Microbac

Laboratory Report Number: L12020091

Mark Lyon
Environmental Waste Solutions
2440 Louisiana Blvd
Albuquerque, NM 87110

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

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

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on February 15 2012

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

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

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0014141	H	0.0		3457503411000000873013169654215 6

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL23-0212-1	L12020091-01	02/02/2012 11:40	02/03/2012 10:30

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL23-0212-1	**Prep Method:**	3005A	**Prep Date:**	02/06/2012 08:11
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/07/2012 08:55
Workgroup #:	WG388881	**Analyst:**	EDL	**Run Date:**	02/07/2012 18:43
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	T2.020712.184328
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5		U	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	31.7		0.200	0.100
Iron, Total	7439-89-6		U	0.100	0.0500
Magnesium, Total	7439-95-4	3.77		0.500	0.250
Molybdenum, Total	7439-98-7	0.00509	J	0.0100	0.00500
Potassium, Total	7440-09-7	2.23		1.00	0.500
Sodium, Total	7440-23-5	26.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00733	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0118	J	0.0200	0.0100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL23-0212-1	**Prep Method:**	3015	**Prep Date:**	02/06/2012 08:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/06/2012 16:22
Workgroup #:	WG388879	**Analyst:**	JYH	**Run Date:**	02/06/2012 19:43
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EL.020612.194301
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00166		0.00100	0.000500
Barium, Total	7440-39-3	0.0198		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00489		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1	0.000688	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00183	J	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2	0.00168		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL23-0212-1	**Prep Method:**	3015	**Prep Date:**	02/06/2012 08:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/07/2012 12:05
Workgroup #:	WG388879	**Analyst:**	JYH	**Run Date:**	02/07/2012 15:52
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EL.020712.155210
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Thallium, Total	7440-28-0		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL23-0212-1	**Prep Method:**	7470A	**Prep Date:**	02/07/2012 09:31
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/08/2012 11:40
Workgroup #:	WG389023	**Analyst:**	PDM	**Run Date:**	02/08/2012 12:22
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	HY.020812.122254
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL23-0212-1	**Prep Method:**	7470A	**Prep Date:**	02/07/2012 09:31
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/08/2012 08:28
Workgroup #:	WG389023	**Analyst:**	PDM	**Run Date:**	02/08/2012 09:13
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	HY.020812.091318
Sample Tag:	01	**Units:**	mg/L		

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL23-0212-1	**Prep Method:**	300.0	**Prep Date:**	02/09/2012 01:50
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG389105	**Analyst:**	JBK	**Run Date:**	02/09/2012 07:58
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	I20209120758.54
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	12.4		0.200	0.100
Fluoride	16984-48-8	0.287		0.200	0.100
Sulfate	14808-79-8	48.6		1.00	0.500

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL23-0212-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG388761	**Analyst:**	HJR	**Run Date:**	02/06/2012 16:15
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	OS12020715183401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.80		0.000	0.000

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		96.7		20.0	10.0

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		96.7		20.0	10.0

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	02/08/2012 08:25
Workgroup #:	WG388944	**Analyst:**	JBK	**Run Date:**	02/08/2012 08:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202080830-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5		U	0.0100	0.00500
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	02/08/2012 08:25
Workgroup #:	WG388947	**Analyst:**	JBK	**Run Date:**	02/08/2012 08:40
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202080840-18
Sample Tag:	wd	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	02/14/2012 10:45
Workgroup #:	WG389446	**Analyst:**	DLP	**Run Date:**	02/14/2012 13:40
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202141340-06
Sample Tag:	D02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL23-0212-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388884	**Analyst:**	DLP	**Run Date:**	02/06/2012 14:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	32.1202061430-17
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		328		1.00	0.500

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	02/07/2012 08:29
Workgroup #:	WG388904	**Analyst:**	DIH	**Run Date:**	02/07/2012 08:52
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207001.033
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/03/2012 13:00
Workgroup #:	WG388788	**Analyst:**	DIH	**Run Date:**	02/06/2012 09:16
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC12020614515201
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.55		0.0500	0.0250

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG388759	**Analyst:**	HJR	**Run Date:**	02/03/2012 14:35
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202031435-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2		U	0.0500	0.0250

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL23-0212-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG388846	**Analyst:**	HJR	**Run Date:**	02/06/2012 12:33
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EN.1202061233-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		226		20.0	10.0

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL23-0212-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG388670	**Analyst:**	DIH	**Run Date:**	02/03/2012 14:20
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	TC02032012.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.39		1.00	0.500

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL23-0212-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG388844	**Analyst:**	HJR	**Run Date:**	02/06/2012 12:31
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EN.1202061231-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids			U	5.00	2.50

2.0 Full Sample Data Package 12
2.1 Metals Data 13
2.1.1 Metals I C P Data 14
2.1.1.1 Summary Data 15
2.1.1.2 QC Summary Data 19
2.1.1.3 Raw Data 66
2.1.2 Metals ICP-MS Data 481
2.1.2.1 Summary Data 482
2.1.2.2 QC Summary Data 487
2.1.2.3 Raw Data 535
2.1.3 Metals CVAA Data (Mercury) 828
2.1.3.1 Summary Data 829
2.1.3.2 QC Summary 834
2.1.3.3 Raw Data 856
2.2 General Chemistry Data 861
2.2.1 Method 9056 862
2.2.1.1 Summary Data 863
2.2.1.2 QC Summary Data 867
2.2.1.3 Sample Data 892
2.2.1.4 Standards Data 894
2.2.1.5 Raw QC Data 918
2.2.2 PH Data 924
2.2.2.1 Summary Data 925
2.2.2.2 QC Summary Data 928
2.2.2.3 Raw Data 931
2.2.3 Alkalinity Data 933
2.2.3.1 Summary Data 934
2.2.3.2 QC Summary Data 938
2.2.3.3 Raw Data 945
2.2.4 Cyanide Data 951
2.2.4.1 Summary Data 952
2.2.4.2 QC Summary Data 958
2.2.4.3 Raw Data 978
2.2.5 Conductivity Data 1013
2.2.5.1 Summary Data 1014
2.2.5.2 QC Summary Data 1017
2.2.5.3 Raw Data 1024
2.2.6 Ammonia Data 1027
2.2.6.1 Summary Data 1028
2.2.6.2 QC Summary Data 1032
2.2.6.3 Raw Data 1039
2.2.7 Nitrate Data 1048
2.2.7.1 Summary Data 1049
2.2.7.2 QC Summary Data 1052
2.2.7.3 Raw Data 1059
2.2.8 Orthophosphate Data 1066
2.2.8.1 Summary Data 1067
2.2.8.2 QC Summary Data 1071
2.2.8.3 Raw Data 1078
2.2.9 Total Dissolved Solids Data 1086
2.2.9.1 Summary Data 1087
2.2.9.2 QC Summary Data 1090

2.2.9.3 Raw Data 1097
2.2.10 Total Organic Carbon Data 1100
2.2.10.1 Summary Data 1101
2.2.10.2 QC Summary Data 1104
2.2.10.3 Raw Data 1111
2.2.11 Total Suspended Solids Data 1140
2.2.11.1 Summary Data 1141
2.2.11.2 QC Summary Data 1145
2.2.11.3 Raw Data 1152
3.0 Attachments 1155

2.0 Full Sample Data Package

2.1 Metals Data

2.1.1 Metals I C P Data

2.1.1.1 Summary Data

Login Number: L12020091
Department: Metals
Analyst: Erin Long

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG388881 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 41888
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	MPL23-0212-1	**Prep Method:**	3005A	**Prep Date:**	02/06/2012 08:11
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/07/2012 08:55
Workgroup #:	WG388881	**Analyst:**	EDL	**Run Date:**	02/07/2012 18:43
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	T2.020712.184328
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5		U	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	31.7		0.200	0.100
Iron, Total	7439-89-6		U	0.100	0.0500
Magnesium, Total	7439-95-4	3.77		0.500	0.250
Molybdenum, Total	7439-98-7	0.00509	J	0.0100	0.00500
Potassium, Total	7440-09-7	2.23		1.00	0.500
Sodium, Total	7440-23-5	26.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00733	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0118	J	0.0200	0.0100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.1.1.2 QC Summary Data

Example 6010 Calculations
Thermo Scientific iCAP 6500

1.0 Initial Calibration (ICAL) Parameters
For a multi-point calibration, the system performs linear regression from data consisting of a blank and four standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system in ug/mL (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial volume (mL)	50
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/mL (mg/L)	0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial weight (g)	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/g (mg/kg)	5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	5
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (mg/kg)	6.25

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG388812
Analyst: REK
Spike Analyst: REK
Method: 3005A
Run Date: 02/06/2012 08:11
Hotblock Start Temp: 95 @ 06:30
Hotblock End Temp: 95.2 @ 10:30

SOP: ME401 Revison 14
Spike Solution: STD49450
Spike Witness: VC
ICP;WG375665 Filter Lot COA15664
HCL Lot #: COA15847
Digestion Tubes Lot #: COA15940
HNO3 Lot #: COA15925

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG388812-02	BLANK	1	50 mL	50 mL		
2	WG388812-03	LCS	1	50 mL	50 mL	5 mL	
3	L12020075-02	SAMP	1	50 mL	50 mL		02/16/12
4	WG388812-01	REF	1	50 mL	50 mL		
5	L12020075-05	RS02	1	50 mL	50 mL		02/16/12
6	WG388812-04	MS	1	50 mL	50 mL	5 mL	
7	L12020075-08	MS02	1	50 mL	50 mL	5 mL	02/16/12
8	WG388812-05	MSD	1	50 mL	50 mL	5 mL	
9	L12020075-11	SD02	1	50 mL	50 mL	5 mL	02/16/12
10	L12020075-14	SAMP	1	50 mL	50 mL		02/16/12
11	L12020075-17	SAMP	1	50 mL	50 mL		02/16/12
12	L12020075-20	SAMP	1	50 mL	50 mL		02/16/12
13	L12020075-23	SAMP	1	50 mL	50 mL		02/16/12
14	L12020075-26	SAMP	1	50 mL	50 mL		02/16/12
15	L12020075-29	SAMP	1	50 mL	50 mL		02/16/12
16	L12020075-32	SAMP	1	50 mL	50 mL		02/16/12
17	L12020086-01	SAMP	1	50 mL	50 mL		02/13/12
18	L12020086-02	SAMP	1	50 mL	50 mL		02/13/12
19	L12020086-03	SAMP	1	50 mL	50 mL		02/13/12
20	L12020086-04	SAMP	1	50 mL	50 mL		02/13/12
21	L12020086-05	SAMP	1	50 mL	50 mL		02/13/12
22	L12020091-01	SAMP	1	50 mL	50 mL		02/14/12

L12020075-14	FILTERED DIGESTATE
L12020075-17	FILTERED DIGESTATE
L12020075-23	FILTERED DIGESTATE
L12020075-26	FILTERED DIGESTATE
L12020086-01	FILTERED DIGESTATE
L12020086-02	FILTERED DIGESTATE
L12020086-03	FILTERED DIGESTATE
L12020086-04	FILTERED DIGESTATE
L12020086-05	FILTERED DIGESTATE

HB_DIG - Modified 09/30/2009
PDF ID: 2299201
Report generated: 02/06/2012 11:04

Microbac Laboratories Inc.
Metals Digest Log

Workgroup:	WG388812	SOP:	ME401 Revison 14
Analyst:	REK	Spike Solution:	STD49450
Spike Analyst:	REK	Spike Witness:	VC
Method:	3005A	ICP;WG375665 Filter Lot	COA15664
Run Date:	02/06/2012 08:11	HCL Lot #:	COA15847
Hotblock Start Temp:	95 @ 06:30	Digestion Tubes Lot #:	COA15940
Hotblock End Temp:	95.2 @ 10:30	HNO3 Lot #:	COA15925

Analyst: _____

Reviewer: _____

HB_DIG - Modified 09/30/2009
PDF ID: 2299201
Report generated: 02/06/2012 11:04

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T2.020712.084142	WG388943-01	Calibration Point		1		02/07/12 08:41
2	T2.020712.084508	WG388943-02	Calibration Point		1		02/07/12 08:45
3	T2.020712.084836	WG388943-03	Calibration Point		1		02/07/12 08:48
4	T2.020712.085202	WG388943-04	Calibration Point		1		02/07/12 08:52
5	T2.020712.085517	WG388943-05	Calibration Point		1		02/07/12 08:55
6	T2.020712.085836	WG388943-06	Initial Calibration Verification		1		02/07/12 08:58
7	T2.020712.090150	WG388943-07	Initial Calib Blank		1		02/07/12 09:01
8	T2.020712.090517	WG388943-08	Low Level Initial Calibration V		1		02/07/12 09:05
9	T2.020712.090842	WG388943-09	Interference Check		1		02/07/12 09:08
10	T2.020712.092647	WG388943-10	Interference Check		1		02/07/12 09:26
11	T2.020712.092955	WG388943-11	Low Level Initial Calibration V		1		02/07/12 09:29
12	T2.020712.093327	WG388943-12	CCV		1		02/07/12 09:33
13	T2.020712.093644	WG388943-13	CCB		1		02/07/12 09:36
14	T2.020712.102033	WG388441-02	Method/Prep Blank	50/50	1		02/07/12 10:20
15	T2.020712.102358	WG388441-03	Laboratory Control S	50/50	1		02/07/12 10:23
16	T2.020712.102715	L12010515-09	P204-775	50/50	1		02/07/12 10:27
17	T2.020712.103040	WG388487-03	Serial Dilution		5	L12010515-09	02/07/12 10:30
18	T2.020712.103405	WG388487-03	Serial Dilution		25	L12010515-09	02/07/12 10:34
19	T2.020712.103731	WG388441-01	Reference Sample		1	L12010767-01	02/07/12 10:37
20	T2.020712.104051	WG388441-04	Matrix Spike	50/50	1	L12010767-01	02/07/12 10:40
21	T2.020712.104406	WG388441-05	Matrix Spike Duplica	50/50	1	L12010767-01	02/07/12 10:44
22	T2.020712.104720	L12010798-01	MPL22-0112-1	50/50	1		02/07/12 10:47
23	T2.020712.105042	L12010799-01	POND OUTFALL	50/50	1		02/07/12 10:50
24	T2.020712.105409	WG388943-20	CCV		1		02/07/12 10:54
25	T2.020712.105722	WG388943-21	CCB		1		02/07/12 10:57
26	T2.020712.110056	L12010800-01	FTGWEF312	50/50	1		02/07/12 11:00
27	T2.020712.110417	WG388487-01	Post Digestion Spike		1	L12010800-01	02/07/12 11:04
28	T2.020712.110731	WG388487-02	Serial Dilution		5	L12010800-01	02/07/12 11:07
29	T2.020712.111052	L12010813-01	2371-W0001	50/50	1		02/07/12 11:10
30	T2.020712.111418	L12010813-02	40004-W0001	50/50	1		02/07/12 11:14
31	T2.020712.111744	L12010813-03	40004-W0002	50/50	1		02/07/12 11:17
32	T2.020712.112111	L12010813-04	8776-W0001	50/50	1		02/07/12 11:21
33	T2.020712.112441	L12010813-05	8792-W0001	50/50	1		02/07/12 11:24
34	T2.020712.112808	L12010813-06	8792-W0002	50/50	1		02/07/12 11:28

Page: 1 Approved: February 08, 2012

Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T2.020712.113135	L12010813-07	8794-W0001	50/50	1		02/07/12 11:31
36	T2.020712.113507	WG388943-22	CCV		1		02/07/12 11:35
37	T2.020712.113822	WG388943-23	CCB		1		02/07/12 11:38
38	T2.020712.114156	L12010813-08	9139-W0001	50/50	1		02/07/12 11:41
39	T2.020712.114523	L12010813-09	9139-W0002	50/50	1		02/07/12 11:45
40	T2.020712.114850	L12010813-10	9174-W0001	50/50	1		02/07/12 11:48
41	T2.020712.115216	L12010813-11	9185-W0001	50/50	1		02/07/12 11:52
42	T2.020712.115542	L12010813-12	9185-W0002	50/50	1		02/07/12 11:55
43	T2.020712.115909	L12010824-01	70115-W0001	50/50	1		02/07/12 11:59
44	T2.020712.120236	L12010824-02	70152-W0001	50/50	1		02/07/12 12:02
45	T2.020712.120602	L12010824-03	70241-W0001	50/50	1		02/07/12 12:06
46	T2.020712.120934	WG388943-24	CCV		1		02/07/12 12:09
47	T2.020712.121247	WG388943-25	CCB		1		02/07/12 12:12
48	T2.020712.121620	WG388943-26	Linear Range Check		1		02/07/12 12:16
49	T2.020712.121951	WG388943-26	Linear Range Check		1		02/07/12 12:19
50	T2.020712.122323	WG388943-26	Linear Range Check		1		02/07/12 12:23
51	T2.020712.123609	WG388943-26	Linear Range Check		1		02/07/12 12:36
52	T2.020712.123925	WG388943-26	Linear Range Check		1		02/07/12 12:39
53	T2.020712.124259	WG388943-26	Linear Range Check		1		02/07/12 12:42
54	T2.020712.124633	WG388943-26	Linear Range Check		1		02/07/12 12:46
55	T2.020712.125008	WG388943-26	Linear Range Check		1		02/07/12 12:50
56	T2.020712.125346	WG388943-29	LRC		1		02/07/12 12:53
57	T2.020712.130018	BLANK	BLANK		1		02/07/12 13:00
58	T2.020712.130659	WG388943-27	CCV		1		02/07/12 13:06
59	T2.020712.131011	WG388943-28	CCB		1		02/07/12 13:10
60	T2.020712.131348	WG388591-02	Method/Prep Blank	50/50	1		02/07/12 13:13
61	T2.020712.131715	WG388591-03	Laboratory Control S	50/50	1		02/07/12 13:17
62	T2.020712.132032	WG388591-01	Reference Sample		1	L12010821-02	02/07/12 13:20
63	T2.020712.132359	WG388591-04	Matrix Spike	50/50	1	L12010821-02	02/07/12 13:23
64	T2.020712.132715	WG388591-05	Matrix Spike Duplica	50/50	1	L12010821-02	02/07/12 13:27
65	T2.020712.133031	L12010821-11	SW2A-269-14	50/50	1		02/07/12 13:30
66	T2.020712.133355	L12010821-14	SW2B-269-14	50/50	1		02/07/12 13:33
67	T2.020712.133719	L12010821-17	SW3A-269-14	50/50	1		02/07/12 13:37
68	T2.020712.134042	WG388719-01	Post Digestion Spike		1	L12010821-17	02/07/12 13:40

Page: 2 Approved: February 08, 2012

Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T2.020712.134400	WG388719-02	Serial Dilution		5	L12010821-17	02/07/12 13:44
70	T2.020712.134731	WG388943-30	CCV		1		02/07/12 13:47
71	T2.020712.135043	WG388943-31	CCB		1		02/07/12 13:50
72	T2.020712.135416	L12010821-20	SW4A-269-14	50/50	1		02/07/12 13:54
73	T2.020712.135741	L12010821-23	SW5A-269-14	50/50	1		02/07/12 13:57
74	T2.020712.140108	L12020021-03	1201-334-1	50/50	1		02/07/12 14:01
75	T2.020712.140430	L12020021-04	1201-334-2	50/50	1		02/07/12 14:04
76	T2.020712.140749	L12020021-05	1201-334-3	50/50	1		02/07/12 14:07
77	T2.020712.141112	L12020023-01	1201-370-1	50/50	1		02/07/12 14:11
78	T2.020712.141434	L12020023-02	1201-370-2	50/50	1		02/07/12 14:14
79	T2.020712.141756	L12020023-03	1201-370-3	50/50	1		02/07/12 14:17
80	T2.020712.142122	L12020023-04	1201-370-4	50/50	1		02/07/12 14:21
81	T2.020712.142446	L12020023-05	1201-370-5	50/50	1		02/07/12 14:24
82	T2.020712.142816	WG388943-32	CCV		1		02/07/12 14:28
83	T2.020712.143132	WG388943-33	CCB		1		02/07/12 14:31
84	T2.020712.143506	L12020026-01	11267-W0001	50/50	1		02/07/12 14:35
85	T2.020712.143831	L12020026-02	11652-W0002	50/50	1		02/07/12 14:38
86	T2.020712.144157	L12020026-03	14659-W0001	50/50	1		02/07/12 14:41
87	T2.020712.144523	L12020026-04	14659-W0002	50/50	1		02/07/12 14:45
88	T2.020712.144848	L12020026-05	17097-W0001	50/50	1		02/07/12 14:48
89	T2.020712.145215	L12020026-06	17097-W0002	50/50	1		02/07/12 14:52
90	T2.020712.145540	WG388943-34	LLCCV		1		02/07/12 14:55
91	T2.020712.150341	WG388943-35	LLCCV		1		02/07/12 15:03
92	T2.020712.152448	WG388943-36	Low Level Continuing Calibra		1		02/07/12 15:24
93	T2.020712.152826	WG388943-37	CCV		1		02/07/12 15:28
94	T2.020712.153140	WG388943-38	CCB		1		02/07/12 15:31
95	T2.020712.153511	WG388649-02	Method/Prep Blank	50/50	1		02/07/12 15:35
96	T2.020712.153840	WG388649-03	Laboratory Control S	50/50	1		02/07/12 15:38
97	T2.020712.154158	WG388649-01	Reference Sample		1	L12020016-01	02/07/12 15:41
98	T2.020712.154520	WG388649-04	Matrix Spike	50/50	1	L12020016-01	02/07/12 15:45
99	T2.020712.154837	WG388649-05	Matrix Spike Duplica	50/50	1	L12020016-01	02/07/12 15:48
100	T2.020712.155149	L12020016-04	MPL2-0112-1	50/50	1		02/07/12 15:51
101	T2.020712.155509	L12020016-05	MPL3-0112-1	50/50	1		02/07/12 15:55
102	T2.020712.155829	L12020016-06	MPL3-0112-2	50/50	1		02/07/12 15:58

Page: 3 Approved: February 08, 2012

Marcia Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T2.020712.160150	WG388773-01	Post Digestion Spike		1	L12020016-06	02/07/12 16:01
104	T2.020712.160503	WG388773-02	Serial Dilution		5	L12020016-06	02/07/12 16:05
105	T2.020712.160835	WG388943-39	CCV		1		02/07/12 16:08
106	T2.020712.161148	WG388943-40	CCB		1		02/07/12 16:11
107	T2.020712.161523	L12020016-07	MPL1-0112-1	50/50	1		02/07/12 16:15
108	T2.020712.161843	L12020044-01	MPL19-0212-1	50/50	1		02/07/12 16:18
109	T2.020712.162204	L12020044-02	MPL20-0212-1	50/50	1		02/07/12 16:22
110	T2.020712.162525	L12020044-03	MPL20-0212-2	50/50	1		02/07/12 16:25
111	T2.020712.162846	L12020046-02	KY038PS0390212	50/50	1		02/07/12 16:28
112	T2.020712.163206	L12020046-04	KY038PS0370212	50/50	1		02/07/12 16:32
113	T2.020712.163525	L12020046-05	KY038PS0380212	50/50	1		02/07/12 16:35
114	T2.020712.163846	L12020046-07	KY038PS0270212	50/50	1		02/07/12 16:38
115	T2.020712.164205	L12020046-08	SS052PS7410212	50/50	1		02/07/12 16:42
116	T2.020712.164526	L12020046-09	SS052PS5900212	50/50	1		02/07/12 16:45
117	T2.020712.164854	WG388943-41	CCV		1		02/07/12 16:48
118	T2.020712.165207	WG388943-42	CCB		1		02/07/12 16:52
119	T2.020712.165539	L12020058-01	MW13-GW01-013112	50/50	1		02/07/12 16:55
120	T2.020712.165857	L12020058-02	MW13-GW01-013112	50/50	1		02/07/12 16:58
121	T2.020712.170216	WG388943-43	Interference Check		1		02/07/12 17:02
122	T2.020712.170534	WG388943-44	Interference Check		1		02/07/12 17:05
123	T2.020712.170847	WG388943-45	Low Level Initial Calibration V		1		02/07/12 17:08
124	T2.020712.171211	WG388943-46	Low Level Initial Calibration V		1		02/07/12 17:12
125	T2.020712.171540	WG388943-47	CCV		1		02/07/12 17:15
126	T2.020712.171853	WG388943-48	CCB		1		02/07/12 17:18
127	T2.020712.172224	WG388812-02	Method/Prep Blank	50/50	1		02/07/12 17:22
128	T2.020712.172550	WG388812-03	Laboratory Control S	50/50	1		02/07/12 17:25
129	T2.020712.172906	L12020075-02	MW2B-269-14	50/50	1		02/07/12 17:29
130	T2.020712.173230	WG388812-01	Reference Sample		1	L12020075-05	02/07/12 17:32
131	T2.020712.173555	WG388812-04	Matrix Spike	50/50	1	L12020075-05	02/07/12 17:35
132	T2.020712.173911	WG388812-05	Matrix Spike Duplica	50/50	1	L12020075-05	02/07/12 17:39
133	T2.020712.174226	L12020075-14	MW4B-269-14	50/50	1		02/07/12 17:42
134	T2.020712.174549	L12020075-17	MW4C-269-14	50/50	1		02/07/12 17:45
135	T2.020712.174912	WG388881-01	Post Digestion Spike		1	L12020075-17	02/07/12 17:49
136	T2.020712.175228	WG388881-02	Serial Dilution		5	L12020075-17	02/07/12 17:52

Page: 4 Approved: February 08, 2012

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T2.020712.175556	WG388943-49	CCV		1		02/07/12 17:55
138	T2.020712.175910	WG388943-50	CCB		1		02/07/12 17:59
139	T2.020712.180238	L12020075-20	MW5A-269-14	50/50	1		02/07/12 18:02
140	T2.020712.180601	L12020075-23	OW1B-269-14	50/50	1		02/07/12 18:06
141	T2.020712.180922	L12020075-26	OW1B2-269-14	50/50	1		02/07/12 18:09
142	T2.020712.181245	L12020075-29	OW2A-269-14	50/50	1		02/07/12 18:12
143	T2.020712.181610	L12020075-32	OW3A-269-14	50/50	1		02/07/12 18:16
144	T2.020712.181936	L12020086-01	T-1360	50/50	5		02/07/12 18:19
145	T2.020712.182302	L12020086-02	T-1362	50/50	5		02/07/12 18:23
146	T2.020712.182635	WG388943-51	CCV		1		02/07/12 18:26
147	T2.020712.182947	WG388943-52	CCB		1		02/07/12 18:29
148	T2.020712.183318	L12020086-03	T-1363	50/50	5		02/07/12 18:33
149	T2.020712.183643	L12020086-04	T-1365	50/50	5		02/07/12 18:36
150	T2.020712.184008	L12020086-05	T-1343	50/50	5		02/07/12 18:40
151	T2.020712.184328	L12020091-01	MPL23-0212-1	50/50	1		02/07/12 18:43
152	T2.020712.184651	WG388943-53	CCV		1		02/07/12 18:46
153	T2.020712.185004	WG388943-54	CCB		1		02/07/12 18:50
154	T2.020712.185335	WG388934-02	Method/Prep Blank	5/50	1		02/07/12 18:53
155	T2.020712.185701	WG388934-03	Laboratory Control S	5/50	1		02/07/12 18:57
156	T2.020712.190019	WG388639-01	Fluid Blank		1		02/07/12 19:00
157	T2.020712.190344	WG388895-01	TCLP Fluid Blank 1		1		02/07/12 19:03
158	T2.020712.190710	WG388895-02	TCLP Fluid Blank 2		1		02/07/12 19:07
159	T2.020712.191036	L12020039-01	SOIL/STONE	5/50	1		02/07/12 19:10
160	T2.020712.191358	L12020064-01	NOVELIS BLUE	5/50	1		02/07/12 19:13
161	T2.020712.191729	WG388967-01	Post Digestion Spike		1	L12020064-01	02/07/12 19:17
162	T2.020712.192052	WG388967-02	Serial Dilution		5	L12020064-01	02/07/12 19:20
163	T2.020712.192426	WG388943-55	CCV		1		02/07/12 19:24
164	T2.020712.192738	WG388943-56	CCB		1		02/07/12 19:27
165	T2.020712.193111	L12020067-01	PRECISION RIG 823	5/50	1		02/07/12 19:31
166	T2.020712.193434	L12020079-02	GRENADIER	5/50	1		02/07/12 19:34
167	T2.020712.193754	WG388934-01	Reference Sample		1	L12020080-02	02/07/12 19:37
168	T2.020712.194125	WG388934-04	Matrix Spike	5/50	1	L12020080-02	02/07/12 19:41
169	T2.020712.194448	WG388934-05	Matrix Spike Duplica	5/50	1	L12020080-02	02/07/12 19:44
170	T2.020712.194812	L12020081-01	SANDBLAST WASTE DRUM	5/50	1		02/07/12 19:48

Page: 5 Approved: February 08, 2012

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	T2.020712.195130	L12020082-02	HALL DRILLING	5/50	1		02/07/12 19:51
172	T2.020712.195452	L12020135-06	1109-116D-001	5/50	1		02/07/12 19:54
173	T2.020712.195820	WG388943-57	CCV		1		02/07/12 19:58
174	T2.020712.200133	WG388943-58	CCB		1		02/07/12 20:01
175	T2.020712.200504	WG388911-02	Method/Prep Blank	50/50	1		02/07/12 20:05
176	T2.020712.200830	WG388911-03	Laboratory Control S	50/50	1		02/07/12 20:08
177	T2.020712.201148	L12020103-01	010	50/50	1		02/07/12 20:11
178	T2.020712.201524	WG388911-01	Reference Sample		1	L12020103-02	02/07/12 20:15
179	T2.020712.201859	WG388911-04	Duplicate	50/50	1	L12020103-02	02/07/12 20:18
180	T2.020712.202235	WG388911-05	Matrix Spike	50/50	1	L12020103-02	02/07/12 20:22
181	T2.020712.202607	L12020103-03	012	50/50	1		02/07/12 20:26
182	T2.020712.202934	L12020103-04	012	50/50	1		02/07/12 20:29
183	T2.020712.203301	WG388971-01	Post Digestion Spike		1	L12020103-04	02/07/12 20:33
184	T2.020712.203617	WG388971-02	Serial Dilution		5	L12020103-04	02/07/12 20:36
185	T2.020712.203943	WG388943-59	CCV		1		02/07/12 20:39
186	T2.020712.204256	WG388943-60	CCB		1		02/07/12 20:42
187	T2.020712.204627	L12020103-05	016	50/50	1		02/07/12 20:46
188	T2.020712.204951	L12020103-06	016	50/50	1		02/07/12 20:49
189	T2.020712.205310	L12020103-07	017	50/50	1		02/07/12 20:53
190	T2.020712.205646	L12020103-08	017	50/50	1		02/07/12 20:56
191	T2.020712.210023	L12020103-09	018	50/50	1		02/07/12 21:00
192	T2.020712.210407	L12020103-10	018	50/50	1		02/07/12 21:04
193	T2.020712.210800	WG388943-61	CCV		1		02/07/12 21:08
194	T2.020712.211113	WG388943-62	CCB		1		02/07/12 21:11
195	T2.020712.211442	RINSE	RINSE		1		02/07/12 21:14
196	T2.020712.211813	RINSE1	RINSE1		1		02/07/12 21:18
197	T2.020712.212143	RINSE2	RINSE2		1		02/07/12 21:21
198	T2.020712.212513	RINSE3	RINSE3		1		02/07/12 21:25
199	T2.020712.212841	RINSE4	RINSE4		1		02/07/12 21:28
200	T2.020712.213211	RINSE5	RINSE5		1		02/07/12 21:32
201	T2.020712.213539	RINSE6	RINSE6		1		02/07/12 21:35
202	T2.020712.213909	RINSE7	RINSE7		1		02/07/12 21:39

Comments

Page: 6 Approved: February 08, 2012

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO2 Dataset: 020712T2.1R.TXT
Analyst1: EDL Analyst2: N/A
Method: 6010 SOP: ME600G Rev: 2
Maintenance Log ID: 40536

Calibration Std: STD49884 ICV Std: STD49885 Post Spike: STD49449
ICSA: STD49701 ICSAB: STD49804 Int. Std: STD49870
CCV: STD49883 LLCCV:

Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time

Seq.	Rerun	Dil.	Reason	Analytes
8			Due to analyst error, the LLICV analyzed at 09:05 was spiked incorrectly for nickel. Therefore an LLICV was analyzed at 09:29 for nickel only.	
56			Data not used - result "k'd out".	
90			Data not used - result "k'd out".	
91			Data not used due to nebulizer flow interference.	
123			Due to analyst error, the LLCCV analyzed at 17:08 was spiked incorrectly for nickel. Therefore an LLCCV was analyzed at 17:12 for nickel only.	

Page: 7 Approved: February 08, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 07-FEB-2012
Analyst: EDL
Analyst: NA
Method: 6010
Instrument: ICP-THERMO2
Curve Workgroup: 388943
Runlog ID: 45007
Analytical Workgroups: 388487, 388719, 388773, 388881, 388967, 388971

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	515, 767, 798, 799, 800, 813, 824
Case Narrative (Continued)	021, 023, 026, 016, 044, 046, 058
Case Narrative (Continued)	091, 135
Client Forms	X
Level X	
Level 3	799, 800, 046, 058
Level 4	515, 767, 813, 824, 026, 016, 044
Level 4 (Continued)	091, 135
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	EDL
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
08-FEB-2012
Erin D. Long

Secondary Reviewer:
08-FEB-2012
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-08-2012 15:30:52

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B

AAB#: WG388881

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12					02/06/12	3.9	180		02/07/12	5.3	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2301603
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: T2.020712.172224
Prep Date: 02/06/12 08:11
Analyzed Date: 02/07/12 17:22
Analyst: EDL

Work Group: WG388881
Blank Sample ID: WG388812-02
Instrument ID: ICP-THERMO2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388812-03	T2.020712.172550	02/07/12 17:25	01
MPL23-0212-1	L12020091-01	T2.020712.184328	02/07/12 18:43	01

Report Name: BLANK_SUMMARY
PDF File ID: 2301604
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 08:11 Sample ID: WG388812-02
Instrument ID: ICP-THERMO2 Run Date: 02/07/12 17:22 Prep Method: 3005A
File ID: T2.020712.172224 Analyst: EDL Method: 6010B
Workgroup (AAB#): WG388881 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-07-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.100	0.0500	1	U
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Boron, Total	0.0500	0.100	0.0500	1	U
Calcium, Total	0.100	0.200	0.100	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	0.250	1	U
Molybdenum, Total	0.00500	0.0100	0.00500	1	U
Potassium, Total	0.500	1.00	0.500	1	U
Sodium, Total	0.250	0.500	0.250	1	U
Tin, Total	0.250	0.500	0.250	1	U
Vanadium, Total	0.00500	0.0100	0.00500	1	U
Zinc, Total	0.0100	0.0200	0.0100	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2301605
08-FEB-2012 08:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388812-03
Instrument ID: ICP-THERMO2 Run Time: 17:25 Prep Method: 3005A
File ID: T2.020712.172550 Analyst: EDL Method: 6010B
Workgroup (AAB#): WG388881 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49450 Cal ID: ICP-TH-07-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	5.00	5.03	101	80 - 120	
Beryllium, Total	0.0250	0.0246	98.4	80 - 120	
Boron, Total	1.00	0.996	99.6	80 - 120	
Calcium, Total	5.00	4.95	99.0	80 - 120	
Iron, Total	2.00	1.95	97.4	80 - 120	
Magnesium, Total	5.00	5.01	100	80 - 120	
Molybdenum, Total	0.500	0.505	101	80 - 120	
Potassium, Total	25.0	25.1	100	80 - 120	
Sodium, Total	25.0	25.9	104	80 - 120	
Tin, Total	0.500	0.495	99.1	80 - 120	
Vanadium, Total	0.500	0.493	98.6	80 - 120	
Zinc, Total	0.500	0.516	103	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2301606
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L12020091 Cal ID: ICP-THERMO2 - Worknum: WG388881
Instrument ID: ICP-THERMO2 Contract #: Method: 6010B
Parent ID: WG388812-01 File ID: T2.020712.173230 Dil: 1 Matrix: WATER
Sample ID: WG388812-04 MS File ID: T2.020712.173555 Dil: 1 Units: mg/L
Sample ID: WG388812-05 MSD File ID: T2.020712.173911 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	5.00	5.13	103	5.00	5.09	102	0.812	80 - 120	20	
Beryllium, Total	ND	0.0250	0.0247	98.7	0.0250	0.0249	99.4	0.727	80 - 120	20	
Boron, Total	ND	1.00	0.987	98.7	1.00	1.00	100	1.35	80 - 120	20	
Calcium, Total	0.710	5.00	5.66	99.0	5.00	5.70	99.7	0.595	80 - 120	20	
Iron, Total	0.0634	2.00	2.02	97.9	2.00	2.01	97.4	0.501	80 - 120	20	
Magnesium, Total	0.582	5.00	5.62	101	5.00	5.64	101	0.258	80 - 120	20	
Molybdenum, Total	ND	0.500	0.508	102	0.500	0.506	101	0.444	80 - 120	20	
Potassium, Total	ND	25.0	25.7	103	25.0	25.8	103	0.218	80 - 120	20	
Sodium, Total	1.51	25.0	27.5	104	25.0	27.5	104	0.291	80 - 120	20	
Tin, Total	ND	0.500	0.530	106	0.500	0.534	107	0.633	80 - 120	20	
Vanadium, Total	ND	0.500	0.493	98.6	0.500	0.495	99.1	0.534	80 - 120	20	
Zinc, Total	ND	0.500	0.520	104	0.500	0.520	104	0.0135	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2301607
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12020091 **Worknum:** WG388881
Instrument: ICP-THERMO2 **Method:** 6010B
Serial Dil: WG388881-02 **File ID:** T2.020712.175228 **Dil:** 5 **Units:** mg/L
Sample: L12020075-17 **File ID:** T2.020712.174549 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	2.32	X	2.14	X	7.68	
Beryllium	ND	U	ND	U		
Boron	ND	U	ND	U		
Calcium	1.13	X	1.00	X	11.10	
Iron	4.45		4.54		2.10	
Magnesium	1.36	X	1.40	F	3.09	
Molybdenum	ND	U	ND	U		
Potassium	0.578	F	ND	U		
Sodium	1.39	X	1.28	F	8.07	
Tin	ND	U	ND	U		
Vanadium	ND	U	ND	U		
Zinc	0.0259	X	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 50 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2301601
02/08/2012 08:42

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12020091 **Worknum:** WG388881
Instrument ID: ICP-THERMO2 **Method:** 6010B
Post Spike ID: WG388881-01 **File ID:** T2.020712.174912 **Dil:** 1 **Units:** mg/L
Sample ID: L12020075-17 **File ID:** T2.020712.174549 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	6.81		2.32		5	94.5	75 - 125	
BERYLLIUM	0.0235		0	U	.025	93.9	75 - 125	
BORON	0.941		0	U	1	94.1	75 - 125	
CALCIUM	5.94		1.13		5	98.6	75 - 125	
IRON	5.83		4.45		2	91.6	75 - 125	
MAGNESIUM	5.96		1.36		5	94.8	75 - 125	
MOLYBDENUM	0.477		0	U	.5	95.4	75 - 125	
POTASSIUM	24.4		0.578	F	25	95.4	75 - 125	
SODIUM	25.9		1.39		25	98.5	75 - 125	
TIN	0.516		0	U	.5	103.1	75 - 125	
VANADIUM	0.469		0	U	.5	93.7	75 - 125	
ZINC	0.516		0.0259		.5	98.4	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2301602
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	L12020091	Workgroup (AAB#):	WG388881
Analytical Method:	6010B	Instrument ID:	ICP-THERMO2
ICAL Worknum:	WG388943	Initial Calibration Date:	07-FEB-2012 08:55

	WG388943-01		WG388943-02		WG388943-03		WG388943-04		WG388943-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ALUMINUM	0	0.00112	.1	0.00202	.2	0.00313	10	0.0935	20	0.185	.999972	
BERYLLIUM	0	-0.00187	.0005	0.00266	.001	0.00776	.05	0.484	.1	0.978	.999983	
BORON	0	0.00101	NA	NA	.01	0.00356	.75	0.134	1	0.268	.999991	
CALCIUM	0	-0.00498	.1	-0.00125	.2	0.00142	10	0.300	20	0.603	.999907	
IRON	0	0.000150	.04	0.00139	.08	0.00265	4	0.118	8	0.234	.999978	
MAGNESIUM	0	-0.0000800	.1	0.00105	.2	0.00197	10	0.0896	20	0.178	.999813	
MOLYBDENUM	0	0.0000400	.01	0.00170	.02	0.00343	1	0.170	2	0.340	.999998	
POTASSIUM	0	0.00320	.5	0.0122	1	0.0220	50	0.981	100	1.96	.999985	
SODIUM	0	-0.0162	.5	0.0166	1	0.0480	50	3.18	100	6.31	.999989	
TIN	0	0.000100	.01	0.00130	.02	0.00258	1	0.120	2	0.237	.999983	
VANADIUM	0	-0.00143	.01	0.00973	.02	0.0214	1	1.12	2	2.25	.999997	
ZINC	0	0.00154	.01	0.00797	.02	0.0148	1	0.637	2	1.27	.999993	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2301610
Report generated: 08-FEB-2012 08:42

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-07
Instrument ID: ICP-THERMO2
Run Time: 09:01
Method: 6010B
File ID: T2.020712.090150
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-THERI - 07-FEB-12
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.05	.1	.05	U
BERYLLIUM	.001	.002	.001	U
BORON	.05	.1	.05	U
CALCIUM	.1	.2	.1	U
IRON	.05	.1	.05	U
MAGNESIUM	.25	.5	.25	U
MOLYBDENUM	.005	.01	.005	U
POTASSIUM	.5	1	.5	U
SODIUM	.25	.5	.25	U
TIN	.25	.5	.25	U
VANADIUM	.005	.01	.005	U
ZINC	.01	.02	.01	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 2301612
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-13
Instrument ID: ICP-THERMO2
Run Time: 09:36
Method: 6010B
File ID: T2.020712.093644
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-25
Instrument ID: ICP-THERMO2
Run Time: 12:12
Method: 6010B
File ID: T2.020712.121247
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-28
Instrument ID: ICP-THERMO2
Run Time: 13:10
Method: 6010B
File ID: T2.020712.131011
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-42
Instrument ID: ICP-THERMO2
Run Time: 16:52
Method: 6010B
File ID: T2.020712.165207
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-48
Instrument ID: ICP-THERMO2
Run Time: 17:18
Method: 6010B
File ID: T2.020712.171853
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-50
Instrument ID: ICP-THERMO2
Run Time: 17:59
Method: 6010B
File ID: T2.020712.175910
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-52
Instrument ID: ICP-THERMO2
Run Time: 18:29
Method: 6010B
File ID: T2.020712.182947
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-54
Instrument ID: ICP-THERMO2
Run Time: 18:50
Method: 6010B
File ID: T2.020712.185004
Analyst: EDL
Units: mg/L
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Beryllium	0.00100	0.00200	0.00100	U
Boron	0.0500	0.100	0.0500	U
Calcium	0.100	0.200	0.100	U
Iron	0.0500	0.100	0.0500	U
Magnesium	0.250	0.500	0.250	U
Molybdenum	0.00500	0.0100	0.00500	U
Potassium	0.500	1.00	0.500	U
Sodium	0.250	0.500	0.250	U
Tin	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.0100	0.0200	0.0100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301615
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388943-06
Instrument ID: ICP-THERMO2 Run Time: 08:58 Method: 6010B
File ID: T2.020712.085836 Analyst: EDL Units: mg/L
Workgroup (AAB#): WG388881 Cal ID: ICP-TH - 07-FEB-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.1	101	90 - 110	
Beryllium		.05	0.0501	100	90 - 110	
Boron		.5	0.505	101	90 - 110	
Calcium		10	9.93	99.3	90 - 110	
Iron		4	4.04	101	90 - 110	
Magnesium		10	10.0	100	90 - 110	
Molybdenum		1	0.977	97.7	90 - 110	
Potassium		50	50.4	101	90 - 110	
Sodium		50	50.3	101	90 - 110	
Tin		1	1.04	104	90 - 110	
Vanadium		1	0.998	99.8	90 - 110	
Zinc		1	1.02	102	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2301611
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-12
Instrument ID: ICP-THERMO2
Run Time: 09:33
Method: 6010B
File ID: T2.020712.093327
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.98	mg/L	99.8	90 - 110		
Beryllium		0.0500	0.0491	mg/L	98.2	90 - 110		
Boron		0.500	0.493	mg/L	98.5	90 - 110		
Calcium		10.0	9.99	mg/L	99.9	90 - 110		
Iron		4.00	3.98	mg/L	99.6	90 - 110		
Magnesium		10.0	9.96	mg/L	99.6	90 - 110		
Molybdenum		1.00	0.995	mg/L	99.5	90 - 110		
Potassium		50.0	49.8	mg/L	99.6	90 - 110		
Sodium		50.0	49.9	mg/L	99.8	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	0.989	mg/L	98.9	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388943-24
Instrument ID: ICP-THERMO2 Run Time: 12:09 Method: 6010B
File ID: T2.020712.120934 Analyst: EDL QC Key: DOD4
Workgroup (AAB#): WG388881 Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.95	mg/L	99.5	90 - 110		
Beryllium		0.0500	0.0487	mg/L	97.3	90 - 110		
Boron		0.500	0.492	mg/L	98.5	90 - 110		
Calcium		10.0	9.84	mg/L	98.4	90 - 110		
Iron		4.00	3.93	mg/L	98.2	90 - 110		
Magnesium		10.0	9.85	mg/L	98.5	90 - 110		
Molybdenum		1.00	0.984	mg/L	98.4	90 - 110		
Potassium		50.0	49.6	mg/L	99.1	90 - 110		
Sodium		50.0	49.8	mg/L	99.6	90 - 110		
Tin		1.00	0.988	mg/L	98.8	90 - 110		
Vanadium		1.00	0.985	mg/L	98.5	90 - 110		
Zinc		1.00	0.985	mg/L	98.5	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-27
Instrument ID: ICP-THERMO2
Run Time: 13:06
Method: 6010B
File ID: T2.020712.130659
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.1	mg/L	101	90 - 110		
Beryllium		0.0500	0.0492	mg/L	98.4	90 - 110		
Boron		0.500	0.510	mg/L	102	90 - 110		
Calcium		10.0	10.0	mg/L	100	90 - 110		
Iron		4.00	3.98	mg/L	99.6	90 - 110		
Magnesium		10.0	9.98	mg/L	99.8	90 - 110		
Molybdenum		1.00	0.995	mg/L	99.5	90 - 110		
Potassium		50.0	50.6	mg/L	101	90 - 110		
Sodium		50.0	50.4	mg/L	101	90 - 110		
Tin		1.00	0.999	mg/L	99.9	90 - 110		
Vanadium		1.00	0.993	mg/L	99.3	90 - 110		
Zinc		1.00	0.997	mg/L	99.7	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-41
Instrument ID: ICP-THERMO2
Run Time: 16:48
Method: 6010B
File ID: T2.020712.164854
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.87	mg/L	98.7	90 - 110		
Beryllium		0.0500	0.0482	mg/L	96.4	90 - 110		
Boron		0.500	0.492	mg/L	98.3	90 - 110		
Calcium		10.0	9.79	mg/L	97.9	90 - 110		
Iron		4.00	3.88	mg/L	97.0	90 - 110		
Magnesium		10.0	9.80	mg/L	98.0	90 - 110		
Molybdenum		1.00	0.975	mg/L	97.5	90 - 110		
Potassium		50.0	49.3	mg/L	98.6	90 - 110		
Sodium		50.0	49.9	mg/L	99.8	90 - 110		
Tin		1.00	0.987	mg/L	98.7	90 - 110		
Vanadium		1.00	0.969	mg/L	96.9	90 - 110		
Zinc		1.00	0.986	mg/L	98.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-47
Instrument ID: ICP-THERMO2
Run Time: 17:15
Method: 6010B
File ID: T2.020712.171540
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.0	mg/L	100	90 - 110		
Beryllium		0.0500	0.0493	mg/L	98.7	90 - 110		
Boron		0.500	0.501	mg/L	100	90 - 110		
Calcium		10.0	9.91	mg/L	99.1	90 - 110		
Iron		4.00	3.92	mg/L	97.9	90 - 110		
Magnesium		10.0	9.87	mg/L	98.7	90 - 110		
Molybdenum		1.00	0.996	mg/L	99.6	90 - 110		
Potassium		50.0	49.8	mg/L	99.7	90 - 110		
Sodium		50.0	50.4	mg/L	101	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	0.991	mg/L	99.1	90 - 110		
Zinc		1.00	1.00	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-49
Instrument ID: ICP-THERMO2
Run Time: 17:55
Method: 6010B
File ID: T2.020712.175556
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.86	mg/L	98.6	90 - 110		
Beryllium		0.0500	0.0484	mg/L	96.7	90 - 110		
Boron		0.500	0.489	mg/L	97.7	90 - 110		
Calcium		10.0	9.84	mg/L	98.4	90 - 110		
Iron		4.00	3.87	mg/L	96.8	90 - 110		
Magnesium		10.0	9.71	mg/L	97.1	90 - 110		
Molybdenum		1.00	0.976	mg/L	97.6	90 - 110		
Potassium		50.0	49.4	mg/L	98.7	90 - 110		
Sodium		50.0	49.8	mg/L	99.5	90 - 110		
Tin		1.00	0.988	mg/L	98.8	90 - 110		
Vanadium		1.00	0.970	mg/L	97.0	90 - 110		
Zinc		1.00	0.990	mg/L	99.0	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943-51
Instrument ID: ICP-THERMO2
Run Time: 18:26
Method: 6010B
File ID: T2.020712.182635
Analyst: EDL
QC Key: DOD4
Workgroup (AAB#): WG388881
Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.2	mg/L	102	90 - 110		
Beryllium		0.0500	0.0494	mg/L	98.9	90 - 110		
Boron		0.500	0.497	mg/L	99.4	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Iron		4.00	3.99	mg/L	99.9	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Molybdenum		1.00	1.01	mg/L	101	90 - 110		
Potassium		50.0	51.2	mg/L	102	90 - 110		
Sodium		50.0	51.3	mg/L	103	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	0.988	mg/L	98.8	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388943-53
Instrument ID: ICP-THERMO2 Run Time: 18:46 Method: 6010B
File ID: T2.020712.184651 Analyst: EDL QC Key: DOD4
Workgroup (AAB#): WG388881 Cal ID: ICP-TH - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.0	mg/L	100	90 - 110		
Beryllium		0.0500	0.0512	mg/L	102	90 - 110		
Boron		0.500	0.525	mg/L	105	90 - 110		
Calcium		10.0	10.0	mg/L	100	90 - 110		
Iron		4.00	3.93	mg/L	98.1	90 - 110		
Magnesium		10.0	9.84	mg/L	98.4	90 - 110		
Molybdenum		1.00	1.01	mg/L	101	90 - 110		
Potassium		50.0	50.2	mg/L	100	90 - 110		
Sodium		50.0	50.6	mg/L	101	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.03	mg/L	103	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301614
Report generated 02/08/2012 08:43

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12020091 **Workgroup (AAB#):** WG388881
Instrument ID: ICP-THERMO2 **Method:** 6010B
Sol. A : WG388943-09 **File ID:** T2.020712.090842 **Units:** mg/L
Sol. AB : WG388943-10 **File ID:** T2.020712.092647 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	252	101	250	251	100	
Beryllium	NS	-0.0000100	NS	0.250	0.255	102	
Boron	NS	0.0580	NS	NS	0.0362	NS	
Calcium	250	250	100	250	248	99.2	
Iron	100	98.4	98.4	100	97.2	97.2	
Magnesium	250	247	98.8	250	243	97.2	
Molybdenum	NS	-0.000340	NS	NS	-0.000620	NS	
Potassium	NS	0.0304	NS	5.00	5.08	102	
Sodium	NS	0.0390	NS	5.00	5.12	102	
Tin	NS	0.000940	NS	NS	0.000510	NS	
Vanadium	NS	-0.000870	NS	0.250	0.251	100	
Zinc	NS	-0.00139	NS	0.500	0.493	98.6	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 2301613
Report generated 02/08/2012 08:42

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12020091
Instrument ID: ICP-THERMO2
Sol. A : WG388943-43 **File ID:** T2.020712.170216
Sol. AB : WG388943-44 **File ID:** T2.020712.170534

Workgroup (AAB#): WG388881
Method: 6010B
Units: mg/L
Matrix: Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	248	99.2	250	248	99.2	
Beryllium	NS	-0.0000500	NS	0.250	0.251	100	
Boron	NS	0.0572	NS	NS	0.0364	NS	
Calcium	250	246	98.4	250	246	98.4	
Iron	100	95.8	95.8	100	95.9	95.9	
Magnesium	250	241	96.4	250	241	96.4	
Molybdenum	NS	-0.000340	NS	NS	-0.000400	NS	
Potassium	NS	-0.0138	NS	5.00	4.95	99.0	
Sodium	NS	0.0461	NS	5.00	5.12	102	
Tin	NS	0.000590	NS	NS	0.000470	NS	
Vanadium	NS	-0.000650	NS	0.250	0.249	99.6	
Zinc	NS	-0.000230	NS	0.500	0.491	98.2	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 2301613
Report generated 02/08/2012 08:42

LRC SAMPLE

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG388943
Instrument ID: ICP-THERMO2
Run Time: 08:55
Prep Method: 3005A
Analyst: EDL
Method: 6010B
Workgroup (AAB#): WG388881
Matrix: Water
Units: mg/L
Cal ID: 07-FEB-12 - 07-FEB-2012 08:55

Analytes	Expected	Found	% Rec	Limits	Q
Aluminum, Total	900	863	95.9	90 - 110	
Boron, Total	90	89.8	99.8	90 - 110	
Calcium, Total	1000	941	94.1	90 - 110	
Magnesium, Total	1000	1020	102	90 - 110	
Zinc, Total	50	47.7	95.4	90 - 110	

KEMRON FORMS - Modified 08/28/2006
Version 1.5 PDF File ID: 2301941
Report generated 02/08/2012 09:57

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12020091 **Date:** 12/30/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	AL	AS	B	BA	BE
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0.0000210	0	0	0	0
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0.00190	0	-0.000140	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	-0.000660	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0	0	0	0
IRON	261.20	0	0	0	0	0
LEAD	220.30	0.000248	0	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	-0.000750	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	-0.0000300	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	-0.0000120	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0.00000100	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2301609
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12020091 **Date:** 12/30/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	CA	CO	CR	CU	FE
ALUMINUM	308.20	0	-0.000820	0	0	0
ANTIMONY	206.80	0	0	0.00950	0	0.0000560
ARSENIC	189.00	0	0	-0.000200	0	-0.0000120
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0.00343	0	0	-0.000619
CADMIUM	228.80	0	-0.00200	0	0	0.00000400
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	-0.000160	0	0	0.0000530
COBALT	228.60	0	0	0.000108	0	0
COPPER	224.70	0	0.0000770	0	0	0.000223
IRON	261.20	-0.000120	0	-0.0000460	-0.0000290	0
LEAD	220.30	0	-0.0000930	-0.000172	0.000809	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	0
MANGANESE	257.60	0	0	-0.0000920	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0.000100	0	0	0.0000320
PHOSPHORUS	214.90	0	0	0	0.00200	0.00120
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0.0000970	0	0	0	0
THALLIUM	190.80	0	0.00397	0.000276	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	-0.00000200
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	-0.0000300

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2301609
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12020091 **Date:** 12/30/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	LI	MG	MN	MO	NA
ALUMINUM	308.20	0	0	0	0.0153	0
ANTIMONY	206.80	0	0	0	0.000670	0
ARSENIC	189.00	0	0	0	0.00109	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	-0.00169	0
CADMIUM	228.80	0	0	0	0.0000220	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0.000160	0	0
COBALT	228.60	0	0	0	-0.000983	0
COPPER	224.70	0	0	0	0.00274	0
IRON	261.20	0	0	0	0	0
LEAD	220.30	0	0	0	-0.00183	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	-0.00190	-0.0110	0
MANGANESE	257.60	0	0.00000900	0	-0.0000720	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	0.00800	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0.000156	0
SILICON	212.40	0	0	0	0.0187	0
SILVER	328.00	0	0	0	-0.0000440	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.30	0	0	0	-0.000153	0
VANADIUM	292.40	0	0	0	-0.00778	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2301609
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12020091 **Date:** 12/30/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	NI	SB	SN	SR	TI
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0	-0.00840	0	-0.000990
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	-0.00160
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	-0.000128	0	0	0	0
CALCIUM	422.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0.0000550
COBALT	228.60	0.000175	0	0	0	0.000950
COPPER	224.70	-0.0120	0	0	0	0.000269
IRON	261.20	0	0	0	0	0
LEAD	220.30	0.000110	0	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	279.10	0	0	0	0	-0.00290
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	-0.00620
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.80	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	-0.00170
TIN	189.90	0	0	0	0	-0.00220
TITANIUM	337.30	0	-0.00180	0	0	0
VANADIUM	292.40	0	0	0	0	0.000824
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2301609
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12020091 **Date:** 12/30/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Wave Length	V	ZN	ZR
ALUMINUM	308.20	0.00300	0	0
ANTIMONY	206.80	-0.00438	0	0
ARSENIC	189.00	0.000107	0	0
BARIUM	455.40	0	0	0
BERYLLIUM	313.00	0.000170	0	0
BORON	249.70	0	0	0
CADMIUM	228.80	0.0000820	0	0
CALCIUM	422.70	0	0	0
CHROMIUM	267.70	-0.00180	-0.000740	
COBALT	228.60	0.0000200	0	0
COPPER	224.70	0	0	
IRON	261.20	0	0	0
LEAD	220.30	-0.000126	0	0
LITHIUM	670.80	0	0	0
MAGNESIUM	279.10	0	0	0
MANGANESE	257.60	-0.00120	0	0
MOLYBDENUM	202.03	-0.000110	0	0
NICKEL	231.60	0	0	0
PHOSPHORUS	214.90	-0.00500	0	0.00200
POTASSIUM	766.40	0	0	0
SELENIUM	196.00	0	0	0
SILICON	212.40	0	0	0
SILVER	328.00	-0.00617	0	0
SODIUM	589.50	0	0	0
STRONTIUM	407.80	0	0	0
THALLIUM	190.80	-0.0282	0	0
TIN	189.90	0	0	0
TITANIUM	337.30	-0.000250	0	0
VANADIUM	292.40	0	0	
ZINC	206.20	0	0	0
ZIRCONIUM	339.20	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2301609
Report generated: 02/08/2012 08:42

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12020091 **Date:** 12/29/2011
Insturment ID: ICP-THERMO2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	810.0
Antimony	10.00	90.0
Arsenic	10.00	90.0
Barium	10.00	81.0
Beryllium	15.00	4.5
Boron	10.00	81.0
Cadmium	10.00	16.2
Calcium	10.00	900.0
Chromium	10.00	45.0
Cobalt	10.00	9.0
Copper	10.00	180.0
Iron	5.00	900.0
Lead	10.00	180.0
Lithium	10.00	90.0
Magnesium	15.00	900.0
Manganese	15.00	180.0
Molybdenum	10.00	9.0
Nickel	10.00	90.0
Phosphorus	10.00	900.0
Potassium	10.00	315.0
Selenium	10.00	90.0
Silicon	10.00	90.0
Silver	5.00	9.0
Sodium	10.00	315.0
Strontium	10.00	4.5
Thallium	10.00	9.0
Tin	10.00	90.0
Titanium	15.00	90.0
Vanadium	10.00	90.0
Zinc	10.00	45.0
Zirconium	10.00	45.0

Comments:
All analytes passed acceptance criteria at the specified concentration.

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2301608
Report generated: 02/08/2012 08:42

2.1.1.3 Raw Data

Sample Name: S0 Acquired: 2/7/2012 8:41:42 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00135**	**.00112**	**-.00030**	**.00101**	**.01093**	**-.00187**	**-.00498**
Stddev	.00060	.00017	.00005	.00021	.00047	.00004	.00007
%RSD	44.515	14.684	15.361	20.471	4.3317	2.2070	1.3790
#1	-.00111	.00101	-.00028	.00107	.01091	-.00190	-.00501
#2	-.00091	.00105	-.00035	.00119	.01047	-.00182	-.00503
#3	-.00203	.00131	-.00026	.00078	.01142	-.00188	-.00491

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00019**	**.00002**	**.00246**	**.00093**	**.00015**	**.00320**	**.00038**
Stddev	.00006	.00009	.00017	.00002	.00004	.00045	.00094
%RSD	30.217	566.22	6.7844	2.1634	23.382	13.998	248.43
#1	.00023	.00010	.00264	.00093	.00011	.00343	.00079
#2	.00012	-.00007	.00243	.00092	.00016	.00350	.00104
#3	.00021	.00002	.00231	.00096	.00018	.00269	-.00070

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00008**	**.00030**	**.00004**	**-.01615**	**-.00074**	**.00023**	**-.00044**
Stddev	.00009	.00006	.00001	.00041	.00011	.00004	.00009
%RSD	117.81	20.242	24.255	2.5498	15.564	18.322	20.350
#1	.00001	.00038	.00004	-.01661	-.00084	.00022	-.00033
#2	-.00007	.00026	.00003	-.01583	-.00075	.00027	-.00050
#3	-.00017	.00028	.00004	-.01599	-.00061	.00019	-.00047

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00793**	**.00014**	**.00033**	**-.00002**	**-.00024**	**.00122**	**.00010**
Stddev	.00059	.00001	.00003	.00003	.00009	.00001	.00002
%RSD	7.3853	9.3736	9.5490	148.74	35.888	1.2156	20.596
#1	-.00851	.00015	.00035	-.00005	-.00031	.00123	.00010
#2	-.00734	.00015	.00030	-.00002	-.00014	.00120	.00008
#3	-.00795	.00013	.00035	.00001	-.00027	.00123	.00012

Approved: February 08, 2012

Erin D. Long

Sample Name: S0 Acquired: 2/7/2012 8:41:42 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00196	-.00127	-.00015	-.00143	.00154	-.00367
Stddev	.00033	.00017	.00001	.00023	.00005	.00028
%RSD	16.929	13.618	8.0988	16.188	3.2752	7.5838
#1	.00225	-.00140	-.00017	-.00164	.00153	-.00361
#2	.00160	-.00134	-.00015	-.00118	.00149	-.00343
#3	.00204	-.00107	-.00014	-.00146	.00159	-.00398

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22182.	18307.
Stddev	187.	167.
%RSD	.84313	.91146
#1	22040.	18454.
#2	22111.	18126.
#3	22394.	18342.

Approved: February 08, 2012

Sample Name: S1 Acquired: 2/7/2012 8:45:08 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00150**	**.00202**	**.02691**	**.00266**	**-.00125**	**.00051**	**.00102**
Stddev	.00087	.00016	.00041	.00029	.00013	.00002	.00008
%RSD	58.063	8.0201	1.5274	10.772	10.557	3.0854	7.6270
#1	.00067	.00188	.02683	.00234	-.00134	.00053	.00095
#2	.00142	.00199	.02736	.00289	-.00110	.00050	.00100
#3	.00241	.00220	.02655	.00274	-.00132	.00051	.00110

Elem	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00558**	**.00183**	**.00139**	**.01221**	**.00574**	**.00105**	**.00181**
Stddev	.00024	.00006	.00005	.00099	.00060	.00009	.00008
%RSD	4.2622	3.3857	3.2971	8.0830	10.412	8.8266	4.6312
#1	.00559	.00184	.00142	.01316	.00631	.00115	.00188
#2	.00581	.00177	.00134	.01119	.00580	.00104	.00183
#3	.00533	.00190	.00142	.01228	.00512	.00096	.00171

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Rb7800	S_1807
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00170**	**.01658**	**-.00008**	**.00020**	**.00002**	**-.00675**	**.00018**
Stddev	.00005	.00065	.00003	.00004	.00016	.00011	.00002
%RSD	3.0780	3.9446	41.436	20.187	730.60	1.5610	13.907
#1	.00176	.01686	-.00007	.00025	.00020	-.00670	.00020
#2	.00166	.01705	-.00011	.00020	-.00003	-.00688	.00017
#3	.00168	.01583	-.00005	.00017	-.00010	-.00669	.00016

Elem	S_1820	Sb2068	Si2124	Sn1899	Sr4077	Ti3372	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00029**	**.00043**	**.00305**	**.00130**	**.02893**	**.00052**	**.00973**
Stddev	.00002	.00001	.00005	.00002	.00012	.00030	.00044
%RSD	6.3627	2.9057	1.5556	1.6978	.41548	58.348	4.5329
#1	.00027	.00044	.00309	.00128	.02885	.00076	.00975
#2	.00028	.00042	.00306	.00132	.02886	.00018	.01016
#3	.00031	.00042	.00300	.00130	.02907	.00061	.00928

Approved: February 08, 2012

Erin D. Long

Sample Name: S1 Acquired: 2/7/2012 8:45:08 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Zn2062	Zr3391
Units	Cts/S	Cts/S
Avg	.00797	-.00354
Stddev	.00004	.00040
%RSD	.47264	11.153
#1	.00798	-.00311
#2	.00801	-.00389
#3	.00793	-.00363
Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22545.	19285.
Stddev	161.	156.
%RSD	.71417	.80648
#1	22723.	19177.
#2	22505.	19214.
#3	22408.	19463.

Approved: February 08, 2012

Sample Name: S2 Acquired: 2/7/2012 8:48:36 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00468**	**.00313**	**.00002**	**.00356**	**.04496**	**.00776**	**.00142**
Stddev	.00018	.00031	.00006	.00040	.00071	.00007	.00013
%RSD	3.9132	9.8412	258.83	11.244	1.5773	.96177	9.0574
#1	.00470	.00297	.00007	.00324	.04575	.00780	.00154
#2	.00449	.00349	.00004	.00401	.04438	.00780	.00128
#3	.00486	.00294	-.00004	.00343	.04475	.00767	.00144

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00087**	**.00213**	**.00862**	**.00289**	**.00265**	**.02197**	**.01017**
Stddev	.00006	.00011	.00029	.00005	.00010	.00111	.00200
%RSD	7.0855	5.2195	3.3311	1.6847	3.8881	5.0632	19.628
#1	.00082	.00226	.00864	.00284	.00274	.02069	.00803
#2	.00094	.00210	.00833	.00287	.00267	.02251	.01198
#3	.00084	.00204	.00890	.00294	.00253	.02270	.01051

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00197**	**.00331**	**.00343**	**.04799**	**.00055**	**.00014**	**.00043**
Stddev	.00006	.00004	.00001	.00083	.00005	.00005	.00011
%RSD	3.1697	1.2608	.31170	1.7265	8.9902	38.000	25.758
#1	.00197	.00326	.00344	.04706	.00061	.00019	.00051
#2	.00190	.00332	.00343	.04863	.00052	.00013	.00048
#3	.00202	.00334	.00342	.04829	.00053	.00009	.00031

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00675**	**.00028**	**.00030**	**.00089**	**-.00007**	**.00500**	**.00258**
Stddev	.00097	.00002	.00004	.00001	.00001	.00003	.00004
%RSD	14.351	8.1234	12.232	1.2334	18.110	.67482	1.3590
#1	-.00777	.00028	.00033	.00091	-.00005	.00496	.00262
#2	-.00663	.00030	.00026	.00088	-.00008	.00500	.00255
#3	-.00585	.00026	.00029	.00090	-.00007	.00503	.00258

Approved: February 08, 2012

Sample Name: S2 Acquired: 2/7/2012 8:48:36 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.05712	.00267	.00017	.02143	.01478	-.00383
Stddev	.00007	.00026	.00001	.00015	.00012	.00052
%RSD	.11543	9.7205	7.2915	.71515	.84194	13.477
#1	.05719	.00288	.00016	.02160	.01473	-.00426
#2	.05709	.00238	.00018	.02130	.01468	-.00326
#3	.05707	.00275	.00017	.02139	.01492	-.00397

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21627.	18374.
Stddev	73.	55.
%RSD	.33591	.29805
#1	21602.	18407.
#2	21709.	18311.
#3	21571.	18405.

Approved: February 08, 2012

Sample Name: S3 Acquired: 2/7/2012 8:52:02 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.29160	.09348	.01469	.13386	1.6824	.48426	.29983
Stddev	.00152	.00025	.00012	.00042	.0022	.00497	.00049
%RSD	.52135	.26781	.80598	.31517	.12943	1.0272	.16447
#1	.29308	.09344	.01482	.13367	1.6823	.48933	.29982
#2	.29167	.09375	.01467	.13434	1.6803	.48406	.30033
#3	.29004	.09325	.01458	.13357	1.6846	.47938	.29935

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03910	.09618	.30332	.08697	.11750	.98064	.40563
Stddev	.00012	.00029	.00247	.00035	.00038	.00359	.00206
%RSD	.31709	.29687	.81517	.39834	.32033	.36630	.50896
#1	.03923	.09644	.30506	.08736	.11721	.98416	.40782
#2	.03910	.09623	.30440	.08683	.11738	.98077	.40371
#3	.03898	.09588	.30049	.08671	.11793	.97698	.40537

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.08964	.14986	.17040	3.1779	.06143	.00019	.03937
Stddev	.00027	.00072	.00024	.0207	.00018	.00002	.00021
%RSD	.29787	.48084	.13998	.65061	.28707	11.965	.52251
#1	.08994	.15013	.17047	3.1965	.06163	.00018	.03954
#2	.08956	.15040	.17060	3.1815	.06136	.00016	.03942
#3	.08942	.14904	.17014	3.1556	.06129	.00021	.03914

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00676	.00666	.00020	.04325	.00805	.18524	.11990
Stddev	.00034	.00001	.00004	.00018	.00005	.00067	.00059
%RSD	5.0084	.16108	22.069	.40521	.58396	.36102	.49438
#1	-.00712	.00666	.00018	.04345	.00809	.18598	.12024
#2	-.00645	.00665	.00017	.04320	.00800	.18506	.12025
#3	-.00670	.00667	.00025	.04311	.00806	.18467	.11921

Approved: February 08, 2012

Sample Name: S3 Acquired: 2/7/2012 8:52:02 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.6701**	**.19481**	**.01433**	**1.1196**	**.63700**	**-.00036**
Stddev	.0153	.00050	.00007	.0056	.00104	.00024
%RSD	.57166	.25743	.47986	.50084	.16351	65.240
#1	2.6816	.19537	.01441	1.1239	.63809	-.00009
#2	2.6759	.19466	.01431	1.1216	.63687	-.00051
#3	2.6528	.19440	.01427	1.1133	.63602	-.00049

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21579.**	**18828.**
Stddev	56.	260.
%RSD	.26084	1.3804
#1	21581.	18533.
#2	21521.	19024.
#3	21634.	18927.

Approved: February 08, 2012

Erin D. Long

Sample Name: S4 Acquired: 2/7/2012 8:55:17 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.58310**	**.18524**	**.02979**	**.26787**	**3.3635**	**.97833**	**.60320**
Stddev	.00082	.00048	.00008	.00081	.0053	.00171	.00073
%RSD	.14133	.25810	.27037	.30086	.15689	.17486	.12142
#1	.58259	.18534	.02972	.26712	3.3645	.97804	.60383
#2	.58405	.18473	.02978	.26873	3.3682	.98016	.60337
#3	.58266	.18567	.02988	.26777	3.3578	.97678	.60239

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.07807**	**.19099**	**.60415**	**.17199**	**.23403**	**1.9555**	**.80774**
Stddev	.00018	.00047	.00090	.00084	.00013	.0032	.00110
%RSD	.22546	.24386	.14919	.48801	.05610	.16523	.13649
#1	.07787	.19051	.60376	.17115	.23411	1.9586	.80847
#2	.07817	.19102	.60350	.17199	.23388	1.9558	.80828
#3	.07818	.19144	.60518	.17283	.23409	1.9522	.80647

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.17782**	**.29667**	**.33986**	**6.3143**	**.12283**	**.00032**	**.07810**
Stddev	.00068	.00167	.00042	.0260	.00016	.00011	.00016
%RSD	.38174	.56350	.12216	.41106	.13281	35.126	.20431
#1	.17807	.29860	.33976	6.3442	.12264	.00026	.07809
#2	.17833	.29562	.33950	6.2980	.12290	.00025	.07794
#3	.17705	.29579	.34031	6.3006	.12294	.00045	.07826

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00800**	**.01285**	**.00017**	**.08605**	**.01631**	**.36670**	**.23739**
Stddev	.00049	.00004	.00002	.00018	.00015	.00094	.00045
%RSD	6.1486	.30965	9.4306	.21054	.92120	.25571	.18789
#1	-.00756	.01282	.00017	.08584	.01616	.36587	.23688
#2	-.00791	.01290	.00018	.08613	.01629	.36650	.23759
#3	-.00853	.01284	.00015	.08617	.01646	.36772	.23770

Approved: February 08, 2012

Erin D. Long

Sample Name: S4 Acquired: 2/7/2012 8:55:17 Type: Cal
Method: ICP-THERMO2_6010_200.7(v1729) Mode: IR Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.3280**	**.38800**	**.02815**	**2.2510**	**1.2699**	**.00105**
Stddev	.0215	.00111	.00003	.0054	.0020	.00055
%RSD	.40329	.28501	.09262	.24119	.15937	52.669
#1	5.3527	.38926	.02812	2.2454	1.2679	.00110
#2	5.3144	.38756	.02816	2.2562	1.2699	.00047
#3	5.3168	.38718	.02816	2.2513	1.2720	.00157

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20509.**	**18248.**
Stddev	65.	51.
%RSD	.31772	.27697
#1	20561.	18292.
#2	20436.	18193.
#3	20530.	18260.

Approved: February 08, 2012

Sample Name: ICV Acquired: 2/7/2012 8:58:36 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40067	10.060	.40140	.50492	1.0117	.05012	9.9338
Stddev	.00499	.019	.00199	.00663	.0021	.00040	.0403
%RSD	1.2463	.18447	.49456	1.3133	.20523	.79874	.40546
#1	.40627	10.049	.40365	.51200	1.0141	.05047	9.9783
#2	.39667	10.050	.39991	.49885	1.0107	.04968	9.8999
#3	.39906	10.081	.40064	.50392	1.0103	.05021	9.9233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05040	.20278	.50616	.51295	4.0440	50.392	1.0054
Stddev	.00011	.00018	.00554	.00055	.0046	.173	.0034
%RSD	.20898	.08726	1.0950	.10628	.11267	.34358	.33752
#1	.05045	.20298	.51141	.51306	4.0468	50.590	1.0093
#2	.05028	.20266	.50036	.51236	4.0465	50.315	1.0030
#3	.05047	.20269	.50671	.51343	4.0388	50.270	1.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.020	.50494	.97674	50.263	.50738	F -19.211	.50934
Stddev	.023	.00326	.00053	.119	.00028	14.122	.00065
%RSD	.22805	.64537	.05377	.23738	.05421	73.512	.12801
#1	10.047	.50870	.97655	50.396	.50712	-24.148	.50865
#2	10.008	.50293	.97633	50.164	.50736	-3.2828	.50942
#3	10.006	.50320	.97733	50.230	.50767	-30.201	.50994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-5.0000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: ICV Acquired: 2/7/2012 8:58:36 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.5529	10.161	F 11.763	1.2153	.40245	5.0100	1.0374
Stddev	.6345	.017	.733	.0007	.00150	.0049	.0004
%RSD	11.426	.17148	6.2271	.05856	.37274	.09683	.03355
#1	5.4922	10.143	11.291	1.2159	.40294	5.0049	1.0375
#2	4.9510	10.177	12.607	1.2155	.40077	5.0106	1.0377
#3	6.2156	10.165	11.392	1.2145	.40365	5.0146	1.0370
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-5.0000%		5.0000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99884	1.0003	.51428	.99782	1.0164	F .61284
Stddev	.00172	.0012	.00203	.00956	.0013	.05598
%RSD	.17183	.11761	.39543	.95767	.13207	9.1347
#1	1.0007	1.0017	.51629	1.0071	1.0151	.66722
#2	.99732	.99939	.51433	.98797	1.0163	.55539
#3	.99850	.99998	.51223	.99842	1.0178	.61589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-5.0000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20644.	18117.
Stddev	122.	83.
%RSD	.59186	.45778
#1	20577.	18028.
#2	20785.	18130.
#3	20570.	18192.

Approved: February 08, 2012

Sample Name: ICB Acquired: 2/7/2012 9:01:50 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00020	-.02156	.00065	.00331	.00030	-.00003	-.00556
Stddev	.00035	.03153	.00162	.00116	.00037	.00002	.00431
%RSD	170.91	146.28	247.65	34.967	124.83	79.277	77.555
#1	.00016	.01327	.00184	.00406	.00049	-.00001	-.00240
#2	-.00053	-.02977	.00131	.00389	-.00013	-.00003	-.01047
#3	-.00024	-.04817	-.00119	.00198	.00053	-.00005	-.00381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00005	.00036	.00040	.00205	.09395	.00301
Stddev	.00015	.00011	.00035	.00027	.00775	.03212	.00044
%RSD	578.24	228.51	97.574	67.461	378.42	34.189	14.432
#1	-.00019	.00003	.00032	.00063	.00019	.13030	.00252
#2	.00000	.00016	.00003	.00048	.01056	.06940	.00334
#3	.00011	-.00005	.00072	.00010	-.00461	.08215	.00318
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00305	-.00017	.00048	-.02297	-.00077	F 11.896	-.00091
Stddev	.02589	.00009	.00019	.01624	.00038	2.718	.00057
%RSD	848.94	53.785	38.240	70.719	49.217	22.845	62.224
#1	-.00487	-.00006	.00035	-.00422	-.00034	10.252	-.00037
#2	.03197	-.00022	.00041	-.03203	-.00090	15.033	-.00151
#3	-.01795	-.00023	.00069	-.03266	-.00107	10.404	-.00086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						1.1000	
Low Limit						-1.0000	

Approved: February 08, 2012

Erin D. Long

Sample Name: ICB Acquired: 2/7/2012 9:01:50 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.8900	-.09107	F 4.2008	.00045	-.00115	.00174	.00066
Stddev	1.7525	.02263	.7547	.00188	.00091	.00046	.00019
%RSD	92.726	24.852	17.966	421.58	79.077	26.534	28.521
#1	-2.2365	-.11534	4.5249	-.00092	-.00018	.00132	.00088
#2	-3.4434	-.07054	4.7393	.00259	-.00129	.00166	.00054
#3	.00989	-.08734	3.3381	-.00033	-.00197	.00223	.00057
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	1.0400		1.0400				
Low Limit	-1.2000		-1.0400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	.00055	-.00010	-.00003	.00016	.00466
Stddev	.00006	.00225	.00044	.00008	.00007	.09135
%RSD	48.321	405.95	452.60	241.05	41.802	1960.0
#1	.00009	-.00193	-.00057	-.00004	.00022	-.09941
#2	.00010	.00113	-.00002	.00005	.00016	.04180
#3	.00021	.00246	.00030	-.00011	.00009	.07158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21556.	17610.
Stddev	202.	99.
%RSD	.93837	.56201
#1	21777.	17724.
#2	21380.	17553.
#3	21512.	17552.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 9:05:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01026	-.01467	.00173	.00128	.01080	.00193	.01792
Stddev	.00053	.01175	.00083	.00061	.00014	.00006	.00362
%RSD	5.1866	80.103	47.828	48.019	1.2828	3.3653	20.173
#1	.00966	-.02395	.00222	.00175	.01068	.00186	.01379
#2	.01068	-.00146	.00220	.00058	.01095	.00194	.02051
#3	.01044	-.01862	.00078	.00151	.01077	.00198	.01948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00978	.02117	.02124	.02521	-.00026	.02797	.00078
Stddev	.00014	.00023	.00073	.00077	.00360	.04895	.00115
%RSD	1.4197	1.0655	3.4151	3.0437	1384.4	175.01	146.83
#1	.00981	.02129	.02069	.02607	-.00094	-.00536	.00207
#2	.00991	.02130	.02097	.02496	-.00347	.00510	-.00011
#3	.00964	.02091	.02206	.02460	.00363	.08417	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01613	.01131	.00006	.51706	.42538	5.2474	.00165
Stddev	.02272	.00038	.00031	.02980	.00122	35.431	.00091
%RSD	140.86	3.3266	492.26	5.7632	.28739	675.22	55.002
#1	.04204	.01164	-.00013	.54773	.42624	24.041	.00060
#2	-.00035	.01090	.00042	.51524	.42591	-35.621	.00216
#3	.00669	.01140	-.00010	.48822	.42398	27.322	.00218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 9:05:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.4172**	F **-.09578**	**2.8212**	**.00024**	**-.00138**	**-.00006**	**.00161**
Stddev	4.8412	.04866	2.5977	.00034	.00254	.00029	.00004
%RSD	57.515	50.802	92.078	143.24	183.61	501.89	2.5816
#1	2.9618	-.06019	4.2849	.00059	-.00196	.00006	.00159
#2	12.201	-.15122	4.3569	-.00009	.00139	-.00038	.00165
#3	10.088	-.07592	-.17809	.00021	-.00358	.00015	.00158
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000					
Low Limit		-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00141**	**-.00119**	**.01141**	**.02194**	**.11030**
Stddev	.00004	.00050	.00088	.00066	.00013	.06021
%RSD	57.117	35.670	74.334	5.7840	.60783	54.592
#1	.00009	-.00128	-.00048	.01065	.02179	.14707
#2	.00002	-.00197	-.00090	.01176	.02205	.14301
#3	.00008	-.00099	-.00218	.01182	.02197	.04081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22451.**	**18829.**
Stddev	335.	158.
%RSD	1.4902	.83647
#1	22796.	18986.
#2	22430.	18671.
#3	22128.	18829.

Approved: February 08, 2012

Erin D. Long

Sample Name: ICSA Acquired: 2/7/2012 9:08:42 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00082	252.24	-.00344	.05797	.00041	-.00001	250.19
Stddev	.00039	1.08	.00141	.00082	.00018	.00002	.54
%RSD	47.159	.42645	40.897	1.4084	44.403	282.23	.21544
#1	-.00093	251.02	-.00278	.05789	.00055	.00000	249.61
#2	-.00114	253.04	-.00248	.05719	.00020	-.00003	250.67
#3	-.00039	252.66	-.00505	.05882	.00047	.00001	250.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	-.00012	.00054	-.00001	98.392	.03043	.01480
Stddev	.00010	.00030	.00074	.00025	.250	.02425	.00101
%RSD	468.78	248.43	136.36	1732.4	.25448	79.713	6.8525
#1	-.00007	-.00046	.00087	-.00030	98.258	.04884	.01503
#2	.00013	-.00003	.00106	.00014	98.681	.00294	.01568
#3	.00000	.00012	-.00031	.00012	98.238	.03950	.01369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	247.02	-.00039	-.00034	.03900	-.00060	F 834.90	-.00219
Stddev	.38	.00018	.00035	.01308	.00036	53.98	.00099
%RSD	.15255	46.449	103.73	33.531	59.777	6.4653	45.084
#1	246.95	-.00020	-.00037	.05015	-.00063	825.38	-.00112
#2	247.43	-.00055	.00003	.02461	-.00095	786.31	-.00240
#3	246.68	-.00041	-.00068	.04224	-.00023	893.00	-.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.50000	
Low Limit						-.50000	

Approved: February 08, 2012

Erin D. Long

Sample Name: ICSA Acquired: 2/7/2012 9:08:42 Type: QC
Method: ICP-THERMO2_6010_200.7(v1729) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.927	F 237.24	F 27.689	-.00390	-.00295	.22944	.00094
Stddev	2.173	.31	.438	.00104	.00321	.00039	.00027
%RSD	16.808	.13028	1.5824	26.747	108.86	.16858	28.481
#1	14.275	237.55	28.190	-.00311	.00075	.22911	.00073
#2	14.086	237.23	27.501	-.00508	-.00460	.22986	.00084
#3	10.421	236.93	27.377	-.00351	-.00499	.22935	.00124
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.04000	.04000	.04000				
Low Limit	-.04000	-.04000	-.04000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00385	-.00744	.00269	-.00087	-.00139	F -3.6199
Stddev	.00009	.00106	.00109	.00009	.00007	.1209
%RSD	2.3283	14.200	40.461	10.950	5.0266	3.3407
#1	.00375	-.00668	.00224	-.00089	-.00134	-3.6506
#2	.00393	-.00865	.00394	-.00094	-.00147	-3.4866
#3	.00385	-.00700	.00190	-.00076	-.00137	-3.7226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20572.	18414.
Stddev	78.	164.
%RSD	.38034	.89204
#1	20495.	18421.
#2	20652.	18246.
#3	20568.	18574.

Approved: February 08, 2012

Sample Name: ICSAB Acquired: 2/7/2012 9:26:47 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50658	250.95	.24341	.03622	.24612	.25469	247.59
Stddev	.00896	1.67	.00357	.00039	.00131	.00451	1.58
%RSD	1.7687	.66488	1.4666	1.0769	.53366	1.7690	.63652
#1	.51200	249.07	.23993	.03654	.24461	.25713	245.83
#2	.51149	251.52	.24706	.03633	.24676	.25745	248.10
#3	.49623	252.25	.24324	.03579	.24700	.24949	248.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.45193	.23729	.25468	.24410	97.242	5.0790	.00944
Stddev	.00264	.00116	.00509	.00271	.506	.0484	.00289
%RSD	.58448	.48869	2.0004	1.1115	.52051	.95327	30.561
#1	.45282	.23771	.25819	.24485	96.686	5.1305	.00687
#2	.45402	.23817	.25701	.24635	97.365	5.0344	.00889
#3	.44896	.23597	.24883	.24108	97.676	5.0720	.01256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	242.95	.23799	-.00062	5.1172	.48245	F 748.96	.48253
Stddev	1.37	.00186	.00004	.0342	.00218	33.12	.00191
%RSD	.56441	.78010	6.7856	.66904	.45223	4.4220	.39682
#1	241.45	.23584	-.00062	5.0827	.48341	773.37	.48385
#2	243.24	.23899	-.00058	5.1176	.48399	711.26	.48340
#3	244.14	.23913	-.00067	5.1512	.47995	762.25	.48033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.50000	
Low Limit						-.50000	

Approved: February 08, 2012

Erin D. Long

Sample Name: ICSAB Acquired: 2/7/2012 9:26:47 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.441	F 237.58	F 25.088	.48377	.24061	.01015	.00051
Stddev	10.960	1.15	2.095	.00294	.00365	.00288	.00038
%RSD	62.839	.48274	8.3485	.60776	1.5163	28.373	73.358
#1	18.373	238.32	22.733	.48640	.23782	.01255	.00030
#2	6.0452	238.17	25.788	.48060	.24474	.00696	.00029
#3	27.905	236.26	26.743	.48431	.23926	.01094	.00095
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.60000	.60000	.60000				
Low Limit	.40000	.40000	.40000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00301	-.00640	.45734	.25123	.49289	F -3.5861
Stddev	.00006	.00077	.00311	.00388	.00283	.1559
%RSD	2.1283	12.012	.68074	1.5428	.57372	4.3475
#1	.00307	-.00722	.45750	.25368	.49433	-3.4795
#2	.00300	-.00569	.46037	.25326	.49472	-3.7650
#3	.00295	-.00629	.45415	.24676	.48964	-3.5137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20158.	19388.
Stddev	185.	160.
%RSD	.91988	.82526
#1	20198.	19518.
#2	19956.	19435.
#3	20321.	19209.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 9:29:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00036	-.00392	.00068	-.00063	-.00010	-.00002	.02902
Stddev	.00061	.01628	.00069	.00054	.00039	.00002	.01794
%RSD	168.08	415.66	102.45	85.557	380.77	112.70	61.830
#1	.00009	-.01612	.00121	-.00125	.00029	-.00001	.02538
#2	-.00106	-.01020	-.00011	-.00024	-.00010	-.00001	.01318
#3	-.00012	.01457	.00092	-.00041	-.00049	-.00005	.04850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	-.00003	.00036	.00050	.01500	-.03765	.00354
Stddev	.00013	.00020	.00022	.00047	.00985	.04904	.00100
%RSD	339.61	770.76	60.456	93.308	65.688	130.24	28.361
#1	.00011	.00021	.00059	.00029	.00382	-.08810	.00331
#2	-.00012	-.00017	.00017	.00104	.01874	.00983	.00266
#3	-.00011	-.00012	.00031	.00018	.02243	-.03468	.00463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02251	-.00073	-.00011	-.01433	.04155	33.892	-.00014
Stddev	.00530	.00020	.00015	.03048	.00065	8.831	.00154
%RSD	23.549	27.865	142.33	212.68	1.5645	26.057	1070.3
#1	.01640	-.00079	-.00021	-.04067	.04190	27.427	-.00111
#2	.02518	-.00050	.00007	-.02137	.04195	30.295	-.00094
#3	.02593	-.00089	-.00019	.01905	.04080	43.953	.00163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 9:29:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5178**	F **-.13497**	**4.0317**	**.00235**	**-.00211**	**.00096**	**.00020**
Stddev	8.6830	.03973	2.2185	.00058	.00225	.00024	.00035
%RSD	192.20	29.436	55.026	24.797	106.25	24.754	177.56
#1	1.1007	-.09932	2.0382	.00291	.00044	.00081	-.00021
#2	14.389	-.17780	3.6352	.00174	-.00379	.00084	.00037
#3	-1.9369	-.12779	6.4217	.00239	-.00299	.00124	.00043
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000					
Low Limit		-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**-.00083**	**-.00034**	**.00006**	**.00015**	F **-.20911**
Stddev	.00016	.00109	.00092	.00004	.00014	.07637
%RSD	896.73	131.48	272.33	67.955	89.407	36.523
#1	.00020	-.00196	.00001	.00001	.00003	-.27964
#2	-.00002	-.00074	.00036	.00009	.00030	-.21969
#3	-.00012	.00022	-.00139	.00007	.00013	-.12800
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21424.**	**18185.**
Stddev	24.	124.
%RSD	.11031	.68032
#1	21444.	18116.
#2	21429.	18328.
#3	21398.	18110.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 9:33:27 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39653	9.9820	.40321	.49261	.99278	.04912	9.9872
Stddev	.00454	.0255	.00394	.00591	.00453	.00057	.0554
%RSD	1.1460	.25549	.97613	1.2002	.45585	1.1620	.55497
#1	.39850	9.9924	.39996	.49657	.98939	.04905	9.9420
#2	.39975	9.9529	.40759	.49545	.99792	.04973	10.049
#3	.39133	10.001	.40209	.48582	.99103	.04860	9.9705
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04994	.20158	.49827	.50335	3.9838	49.798	.98739
Stddev	.00029	.00106	.00684	.00375	.0118	.148	.00593
%RSD	.57791	.52378	1.3719	.74569	.29601	.29704	.60018
#1	.04966	.20057	.49926	.49979	3.9723	49.659	.98692
#2	.05024	.20268	.50455	.50727	3.9959	49.953	.99353
#3	.04990	.20150	.49099	.50298	3.9832	49.781	.98171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9595	.49665	.99504	49.923	.50394	F 4.3908	.50842
Stddev	.0669	.00147	.00202	.153	.00186	22.086	.00598
%RSD	.67170	.29554	.20326	.30709	.36887	503.00	1.1756
#1	9.8910	.49539	.99307	49.840	.50188	5.4292	.50152
#2	10.025	.49826	.99711	50.100	.50550	-18.196	.51199
#3	9.9627	.49628	.99493	49.829	.50444	25.939	.51176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 9:33:27 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.5682	10.144	F 11.240	1.2010	.39894	4.9880	1.0082
Stddev	7.0438	.030	1.589	.0091	.00446	.0268	.0037
%RSD	93.070	.29107	14.136	.75899	1.1172	.53725	.37118
#1	15.632	10.114	9.5638	1.1904	.39448	4.9573	1.0041
#2	4.4580	10.173	11.433	1.2064	.40340	5.0067	1.0115
#3	2.6149	10.146	12.724	1.2060	.39894	5.0000	1.0089
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99277	.98347	.50870	.98855	1.0057	F .88041
Stddev	.00365	.00444	.00151	.01232	.0046	.20705
%RSD	.36717	.45170	.29717	1.2465	.45638	23.518
#1	.99044	.98271	.50810	.98929	1.0015	.86926
#2	.99697	.98825	.51042	1.0005	1.0106	.67916
#3	.99090	.97946	.50758	.97587	1.0051	1.0928
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21131.	18701.
Stddev	252.	329.
%RSD	1.1926	1.7573
#1	21212.	18993.
#2	20848.	18765.
#3	21332.	18345.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 9:36:44 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**-.04217**	**.00048**	**.00075**	**.00010**	**-.00004**	**-.00716**
Stddev	.00044	.03138	.00272	.00034	.00027	.00002	.00635
%RSD	188.12	74.420	568.11	45.450	268.33	61.439	88.670
#1	-.00066	-.01477	-.00214	.00062	-.00021	-.00002	-.01436
#2	-.00028	-.07640	.00029	.00050	.00026	-.00006	-.00238
#3	.00023	-.03533	.00328	.00114	.00025	-.00003	-.00473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00020**	**-.00038**	**.00069**	**.00193**	**-.00626**	**-.00066**
Stddev	.00007	.00025	.00011	.00086	.00499	.02986	.00038
%RSD	370.12	130.53	28.375	125.26	258.92	476.80	58.723
#1	-.00009	.00047	-.00037	.00083	.00500	-.04020	-.00057
#2	.00003	-.00004	-.00049	.00147	-.00383	.00543	-.00032
#3	.00001	.00016	-.00028	-.00024	.00460	.01598	-.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00155**	**-.00022**	**.00069**	**.00198**	**-.00079**	F **10.325**	**-.00117**
Stddev	.01083	.00002	.00013	.01866	.00080	49.824	.00039
%RSD	699.09	9.7780	18.607	942.73	101.86	482.55	33.161
#1	.01355	-.00023	.00078	-.01641	-.00166	-41.213	-.00137
#2	-.00749	-.00020	.00075	.00145	-.00064	58.237	-.00141
#3	-.00142	-.00024	.00054	.02090	-.00007	13.952	-.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						1.0000	
Low Limit						-1.1000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 9:36:44 Type: QC
Method: ICP-THERMO2_6010_200.7(v1730) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.680	-.13310	F 6.3865	.00125	-.00341	.00205	.00034
Stddev	8.718	.03928	4.1589	.00033	.00314	.00208	.00034
%RSD	81.629	29.512	65.120	26.539	91.952	101.43	99.416
#1	20.370	-.08792	4.5450	.00092	-.00383	.00445	.00073
#2	8.1983	-.15225	11.148	.00158	-.00632	.00082	.00024
#3	3.4722	-.15914	3.4663	.00124	-.00009	.00088	.00007
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	1.0000		1.0000				
Low Limit	-1.0000		-1.0000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.00020	.00020	-.00003	.00006	F -.12507
Stddev	.00009	.00058	.00117	.00007	.00008	.10574
%RSD	119.09	289.25	592.72	215.19	129.90	84.546
#1	.00002	.00082	.00115	-.00009	-.00003	-.23349
#2	.00019	.00011	-.00111	-.00004	.00013	-.11949
#3	.00003	-.00033	.00056	.00004	.00009	-.02223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21733.	18098.
Stddev	436.	73.
%RSD	2.0057	.40157
#1	21256.	18035.
#2	21831.	18178.
#3	22111.	18081.

Approved: February 08, 2012

Sample Name: PBW AC Acquired: 2/7/2012 10:20:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00038	-.01244	.00054	.00003	-.00026	-.00003	.00844
Stddev	.00010	.02210	.00221	.00095	.00033	.00002	.00829
%RSD	25.560	177.70	410.15	3694.4	125.36	76.103	98.288
#1	-.00027	.01173	.00223	-.00089	-.00049	-.00001	.01786
#2	-.00043	-.01741	-.00196	.00100	.00011	-.00006	.00523
#3	-.00044	-.03162	.00135	-.00003	-.00041	-.00002	.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	.00003	.00092	.00077	.00909	.10990	-.00292
Stddev	.00009	.00008	.00009	.00054	.00286	.02394	.00166
%RSD	147.64	302.60	9.6065	69.641	31.454	21.780	56.603
#1	.00015	.00008	.00088	.00128	.00781	.12714	-.00389
#2	-.00002	-.00007	.00086	.00083	.00710	.08257	-.00101
#3	.00005	.00007	.00102	.00021	.01236	.11999	-.00387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01734	-.00022	.00003	.00400	.00147	19.650	.00028
Stddev	.01581	.00073	.00017	.00951	.00074	13.760	.00061
%RSD	91.143	330.66	557.99	237.76	50.331	70.022	214.19
#1	.03194	.00036	.00002	.00932	.00121	31.786	.00094
#2	.01954	-.00104	-.00013	-.00698	.00089	4.7016	-.00026
#3	.00055	.00002	.00021	.00965	.00230	22.464	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW AC Acquired: 2/7/2012 10:20:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.668	F -.20833	5.3588	.00096	-.00264	.00810	-.00001
Stddev	4.655	.01188	1.9986	.00125	.00160	.00078	.00019
%RSD	36.745	5.7018	37.295	130.99	60.619	9.6253	2065.5
#1	7.4625	-.20436	7.2265	.00131	-.00083	.00861	.00012
#2	16.430	-.19894	5.5988	-.00044	-.00324	.00848	-.00023
#3	14.111	-.22168	3.2511	.00199	-.00386	.00720	.00008
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.00093	.00045	.00042	.00155	.07180
Stddev	.00007	.00114	.00124	.00009	.00034	.10484
%RSD	46.908	121.99	275.82	20.296	21.756	146.02
#1	.00024	.00025	.00042	.00032	.00124	.07645
#2	.00010	.00030	.00171	.00047	.00151	-.03529
#3	.00012	.00225	-.00078	.00047	.00191	.17424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22400.	18860.
Stddev	99.	188.
%RSD	.44233	.99711
#1	22513.	19014.
#2	22362.	18651.
#3	22326.	18915.

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW AC Acquired: 2/7/2012 10:23:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20163	4.9386	.19341	.98120	.48625	.02421	4.8636
Stddev	.00378	.0469	.00055	.01718	.00673	.00044	.0545
%RSD	1.8736	.94917	.28614	1.7509	1.3832	1.8107	1.1208
#1	.19964	4.9162	.19336	.97366	.47989	.02405	4.8067
#2	.19927	4.9072	.19399	.96907	.48558	.02388	4.8686
#3	.20599	4.9925	.19288	1.0009	.49329	.02471	4.9154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02397	.09784	.24997	.24272	1.9363	24.226	.48158
Stddev	.00006	.00020	.00464	.00069	.0228	.231	.00599
%RSD	.24926	.20817	1.8542	.28413	1.1771	.95449	1.2437
#1	.02392	.09761	.24832	.24250	1.9154	24.040	.47584
#2	.02403	.09800	.24639	.24218	1.9330	24.152	.48113
#3	.02394	.09790	.25521	.24350	1.9606	24.485	.48779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.9233	.24158	.49611	24.884	.24859	2.4948	.24878
Stddev	.0429	.00348	.00092	.286	.00052	9.0859	.00099
%RSD	.87045	1.4384	.18468	1.1488	.20877	364.19	.39956
#1	4.8799	.23922	.49510	24.642	.24853	-2.9306	.24962
#2	4.9245	.23996	.49635	24.811	.24810	-2.5691	.24906
#3	4.9656	.24557	.49689	25.199	.24914	12.984	.24768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW AC Acquired: 2/7/2012 10:23:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 18.936	5.0446	4.2211	.58226	.19191	2.5239	.51633
Stddev	3.054	.0699	1.0890	.00176	.00186	.0075	.00057
%RSD	16.130	1.3864	25.800	.30223	.96915	.29714	.11127
#1	21.917	5.0356	4.0774	.58214	.19238	2.5153	.51685
#2	15.813	4.9796	5.3748	.58407	.18985	2.5274	.51571
#3	19.078	5.1186	3.2111	.58056	.19348	2.5291	.51641
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48104	.47477	.25235	.48642	.49544	.50197
Stddev	.00704	.00702	.00105	.00737	.00073	.03079
%RSD	1.4634	1.4790	.41756	1.5150	.14645	6.1345
#1	.47476	.46768	.25174	.48393	.49511	.48772
#2	.47973	.47490	.25175	.48061	.49493	.48088
#3	.48865	.48173	.25357	.49471	.49627	.53730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22183.	19329.
Stddev	125.	301.
%RSD	.56292	1.5549
#1	22272.	19060.
#2	22237.	19275.
#3	22040.	19653.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201051509 Acquired: 2/7/2012 10:27:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00070	-.01106	-.00240	.00323	-.00015	-.00003	.01609
Stddev	.00056	.03196	.00060	.00086	.00009	.00001	.00459
%RSD	78.872	289.00	25.152	26.771	62.506	26.079	28.533
#1	-.00111	-.04404	-.00233	.00364	-.00011	-.00004	.01980
#2	-.00007	.01976	-.00303	.00380	-.00009	-.00004	.01752
#3	-.00094	-.00889	-.00183	.00223	-.00026	-.00002	.01096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	-.00039	.00122	.00054	.03834	.00821	-.00281
Stddev	.00003	.00027	.00002	.00047	.00368	.01958	.00224
%RSD	26.705	68.225	1.3146	87.703	9.6044	238.39	79.686
#1	.00010	-.00009	.00121	.00063	.03408	.02996	-.00374
#2	.00014	-.00058	.00124	.00095	.04049	-.00801	-.00444
#3	.00008	-.00051	.00121	.00003	.04043	.00269	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02409	-.00007	.00083	73.896	-.00127	F -9.0696	.00068
Stddev	.02202	.00060	.00007	.176	.00006	17.035	.00145
%RSD	91.401	915.20	8.0279	.23787	4.9149	187.83	213.86
#1	.04296	-.00043	.00082	73.858	-.00129	-28.179	.00040
#2	-.00010	-.00040	.00090	73.742	-.00120	4.5250	-.00061
#3	.02940	.00063	.00077	74.087	-.00132	-3.5547	.00225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201051509 Acquired: 2/7/2012 10:27:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.229	F -.16870	.93894	.00266	-.00174	44.544	.00313
Stddev	1.308	.06572	2.2448	.00019	.00214	.184	.00031
%RSD	12.783	38.956	239.08	7.2608	122.58	.41243	9.9549
#1	8.7889	-.22007	-1.3530	.00259	.00024	44.337	.00300
#2	11.341	-.09464	1.0362	.00251	-.00401	44.607	.00290
#3	10.558	-.19138	3.1335	.00288	-.00146	44.688	.00348
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	.00414	.00087	.00025	.00004	.10031
Stddev	.00016	.00063	.00060	.00011	.00011	.13005
%RSD	123.49	15.231	69.326	44.117	266.23	129.65
#1	.00012	.00436	.00156	.00038	.00000	.14045
#2	-.00002	.00463	.00052	.00019	.00017	-.04507
#3	.00030	.00343	.00052	.00019	-.00005	.20556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22213.	18771.
Stddev	413.	239.
%RSD	1.8588	1.2711
#1	21737.	19016.
#2	22450.	18758.
#3	22453.	18539.

Approved: February 08, 2012

Sample Name: L1201051509SDL Acquired: 2/7/2012 10:30:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388487-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.01816	-.00012	.00155	-.00100	-.00003	.01704
Stddev	.00025	.00581	.00035	.00158	.00005	.00002	.01368
%RSD	111.21	31.980	294.19	102.00	5.1780	70.989	80.289
#1	-.00010	-.01268	-.00023	.00330	-.00096	-.00001	.00229
#2	-.00007	-.01755	-.00040	.00024	-.00098	-.00003	.01951
#3	-.00052	-.02424	.00027	.00110	-.00106	-.00005	.02932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.00001	.00035	.00034	.00109	-.05028	.00194
Stddev	.00013	.00014	.00038	.00056	.00560	.03320	.00381
%RSD	291.74	1107.6	108.65	161.43	512.34	66.021	196.95
#1	-.00001	-.00017	.00040	-.00012	-.00163	-.06027	.00431
#2	-.00005	.00009	.00070	.00019	.00754	-.01324	-.00246
#3	.00020	.00005	-.00005	.00096	-.00262	-.07733	.00396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01340	-.00006	-.00010	15.051	-.00037	F -4.8731	-.00033
Stddev	.01343	.00028	.00017	.146	.00040	17.048	.00105
%RSD	100.22	457.80	174.56	.96681	109.60	349.83	314.33
#1	.02061	.00023	-.00017	15.217	-.00043	-24.350	-.00120
#2	.02169	-.00008	.00010	14.991	.00006	7.3386	-.00064
#3	-.00210	-.00033	-.00023	14.945	-.00073	2.3919	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201051509SDL Acquired: 2/7/2012 10:30:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388487-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.822	F -.14880	8.7178	.00247	.00023	8.9392	.00096
Stddev	5.076	.02094	2.5200	.00090	.00095	.0405	.00006
%RSD	46.904	14.070	28.906	36.545	422.00	.45266	6.4326
#1	5.2669	-.14265	9.9055	.00285	-.00076	8.9813	.00094
#2	11.980	-.17212	10.424	.00312	.00029	8.9357	.00092
#3	15.218	-.13163	5.8234	.00144	.00115	8.9006	.00103
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.00071	.00058	.00004	-.00066	F -.16892
Stddev	.00008	.00200	.00026	.00032	.00003	.05495
%RSD	71.360	279.29	44.407	843.06	3.7954	32.529
#1	.00020	-.00021	.00077	-.00008	-.00067	-.22507
#2	.00005	-.00065	.00029	.00039	-.00068	-.11525
#3	.00009	.00301	.00069	-.00021	-.00063	-.16645
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21879.	19810.
Stddev	247.	219.
%RSD	1.1309	1.1076
#1	21867.	19568.
#2	22132.	19995.
#3	21637.	19868.

Approved: February 08, 2012

Sample Name: L1201051509SDL Acquired: 2/7/2012 10:34:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG388487-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	-.01337	-.00093	.00119	.00014	-.00004	-.00572
Stddev	.00036	.01426	.00149	.00130	.00022	.00003	.01311
%RSD	127.27	106.70	159.81	108.86	150.43	86.761	229.05
#1	-.00036	-.01992	-.00057	.00221	.00031	-.00006	.00003
#2	-.00060	-.02317	-.00258	.00163	.00022	-.00005	-.02073
#3	.00011	.00299	.00034	-.00027	-.00010	.00000	.00353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	-.00010	-.00003	.00034	-.00239	.00679	-.00214
Stddev	.00020	.00017	.00051	.00027	.00214	.03223	.00214
%RSD	17044.	175.06	1508.3	80.952	89.578	475.03	100.10
#1	-.00004	-.00010	.00006	.00005	-.00116	.02666	.00029
#2	-.00018	.00008	-.00058	.00059	-.00115	-.03040	-.00377
#3	.00022	-.00026	.00042	.00037	-.00485	.02410	-.00294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00631	-.00062	-.00028	3.8354	-.00098	F -5.0556	-.00195
Stddev	.00289	.00078	.00005	.0107	.00036	27.843	.00081
%RSD	45.748	124.59	16.800	.27840	36.430	550.74	41.351
#1	.00964	-.00002	-.00030	3.8461	-.00073	-1.6589	-.00248
#2	.00454	-.00150	-.00030	3.8248	-.00139	20.933	-.00102
#3	.00475	-.00034	-.00022	3.8353	-.00082	-34.441	-.00236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201051509SDL Acquired: 2/7/2012 10:34:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG388487-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.4300**	F **-.20778**	**8.9066**	**.00165**	**-.00119**	**2.2799**	**.00016**
Stddev	.6818	.04216	.4303	.00197	.00229	.0047	.00016
%RSD	12.555	20.292	4.8312	119.01	193.44	.20760	103.32
#1	4.7196	-.22810	8.8354	.00309	.00086	2.2799	.00010
#2	6.0789	-.23594	8.5163	.00245	-.00075	2.2847	.00034
#3	5.4914	-.15931	9.3681	-.00059	-.00367	2.2752	.00003
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000					
Low Limit		-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00054**	**-.00003**	**.00012**	**-.00077**	F **-.15476**
Stddev	.00007	.00038	.00047	.00025	.00003	.22831
%RSD	99.883	70.055	1371.8	209.34	4.4943	147.53
#1	.00014	-.00011	-.00017	.00036	-.00078	-.22671
#2	.00000	-.00071	.00049	.00013	-.00073	.10086
#3	.00008	-.00080	-.00042	-.00013	-.00079	-.33842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21310.**	**17715.**
Stddev	121.	163.
%RSD	.56910	.91806
#1	21436.	17553.
#2	21193.	17712.
#3	21302.	17879.

Approved: February 08, 2012

Sample Name: L1201076701 Acquired: 2/7/2012 10:37:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00030	.02041	.00243	.03078	.05948	-.00003	35.467
Stddev	.00028	.02765	.00111	.00151	.00015	.00002	.098
%RSD	92.809	135.49	45.698	4.8983	.24461	67.272	.27716
#1	.00001	.02445	.00192	.03089	.05939	-.00005	35.580
#2	-.00052	-.00904	.00166	.02922	.05940	-.00004	35.413
#3	-.00040	.04581	.00370	.03223	.05965	-.00001	35.407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00020	-.00014	.00580	.00141	.03196	2.2750	.01255
Stddev	.00002	.00011	.00042	.00039	.00359	.0271	.00146
%RSD	8.5465	78.486	7.2903	27.918	11.234	1.1923	11.621
#1	.00018	-.00016	.00627	.00152	.03556	2.3061	.01368
#2	.00020	-.00002	.00567	.00097	.02838	2.2564	.01090
#3	.00021	-.00023	.00546	.00174	.03193	2.2624	.01308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.3150	.00108	.00456	21.829	.00029	F -43.021	-.00023
Stddev	.0288	.00063	.00019	.088	.00027	11.686	.00027
%RSD	.54259	58.009	4.0836	.40494	90.866	27.164	115.12
#1	5.3161	.00156	.00436	21.931	-.00001	-39.725	-.00002
#2	5.3433	.00037	.00473	21.784	.00040	-56.001	-.00014
#3	5.2857	.00131	.00460	21.772	.00049	-33.336	-.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201076701 Acquired: 2/7/2012 10:37:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.6806	F 478.54	F -23339.	.00174	.00233	14.056	-.00032
Stddev	11.703	2.69	94.	.00194	.00141	.036	.00040
%RSD	152.37	.56305	.40109	111.62	60.602	.25486	125.32
#1	1.9910	475.62	-23236.	-.00041	.00395	14.015	-.00077
#2	-.08969	479.07	-23360.	.00337	.00157	14.070	-.00003
#3	21.140	480.93	-23420.	.00226	.00146	14.082	-.00015
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.35416	.00001	.00043	.00833	.02269	.09646
Stddev	.00098	.00252	.00134	.00024	.00011	.01747
%RSD	.27721	40883.	310.76	2.8756	.46362	18.113
#1	.35514	-.00254	.00037	.00837	.02275	.08902
#2	.35318	.00249	.00181	.00807	.02256	.08394
#3	.35416	.00006	-.00088	.00854	.02275	.11642
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21942.	18531.
Stddev	20.	224.
%RSD	.09089	1.2106
#1	21927.	18287.
#2	21965.	18728.
#3	21935.	18579.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201076702S Acquired: 2/7/2012 10:40:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20443	4.9970	.19650	1.0353	.54519	.02488	39.304
Stddev	.00391	.0320	.00180	.0172	.00257	.00041	.050
%RSD	1.9104	.63969	.91738	1.6651	.47222	1.6510	.12612
#1	.19995	4.9750	.19857	1.0160	.54813	.02441	39.272
#2	.20627	4.9824	.19567	1.0492	.54409	.02515	39.278
#3	.20708	5.0337	.19526	1.0407	.54334	.02508	39.361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02449	.09894	.25793	.24480	1.9555	26.802	.50122
Stddev	.00016	.00051	.00399	.00192	.0159	.044	.00052
%RSD	.63290	.51051	1.5467	.78596	.81359	.16559	.10411
#1	.02445	.09870	.25347	.24327	1.9716	26.752	.50092
#2	.02437	.09859	.26116	.24417	1.9551	26.837	.50182
#3	.02467	.09952	.25916	.24696	1.9398	26.816	.50092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.005	.24345	.50776	46.489	.24966	F -28.563	.24956
Stddev	.006	.00056	.00152	.166	.00111	19.786	.00188
%RSD	.06192	.22996	.29934	.35729	.44575	69.269	.75494
#1	10.004	.24280	.50838	46.301	.24898	-13.164	.24758
#2	10.012	.24374	.50603	46.550	.24906	-50.878	.24977
#3	9.9995	.24380	.50887	46.615	.25095	-21.648	.25133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201076702S Acquired: 2/7/2012 10:40:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-04

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.446	F 466.00	F -22503.	.58959	.19233	16.097	.52448
Stddev	4.283	1.70	44.	.00362	.00266	.014	.00204
%RSD	37.417	.36571	.19341	.61392	1.3809	.08448	.38842
#1	7.2906	466.58	-22549.	.59156	.19291	16.098	.52329
#2	15.846	464.08	-22463.	.58541	.18942	16.083	.52332
#3	11.202	467.34	-22497.	.59180	.19464	16.111	.52683
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.83807	.48157	.25195	.50738	.50930	.29544
Stddev	.00055	.00192	.00065	.00646	.00197	.10729
%RSD	.06513	.39920	.25972	1.2738	.38612	36.316
#1	.83744	.48083	.25125	.49993	.50703	.40894
#2	.83844	.48375	.25254	.51151	.51032	.19568
#3	.83832	.48012	.25208	.51070	.51055	.28170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20912.	18647.
Stddev	274.	82.
%RSD	1.3097	.43968
#1	21227.	18696.
#2	20783.	18552.
#3	20726.	18692.

Approved: February 08, 2012

Sample Name: L1201076703SD Acquired: 2/7/2012 10:44:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19380	5.0596	.19786	.98266	.54764	.02382	38.868
Stddev	.00544	.0365	.00100	.02728	.00266	.00053	.076
%RSD	2.8072	.72077	.50485	2.7759	.48583	2.2149	.19630
#1	.18932	5.0397	.19900	.96054	.54789	.02334	38.874
#2	.19223	5.1017	.19713	.97430	.55017	.02374	38.941
#3	.19986	5.0375	.19746	1.0131	.54486	.02439	38.789
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02473	.09945	.24626	.24677	1.9661	27.001	.50822
Stddev	.00002	.00024	.00502	.00065	.0066	.028	.00197
%RSD	.06375	.24570	2.0383	.26363	.33424	.10484	.38799
#1	.02473	.09918	.24156	.24622	1.9720	26.973	.50603
#2	.02471	.09952	.24568	.24661	1.9672	26.999	.50985
#3	.02474	.09966	.25155	.24749	1.9590	27.029	.50879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.008	.24609	.51189	46.346	.25121	F -11.558	.25056
Stddev	.008	.00107	.00181	.056	.00166	11.736	.00155
%RSD	.07728	.43379	.35441	.12168	.66226	101.54	.61665
#1	10.013	.24710	.51331	46.410	.25158	-11.990	.25220
#2	9.9987	.24619	.50985	46.303	.24940	-23.071	.25032
#3	10.010	.24497	.51251	46.327	.25266	.3884	.24914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201076703SD Acquired: 2/7/2012 10:44:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388441-05

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.1542	F 463.85	F -22215.	.59760	.19693	16.039	.52960
Stddev	1.2229	1.64	36.	.00040	.00330	.039	.00122
%RSD	23.727	.35405	.16153	.06743	1.6763	.24309	.22967
#1	4.0069	462.10	-22177.	.59732	.19332	15.994	.53099
#2	6.4408	465.36	-22249.	.59806	.19979	16.058	.52873
#3	5.0148	464.08	-22220.	.59741	.19769	16.064	.52907
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.83348	.48272	.25474	.48310	.50987	.26567
Stddev	.00183	.00338	.00213	.01156	.00107	.09041
%RSD	.21952	.69971	.83679	2.3923	.20989	34.030
#1	.83407	.47971	.25232	.47331	.50910	.16185
#2	.83494	.48637	.25556	.48013	.50941	.30810
#3	.83143	.48208	.25634	.49585	.51109	.32706
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21489.	17563.
Stddev	85.	179.
%RSD	.39605	1.0179
#1	21473.	17451.
#2	21581.	17769.
#3	21414.	17468.

Approved: February 08, 2012

Sample Name: L1201079801 Acquired: 2/7/2012 10:47:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	.05088	.00626	.04576	.08482	-.00003	22.233
Stddev	.00026	.01262	.00018	.00100	.00017	.00002	.142
%RSD	654.67	24.805	2.9395	2.1771	.20570	64.466	.63854
#1	-.00030	.06542	.00606	.04635	.08470	-.00001	22.267
#2	.00023	.04273	.00631	.04461	.08474	-.00002	22.076
#3	-.00005	.04450	.00642	.04632	.08502	-.00005	22.354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	-.00006	.00186	.00016	.04542	1.8067	.01113
Stddev	.00013	.00011	.00023	.00049	.00255	.0356	.00109
%RSD	127.04	169.88	12.238	309.71	5.6111	1.9694	9.7908
#1	-.00002	-.00018	.00185	.00017	.04437	1.8461	.01182
#2	.00009	.00003	.00164	-.00034	.04357	1.7973	.01169
#3	.00023	-.00005	.00209	.00065	.04833	1.7768	.00987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3379	.00156	.00529	19.594	.00037	F -39.181	.00076
Stddev	.0254	.00084	.00026	.122	.00026	19.390	.00054
%RSD	1.0860	53.903	4.8536	.62470	71.526	49.488	71.250
#1	2.3091	.00196	.00518	19.622	.00059	-58.206	.00062
#2	2.3479	.00213	.00559	19.460	.00008	-19.445	.00136
#3	2.3569	.00059	.00511	19.700	.00044	-39.892	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201079801 Acquired: 2/7/2012 10:47:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.459	F 296.22	F -14183.	.00150	.00124	13.363	.00009
Stddev	8.034	1.08	65.	.00127	.00364	.046	.00039
%RSD	55.561	.36322	.45970	84.410	292.74	.34338	453.39
#1	21.275	295.28	-14184.	.00012	.00465	13.369	-.00008
#2	16.500	295.98	-14117.	.00261	.00165	13.315	.00053
#3	5.6018	297.40	-14247.	.00179	-.00258	13.406	-.00019
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.23145	.00041	.00018	.01894	.00989	F -.01011
Stddev	.00179	.00186	.00056	.00026	.00006	.11008
%RSD	.77537	449.14	308.65	1.3978	.58921	1089.0
#1	.23218	.00152	-.00042	.01896	.00995	-.10704
#2	.22941	.00146	.00069	.01867	.00988	.10957
#3	.23277	-.00174	.00027	.01920	.00984	-.03286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21624.	18614.
Stddev	133.	385.
%RSD	.61731	2.0695
#1	21514.	18855.
#2	21585.	18819.
#3	21773.	18170.

Approved: February 08, 2012

Sample Name: L1201079901 Acquired: 2/7/2012 10:50:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	.01149	.00160	.02152	.02140	-.00004	56.144
Stddev	.00069	.01737	.00195	.00078	.00019	.00001	.295
%RSD	421.30	151.18	121.32	3.6161	.90329	34.056	.52487
#1	.00087	.02657	-.00044	.02183	.02144	-.00005	56.066
#2	-.00051	.01540	.00343	.02210	.02157	-.00004	56.470
#3	.00012	-.00750	.00183	.02064	.02119	-.00003	55.896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.00017	.00180	.00095	.65728	2.8366	-.00285
Stddev	.00010	.00009	.00029	.00013	.00618	.0692	.00070
%RSD	66.268	53.523	16.305	13.741	.94014	2.4394	24.590
#1	.00017	.00007	.00189	.00106	.66424	2.8956	-.00320
#2	.00004	.00018	.00203	.00099	.65516	2.8539	-.00330
#3	.00024	.00024	.00147	.00080	.65244	2.7604	-.00204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.7069	.09824	.00026	7.9844	.00124	F -211.76	.00100
Stddev	.0203	.00062	.00024	.0381	.00055	15.27	.00075
%RSD	.20860	.62943	93.650	.47656	44.076	7.2115	74.983
#1	9.7199	.09754	.00051	7.9535	.00160	-196.60	.00019
#2	9.7173	.09847	.00004	8.0269	.00152	-211.53	.00114
#3	9.6836	.09872	.00021	7.9728	.00061	-227.14	.00167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201079901 Acquired: 2/7/2012 10:50:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 23.623	F 207.03	F -7711.3	.00320	-.00053	4.1906	.00005
Stddev	6.583	2.32	37.9	.00144	.00289	.0282	.00013
%RSD	27.867	1.1216	.49128	44.908	541.83	.67350	278.95
#1	19.539	208.48	-7726.9	.00469	-.00238	4.2094	-.00009
#2	20.112	208.25	-7738.8	.00183	-.00201	4.2043	.00017
#3	31.217	204.35	-7668.1	.00307	.00279	4.1581	.00006
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.18254	-.00010	-.00102	.00028	.01106	.33388
Stddev	.00074	.00132	.00134	.00008	.00014	.18453
%RSD	.40491	1371.9	131.29	29.016	1.2345	55.268
#1	.18202	.00082	-.00246	.00037	.01118	.18678
#2	.18338	-.00161	-.00077	.00022	.01109	.54094
#3	.18220	.00050	.00017	.00025	.01091	.27393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22090.	19356.
Stddev	229.	133.
%RSD	1.0360	.68851
#1	21831.	19326.
#2	22172.	19240.
#3	22266.	19501.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 10:54:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40658	10.082	.40130	.50180	.99016	.04926	10.014
Stddev	.01079	.058	.00103	.01102	.00451	.00080	.048
%RSD	2.6533	.57867	.25583	2.1952	.45542	1.6219	.48181
#1	.41662	10.015	.40226	.51154	.98540	.04988	9.9595
#2	.39517	10.121	.40022	.48985	.99071	.04836	10.051
#3	.40794	10.110	.40141	.50403	.99437	.04953	10.031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04969	.20138	.50338	.50090	3.9472	49.731	.98164
Stddev	.00008	.00033	.00884	.00032	.0115	.164	.00354
%RSD	.16823	.16454	1.7560	.06401	.29170	.32904	.36098
#1	.04973	.20111	.51048	.50056	3.9339	49.548	.97791
#2	.04974	.20175	.49348	.50094	3.9539	49.782	.98205
#3	.04959	.20128	.50619	.50120	3.9537	49.864	.98496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8251	.49169	1.0042	50.156	.50432	F 1.8149	.50686
Stddev	.0369	.00287	.0017	.128	.00154	33.757	.00132
%RSD	.37506	.58334	.16690	.25445	.30584	1860.0	.26102
#1	9.7827	.48904	1.0061	50.047	.50609	30.877	.50534
#2	9.8427	.49474	1.0029	50.124	.50327	-35.212	.50765
#3	9.8498	.49130	1.0036	50.296	.50361	9.7801	.50760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 10:54:09 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 18.329	10.195	F 12.485	1.2030	.39845	5.0011	1.0097
Stddev	4.609	.079	1.960	.0039	.00143	.0060	.0003
%RSD	25.148	.77566	15.702	.32264	.35773	.12002	.02573
#1	20.408	10.178	10.970	1.2055	.39756	5.0056	1.0100
#2	13.046	10.126	14.699	1.2049	.39769	5.0035	1.0095
#3	21.532	10.282	11.785	1.1985	.40009	4.9943	1.0097
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99978	.98105	.51059	.99814	1.0072	F .88899
Stddev	.00322	.00348	.00046	.01863	.0010	.12369
%RSD	.32231	.35481	.08980	1.8663	.09518	13.914
#1	.99607	.97745	.51087	1.0131	1.0080	.74723
#2	1.0014	.98440	.51006	.97727	1.0061	.97497
#3	1.0019	.98131	.51084	1.0041	1.0075	.94477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21485.	19579.
Stddev	129.	89.
%RSD	.60222	.45326
#1	21494.	19632.
#2	21609.	19630.
#3	21351.	19477.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 10:57:22 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**-.00252**	**-.00042**	**.00160**	**-.00047**	**-.00004**	**-.00601**
Stddev	.00037	.01070	.00069	.00095	.00027	.00003	.01461
%RSD	192.12	424.10	163.70	59.411	57.645	71.440	243.20
#1	-.00022	-.00124	-.00071	.00051	-.00027	-.00005	-.02275
#2	.00019	.00748	.00037	.00223	-.00078	-.00005	.00063
#3	-.00055	-.01381	-.00093	.00206	-.00036	-.00001	.00411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**.00004**	**-.00012**	**.00086**	**.00340**	**.04261**	**-.00215**
Stddev	.0001	.00009	.00035	.00072	.00010	.06312	.00145
%RSD	7816.3	235.03	290.19	83.703	2.9862	148.13	67.692
#1	-.00003	.00012	.00019	.00013	.00332	.10061	-.00102
#2	-.00004	.00006	-.00051	.00088	.00352	-.02462	-.00379
#3	.00006	-.00006	-.00005	.00156	.00337	.05184	-.00163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00405**	**.00028**	**.00056**	**.03214**	**-.00041**	F **17.040**	**.00083**
Stddev	.00839	.00082	.00006	.00390	.00026	7.852	.00071
%RSD	207.31	288.47	10.105	12.148	63.624	46.080	85.400
#1	-.00083	-.00055	.00060	.02975	-.00025	22.351	.00162
#2	-.00076	.00108	.00049	.03664	-.00071	8.0207	.00025
#3	.01373	.00032	.00058	.03001	-.00027	20.749	.00062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						1.0000	
Low Limit						-1.1000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 10:57:22 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.549	-.18021	F 11.624	.00102	-.00447	.00253	.00051
Stddev	7.908	.04193	1.594	.00058	.00159	.00093	.00026
%RSD	58.363	23.266	13.713	56.840	35.527	36.990	50.872
#1	10.413	-.22207	10.729	.00048	-.00473	.00162	.00023
#2	7.6907	-.18033	10.678	.00095	-.00276	.00248	.00074
#3	22.544	-.13822	13.464	.00163	-.00591	.00348	.00055
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	1.0000		1.0000				
Low Limit	-1.0000		-1.0000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	.00117	-.00019	-.00017	.00002	-.01469
Stddev	.00013	.00069	.00087	.00022	.00002	.16725
%RSD	70.278	59.193	462.30	131.97	106.08	1138.8
#1	.00030	.00038	.00058	.00001	.00003	.02040
#2	.00024	.00165	-.00114	-.00042	.00000	.13224
#3	.00004	.00147	-.00001	-.00010	.00004	-.19670
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21693.	18593.
Stddev	220.	263.
%RSD	1.0155	1.4139
#1	21608.	18323.
#2	21527.	18609.
#3	21943.	18848.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201080001 Acquired: 2/7/2012 11:00:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	-.01628	.00196	.03380	.00719	.00000	60.584
Stddev	.00063	.03925	.00165	.00004	.00041	.00002	.033
%RSD	713.95	241.11	83.867	.10456	5.6502	1424.3	.05370
#1	.00042	.01432	.00362	.03380	.00750	-.00002	60.551
#2	.00010	-.00263	.00194	.03384	.00734	.00003	60.585
#3	-.00079	-.06054	.00033	.03377	.00673	.00000	60.616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00023	.00003	.00184	.00093	.25220	1.5953	.00100
Stddev	.00007	.00014	.00041	.00029	.00413	.0168	.00093
%RSD	29.370	517.58	22.449	30.879	1.6383	1.0504	92.674
#1	.00031	-.00004	.00228	.00115	.25569	1.5798	.00093
#2	.00018	.00019	.00176	.00104	.25327	1.6131	.00197
#3	.00020	-.00007	.00147	.00061	.24764	1.5929	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.000	.13249	.00037	13.760	.00065	F -50.382	-.00043
Stddev	.045	.00046	.00006	.035	.00074	25.181	.00054
%RSD	.23545	.34625	14.885	.25688	115.10	49.980	124.52
#1	19.032	.13202	.00039	13.722	.00093	-52.719	-.00093
#2	18.949	.13294	.00031	13.791	.00120	-24.114	-.00050
#3	19.019	.13251	.00041	13.768	-.00020	-74.312	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201080001 Acquired: 2/7/2012 11:00:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.865	F 224.23	F -8341.6	.00142	.00029	6.5871	-.00002
Stddev	3.106	.77	10.4	.00118	.00175	.0180	.00042
%RSD	18.417	.34347	.12476	83.055	606.01	.27258	1721.7
#1	14.913	224.97	-8343.2	.00276	.00147	6.6016	-.00008
#2	15.235	223.43	-8330.4	.00093	-.00172	6.5670	.00042
#3	20.447	224.29	-8351.0	.00057	.00112	6.5926	-.00042
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.18972	-.00243	-.00003	.00024	.00388	F -.23540
Stddev	.00019	.00069	.00147	.00043	.00013	.10351
%RSD	.10269	28.415	5664.0	179.09	3.2877	43.970
#1	.18952	-.00294	.00089	-.00016	.00385	-.13231
#2	.18991	-.00270	.00075	.00070	.00377	-.23456
#3	.18974	-.00164	-.00172	.00018	.00402	-.33932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21288.	18495.
Stddev	29.	115.
%RSD	.13624	.62011
#1	21275.	18364.
#2	21268.	18545.
#3	21321.	18577.

Approved: February 08, 2012

Sample Name: L1201080001PS Acquired: 2/7/2012 11:04:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388487-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20091	4.9560	.19758	1.0251	.49243	.02467	58.452
Stddev	.00206	.0204	.00160	.0128	.00220	.00021	.085
%RSD	1.0264	.41117	.81130	1.2484	.44679	.85753	.14499
#1	.20208	4.9401	.19943	1.0305	.49043	.02474	58.418
#2	.19852	4.9488	.19656	1.0105	.49479	.02443	58.549
#3	.20211	4.9789	.19676	1.0343	.49209	.02483	58.390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02505	.09889	.24957	.24604	2.1547	26.011	.48889
Stddev	.00010	.00027	.00144	.00018	.0080	.059	.00241
%RSD	.38196	.27033	.57797	.07516	.37340	.22696	.49336
#1	.02503	.09870	.25035	.24582	2.1477	25.943	.48648
#2	.02496	.09877	.24791	.24614	2.1529	26.049	.49130
#3	.02515	.09920	.25046	.24614	2.1635	26.042	.48889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.491	.35935	.50013	37.277	.24737	F -37.346	.24993
Stddev	.097	.00027	.00149	.015	.00148	11.474	.00033
%RSD	.45210	.07408	.29733	.03945	.59774	30.725	.13207
#1	21.448	.35905	.49844	37.261	.24577	-42.750	.25020
#2	21.602	.35957	.50075	37.289	.24766	-24.167	.25003
#3	21.423	.35941	.50121	37.283	.24868	-45.120	.24956
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201080001PS Acquired: 2/7/2012 11:04:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388487-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.648	F 203.87	F -7449.4	.59133	.19605	8.3723	.50070
Stddev	6.018	.77	14.4	.00103	.00374	.0202	.00960
%RSD	44.094	.37969	.19360	.17397	1.9077	.24074	1.9180
#1	15.725	204.62	-7438.8	.59019	.19950	8.3881	.49272
#2	18.353	203.08	-7465.8	.59163	.19658	8.3496	.49802
#3	6.8668	203.90	-7443.6	.59218	.19207	8.3791	.51136
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.65296	.48082	.25305	.49314	.50637	.20176
Stddev	.00074	.00259	.00121	.00407	.00226	.20097
%RSD	.11350	.53849	.47921	.82619	.44641	99.607
#1	.65237	.47917	.25165	.49493	.50590	.15859
#2	.65379	.48381	.25366	.48848	.50438	.42081
#3	.65272	.47949	.25384	.49602	.50883	.02589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21175.	18522.
Stddev	253.	150.
%RSD	1.1926	.80884
#1	21392.	18646.
#2	21234.	18355.
#3	20898.	18563.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201080001SDL Acquired: 2/7/2012 11:07:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388487-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	-.01147	.00110	.01100	.00128	-.00003	12.208
Stddev	.00031	.03103	.00047	.00015	.00024	.00002	.048
%RSD	195.29	270.59	42.984	1.3951	19.078	53.058	.39572
#1	-.00026	-.04725	.00066	.01089	.00155	-.00003	12.156
#2	.00019	.00481	.00160	.01117	.00107	-.00005	12.218
#3	-.00041	.00804	.00104	.01093	.00123	-.00002	12.252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00012	.00010	.00078	.00070	.05656	.34051	-.00284
Stddev	.00016	.00017	.00013	.00014	.00614	.01763	.00242
%RSD	141.28	165.12	16.895	20.311	10.852	5.1779	85.226
#1	.00024	.00018	.00074	.00053	.05208	.35568	-.00472
#2	.00018	-.00009	.00092	.00079	.05405	.34469	-.00368
#3	-.00007	.00022	.00067	.00077	.06356	.32117	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8627	.02706	.00041	2.7711	-.00039	18.595	-.00024
Stddev	.0199	.00050	.00007	.0073	.00040	32.883	.00121
%RSD	.51585	1.8408	16.214	.26168	101.85	176.84	505.99
#1	3.8527	.02670	.00036	2.7639	-.00082	55.711	-.00077
#2	3.8497	.02685	.00049	2.7784	-.00004	-6.9005	-.00109
#3	3.8856	.02763	.00039	2.7709	-.00031	6.9752	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201080001SDL Acquired: 2/7/2012 11:07:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388487-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.752	F 44.927	F -1635.7	.00189	-.00223	1.3109	.00017
Stddev	7.011	.166	4.0	.00180	.00167	.0038	.00043
%RSD	50.986	.36888	.24734	95.479	74.937	.28682	250.93
#1	7.8091	45.100	-1632.1	.00087	-.00040	1.3127	.00053
#2	21.485	44.911	-1640.1	.00083	-.00260	1.3134	-.00030
#3	11.961	44.770	-1634.9	.00397	-.00368	1.3065	.00027
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03847	-.00116	-.00012	-.00007	.00164	F -.02182
Stddev	.00014	.00101	.00085	.00011	.00029	.13670
%RSD	.36638	87.245	725.47	162.82	17.632	626.46
#1	.03855	-.00169	.00076	-.00014	.00156	-.17875
#2	.03830	-.00181	-.00094	-.00013	.00197	.04194
#3	.03855	.00001	-.00017	.00006	.00140	.07135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21584.	18057.
Stddev	139.	141.
%RSD	.64191	.78097
#1	21654.	17912.
#2	21424.	18065.
#3	21673.	18194.

Approved: February 08, 2012

Sample Name: L1201081301 Acquired: 2/7/2012 11:10:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00050	-.02424	.00148	.00248	-.00010	-.00002	.02258
Stddev	.00058	.01175	.00140	.00033	.00046	.00001	.00635
%RSD	117.70	48.484	94.964	13.466	459.70	68.247	28.118
#1	-.00092	-.03436	-.00014	.00211	-.00022	-.00003	.01556
#2	.00017	-.02701	.00241	.00276	-.00049	-.00001	.02428
#3	-.00074	-.01135	.00215	.00256	.00041	-.00001	.02792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	-.00012	.00136	.00170	.00929	.08474	-.00274
Stddev	.00007	.00009	.00026	.00047	.00481	.02154	.00153
%RSD	195.85	73.130	19.244	27.796	51.771	25.418	55.725
#1	-.00001	-.00007	.00141	.00118	.00397	.06025	-.00207
#2	.00002	-.00007	.00160	.00181	.01333	.10075	-.00449
#3	-.00011	-.00022	.00108	.00210	.01056	.09321	-.00167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01324	.00003	-.00007	.02169	.00064	F -35.516	.00063
Stddev	.01122	.00026	.00023	.01605	.00075	23.519	.00105
%RSD	84.753	1009.6	303.98	74.005	116.41	66.220	168.20
#1	.00102	-.00015	-.00031	.01862	.00110	-51.823	.00166
#2	.02309	-.00010	-.00005	.00739	-.00022	-8.5556	.00065
#3	.01562	.00033	.00014	.03905	.00105	-46.170	-.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1201081301 Acquired: 2/7/2012 11:10:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.2423**	**.43542**	F **-21.413**	**-.00037**	**.00017**	**.00884**	**.00021**
Stddev	3.4366	.01993	1.073	.00214	.00191	.00214	.00019
%RSD	47.452	4.5762	5.0088	577.09	1158.8	24.205	92.124
#1	3.4792	.45841	-21.462	.00062	.00237	.00930	.00013
#2	10.214	.42464	-22.460	-.00283	-.00082	.00651	.00007
#3	8.0331	.42320	-20.317	.00109	-.00106	.01071	.00043
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00066**	**.00128**	**.00010**	**-.00006**	**.06262**
Stddev	.00013	.00093	.00071	.00013	.00012	.14006
%RSD	102.34	139.62	55.317	128.02	216.25	223.66
#1	.00024	.00153	.00179	.00021	-.00012	-.09622
#2	.00015	-.00031	.00157	-.00004	-.00013	.16839
#3	-.00001	.00078	.00047	.00014	.00008	.11569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22452.**	**18085.**
Stddev	248.	106.
%RSD	1.1055	.58658
#1	22333.	18029.
#2	22737.	18018.
#3	22286.	18207.

Approved: February 08, 2012

Sample Name: L1201081302 Acquired: 2/7/2012 11:14:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.02245	.00080	.00139	-.00044	-.00003	.01737
Stddev	.00029	.01473	.00042	.00075	.00035	.00001	.00685
%RSD	120.27	65.610	51.823	53.945	80.167	48.507	39.462
#1	.00001	.00736	.00041	.00056	-.00039	-.00002	.02093
#2	.00057	.03679	.00076	.00202	-.00082	-.00002	.02170
#3	.00014	.02319	.00124	.00158	-.00012	-.00005	.00946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	-.00006	.00048	.00153	.00588	-.02563	-.00203
Stddev	.00008	.00003	.00019	.00008	.00498	.04535	.00087
%RSD	180.34	53.764	39.368	5.3755	84.641	176.92	42.925
#1	-.00012	-.00004	.00026	.00147	.00381	-.07693	-.00265
#2	-.00004	-.00004	.00058	.00162	.01156	.00910	-.00103
#3	.00003	-.00009	.00059	.00150	.00227	-.00906	-.00240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00503	-.00031	-.00010	.03082	.00052	21.055	.00132
Stddev	.01996	.00039	.00021	.00709	.00031	11.654	.00119
%RSD	396.51	125.10	208.85	22.992	59.310	55.349	90.379
#1	-.01246	.00008	-.00027	.02872	.00028	7.5997	.00211
#2	.00078	-.00032	-.00017	.02503	.00041	27.941	-.00005
#3	.02677	-.00070	.00014	.03872	.00086	27.624	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081302 Acquired: 2/7/2012 11:14:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.686	.11334	F -2.9141	.00167	-.00060	.00846	-.00004
Stddev	4.054	.06423	.4859	.00036	.00151	.00057	.00039
%RSD	24.295	56.668	16.676	21.456	253.26	6.7882	875.82
#1	13.931	.17505	-3.4590	.00152	-.00199	.00859	-.00048
#2	14.786	.11811	-2.7578	.00208	-.00080	.00783	.00011
#3	21.341	.04686	-2.5256	.00141	.00101	.00895	.00024
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.00028	-.00048	.00000	-.00073	F -.10065
Stddev	.00008	.00044	.00049	.0002	.00006	.11033
%RSD	97.451	155.88	102.51	4621.3	7.8547	109.61
#1	-.00001	.00004	.00009	.00016	-.00078	-.08550
#2	.00015	.00002	-.00081	-.00024	-.00074	.00132
#3	.00010	.00078	-.00073	.00007	-.00067	-.21778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22162.	18941.
Stddev	68.	85.
%RSD	.30580	.44869
#1	22194.	18924.
#2	22084.	19033.
#3	22208.	18865.

Approved: February 08, 2012

Sample Name: L1201081303 Acquired: 2/7/2012 11:17:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.04105	.00117	.00229	-.00040	-.00003	.01662
Stddev	.00024	.03050	.00181	.00058	.00051	.00001	.01355
%RSD	104.28	74.307	154.30	25.230	127.75	36.907	81.532
#1	-.00045	-.00953	.00292	.00291	.00017	-.00003	.00203
#2	.00002	-.07042	.00129	.00219	-.00081	-.00004	.02881
#3	-.00026	-.04320	-.00069	.00177	-.00056	-.00002	.01901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	.00001	.00103	.00160	.00468	.02033	-.00494
Stddev	.00004	.00009	.00042	.00031	.00223	.02066	.00172
%RSD	41.734	707.03	40.524	19.610	47.543	101.66	34.746
#1	.00008	-.00009	.00125	.00139	.00703	.04221	-.00300
#2	.00014	.00008	.00055	.00196	.00441	.01763	-.00558
#3	.00007	.00005	.00130	.00145	.00260	.00114	-.00625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01515	-.00023	.00001	.04495	.00043	9.5153	.00014
Stddev	.00320	.00061	.00031	.02410	.00053	8.5004	.00094
%RSD	21.142	260.72	3443.5	53.610	121.11	89.334	669.67
#1	.01703	-.00051	.00021	.02156	.00029	1.3354	.00031
#2	.01145	-.00065	.00017	.06970	.00101	8.9069	.00098
#3	.01697	.00046	-.00035	.04360	-.00001	18.304	-.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081303 Acquired: 2/7/2012 11:17:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.5184	.05906	F -4.2392	-.00060	-.00302	.00701	.00003
Stddev	7.4086	.03466	2.3735	.00181	.00250	.00076	.00009
%RSD	77.835	58.683	55.988	299.46	82.783	10.902	320.78
#1	13.330	.04548	-3.8993	-.00267	-.00591	.00674	-.00008
#2	.98001	.09846	-6.7643	.00068	-.00148	.00787	.00009
#3	14.245	.03325	-2.0540	.00018	-.00168	.00642	.00007
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	.00063	-.00001	.00034	-.00058	F -.09610
Stddev	.00015	.00069	.00008	.00042	.00015	.15908
%RSD	2223.9	108.03	730.03	124.76	25.175	165.53
#1	-.00010	-.00015	.00005	-.00008	-.00071	-.10234
#2	-.00010	.00094	.00001	.00076	-.00060	.06600
#3	.00017	.00111	-.00010	.00034	-.00042	-.25197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22455.	19066.
Stddev	26.	173.
%RSD	.11438	.90728
#1	22485.	18897.
#2	22442.	19243.
#3	22439.	19058.

Approved: February 08, 2012

Sample Name: L1201081304 Acquired: 2/7/2012 11:21:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	.02210	.00050	.00032	-.00016	-.00003	.01777
Stddev	.00052	.02632	.00093	.00042	.00017	.00002	.01677
%RSD	324.19	119.11	186.50	128.02	111.53	53.388	94.393
#1	.00024	-.00645	-.00053	.00068	-.00019	-.00002	.00592
#2	.00064	.04540	.00129	-.00013	-.00031	-.00005	.01043
#3	-.00039	.02735	.00074	.00043	.00003	-.00002	.03696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00023	.00059	.00158	.01152	.02326	-.00565
Stddev	.00016	.00012	.00033	.00046	.00239	.05630	.00109
%RSD	480.63	53.459	56.344	29.141	20.725	242.04	19.352
#1	.00009	.00009	.00033	.00200	.01186	.02634	-.00678
#2	-.00022	.00026	.00048	.00109	.01371	-.03452	-.00556
#3	.00002	.00033	.00096	.00165	.00898	.07796	-.00460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01704	.00033	-.00001	.04464	.00025	F -12.531	.00016
Stddev	.01399	.00042	.00019	.00561	.00033	18.802	.00148
%RSD	82.094	124.55	1434.5	12.558	133.15	150.05	901.02
#1	.02157	.00035	-.00015	.03822	.00053	5.9328	.00104
#2	.02819	.00074	.00020	.04711	.00033	-11.871	-.00154
#3	.00135	-.00009	-.00009	.04858	-.00011	-31.653	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081304 Acquired: 2/7/2012 11:21:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.829	.42245	F -22.896	.00071	.00055	.00935	-.00022
Stddev	5.507	.02790	1.261	.00153	.00155	.00180	.00041
%RSD	42.928	6.6046	5.5054	216.40	283.67	19.302	188.86
#1	18.491	.44626	-21.644	.00015	.00233	.00823	-.00068
#2	12.505	.39175	-22.879	-.00047	-.00054	.00839	.00007
#3	7.4911	.42934	-24.164	.00244	-.00014	.01143	-.00004
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00021	-.00076	.00062	.00032	.00266	.14184
Stddev	.00015	.00114	.00139	.00028	.00008	.19695
%RSD	72.320	150.20	224.84	87.043	2.8614	138.85
#1	.00004	.00036	-.00086	.00062	.00257	.23431
#2	.00028	-.00191	.00083	.00007	.00270	.27555
#3	.00032	-.00073	.00189	.00028	.00270	-.08432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22258.	19030.
Stddev	51.	73.
%RSD	.22939	.38364
#1	22247.	19103.
#2	22214.	18957.
#3	22314.	19029.

Approved: February 08, 2012

Sample Name: L1201081305 Acquired: 2/7/2012 11:24:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00075	-.01141	.00084	.00114	-.00042	-.00002	.03036
Stddev	.00028	.04892	.00107	.00085	.00050	.00002	.00071
%RSD	37.283	428.75	127.14	75.151	118.54	139.72	2.3400
#1	-.00066	-.01921	.00109	.00033	-.00012	-.00001	.03116
#2	-.00106	.04094	.00176	.00203	-.00101	-.00004	.03015
#3	-.00052	-.05596	-.00033	.00105	-.00015	.00001	.02979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	-.00014	.00346	.00263	.01949	.00069	-.00419
Stddev	.00005	.00019	.00039	.00025	.00354	.02286	.00043
%RSD	59.981	135.35	11.309	9.4336	18.181	3312.2	10.281
#1	.00013	-.00009	.00317	.00289	.01542	.01602	-.00431
#2	.00007	.00002	.00390	.00262	.02186	-.02559	-.00454
#3	.00004	-.00035	.00331	.00239	.02119	.01164	-.00371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00297	-.00045	.00019	.02403	-.00001	F -1.2176	-.00035
Stddev	.00692	.00022	.00002	.01244	.00030	34.418	.00132
%RSD	232.57	48.718	11.082	51.792	3649.8	2826.7	378.69
#1	.00527	-.00068	.00018	.03081	.00033	38.247	-.00187
#2	-.00480	-.00040	.00021	.03161	-.00024	-16.884	.00049
#3	.00846	-.00026	.00017	.00967	-.00012	-25.015	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081305 Acquired: 2/7/2012 11:24:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.540	.39017	F -22.682	.00137	-.00178	.01063	-.00004
Stddev	6.199	.02396	2.675	.00176	.00078	.00132	.00020
%RSD	37.477	6.1417	11.795	128.55	43.522	12.397	457.04
#1	23.688	.37386	-24.776	.00195	-.00166	.01064	.00000
#2	12.649	.41768	-23.601	.00275	-.00262	.01194	-.00027
#3	13.282	.37898	-19.668	-.00061	-.00108	.00931	.00013
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	-.00009	-.00040	.00047	-.00098	F -.06425
Stddev	.00005	.00176	.00068	.00030	.00006	.09328
%RSD	57.474	1957.2	168.07	63.023	6.1898	145.19
#1	.00015	-.00059	-.00066	.00013	-.00092	.03524
#2	.00004	.00186	.00037	.00065	-.00103	-.14974
#3	.00010	-.00154	-.00091	.00064	-.00100	-.07823
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21913.	18853.
Stddev	96.	220.
%RSD	.43711	1.1651
#1	21887.	18983.
#2	22020.	18976.
#3	21834.	18599.

Approved: February 08, 2012

Sample Name: L1201081306 Acquired: 2/7/2012 11:28:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00060	.00732	-.00015	.00207	-.00020	-.00003	.01944
Stddev	.00022	.01310	.00116	.00047	.00026	.00002	.00337
%RSD	36.699	178.92	787.08	22.577	133.61	62.479	17.329
#1	-.00058	.00053	.00006	.00258	.00011	-.00001	.02144
#2	-.00083	-.00098	-.00140	.00165	-.00034	-.00004	.01555
#3	-.00039	.02242	.00090	.00199	-.00035	-.00003	.02133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	.00002	.00073	.00224	.01381	-.02146	.00066
Stddev	.00001	.00020	.00045	.00050	.00401	.02562	.00141
%RSD	17.085	1039.3	61.612	22.116	29.057	119.37	214.53
#1	-.00008	.00007	.00125	.00268	.01781	-.01891	.00221
#2	-.00006	-.00021	.00055	.00171	.00978	.00279	.00031
#3	-.00008	.00019	.00040	.00235	.01383	-.04826	-.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01086	-.00015	-.00013	.01462	-.00013	17.785	.00049
Stddev	.03218	.00040	.00026	.00269	.00046	22.638	.00118
%RSD	296.41	272.65	200.39	18.402	344.26	127.29	241.11
#1	-.00342	.00022	-.00027	.01163	-.00042	-6.5870	.00062
#2	-.01172	-.00057	.00017	.01541	.00040	21.786	.00160
#3	.04770	-.00008	-.00029	.01683	-.00038	38.155	-.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081306 Acquired: 2/7/2012 11:28:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.8555**	**.33620**	F **-18.700**	**.00135**	**-.00209**	**.01067**	**.00030**
Stddev	5.2056	.01127	1.333	.00014	.00124	.00001	.00022
%RSD	58.784	3.3533	7.1278	10.584	59.603	.11492	73.604
#1	14.846	.33047	-19.865	.00146	-.00352	.01067	.00045
#2	6.2880	.34919	-18.989	.00141	-.00141	.01065	.00005
#3	5.4324	.32894	-17.247	.00119	-.00133	.01067	.00039
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**-.00107**	**.00080**	**.00004**	**.00032**	F **-.04120**
Stddev	.00019	.00136	.00033	.00038	.00012	.16015
%RSD	250.03	126.92	41.628	894.24	37.679	388.72
#1	.00028	-.00224	.00089	.00014	.00019	-.17172
#2	-.00008	.00042	.00107	.00037	.00033	.13752
#3	.00002	-.00139	.00043	-.00038	.00044	-.08940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21308.**	**18670.**
Stddev	332.	246.
%RSD	1.5595	1.3187
#1	20928.	18793.
#2	21448.	18829.
#3	21547.	18386.

Approved: February 08, 2012

Sample Name: L1201081307 Acquired: 2/7/2012 11:31:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00066	-.03101	-.00025	.00124	-.00011	-.00003	.00347
Stddev	.00055	.01394	.00154	.00102	.00029	.00002	.00770
%RSD	83.645	44.937	622.10	82.774	271.82	64.578	221.88
#1	-.00129	-.03050	-.00201	.00199	.00020	-.00001	-.00384
#2	-.00034	-.01734	.00076	.00007	-.00013	-.00004	.01151
#3	-.00034	-.04520	.00051	.00165	-.00039	-.00005	.00273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00008	-.00008	.00156	.00205	.01071	.06870	-.00455
Stddev	.00008	.00016	.00042	.00044	.00249	.03489	.00326
%RSD	93.683	193.42	27.072	21.722	23.222	50.781	71.620
#1	-.00001	.00001	.00129	.00231	.00785	.06863	-.00079
#2	-.00016	.00001	.00134	.00229	.01231	.03385	-.00637
#3	-.00008	-.00026	.00205	.00153	.01199	.10362	-.00649
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00497	-.00008	-.00018	.01877	.00040	.17632	-.00108
Stddev	.02225	.00062	.00028	.00331	.00057	13.116	.00096
%RSD	447.88	803.97	153.48	17.652	140.40	7438.9	89.271
#1	-.01586	.00049	-.00036	.02052	.00103	15.059	-.00026
#2	.02841	.00001	.00014	.02084	-.00007	-9.6970	-.00214
#3	.00236	-.00073	-.00033	.01495	.00025	-4.8329	-.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: L1201081307 Acquired: 2/7/2012 11:31:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.333	.34883	F -19.654	.00005	-.00073	.00901	-.00008
Stddev	10.137	.04389	2.113	.00233	.00095	.00113	.00007
%RSD	82.193	12.582	10.751	4438.5	129.87	12.487	85.929
#1	.91135	.36897	-19.612	-.00256	-.00180	.00772	-.00010
#2	15.827	.29849	-17.563	.00194	-.00040	.00968	.00000
#3	20.261	.37904	-21.789	.00077	.00001	.00965	-.00013
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	-.00187	.00073	-.00006	-.00090	F -.08174
Stddev	.00014	.00060	.00116	.00033	.00007	.12963
%RSD	1031.6	32.072	158.95	514.42	7.5056	158.59
#1	-.00010	-.00201	.00033	-.00005	-.00094	.06732
#2	-.00009	-.00121	.00204	.00026	-.00082	-.16809
#3	.00014	-.00238	-.00018	-.00040	-.00094	-.14446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21676.	18253.
Stddev	61.	114.
%RSD	.28055	.62258
#1	21692.	18176.
#2	21727.	18384.
#3	21609.	18200.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 11:35:07 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39685	9.9838	.39765	.49128	.98355	.04797	9.8565
Stddev	.00472	.0520	.00236	.00773	.00347	.00084	.0219
%RSD	1.1896	.52068	.59467	1.5728	.35261	1.7541	.22228
#1	.40145	9.9261	.39843	.49966	.97963	.04874	9.8597
#2	.39707	10.027	.39953	.48972	.98479	.04810	9.8766
#3	.39202	9.9983	.39500	.48445	.98623	.04707	9.8331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04953	.19864	.48726	.49404	3.9373	49.734	.97920
Stddev	.00009	.00064	.00708	.00217	.0034	.135	.00164
%RSD	.18252	.32020	1.4538	.43855	.08756	.27102	.16799
#1	.04962	.19894	.49394	.49537	3.9361	49.601	.98088
#2	.04954	.19907	.48801	.49522	3.9346	49.870	.97913
#3	.04944	.19791	.47983	.49154	3.9412	49.730	.97759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9342	.49529	.98670	49.984	.49691	F -6.0255	.50392
Stddev	.0291	.00238	.00229	.104	.00061	41.329	.00260
%RSD	.29311	.48095	.23205	.20889	.12365	685.90	.51501
#1	9.9562	.49434	.98934	49.933	.49761	35.947	.50684
#2	9.9453	.49800	.98524	50.104	.49649	-7.3433	.50305
#3	9.9012	.49352	.98552	49.915	.49662	-46.680	.50187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 11:35:07 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.495	10.048	F 17.281	1.1989	.39880	4.9728	.99684
Stddev	5.419	.052	2.065	.0042	.00185	.0017	.00222
%RSD	34.975	.51858	11.952	.35128	.46414	.03486	.22319
#1	9.2841	10.090	18.335	1.2004	.40034	4.9727	.99935
#2	19.264	10.064	14.901	1.1942	.39674	4.9711	.99513
#3	17.936	9.9895	18.605	1.2022	.39930	4.9745	.99603
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99079	.98434	.50697	.97326	.98598	F .88453
Stddev	.00270	.00295	.00302	.01645	.00311	.06698
%RSD	.27300	.29959	.59544	1.6906	.31570	7.5729
#1	.98784	.98150	.51024	.98998	.98884	.89995
#2	.99316	.98738	.50430	.97272	.98643	.94246
#3	.99138	.98415	.50636	.95709	.98267	.81118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21870.	18690.
Stddev	225.	369.
%RSD	1.0300	1.9755
#1	21694.	18366.
#2	21791.	18610.
#3	22124.	19092.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 11:38:22 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**-.02249**	**.00046**	**.00152**	**-.00056**	**-.00006**	**.00765**
Stddev	.00008	.02970	.00083	.00026	.00052	.00002	.00912
%RSD	37.479	132.04	181.51	16.966	92.858	42.910	119.16
#1	-.00017	-.01739	-.00027	.00159	.00004	-.00008	.00578
#2	-.00032	.00433	.00029	.00174	-.00092	-.00005	-.00038
#3	-.00018	-.05441	.00137	.00124	-.00081	-.00004	.01756
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00011**	**-.00023**	**.00021**	**.00223**	**.06402**	**-.00311**
Stddev	.00007	.00011	.00048	.00077	.00667	.02561	.00274
%RSD	341.71	104.02	204.59	372.89	298.85	40.007	88.319
#1	-.00002	.00024	.00030	.00069	-.00300	.08944	-.00257
#2	.00010	.00004	-.00063	.00061	-.00005	.06439	-.00067
#3	-.00002	.00004	-.00037	-.00068	.00974	.03822	-.00608
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00744**	**.00016**	**.00046**	**.04210**	**.00017**	F **9.9233**	**-.00058**
Stddev	.00668	.00044	.00023	.00325	.00021	34.467	.00144
%RSD	89.769	279.49	50.719	7.7274	117.34	347.34	249.59
#1	.00454	.00033	.00052	.04326	.00035	27.056	.00005
#2	.01508	.00049	.00020	.04460	.00023	32.467	.00045
#3	.00270	-.00035	.00066	.03842	-.00005	-29.754	-.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						1.0000	
Low Limit						-1.1000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 11:38:22 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.961	-.20712	F 12.461	.00269	-.00188	.00308	.00049
Stddev	9.150	.06291	1.353	.00148	.00125	.00088	.00035
%RSD	53.948	30.372	10.855	54.948	66.437	28.522	71.495
#1	27.292	-.18405	10.900	.00440	-.00052	.00295	.00034
#2	9.8768	-.15900	13.274	.00190	-.00213	.00402	.00023
#3	13.715	-.27830	13.210	.00178	-.00298	.00228	.00088
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	1.0000		1.0000				
Low Limit	-1.0000		-1.0000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	.00068	-.00074	.00007	.00006	.06361
Stddev	.00015	.00145	.00107	.00022	.00008	.09870
%RSD	280.14	213.17	144.69	335.18	129.98	155.16
#1	-.00010	-.00076	-.00129	-.00001	.00015	.08958
#2	.00020	.00066	.00049	-.00011	.00000	-.04548
#3	.00005	.00214	-.00144	.00032	.00003	.14673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22122.	19325.
Stddev	167.	257.
%RSD	.75550	1.3299
#1	21929.	19504.
#2	22210.	19031.
#3	22227.	19441.

Approved: February 08, 2012

Sample Name: L1201081308 Acquired: 2/7/2012 11:41:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.00668	.00073	.00179	-.00096	-.00004	.05020
Stddev	.00055	.01073	.00098	.00109	.00036	.00003	.00257
%RSD	235.76	160.49	133.89	60.959	37.169	63.548	5.1139
#1	-.00035	-.01501	.00180	.00114	-.00109	-.00004	.04832
#2	.00037	.00542	.00052	.00117	-.00123	-.00007	.04916
#3	-.00072	-.01047	-.00012	.00304	-.00056	-.00002	.05312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	-.00002	.00064	.00237	.00657	-.07149	.00020
Stddev	.00016	.00014	.00017	.00041	.00156	.04173	.00186
%RSD	436.23	644.68	26.431	17.119	23.777	58.377	924.97
#1	-.00013	.00013	.00084	.00230	.00483	-.11688	.00066
#2	.00018	-.00014	.00056	.00200	.00705	-.03478	-.00185
#3	.00007	-.00004	.00053	.00281	.00784	-.06281	.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02512	-.00009	.00008	.12208	.00009	14.736	.00046
Stddev	.01115	.00034	.00012	.01313	.00021	18.284	.00049
%RSD	44.367	375.26	151.91	10.758	227.82	124.08	106.34
#1	.02782	-.00012	.00017	.12721	-.00015	35.182	.00019
#2	.03468	-.00041	-.00005	.10716	.00024	-.04522	.00016
#3	.01288	.00026	.00011	.13188	.00019	9.0714	.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: L1201081308 Acquired: 2/7/2012 11:41:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 21.313	.05609	F -2.1999	.00131	.00018	.01143	.00012
Stddev	1.411	.01149	1.4614	.00148	.00252	.00058	.00017
%RSD	6.6209	20.489	66.430	112.92	1396.7	5.1170	132.63
#1	20.105	.05587	-2.2437	.00174	-.00255	.01154	-.00003
#2	20.969	.04471	-3.6389	.00253	.00242	.01195	.00010
#3	22.864	.06769	-.71709	-.00034	.00067	.01080	.00030
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.00193	-.00027	-.00005	-.00096	.13594
Stddev	.00012	.00114	.00063	.00018	.00008	.13017
%RSD	321.96	59.054	235.28	349.59	8.1301	95.758
#1	-.00006	.00258	.00004	.00002	-.00100	.10160
#2	.00017	.00061	.00015	-.00025	-.00087	.02638
#3	.00000	.00261	-.00099	.00008	-.00102	.27984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22078.	20692.
Stddev	194.	127.
%RSD	.87763	.61302
#1	22156.	20639.
#2	22220.	20837.
#3	21857.	20601.

Approved: February 08, 2012

Sample Name: L1201081309 Acquired: 2/7/2012 11:45:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00020	-.01332	-.00007	.00195	-.00019	-.00004	.03822
Stddev	.00031	.03133	.00014	.00027	.00007	.00003	.01025
%RSD	150.73	235.16	207.07	14.061	36.271	61.667	26.805
#1	.00020	.02276	.00009	.00164	-.00012	-.00007	.02788
#2	-.00010	-.02916	-.00010	.00203	-.00019	-.00004	.03843
#3	.00051	-.03357	-.00018	.00217	-.00026	-.00002	.04837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	-.00013	.00116	.00141	.01155	.00620	-.00172
Stddev	.0001	.00009	.00050	.00040	.00155	.02221	.00217
%RSD	1619.2	69.962	42.966	28.472	13.429	358.05	125.96
#1	-.00006	-.00006	.00059	.00177	.01167	.02980	.00027
#2	.00008	-.00010	.00148	.00149	.00994	.00312	-.00404
#3	-.00004	-.00024	.00142	.00098	.01304	-.01430	-.00140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00473	.00012	.00009	.04450	.00045	F -4.1689	.00063
Stddev	.01794	.00050	.00037	.02374	.00000	30.699	.00057
%RSD	378.88	412.85	402.05	53.344	.52580	736.39	91.023
#1	-.01017	.00029	-.00007	.06993	.00045	-24.444	.00097
#2	-.00026	-.00044	-.00017	.04063	.00046	-19.214	-.00003
#3	.02464	.00052	.00052	.02293	.00046	31.151	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081309 Acquired: 2/7/2012 11:45:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.877	.39874	F -17.316	.00082	-.00109	.00870	.00013
Stddev	5.655	.02037	1.719	.00078	.00152	.00082	.00047
%RSD	43.917	5.1076	9.9245	95.767	138.94	9.4280	371.78
#1	7.2680	.37669	-15.363	.00120	-.00106	.00895	-.00021
#2	18.578	.40268	-18.598	-.00008	.00041	.00778	.00066
#3	12.786	.41685	-17.987	.00133	-.00263	.00936	-.00007
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	-.00157	-.00141	.00020	-.00049	F -.15837
Stddev	.00006	.00111	.00083	.00022	.00006	.12859
%RSD	30.711	70.696	59.293	107.35	13.047	81.200
#1	.00013	-.00256	-.00211	.00006	-.00054	-.28127
#2	.00020	-.00178	-.00048	.00010	-.00050	-.02475
#3	.00024	-.00037	-.00163	.00045	-.00042	-.16907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22218.	18717.
Stddev	36.	288.
%RSD	.16186	1.5368
#1	22206.	18979.
#2	22258.	18409.
#3	22189.	18761.

Approved: February 08, 2012

Sample Name: L1201081310 Acquired: 2/7/2012 11:48:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00037	-.00412	-.00006	.00203	-.00048	-.00004	.02227
Stddev	.00052	.03417	.00037	.00139	.00030	.00001	.01141
%RSD	140.46	828.33	621.89	68.523	63.293	31.012	51.256
#1	.00023	-.03672	-.00036	.00256	-.00031	-.00004	.02637
#2	-.00071	-.00708	-.00018	.00045	-.00083	-.00002	.00937
#3	-.00063	.03142	.00036	.00308	-.00030	-.00005	.03106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	-.00002	.00123	.00180	.00927	.06309	-.00341
Stddev	.00011	.00010	.00017	.00026	.00202	.06718	.00245
%RSD	153.00	594.08	13.908	14.682	21.770	106.48	71.921
#1	-.00001	-.00007	.00125	.00206	.00741	.09513	-.00061
#2	.00019	.00009	.00140	.00181	.00899	.10825	-.00519
#3	.00003	-.00008	.00105	.00153	.01141	-.01411	-.00444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02653	-.00019	.00003	.02689	.00046	32.138	.00094
Stddev	.02077	.00012	.00025	.01878	.00030	39.777	.00120
%RSD	78.277	62.208	971.55	69.842	65.268	123.77	127.37
#1	.00293	-.00023	-.00026	.04831	.00040	77.831	.00232
#2	.03465	-.00005	.00023	.01328	.00078	13.335	.00037
#3	.04202	-.00027	.00011	.01906	.00019	5.2470	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081310 Acquired: 2/7/2012 11:48:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.315	.39179	F -19.058	.00021	-.00100	.00934	.00024
Stddev	7.384	.01548	2.743	.00032	.00167	.00071	.00008
%RSD	42.646	3.9514	14.392	153.43	167.34	7.6075	33.806
#1	10.518	.37440	-16.130	.00004	-.00239	.00870	.00033
#2	25.172	.40409	-21.568	.00001	.00086	.01011	.00020
#3	16.256	.39687	-19.476	.00059	-.00147	.00921	.00018
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	.00035	-.00035	-.00002	-.00082	.18632
Stddev	.00003	.00060	.00172	.00021	.00007	.08365
%RSD	16.499	170.60	497.58	980.77	8.1379	44.897
#1	.00014	-.00034	-.00158	.00017	-.00086	.26820
#2	.00015	.00066	-.00108	.00000	-.00074	.10100
#3	.00019	.00072	.00162	-.00024	-.00085	.18977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22265.	19164.
Stddev	124.	220.
%RSD	.55693	1.1457
#1	22330.	19318.
#2	22344.	19263.
#3	22122.	18913.

Approved: February 08, 2012

Sample Name: L1201081311 Acquired: 2/7/2012 11:52:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00056	-.01242	.00007	.00186	-.00052	-.00001	.05087
Stddev	.00065	.03347	.00034	.00138	.00015	.00002	.00575
%RSD	115.89	269.40	495.41	74.305	28.250	176.49	11.312
#1	-.00032	.02606	.00004	.00344	-.00054	-.00004	.04955
#2	-.00007	-.02854	.00042	.00131	-.00037	.00001	.05717
#3	-.00130	-.03479	-.00026	.00084	-.00066	-.00001	.04589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	.00001	.00106	.00287	.02333	.01758	-.00529
Stddev	.00001	.00008	.00013	.00049	.00216	.02784	.00315
%RSD	22.268	1085.6	12.086	16.985	9.2777	158.33	59.502
#1	-.00008	.00004	.00094	.00235	.02085	.04259	-.00647
#2	-.00006	-.00008	.00106	.00295	.02430	-.01241	-.00768
#3	-.00005	.00006	.00119	.00332	.02484	.02257	-.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00228	.00013	-.00001	.05995	.00048	19.961	-.00004
Stddev	.01103	.00015	.00015	.01171	.00071	9.604	.00167
%RSD	482.86	110.53	1671.6	19.525	147.04	48.112	4523.5
#1	.01045	.00030	.00010	.07165	.00129	16.348	-.00168
#2	-.00866	.00008	-.00018	.04823	.00016	12.688	-.00009
#3	-.00864	.00002	.00005	.05998	-.00001	30.847	.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: L1201081311 Acquired: 2/7/2012 11:52:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 20.139	.42986	F -18.284	.00102	.00051	.01918	-.00013
Stddev	5.156	.01582	2.651	.00219	.00278	.00161	.00040
%RSD	25.601	3.6804	14.500	214.04	546.12	8.3902	304.87
#1	22.987	.42438	-18.577	.00300	-.00102	.01929	-.00059
#2	14.187	.44769	-15.499	.00140	-.00117	.01752	.00009
#3	23.242	.41750	-20.777	-.00133	.00372	.02074	.00010
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.00075	.00009	-.00007	.00108	.51427
Stddev	.00007	.00102	.00205	.00013	.00007	.17042
%RSD	50.918	134.74	2396.6	182.71	6.7026	33.139
#1	.00006	-.00042	.00205	-.00005	.00102	.70960
#2	.00018	.00137	-.00205	.00005	.00116	.39585
#3	.00020	.00131	.00026	-.00021	.00106	.43738
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22580.	19602.
Stddev	77.	136.
%RSD	.34061	.69555
#1	22586.	19594.
#2	22654.	19469.
#3	22501.	19742.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201081312 Acquired: 2/7/2012 11:55:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.02086	.00070	.00277	-.00033	-.00004	.04002
Stddev	.00046	.03088	.00076	.00144	.00012	.00001	.00275
%RSD	949.13	148.00	108.42	51.874	37.229	30.417	6.8674
#1	.00002	-.01536	.00096	.00375	-.00026	-.00005	.03722
#2	.00052	.00689	.00130	.00344	-.00026	-.00003	.04011
#3	-.00039	-.05412	-.00015	.00112	-.00047	-.00003	.04272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	.00009	.00218	.00146	.01323	-.04997	.00246
Stddev	.00002	.00012	.00030	.00016	.00656	.06652	.00063
%RSD	284.34	137.11	13.636	10.938	49.616	133.12	25.752
#1	.00001	.00017	.00247	.00133	.01025	.02218	.00314
#2	-.00002	.00014	.00187	.00164	.00868	-.10886	.00188
#3	-.00002	-.00005	.00219	.00140	.02075	-.06324	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01840	-.00035	.00001	.02818	.00110	23.299	-.00146
Stddev	.00482	.00059	.00026	.01936	.00030	11.419	.00151
%RSD	26.190	168.43	2089.7	68.716	27.100	49.010	103.73
#1	.01293	-.00093	-.00022	.00622	.00077	19.495	-.00196
#2	.02027	.00026	.00029	.04282	.00120	14.267	-.00266
#3	.02200	-.00039	-.00003	.03549	.00134	36.134	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: L1201081312 Acquired: 2/7/2012 11:55:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.236	.71877	F -33.159	.00251	-.00142	.01065	.00002
Stddev	9.329	.02459	.902	.00092	.00255	.00086	.00019
%RSD	91.139	3.4210	2.7209	36.843	178.93	8.1108	910.29
#1	4.9237	.72130	-34.107	.00356	-.00272	.01165	.00018
#2	21.008	.69301	-32.311	.00183	.00151	.01010	.00007
#3	4.7764	.74199	-33.060	.00213	-.00306	.01021	-.00019
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	-.00011	-.00013	-.00008	-.00049	F -.08456
Stddev	.00010	.00091	.00156	.00041	.00009	.13472
%RSD	66.525	815.23	1233.1	537.31	17.930	159.32
#1	.00005	.00007	.00003	.00039	-.00039	.07057
#2	.00026	-.00110	-.00175	-.00035	-.00054	-.17212
#3	.00016	.00069	.00135	-.00027	-.00055	-.15213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21992.	19276.
Stddev	136.	429.
%RSD	.61644	2.2250
#1	22129.	18785.
#2	21858.	19461.
#3	21989.	19581.

Approved: February 08, 2012

Sample Name: L1201082401 Acquired: 2/7/2012 11:59:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00011	-.03051	-.00126	.00184	-.00093	-.00004	.03346
Stddev	.00015	.01200	.00096	.00067	.00010	.00003	.01025
%RSD	136.81	39.339	76.360	36.450	11.085	69.909	30.633
#1	.00006	-.03024	-.00152	.00222	-.00087	-.00001	.02676
#2	-.00023	-.04264	-.00020	.00225	-.00105	-.00007	.02836
#3	-.00017	-.01864	-.00207	.00107	-.00088	-.00004	.04526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00004	.00171	.00090	.01187	-.11668	.00769
Stddev	.00008	.00009	.00007	.00029	.00278	.04472	.00202
%RSD	254.59	220.57	3.9612	32.236	23.425	38.328	26.311
#1	.00000	-.00006	.00165	.00084	.00869	-.12895	.00697
#2	-.00012	.00007	.00169	.00121	.01305	-.06710	.00997
#3	.00003	.00012	.00178	.00064	.01386	-.15398	.00612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01049	-.00012	-.00027	.01720	.00139	29.619	.00206
Stddev	.00788	.00046	.00008	.00685	.00014	13.231	.00056
%RSD	75.092	392.93	29.430	39.802	10.010	44.670	27.251
#1	-.01405	-.00064	-.00029	.02034	.00142	15.884	.00194
#2	-.01596	.00019	-.00018	.00935	.00124	42.281	.00267
#3	-.00146	.00011	-.00033	.02192	.00151	30.693	.00156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082401 Acquired: 2/7/2012 11:59:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.060	.34521	F -15.099	.00110	-.00136	.00752	-.00017
Stddev	6.439	.02724	2.910	.00011	.00065	.00125	.00015
%RSD	45.793	7.8912	19.271	10.062	47.788	16.676	87.989
#1	21.394	.37145	-17.792	.00120	-.00124	.00835	-.00020
#2	11.451	.34711	-15.493	.00098	-.00079	.00608	-.00030
#3	9.3353	.31707	-12.012	.00111	-.00207	.00814	-.00001
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.00096	.00027	.00020	.00021	.17861
Stddev	.00011	.00165	.00080	.00026	.00004	.07614
%RSD	78.577	171.06	296.98	128.43	18.335	42.631
#1	.00015	-.00021	-.00064	.00021	.00023	.09997
#2	.00023	.00026	.00061	-.00006	.00017	.25199
#3	.00002	.00285	.00083	.00045	.00023	.18387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	23599.	20435.
Stddev	314.	383.
%RSD	1.3314	1.8761
#1	23338.	20432.
#2	23948.	20054.
#3	23512.	20821.

Approved: February 08, 2012

Sample Name: L1201082402 Acquired: 2/7/2012 12:02:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00042	-.02900	.00204	.00244	-.00035	-.00003	.05196
Stddev	.00014	.01674	.00015	.00068	.00013	.00001	.01167
%RSD	33.125	57.722	7.3330	27.733	37.046	41.036	22.454
#1	-.00041	-.04773	.00221	.00271	-.00027	-.00004	.06438
#2	-.00057	-.01549	.00191	.00293	-.00050	-.00002	.05027
#3	-.00029	-.02380	.00200	.00167	-.00029	-.00002	.04123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	-.00018	.00107	.00139	.01747	-.01707	.00017
Stddev	.00011	.00014	.00036	.00043	.00495	.01761	.00108
%RSD	253.71	77.478	33.658	30.654	28.304	103.16	636.89
#1	-.00014	-.00027	.00088	.00153	.01181	.00262	.00025
#2	.00008	-.00002	.00149	.00172	.01965	-.02254	-.00094
#3	-.00008	-.00024	.00084	.00091	.02096	-.03131	.00120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00492	.00016	-.00008	.07346	.00012	F -2.1879	-.00055
Stddev	.00938	.00032	.00039	.01489	.00032	3.6908	.00172
%RSD	190.78	192.99	514.98	20.273	271.92	168.69	313.01
#1	-.00572	-.00020	.00031	.07946	.00044	1.6547	.00136
#2	.01203	.00032	-.00007	.05650	.00013	-2.5130	-.00198
#3	.00845	.00037	-.00047	.08442	-.00021	-5.7053	-.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082402 Acquired: 2/7/2012 12:02:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 20.038	.38431	F -16.896	.00239	-.00325	.00807	-.00017
Stddev	2.930	.01865	2.219	.00114	.00185	.00080	.00030
%RSD	14.622	4.8533	13.131	47.687	56.932	9.8792	180.24
#1	19.324	.37920	-18.882	.00200	-.00392	.00775	-.00029
#2	23.260	.40498	-17.304	.00367	-.00467	.00898	.00018
#3	17.532	.36874	-14.502	.00149	-.00116	.00749	-.00038
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.00077	-.00069	.00005	-.00063	F -.04362
Stddev	.00017	.00066	.00039	.00027	.00008	.07778
%RSD	118.94	85.795	56.344	533.89	13.339	178.29
#1	.00027	.00113	-.00085	.00033	-.00069	-.12568
#2	-.00005	.00001	-.00098	.00002	-.00053	-.03420
#3	.00021	.00117	-.00025	-.00021	-.00067	.02901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22179.	19756.
Stddev	158.	109.
%RSD	.71407	.55001
#1	22326.	19754.
#2	22011.	19649.
#3	22200.	19866.

Approved: February 08, 2012

Sample Name: L1201082403 Acquired: 2/7/2012 12:06:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00017	-.00365	.00181	.00118	-.00056	-.00004	.11114
Stddev	.00048	.03271	.00191	.00026	.00022	.00002	.00120
%RSD	283.56	896.58	105.70	22.142	38.123	57.983	1.0775
#1	-.00067	-.01733	.00253	.00104	-.00078	-.00001	.11001
#2	-.00012	-.02730	-.00036	.00101	-.00057	-.00006	.11240
#3	.00029	.03369	.00325	.00148	-.00035	-.00005	.11101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	.00001	.00144	.00175	.01009	.00736	.00090
Stddev	.00006	.00014	.00046	.00003	.00166	.06385	.00159
%RSD	166.13	2344.2	31.698	1.9315	16.421	867.78	176.74
#1	-.00003	.00010	.00093	.00171	.00826	-.03510	.00194
#2	-.00011	.00007	.00157	.00178	.01055	-.02361	.00169
#3	.00002	-.00015	.00181	.00175	.01148	.08078	-.00093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02562	.00024	-.00009	.02995	.00019	F -6.7104	.00053
Stddev	.00960	.00020	.00042	.00920	.00007	15.649	.00118
%RSD	37.484	84.653	493.64	30.703	36.038	233.21	222.55
#1	.03401	.00046	.00018	.02002	.00024	11.289	.00176
#2	.02769	.00008	-.00057	.03166	.00020	-17.090	.00043
#3	.01515	.00016	.00014	.03818	.00011	-14.331	-.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082403 Acquired: 2/7/2012 12:06:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.699	.17525	F -.81347	.00268	-.00104	.00971	-.00007
Stddev	7.870	.04751	1.4402	.00126	.00218	.00089	.00034
%RSD	73.561	27.108	177.05	46.916	209.87	9.1869	457.42
#1	13.368	.23002	.83577	.00136	-.00133	.00928	.00026
#2	1.8414	.14536	-1.8231	.00282	-.00306	.00911	-.00006
#3	16.888	.15036	-1.4531	.00387	.00127	.01073	-.00042
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00022	-.00007	-.00012	.00014	-.00057	F -.03273
Stddev	.00009	.00055	.00068	.00020	.00016	.10003
%RSD	43.601	761.37	571.60	144.85	27.324	305.64
#1	.00027	.00049	-.00051	.00037	-.00053	-.00967
#2	.00027	-.00061	.00067	.00001	-.00074	.05376
#3	.00011	-.00010	-.00051	.00004	-.00044	-.14227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22105.	18926.
Stddev	323.	77.
%RSD	1.4592	.40698
#1	22056.	18931.
#2	22449.	19001.
#3	21809.	18847.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 12:09:34 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39678	9.9466	.39155	.49230	.98017	.04866	9.8448
Stddev	.00328	.0693	.00256	.00469	.00261	.00035	.0355
%RSD	.82549	.69636	.65314	.95211	.26677	.71685	.36088
#1	.39313	10.012	.38935	.48696	.97971	.04827	9.8790
#2	.39776	9.9530	.39436	.49423	.98299	.04893	9.8474
#3	.39945	9.8744	.39094	.49572	.97782	.04879	9.8081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04951	.19859	.49213	.49396	3.9292	49.566	.97554
Stddev	.00028	.00073	.00533	.00294	.0213	.113	.00628
%RSD	.56870	.36847	1.0838	.59492	.54257	.22731	.64331
#1	.04919	.19775	.48598	.49064	3.9249	49.677	.98180
#2	.04966	.19910	.49555	.49500	3.9524	49.569	.97557
#3	.04969	.19892	.49484	.49623	3.9104	49.451	.96925
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8456	.49224	.98441	49.788	.49691	F 13.884	.49748
Stddev	.0447	.00323	.00250	.353	.00144	24.214	.00339
%RSD	.45391	.65711	.25441	.70941	.28944	174.39	.68200
#1	9.8890	.49548	.98187	50.191	.49547	-7.2097	.49417
#2	9.8480	.49222	.98449	49.642	.49835	40.324	.50095
#3	9.7997	.48902	.98688	49.531	.49691	8.5390	.49734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 12:09:34 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.939	9.9466	F 19.294	1.1890	.39301	4.9279	.98797
Stddev	1.631	.0316	1.954	.0032	.00216	.0116	.00412
%RSD	12.608	.31789	10.127	.26930	.55049	.23523	.41732
#1	14.185	9.9180	20.902	1.1859	.39087	4.9152	.98335
#2	13.540	9.9414	17.120	1.1889	.39519	4.9378	.99126
#3	11.093	9.9806	19.862	1.1923	.39299	4.9308	.98932
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98619	.97710	.50725	.98476	.98452	F .84327
Stddev	.00685	.00592	.00313	.00740	.00424	.04411
%RSD	.69435	.60582	.61770	.75112	.43065	5.2313
#1	.99375	.98378	.50442	.97627	.97969	.79233
#2	.98442	.97505	.50670	.98979	.98625	.86815
#3	.98040	.97249	.51062	.98821	.98762	.86931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21276.	18351.
Stddev	158.	11.
%RSD	.74131	.06135
#1	21458.	18360.
#2	21186.	18354.
#3	21184.	18339.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 12:12:47 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.01501	.00119	.00163	-.00006	-.00004	-.00733
Stddev	.00055	.03285	.00155	.00101	.00012	.00003	.00444
%RSD	239.40	218.92	129.97	61.865	214.27	78.687	60.536
#1	.00040	.02262	-.00035	.00048	.00008	-.00005	-.00861
#2	-.00052	-.02965	.00118	.00208	-.00016	-.00006	-.01099
#3	-.00058	-.03799	.00274	.00235	-.00009	.00000	-.00240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	-.00002	.00046	.00051	-.00302	.05302	-.00635
Stddev	.00009	.00021	.00025	.00004	.00449	.03575	.00209
%RSD	274.83	956.26	55.220	7.3593	148.84	67.425	32.904
#1	.00002	-.00009	.00075	.00055	-.00806	.08975	-.00599
#2	.00002	-.00019	.00034	.00049	.00053	.01835	-.00446
#3	-.00014	.00021	.00028	.00048	-.00151	.05096	-.00859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01902	-.00015	.00097	.02549	-.00033	F 7.1026	.00087
Stddev	.00422	.00082	.00026	.02085	.00056	25.326	.00210
%RSD	22.209	540.87	26.546	81.798	168.51	356.58	241.70
#1	.01457	.00078	.00127	.00729	-.00098	6.0065	.00067
#2	.02297	-.00047	.00082	.04824	-.00007	-17.658	.00306
#3	.01951	-.00077	.00082	.02094	.00005	32.959	-.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						1.0000	
Low Limit						-1.1000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 12:12:47 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.808	-.27294	F 14.507	.00275	.00114	.00348	.00028
Stddev	13.137	.04549	3.074	.00134	.00198	.00134	.00021
%RSD	78.160	16.668	21.192	48.613	173.96	38.434	75.318
#1	2.1159	-.30662	14.632	.00394	.00013	.00481	.00015
#2	27.424	-.22119	11.372	.00130	.00342	.00350	.00016
#3	20.884	-.29101	17.517	.00302	-.00014	.00213	.00052
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	1.0000		1.0000				
Low Limit	-1.0000		-1.0000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	-.00030	-.00003	-.00026	.00030	-.04038
Stddev	.00012	.00018	.00097	.00024	.00005	.02332
%RSD	783.83	60.771	2854.0	91.993	17.604	57.747
#1	.00012	-.00050	-.00069	-.00050	.00025	-.01382
#2	.00004	-.00025	.00108	-.00026	.00029	-.04982
#3	-.00011	-.00015	-.00049	-.00002	.00036	-.05749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21759.	18122.
Stddev	341.	272.
%RSD	1.5649	1.5000
#1	21620.	18098.
#2	21509.	18405.
#3	22147.	17862.

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:16:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: FE 1000 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00241	-.04415	-.00656	.35136	-.00076	.00090
Stddev	.00071	.01107	.00131	.00691	.00018	.00005
%RSD	29.247	25.064	19.890	1.9670	24.018	5.2469
#1	-.00208	-.04376	-.00766	.34762	-.00055	.00095
#2	-.00194	-.05540	-.00512	.35934	-.00087	.00086
#3	-.00323	-.03328	-.00691	.34713	-.00086	.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.04487	F -.01394	.01237	F -.04410	.01623	F 963.24
Stddev	.00434	.00018	.00010	.00047	.00298	7.45
%RSD	9.6696	1.2867	.78090	1.0562	18.358	.77304
#1	-.04846	-.01377	.01231	-.04460	.01479	963.30
#2	-.04612	-.01413	.01233	-.04402	.01425	970.65
#3	-.04005	-.01392	.01248	-.04368	.01966	955.76
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit		16.200		45.000		900.00
Low Limit		-.00050		-.00300		-.02000

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.06221	-.00560	-.00600	.01875	-.00367	.02101
Stddev	.04697	.00065	.00750	.00087	.00012	.00546
%RSD	75.490	11.675	124.96	4.6231	3.3556	26.007
#1	-.01242	-.00631	-.00959	.01827	-.00369	.01656
#2	-.06851	-.00547	.00262	.01823	-.00354	.01935
#3	-.10572	-.00502	-.01104	.01975	-.00379	.02711
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:16:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: FE 1000 PPM

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00555	kF -4789.9	.03014	F 17.264	F -.10981	F 63.699
Stddev	.00126	33.6	.00183	4.742	.02734	1.665
%RSD	22.696	.70163	6.0793	27.465	24.894	2.6143
#1	.00412	k -4787.5	.02825	12.113	-.07950	61.776
#2	.00602	k -4757.6	.03191	21.448	-.11732	64.667
#3	.00651	k -4824.6	.03026	18.230	-.13260	64.653
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00356	.00293	.00645	.00512	.00089	.00227
Stddev	.00105	.00222	.00209	.00007	.00009	.00081
%RSD	29.644	75.898	32.382	1.4288	9.8247	35.752
#1	-.00322	.00356	.00494	.00513	.00079	.00160
#2	-.00474	.00477	.00557	.00519	.00093	.00203
#3	-.00271	.00046	.00883	.00505	.00095	.00317
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00394	-.00464	.00352	^ *****
Stddev	.00058	.00049	.00010	-----
%RSD	14.750	10.659	2.7542	-----
#1	.00447	-.00494	.00361	^ -----
#2	.00402	-.00491	.00342	^ -----
#3	.00332	-.00407	.00352	^ -----
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:16:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: FE 1000 PPM

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22034.**	**20017.**
Stddev	162.	79.
%RSD	.73346	.39328
#1	21941.	20058.
#2	22220.	20066.
#3	21940.	19926.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:19:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1722) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: CA 1000 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00102	-.01388	.00001	.00257	.00073	-.00004	F 941.46
Stddev	.00026	.04332	.00059	.00111	.00035	.00002	19.83
%RSD	25.245	312.15	6747.2	43.180	47.886	49.422	2.1065
#1	-.00130	-.04372	-.00046	.00129	.00054	-.00005	928.89
#2	-.00095	.03581	-.00019	.00313	.00114	-.00005	964.32
#3	-.00080	-.03373	.00068	.00328	.00053	-.00002	931.16
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							900.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.00018	.01733	-.00009	.20605	.05230	.04449
Stddev	.00004	.00026	.00067	.00058	.01940	.04435	.00133
%RSD	95.350	144.74	3.8386	641.42	9.4156	84.796	2.9930
#1	-.00008	.00048	.01787	.00058	.22819	.01580	.04300
#2	-.00006	-.00002	.01754	-.00048	.19791	.10166	.04558
#3	.00000	.00008	.01659	-.00038	.19204	.03944	.04488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02452	-.00013	-.00009	.04392	-.00133	F -104.29	.00365
Stddev	.02848	.00047	.00018	.01065	.00027	15.49	.00172
%RSD	116.16	367.69	186.88	24.252	20.137	14.848	47.153
#1	-.00288	-.00039	.00004	.05596	-.00125	-121.87	.00563
#2	.05397	.00042	-.00003	.04006	-.00112	-98.373	.00254
#3	.02246	-.00041	-.00029	.03574	-.00164	-92.643	.00278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:19:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1722) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: CA 1000 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 22.789	F 960.87	F -183.44	.00013	-.00436	.00827	.00003
Stddev	2.661	1.22	4.52	.00029	.00257	.00111	.00024
%RSD	11.676	.12711	2.4646	222.43	59.028	13.369	850.39
#1	22.879	960.82	-188.41	.00044	-.00169	.00715	.00029
#2	20.084	962.12	-179.57	.00011	-.00682	.00828	-.00019
#3	25.404	959.68	-182.34	-.00015	-.00457	.00937	-.00001
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.04085	-.02164	-.00105	.00018	.00935	F -.51688
Stddev	.00172	.00052	.00094	.00029	.00003	.28211
%RSD	4.2027	2.4086	89.820	163.37	.30284	54.580
#1	-.03973	-.02129	-.00024	-.00015	.00932	-.19429
#2	-.04282	-.02224	-.00082	.00026	.00934	-.71743
#3	-.03999	-.02139	-.00209	.00042	.00938	-.63891
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	4.5000					45.000
Low Limit	-.01000					-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20023.	18531.
Stddev	165.	139.
%RSD	.82366	.75011
#1	20188.	18687.
#2	19859.	18423.
#3	20022.	18482.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:19:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: CA 1000 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00102	-.01388	.00001	.00257	.00073	-.00004	F 941.46
Stddev	.00026	.04332	.00059	.00111	.00035	.00002	19.83
%RSD	25.245	312.15	6747.2	43.180	47.886	49.422	2.1065
#1	-.00130	-.04372	-.00046	.00129	.00054	-.00005	928.89
#2	-.00095	.03581	-.00019	.00313	.00114	-.00005	964.32
#3	-.00080	-.03373	.00068	.00328	.00053	-.00002	931.16
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							900.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.00018	.01733	-.00008	.20605	.05230	.04449
Stddev	.00004	.00026	.00067	.00059	.01940	.04435	.00133
%RSD	95.350	144.74	3.8386	739.96	9.4156	84.796	2.9930
#1	-.00008	.00048	.01787	.00059	.22819	.01580	.04300
#2	-.00006	-.00002	.01754	-.00047	.19791	.10166	.04558
#3	.00000	.00008	.01659	-.00037	.19204	.03944	.04488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02452	-.00013	-.00009	.04392	-.00133	F -104.29	.00365
Stddev	.02848	.00047	.00018	.01065	.00027	15.49	.00172
%RSD	116.16	367.69	186.88	24.252	20.137	14.848	47.153
#1	-.00288	-.00039	.00004	.05596	-.00125	-121.87	.00563
#2	.05397	.00042	-.00003	.04006	-.00112	-98.373	.00254
#3	.02246	-.00041	-.00029	.03574	-.00164	-92.643	.00278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:19:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: CA 1000 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 22.789	F 960.87	F -183.44	.00013	-.00436	.00827	.00003
Stddev	2.661	1.22	4.52	.00029	.00257	.00111	.00024
%RSD	11.676	.12711	2.4646	222.43	59.028	13.369	850.39
#1	22.879	960.82	-188.41	.00044	-.00169	.00715	.00029
#2	20.084	962.12	-179.57	.00011	-.00682	.00828	-.00019
#3	25.404	959.68	-182.34	-.00015	-.00457	.00937	-.00001
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.04085	-.02164	-.00105	.00018	.00935	F -.51688
Stddev	.00172	.00052	.00094	.00029	.00003	.28211
%RSD	4.2027	2.4086	89.820	163.37	.30284	54.580
#1	-.03973	-.02129	-.00024	-.00015	.00932	-.19429
#2	-.04282	-.02224	-.00082	.00026	.00934	-.71743
#3	-.03999	-.02139	-.00209	.00042	.00938	-.63891
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	4.5000					45.000
Low Limit	-.01000					-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20023.	18531.
Stddev	165.	139.
%RSD	.82366	.75011
#1	20188.	18687.
#2	19859.	18423.
#3	20022.	18482.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:23:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1722) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MG 1000 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00013	-.03535	.00045	.00018	.00045	-.00005	.06491
Stddev	.00030	.02200	.00137	.00109	.00033	.00001	.02492
%RSD	226.54	62.231	306.90	599.72	72.270	19.275	38.396
#1	.00017	-.02062	.00000	.00029	.00075	-.00004	.09088
#2	-.00013	-.02479	.00198	-.00096	.00010	-.00005	.06267
#3	-.00043	-.06063	-.00064	.00121	.00051	-.00006	.04119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00158	.00010	.00165	.00179	.00175	.09429	.00195
Stddev	.00006	.00006	.00038	.00018	.00285	.03219	.00341
%RSD	3.5835	54.038	23.197	9.8127	163.34	34.138	174.87
#1	.00154	.00014	.00206	.00161	-.00132	.08648	-.00027
#2	.00164	.00013	.00131	.00180	.00433	.12967	.00024
#3	.00155	.00004	.00157	.00197	.00223	.06673	.00588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1020.4	F -.00666	-.00003	.04082	-.00129	F -42.660	.00034
Stddev	3.6	.00033	.00010	.00616	.00052	16.354	.00328
%RSD	.35166	4.9714	393.53	15.086	40.770	38.335	974.57
#1	1017.7	-.00703	-.00001	.04792	-.00097	-55.670	-.00338
#2	1024.5	-.00657	.00007	.03764	-.00099	-24.302	.00283
#3	1019.2	-.00639	-.00013	.03690	-.00189	-48.008	.00156
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	900.00	180.00				900.00	
Low Limit	-.10000	-.00300				-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:23:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1722) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MG 1000 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.595	F -.18218	3.8925	-.00122	-.00439	.00026	.00023
Stddev	2.224	.03831	2.6470	.00305	.00264	.00235	.00025
%RSD	11.351	21.027	68.004	249.17	60.152	906.72	107.34
#1	22.098	-.15707	2.9554	.00207	-.00160	.00209	.00027
#2	18.842	-.22627	1.8414	-.00394	-.00685	.00107	-.00003
#3	17.845	-.16319	6.8806	-.00180	-.00471	-.00238	.00046
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	-.00101	-.00024	-.00136	.00406	F -.14465
Stddev	.00010	.00064	.00102	.00019	.00004	.09877
%RSD	116.45	63.960	419.87	13.925	1.0579	68.286
#1	-.00001	-.00112	-.00014	-.00149	.00404	-.24501
#2	.00008	-.00159	-.00131	-.00144	.00404	-.04755
#3	.00020	-.00031	.00072	-.00114	.00411	-.14137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19767.	18239.
Stddev	63.	54.
%RSD	.32112	.29769
#1	19813.	18228.
#2	19695.	18191.
#3	19793.	18298.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:23:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MG 1000 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00013	-.03535	.00045	.00018	.00045	-.00005	.06491
Stddev	.00030	.02200	.00137	.00109	.00033	.00001	.02492
%RSD	226.54	62.231	306.90	599.72	72.270	19.275	38.396
#1	.00017	-.02062	.00000	.00029	.00075	-.00004	.09088
#2	-.00013	-.02479	.00198	-.00096	.00010	-.00005	.06267
#3	-.00043	-.06063	-.00064	.00121	.00051	-.00006	.04119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00158	.00010	.00165	.00179	.00175	.09429	.00195
Stddev	.00006	.00006	.00038	.00018	.00285	.03219	.00341
%RSD	3.5835	54.038	23.197	9.8180	163.34	34.138	174.87
#1	.00154	.00014	.00206	.00161	-.00132	.08648	-.00027
#2	.00164	.00013	.00131	.00180	.00433	.12967	.00024
#3	.00155	.00004	.00157	.00196	.00223	.06673	.00588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1020.4	F -.00666	-.00003	.04082	-.00129	F -42.660	.00034
Stddev	3.6	.00033	.00010	.00616	.00052	16.354	.00328
%RSD	.35166	4.9714	393.53	15.086	40.770	38.335	974.57
#1	1017.7	-.00703	-.00001	.04792	-.00097	-55.670	-.00338
#2	1024.5	-.00657	.00007	.03764	-.00099	-24.302	.00283
#3	1019.2	-.00639	-.00013	.03690	-.00189	-48.008	.00156
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	900.00	180.00				900.00	
Low Limit	-.10000	-.00300				-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:23:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MG 1000 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.595	F -.18218	3.8925	-.00122	-.00439	.00026	.00023
Stddev	2.224	.03831	2.6470	.00305	.00264	.00235	.00025
%RSD	11.351	21.027	68.004	249.17	60.152	906.72	107.34
#1	22.098	-.15707	2.9554	.00207	-.00160	.00209	.00027
#2	18.842	-.22627	1.8414	-.00394	-.00685	.00107	-.00003
#3	17.845	-.16319	6.8806	-.00180	-.00471	-.00238	.00046
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	-.00101	-.00024	-.00136	.00406	F -.14465
Stddev	.00010	.00064	.00102	.00019	.00004	.09877
%RSD	116.45	63.960	419.87	13.925	1.0579	68.286
#1	-.00001	-.00112	-.00014	-.00149	.00404	-.24501
#2	.00008	-.00159	-.00131	-.00144	.00404	-.04755
#3	.00020	-.00031	.00072	-.00114	.00411	-.14137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19767.	18239.
Stddev	63.	54.
%RSD	.32112	.29769
#1	19813.	18228.
#2	19695.	18191.
#3	19793.	18298.

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:36:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: AL 900 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	F 862.73	-.00821	-.00023	-.00070	-.00010	.02005
Stddev	.00024	3.05	.00169	.00015	.00031	.00001	.00748
%RSD	144.89	.35351	20.610	65.612	43.883	10.538	37.295
#1	.00042	859.24	-.00751	-.00034	-.00036	-.00011	.02868
#2	-.00004	864.01	-.00698	-.00006	-.00078	-.00011	.01565
#3	.00010	864.92	-.01014	-.00028	-.00096	-.00009	.01582
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		810.00					
Low Limit		-.10000					

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	.00010	-.00006	.00248	.01164	.01708	-.00382
Stddev	.00001	.00015	.00026	.00018	.00562	.02614	.00117
%RSD	16.321	148.06	459.02	7.1171	48.305	153.04	30.581
#1	.00006	.00025	.00019	.00228	.00764	-.01310	-.00309
#2	.00005	-.00005	-.00032	.00258	.00921	.03156	-.00517
#3	.00004	.00010	-.00003	.00259	.01807	.03278	-.00320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00712	.00207	.00005	.03283	-.00147	F 4400.7	F -.01191
Stddev	.00846	.00032	.00053	.01318	.00024	26.2	.00196
%RSD	118.78	15.355	1003.7	40.137	16.609	.59536	16.471
#1	.01341	.00196	-.00043	.03205	-.00128	4371.9	-.01085
#2	.01044	.00182	-.00004	.02006	-.00139	4407.2	-.01071
#3	-.00249	.00243	.00062	.04638	-.00174	4423.1	-.01418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit						900.00	180.00
Low Limit						-.00400	-.00500

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:36:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: AL 900 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 18.572	F -1.2862	F 31.648	-.01656	-.00373	.00891	.00960
Stddev	7.327	.0687	.360	.00241	.00311	.00176	.00047
%RSD	39.453	5.3407	1.1386	14.537	83.201	19.731	4.8620
#1	16.859	-1.3049	31.414	-.01632	-.00016	.00981	.00992
#2	12.253	-1.2101	32.063	-.01908	-.00525	.00689	.00982
#3	26.604	-1.3436	31.467	-.01428	-.00579	.01005	.00906
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	-.00051	.00333	.00016	.00049	F -.08430
Stddev	.00015	.00038	.00214	.00023	.00010	.07191
%RSD	219.32	74.277	64.270	144.36	20.638	85.306
#1	.00019	-.00094	.00179	-.00006	.00059	-.12680
#2	-.00010	-.00022	.00578	.00041	.00049	-.00127
#3	.00011	-.00038	.00244	.00013	.00039	-.12484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21752.	19385.
Stddev	73.	27.
%RSD	.33613	.14119
#1	21807.	19361.
#2	21669.	19380.
#3	21779.	19415.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:39:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MN 200 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00888	.24182	.00603	-.01365	-.00045	.00007	.00612
Stddev	.00038	.02203	.00149	.00114	.00011	.00001	.01192
%RSD	4.3228	9.1120	24.732	8.3259	25.252	17.309	194.89
#1	.00848	.26688	.00489	-.01399	-.00032	.00007	.01607
#2	.00924	.23309	.00548	-.01238	-.00050	.00006	.00937
#3	.00891	.22549	.00772	-.01457	-.00052	.00008	-.00709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00049	.00076	F -.01466	.00139	.01445	.07893	-.00954
Stddev	.00009	.00010	.00062	.00060	.00838	.04094	.00097
%RSD	17.822	13.013	4.2212	43.288	57.993	51.871	10.202
#1	.00058	.00085	-.01530	.00204	.00688	.03461	-.00956
#2	.00041	.00065	-.01407	.00084	.01301	.08683	-.00856
#3	.00047	.00078	-.01460	.00130	.02346	.11533	-.01050
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			45.000				
Low Limit			-.00300				

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04368	F 191.30	F -.01108	.03682	.00106	F 1362.6	.02351
Stddev	.02831	.77	.00005	.01228	.00060	13.4	.00096
%RSD	64.803	.40092	.42792	33.350	56.171	.98407	4.0745
#1	.04564	191.90	-.01104	.03947	.00172	1376.7	.02284
#2	.01445	190.44	-.01106	.04756	.00054	1361.0	.02460
#3	.07097	191.55	-.01113	.02343	.00093	1350.0	.02308
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		180.00	9.0000			900.00	
Low Limit		-.00300	-.01000			-.00400	

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:39:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MN 200 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.868	F 29.613	F -1178.2	.00309	.07565	.00970	-.00007
Stddev	3.026	.155	10.5	.00123	.00078	.00064	.00027
%RSD	15.230	.52260	.89391	39.960	1.0349	6.6241	382.63
#1	17.079	29.682	-1177.0	.00406	.07477	.01000	-.00026
#2	23.085	29.722	-1189.2	.00170	.07627	.01013	-.00020
#3	19.438	29.436	-1168.3	.00350	.07591	.00896	.00024
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.00419	.08242	F -.02029	-.00041	F -.19234
Stddev	.00006	.00051	.00127	.00017	.00004	.09636
%RSD	131.16	12.224	1.5409	.81779	9.6183	50.097
#1	-.00001	-.00465	.08388	-.02037	-.00038	-.18691
#2	.00004	-.00427	.08180	-.02041	-.00045	-.09881
#3	.00012	-.00364	.08157	-.02010	-.00039	-.29129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit				90.000		45.000
Low Limit				-.01000		-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21448.	18661.
Stddev	153.	439.
%RSD	.71207	2.3509
#1	21311.	19070.
#2	21420.	18715.
#3	21613.	18197.

Approved: February 08, 2012
Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:42:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: B 100 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00079	-.02711	.00625	89.848	-.00014	-.00001	-.00718
Stddev	.00031	.03436	.00116	3.084	.00032	.00005	.00250
%RSD	39.095	126.74	18.630	3.4323	220.77	395.16	34.858
#1	-.00103	-.02249	.00500	93.407	.00016	-.00007	-.00878
#2	-.00044	-.06355	.00730	88.168	-.00048	.00003	-.00429
#3	-.00091	.00470	.00644	87.969	-.00011	.00000	-.00846
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.00072	-.00042	.00003	.00144	.00249	.04411	-.00408
Stddev	.00007	.00010	.00024	.00057	.00377	.06931	.00150
%RSD	9.6805	23.822	922.45	39.807	151.35	157.14	36.834
#1	-.00076	-.00039	.00010	.00205	.00388	.06452	-.00557
#2	-.00064	-.00054	-.00024	.00134	.00536	.10091	-.00256
#3	-.00076	-.00035	.00022	.00092	-.00177	-.03312	-.00411
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	16.200						
Low Limit	-.00050						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02209	.01479	.00056	.01741	-.00060	10.744	.00017
Stddev	.01071	.00454	.00031	.01822	.00031	31.386	.00197
%RSD	48.502	30.681	54.753	104.63	51.906	292.13	1152.5
#1	.00972	.01961	.00048	.03493	-.00058	46.955	-.00203
#2	.02852	.01414	.00030	.01875	-.00030	-8.6443	.00077
#3	.02802	.01061	.00090	-.00144	-.00093	-6.0791	.00177
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:42:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: B 100 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.189	F -.44245	F 13.836	-.00115	-.00379	.00575	.00103
Stddev	6.756	.02030	2.478	.00081	.00177	.00183	.00018
%RSD	44.481	4.5879	17.909	70.814	46.847	31.863	17.132
#1	15.878	-.44177	13.239	-.00198	-.00406	.00775	.00090
#2	21.575	-.46308	11.712	-.00112	-.00540	.00416	.00123
#3	8.1151	-.42250	16.559	-.00035	-.00189	.00535	.00095
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	-.00156	.00007	-.00005	-.00042	F -.19340
Stddev	.00016	.00177	.00009	.00012	.00008	.18108
%RSD	145.21	113.89	135.74	227.65	18.151	93.626
#1	.00026	-.00208	.00016	-.00003	-.00040	-.40049
#2	-.00005	.00042	-.00003	.00006	-.00050	-.11483
#3	.00011	-.00301	.00008	-.00019	-.00035	-.06489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22350.	18181.
Stddev	854.	157.
%RSD	3.8191	.86327
#1	21369.	18068.
#2	22760.	18360.
#3	22921.	18116.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:46:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: BA 90 PM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00085	-.02709	.00257	.31099	F 86.518	-.00001	.01089
Stddev	.00010	.02958	.00194	.01977	2.380	.00002	.01681
%RSD	12.404	109.17	75.401	6.3572	2.7513	176.54	154.35
#1	-.00076	-.05920	.00474	.33172	85.574	.00000	.02961
#2	-.00096	-.00094	.00192	.30892	89.226	-.00003	.00598
#3	-.00081	-.02114	.00104	.29234	84.755	.00000	-.00291
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					81.000		
Low Limit					-.00500		

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01149	-.00482	-.00010	.00092	.00342	.02304	-.00531
Stddev	.00027	.00035	.00046	.00015	.00126	.03163	.00270
%RSD	2.3893	7.2926	483.38	16.740	36.759	137.27	50.941
#1	.01138	-.00442	-.00053	.00074	.00482	-.00441	-.00613
#2	.01181	-.00500	.00039	.00102	.00239	.01591	-.00751
#3	.01129	-.00505	-.00015	.00100	.00305	.05763	-.00229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01106	.00027	-.00027	.02493	-.00128	24.411	-.00088
Stddev	.00816	.00007	.00012	.01667	.00011	17.424	.00043
%RSD	73.758	27.243	42.775	66.836	8.2882	71.377	48.482
#1	.00994	.00033	-.00026	.04048	-.00126	4.2936	-.00131
#2	.01972	.00030	-.00016	.02698	-.00118	34.227	-.00088
#3	.00352	.00019	-.00039	.00734	-.00139	34.712	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:46:33 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: BA 90 PM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 20.391	F -.25379	F 14.596	.00276	.00131	.00943	.00017
Stddev	6.415	.06427	.894	.00196	.00191	.00155	.00009
%RSD	31.460	25.324	6.1259	70.966	145.35	16.409	55.524
#1	27.575	-.26054	15.187	.00188	-.00085	.00829	.00009
#2	18.361	-.18641	15.034	.00501	.00203	.00882	.00027
#3	15.236	-.31442	13.567	.00140	.00276	.01119	.00014
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00032	.00005	.00089	-.00023	-.00062	F -.12304
Stddev	.00012	.00055	.00095	.00013	.00010	.12384
%RSD	36.979	1170.0	107.27	58.697	16.007	100.65
#1	.00019	.00048	.00141	-.00008	-.00073	.00390
#2	.00035	.00024	-.00021	-.00032	-.00053	-.24354
#3	.00042	-.00058	.00147	-.00029	-.00062	-.12949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21885.	19439.
Stddev	159.	839.
%RSD	.72821	4.3153
#1	21900.	20284.
#2	22037.	19426.
#3	21719.	18606.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:50:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: ZN 50 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00043	.00032	.00070	.13332	.00634	.00008	-.01772
Stddev	.00075	.04282	.00111	.00558	.00155	.00002	.00594
%RSD	174.69	13337.	159.25	4.1845	24.440	20.457	33.543
#1	-.00127	-.04837	.00193	.13967	.00779	.00010	-.02424
#2	.00016	.01720	-.00025	.13109	.00653	.00007	-.01632
#3	-.00018	.03214	.00042	.12920	.00471	.00007	-.01260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	-.00002	.03577	.00047	-.00096	.01348	-.00509
Stddev	.00009	.00022	.00030	.00050	.00533	.03863	.00093
%RSD	121.62	960.83	.84815	107.32	553.94	286.66	18.331
#1	-.00017	-.00027	.03555	.00037	.00199	.05532	-.00408
#2	-.00005	.00004	.03565	.00101	.00223	-.02084	-.00528
#3	.00000	.00016	.03612	.00002	-.00711	.00595	-.00591
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00353	-.00045	-.00015	-.01349	-.00058	F -9.0662	.00013
Stddev	.01654	.00042	.00010	.02274	.00036	6.9854	.00209
%RSD	468.44	94.279	66.741	168.63	62.176	77.049	1580.9
#1	-.00242	-.00063	-.00004	-.02953	-.00025	-15.652	.00114
#2	.02222	.00004	-.00022	.01254	-.00053	-1.7405	.00152
#3	-.00921	-.00075	-.00021	-.02348	-.00096	-9.8057	-.00227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:50:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: ZN 50 PPM

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **11.589**	F **-.30515**	F **15.213**	**-.00019**	**-.00072**	**.01048**	**.00014**
Stddev	7.329	.04749	1.944	.00063	.00137	.00074	.00023
%RSD	63.242	15.562	12.781	338.36	190.13	7.0979	163.59
#1	11.755	-.32464	17.295	-.00052	-.00212	.01005	.00007
#2	18.834	-.33979	14.899	.00054	.00062	.01134	-.00004
#3	4.1783	-.25102	13.445	-.00059	-.00067	.01005	.00039
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**-.00072**	**-.00046**	**.00010**	F **47.697**	F **-.05753**
Stddev	.00007	.00058	.00014	.00033	.810	.02414
%RSD	45.065	80.430	29.446	337.15	1.6983	41.962
#1	.00023	-.00095	-.00042	.00047	47.390	-.03086
#2	.00010	-.00114	-.00036	-.00014	47.085	-.07789
#3	.00013	-.00006	-.00062	-.00004	48.615	-.06382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit					45.000	45.000
Low Limit					-.01000	-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21466.**	**17696.**
Stddev	313.	73.
%RSD	1.4571	.41200
#1	21480.	17740.
#2	21771.	17611.
#3	21146.	17736.

Approved: February 08, 2012

Sample Name: LRC Acquired: 2/7/2012 12:53:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MO 10 PPM

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .00003	k -.02877	k -.00401	k .07093	-.00032	k -.00001
Stddev	.00033	.03281	.00062	.00564	.00050	.00004
%RSD	1047.2	114.05	15.470	7.9485	155.91	335.47
#1	k .00035	k -.04794	k -.00415	k .07699	-.00040	k -.00006
#2	-.00032	-.04747	-.00333	.06996	.00021	.00003
#3	.00007	.00912	-.00455	.06584	-.00077	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.01473	k -.00013	k .00619	k .00028	kF -.01296	k -.00314
Stddev	.02009	.00016	.00006	.00050	.00042	.00194
%RSD	136.42	129.14	1.0408	181.49	3.2715	61.810
#1	-.00892	k -.00032	k .00620	k .00077	k -.01290	k -.00374
#2	-.03709	-.00005	.00612	.00030	-.01257	-.00472
#3	.00182	-.00002	.00625	-.00024	-.01341	-.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					180.00	
Low Limit					-.00500	

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.15669	-.01265	k .06465	k .00048	F 9.7503	.02373
Stddev	.06288	.00105	.02410	.00062	.0523	.01359
%RSD	40.131	8.2845	37.276	128.85	.53678	57.272
#1	.19204	-.01249	k .08038	k -.00006	9.8095	.02579
#2	.19394	-.01376	.03691	.00035	9.7100	.00923
#3	.08409	-.01169	.07668	.00116	9.7315	.03617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					9.0000	
Low Limit					-.01000	

Approved: February 08, 2012
Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:53:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MO 10 PPM

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .06101	kF -645.66	k .00588	F 14.533	1.6534	4.7880
Stddev	.10601	18.82	.00119	4.161	2.9921	153.33
%RSD	173.75	2.9152	20.300	28.633	180.97	3202.5
#1	k .18342	k -667.21	k .00579	13.337	5.1029	-172.06
#2	.00004	-632.47	.00712	19.161	.09635	85.885
#3	-.00042	-637.29	.00474	11.101	-.23919	100.54
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit		900.00		9.0000		
Low Limit		-.00400		-.00400		

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.00794	k .00279	.11548	k .00007	.00022	k -.00078
Stddev	.00104	.00217	.04901	.00056	.00007	.00253
%RSD	13.087	77.979	42.438	855.93	33.608	322.46
#1	k -.00674	k .00422	.17206	k -.00058	.00029	k -.00370
#2	-.00851	.00385	.08788	.00043	.00023	.00073
#3	-.00857	.00029	.08649	.00035	.00014	.00062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	k -.00099	kF -.02373	^ *****	k 8.3077
Stddev	.00064	.00431	-----	.3280
%RSD	64.655	18.175	-----	3.9483
#1	k -.00038	k -.02871	^ -----	k 8.6457
#2	-.00092	-.02125	-.00065	8.2869
#3	-.00165	-.02122	-.00099	7.9906
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit		90.000		
Low Limit		-.01000		

Approved: February 08, 2012

Erin D. Long

Sample Name: LRC Acquired: 2/7/2012 12:53:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: MO 10 PPM

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21572.**	**18182.**
Stddev	1067.	288.
%RSD	4.9481	1.5853
#1	20343.	17943.
#2	22106.	18100.
#3	22267.	18502.

Approved: February 08, 2012

Sample Name: BLANK Acquired: 2/7/2012 13:00:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00061	-.01132	-.00003	.02398	-.00055	-.00002	-.00486
Stddev	.00074	.01720	.00134	.00060	.00025	.00001	.00939
%RSD	120.97	151.99	4255.1	2.4872	45.016	77.698	193.11
#1	-.00146	-.02786	-.00125	.02462	-.00064	.00000	-.00260
#2	-.00009	-.01257	.00139	.02389	-.00073	-.00003	-.01518
#3	-.00029	.00648	-.00024	.02344	-.00027	-.00003	.00319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00023	.00049	.00095	.00006	.01755	-.00217
Stddev	.00004	.00014	.00059	.00058	.00522	.04512	.00148
%RSD	501.72	60.460	121.31	60.314	8936.0	257.10	68.141
#1	.00001	.00025	-.00017	.00050	-.00548	-.03035	-.00245
#2	.00005	.00036	.00066	.00076	.00488	.05925	-.00349
#3	-.00003	.00008	.00098	.00160	.00077	.02375	-.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00613	-.00002	.00039	.00519	-.00056	F -1.5460	-.00077
Stddev	.00740	.00051	.00025	.01062	.00028	3.0913	.00092
%RSD	120.83	2106.3	64.042	204.74	49.159	199.96	119.33
#1	.01280	-.00011	.00038	-.00522	-.00037	-4.4320	.00017
#2	-.00184	.00052	.00014	.01601	-.00044	1.7162	-.00082
#3	.00742	-.00049	.00064	.00478	-.00088	-1.9223	-.00167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: BLANK Acquired: 2/7/2012 13:00:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.844	F -.34308	F 15.309	.00003	-.00148	.00703	-.00004
Stddev	2.711	.03998	3.685	.00100	.00375	.00137	.00015
%RSD	16.097	11.653	24.071	2940.9	254.32	19.462	396.11
#1	14.911	-.29769	12.403	.00092	.00179	.00547	.00011
#2	19.943	-.35850	14.071	-.00106	-.00064	.00763	-.00019
#3	15.677	-.37305	19.454	.00024	-.00558	.00800	-.00003
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.00107	-.00172	-.00005	-.00131	F -.02659
Stddev	.00014	.00041	.00046	.00011	.00007	.23517
%RSD	305.02	37.787	26.892	235.73	5.1622	884.50
#1	.00017	-.00061	-.00137	-.00011	-.00127	.23681
#2	.00008	-.00128	-.00224	-.00011	-.00127	-.21547
#3	-.00011	-.00134	-.00155	.00008	-.00139	-.10111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21097.	18649.
Stddev	261.	190.
%RSD	1.2349	1.0167
#1	21393.	18833.
#2	20997.	18659.
#3	20902.	18454.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 13:06:59 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40259	10.100	.39259	.50999	.99623	.04922	10.024
Stddev	.01034	.071	.00408	.01288	.00362	.00117	.046
%RSD	2.5694	.70320	1.0381	2.5257	.36316	2.3804	.45949
#1	.39072	10.019	.39486	.49577	.99297	.04789	9.9802
#2	.40963	10.132	.39503	.52088	1.0001	.05008	10.019
#3	.40742	10.149	.38789	.51333	.99561	.04969	10.072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04917	.19863	.50337	.49576	3.9845	50.559	.98217
Stddev	.00038	.00104	.01250	.00233	.0198	.056	.00251
%RSD	.76379	.52147	2.4826	.47054	.49576	.11086	.25549
#1	.04960	.19908	.48905	.49810	3.9649	50.505	.97956
#2	.04901	.19937	.51205	.49573	4.0044	50.617	.98456
#3	.04890	.19745	.50901	.49343	3.9843	50.556	.98239
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9798	.49399	.99545	50.387	.49991	F 3.0416	.50168
Stddev	.0459	.00302	.01078	.090	.00363	19.864	.00327
%RSD	.46009	.61203	1.0825	.17869	.72651	653.09	.65145
#1	9.9541	.49394	1.0045	50.286	.50268	-19.024	.50305
#2	10.033	.49704	.99837	50.416	.50124	19.499	.50404
#3	9.9524	.49100	.98351	50.459	.49580	8.6491	.49795
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 13:06:59 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.496	9.9984	F 21.667	1.1811	.39038	4.9105	.99939
Stddev	4.065	.0827	3.160	.0150	.00705	.0524	.00785
%RSD	26.233	.82718	14.582	1.2667	1.8061	1.0682	.78557
#1	11.547	10.089	20.807	1.1954	.39709	4.9522	1.0052
#2	19.668	9.9781	25.168	1.1824	.39103	4.9276	1.0025
#3	15.274	9.9277	19.027	1.1656	.38303	4.8516	.99046
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99705	.98357	.50451	.99292	.99659	F .84146
Stddev	.00299	.00444	.00365	.02627	.00613	.18124
%RSD	.29984	.45157	.72329	2.6455	.61544	21.539
#1	.99363	.97996	.50871	.96267	1.0004	.87972
#2	.99916	.98853	.50213	1.0100	.99988	.64414
#3	.99837	.98222	.50269	1.0061	.98951	1.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21035.	18236.
Stddev	567.	32.
%RSD	2.6932	.17719
#1	21685.	18201.
#2	20774.	18241.
#3	20646.	18265.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 13:10:11 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00029	-.00679	.00021	.01087	.00030	-.00002	-.00750
Stddev	.00082	.03051	.00131	.00037	.00035	.00001	.01186
%RSD	277.06	449.34	608.85	3.3990	117.22	38.099	158.24
#1	-.00108	-.03904	-.00120	.01057	.00043	-.00002	-.00750
#2	-.00036	.02161	.00138	.01077	.00057	-.00001	-.01936
#3	.00055	-.00294	.00046	.01128	-.00010	-.00003	.00437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00008	-.00007	.00087	.00062	.00032	.08847	-.00082
Stddev	.00018	.00012	.00020	.00034	.00626	.04652	.00127
%RSD	231.10	171.64	22.433	54.473	1964.4	52.579	156.21
#1	-.00023	-.00017	.00099	.00076	.00695	.11315	.00065
#2	.00013	-.00011	.00098	.00023	-.00549	.03482	-.00145
#3	-.00013	.00007	.00065	.00087	-.00050	.11746	-.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01446	.00013	.00069	-.00463	-.00035	F -8.7628	-.00103
Stddev	.02608	.00067	.00030	.00831	.00061	13.638	.00121
%RSD	180.31	514.98	44.175	179.48	172.58	155.63	117.46
#1	-.00430	-.00051	.00034	.00389	.00012	-23.559	-.00148
#2	.00345	.00007	.00081	-.01270	-.00104	-6.0321	.00034
#3	.04425	.00083	.00091	-.00507	-.00014	3.3027	-.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 13:10:11 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **5.0152**	F **-.31722**	F **16.213**	**.00093**	**-.00010**	**.00677**	**.00058**
Stddev	3.1465	.03648	.512	.00147	.00098	.00117	.00012
%RSD	62.739	11.500	3.1559	157.79	982.94	17.344	21.389
#1	7.5492	-.27614	15.641	.00007	-.00108	.00546	.00071
#2	6.0032	-.32969	16.628	.00010	.00088	.00773	.00057
#3	1.4933	-.34582	16.369	.00263	-.00010	.00712	.00046
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**-.00185**	**.00042**	**.00007**	**.00000**	**-.06076**
Stddev	.00012	.00198	.00116	.00039	.0000	.14548
%RSD	46.716	107.01	277.43	525.87	1333.8	239.44
#1	.00039	-.00209	.00074	-.00001	-.00002	.07964
#2	.00016	-.00371	-.00087	-.00026	.00000	-.21084
#3	.00021	.00024	.00139	.00050	.00002	-.05108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20776.**	**17271.**
Stddev	150.	165.
%RSD	.72248	.95258
#1	20933.	17207.
#2	20759.	17148.
#3	20634.	17458.

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW AG Acquired: 2/7/2012 13:13:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00030	.01400	.00072	.00801	-.00018	-.00001	-.00483
Stddev	.00049	.02307	.00091	.00031	.00030	.00002	.01069
%RSD	160.72	164.80	126.18	3.9270	167.39	149.02	221.54
#1	-.00016	.02927	-.00033	.00837	-.00025	-.00001	-.00888
#2	.00010	.02526	.00123	.00781	-.00044	.00000	.00730
#3	-.00085	-.01254	.00127	.00785	.00015	-.00004	-.01290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	.00006	.00120	.00033	.02295	.02825	-.00288
Stddev	.00010	.00006	.00015	.00036	.00516	.07903	.00337
%RSD	665.46	98.596	12.339	106.76	22.504	279.71	117.12
#1	.00010	.00012	.00138	.00029	.02792	.06059	.00042
#2	-.00005	.00003	.00111	.00000	.01761	-.06181	-.00274
#3	-.00009	.00002	.00113	.00071	.02331	.08599	-.00632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01233	.00218	.00004	-.01176	.00024	F -4.0126	-.00018
Stddev	.00056	.00038	.00007	.01410	.00034	28.207	.00106
%RSD	4.5118	17.431	184.83	119.82	144.35	702.96	581.42
#1	.01189	.00242	.00006	-.02290	-.00016	-26.790	.00040
#2	.01295	.00174	-.00004	.00408	.00040	27.539	-.00141
#3	.01215	.00238	.00008	-.01647	.00047	-12.787	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW AG Acquired: 2/7/2012 13:13:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.0527	F -.25718	F 13.421	.00145	.00172	.01180	.00016
Stddev	12.052	.05084	1.915	.00132	.00107	.00177	.00013
%RSD	149.67	19.769	14.272	90.686	62.090	14.990	83.629
#1	-2.0947	-.31010	15.207	.00267	.00295	.01313	.00014
#2	4.8786	-.25273	13.657	.00164	.00106	.00979	.00029
#3	21.374	-.20871	11.398	.00005	.00115	.01247	.00003
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	.00055	-.00040	-.00017	-.00112	F -.18955
Stddev	.00008	.00007	.00154	.00025	.00012	.13306
%RSD	49.429	12.193	383.30	144.85	11.111	70.196
#1	.00022	.00057	-.00212	-.00044	-.00126	-.19259
#2	.00019	.00048	.00085	-.00011	-.00104	-.05500
#3	.00007	.00061	.00006	.00004	-.00106	-.32107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21668.	17415.
Stddev	531.	55.
%RSD	2.4507	.31458
#1	21471.	17415.
#2	22270.	17361.
#3	21264.	17470.

Approved: February 08, 2012

Sample Name: LCSW AG Acquired: 2/7/2012 13:17:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19729	4.8954	.19207	.97309	.48122	.02402	4.7968
Stddev	.00233	.0244	.00066	.00535	.00142	.00016	.0052
%RSD	1.1813	.49923	.34184	.55012	.29409	.64650	.10920
#1	.19994	4.8679	.19137	.97825	.48285	.02416	4.7976
#2	.19639	4.9037	.19267	.97344	.48054	.02405	4.7912
#3	.19555	4.9146	.19219	.96756	.48028	.02385	4.8016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02435	.09911	.24543	.24774	1.9173	24.374	.48751
Stddev	.00009	.00041	.00144	.00167	.0094	.088	.00213
%RSD	.36934	.41484	.58806	.67225	.49162	.36276	.43774
#1	.02440	.09940	.24675	.24801	1.9231	24.456	.48941
#2	.02424	.09929	.24565	.24925	1.9064	24.280	.48520
#3	.02440	.09864	.24389	.24595	1.9223	24.385	.48793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.9435	.24315	.49094	25.120	.25003	F -19.321	.24909
Stddev	.0198	.00121	.00145	.022	.00089	27.498	.00096
%RSD	.39962	.49886	.29527	.08565	.35759	142.32	.38626
#1	4.9502	.24453	.49160	25.143	.24966	-23.178	.24988
#2	4.9213	.24225	.49195	25.100	.25105	9.9023	.24802
#3	4.9590	.24267	.48928	25.118	.24938	-44.687	.24938
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW AG Acquired: 2/7/2012 13:17:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.048	4.9968	F 9.9789	.58143	.18970	2.5156	.52351
Stddev	3.984	.0876	1.8204	.00496	.00184	.0124	.00211
%RSD	39.650	1.7529	18.243	.85287	.96935	.49292	.40220
#1	12.365	5.0144	11.767	.58339	.18758	2.5200	.52401
#2	12.332	5.0742	8.1274	.58511	.19086	2.5253	.52532
#3	5.4477	4.9017	10.043	.57579	.19065	2.5017	.52119
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48133	.47693	.25251	.48386	.49919	.16775
Stddev	.00121	.00090	.00147	.00319	.00178	.11871
%RSD	.25058	.18969	.58301	.65902	.35602	70.767
#1	.48269	.47796	.25324	.48728	.50034	.13163
#2	.48039	.47628	.25347	.48334	.50009	.30033
#3	.48092	.47655	.25081	.48096	.49715	.07129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21010.	17481.
Stddev	202.	331.
%RSD	.95910	1.8933
#1	20821.	17301.
#2	20986.	17863.
#3	21222.	17280.

Approved: February 08, 2012

Sample Name: L1201082102 Acquired: 2/7/2012 13:20:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00055	.13718	-.00051	.00973	.00935	.00000	1.9055
Stddev	.00041	.02592	.00051	.00042	.00023	.00003	.0083
%RSD	74.325	18.894	100.82	4.3071	2.4653	1373.0	.43518
#1	-.00070	.16227	-.00093	.00928	.00961	-.00003	1.8971
#2	-.00009	.13875	.00006	.00983	.00917	.00002	1.9059
#3	-.00085	.11051	-.00066	.01010	.00928	.00002	1.9136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00009	.00125	.00094	.25343	.37844	.00088
Stddev	.00007	.00029	.00063	.00067	.00527	.05473	.00250
%RSD	218.10	323.37	50.307	70.754	2.0800	14.462	284.13
#1	-.00002	.00038	.00095	.00135	.24738	.36123	.00348
#2	-.00010	-.00019	.00082	.00130	.25705	.33439	-.00151
#3	.00003	.00007	.00196	.00017	.25587	.43971	.00068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.84949	.00613	.00018	1.7007	.00044	F -59.745	-.00081
Stddev	.01370	.00058	.00037	.0077	.00069	10.717	.00095
%RSD	1.6129	9.4513	199.13	.45121	158.03	17.938	116.49
#1	.83367	.00607	-.00011	1.7028	.00118	-53.917	-.00116
#2	.85757	.00558	.00006	1.6922	.00032	-53.204	.00026
#3	.85723	.00674	.00059	1.7071	-.00019	-72.112	-.00154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082102 Acquired: 2/7/2012 13:20:32 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.204	F 12.487	F -528.60	.00190	-.00070	4.4564	-.00018
Stddev	2.575	.019	3.08	.00040	.00373	.0029	.00029
%RSD	15.891	.14900	.58247	21.296	534.74	.06504	164.76
#1	16.873	12.479	-525.20	.00184	.00198	4.4596	-.00047
#2	13.361	12.474	-529.40	.00152	-.00496	4.4539	-.00018
#3	18.379	12.509	-531.20	.00233	.00089	4.4558	.00012
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01339	.00264	-.00018	.00027	.00158	F -.02524
Stddev	.00010	.00120	.00134	.00053	.00006	.14712
%RSD	.71984	45.376	728.34	197.59	3.7856	582.88
#1	.01346	.00377	.00014	.00019	.00156	.14399
#2	.01344	.00139	-.00166	-.00022	.00165	-.12269
#3	.01328	.00275	.00097	.00084	.00154	-.09702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21540.	18243.
Stddev	106.	133.
%RSD	.49222	.72723
#1	21654.	18206.
#2	21444.	18133.
#3	21522.	18391.

Approved: February 08, 2012

Sample Name: L1201082105S Acquired: 2/7/2012 13:23:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19913	5.3539	.19184	.97567	.49043	.02420	6.6636
Stddev	.00560	.0268	.00023	.02607	.00306	.00044	.0330
%RSD	2.8116	.50151	.12085	2.6724	.62454	1.8346	.49557
#1	.20553	5.3790	.19184	1.0047	.48818	.02471	6.6326
#2	.19514	5.3256	.19160	.95430	.48919	.02392	6.6599
#3	.19673	5.3571	.19207	.96799	.49392	.02397	6.6984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02434	.09921	.24678	.24646	2.3464	24.669	.48554
Stddev	.00020	.00014	.00568	.00044	.0043	.058	.00418
%RSD	.83164	.14508	2.3025	.17817	.18299	.23569	.86142
#1	.02411	.09905	.25328	.24622	2.3461	24.701	.48385
#2	.02448	.09926	.24430	.24697	2.3423	24.602	.48247
#3	.02444	.09933	.24276	.24620	2.3509	24.703	.49031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.7185	.25872	.48716	26.686	.24860	F -74.031	.24675
Stddev	.0164	.00073	.00044	.090	.00089	28.702	.00111
%RSD	.28605	.28331	.08966	.33744	.35860	38.770	.44998
#1	5.7020	.25944	.48713	26.678	.24762	-102.13	.24552
#2	5.7187	.25797	.48761	26.601	.24937	-44.759	.24769
#3	5.7347	.25875	.48674	26.780	.24881	-75.210	.24703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082105S Acquired: 2/7/2012 13:23:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-04

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.4106	F 17.709	F -535.64	.58046	.19166	7.2509	.51473
Stddev	9.4136	.069	2.48	.00202	.00290	.0176	.00035
%RSD	100.03	.38745	.46374	.34728	1.5124	.24265	.06808
#1	17.157	17.633	-536.06	.57978	.19247	7.2367	.51514
#2	-1.0664	17.765	-532.97	.57888	.19407	7.2455	.51452
#3	12.141	17.729	-537.88	.58273	.18844	7.2706	.51454
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49255	.47813	.25204	.48881	.49309	.39239
Stddev	.00138	.00270	.00103	.01137	.00054	.16100
%RSD	.28095	.56469	.41018	2.3267	.11040	41.029
#1	.49228	.47726	.25088	.50169	.49250	.47354
#2	.49132	.47597	.25288	.48014	.49320	.20697
#3	.49405	.48116	.25235	.48460	.49358	.49667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21328.	17765.
Stddev	59.	45.
%RSD	.27686	.25608
#1	21353.	17817.
#2	21260.	17743.
#3	21370.	17734.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082108SD Acquired: 2/7/2012 13:27:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20398	5.4424	.19543	1.0042	.50129	.02496	6.8008
Stddev	.00073	.0101	.00077	.0030	.00308	.00002	.0491
%RSD	.35735	.18642	.39580	.29917	.61540	.06198	.72174
#1	.20357	5.4341	.19625	1.0007	.50063	.02494	6.7663
#2	.20356	5.4394	.19471	1.0062	.49858	.02496	6.7792
#3	.20483	5.4537	.19532	1.0056	.50465	.02497	6.8570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02476	.10218	.25476	.25433	2.3817	25.163	.50068
Stddev	.00014	.00053	.00140	.00046	.0135	.243	.00172
%RSD	.56484	.51671	.54802	.18085	.56802	.96713	.34273
#1	.02491	.10270	.25335	.25432	2.3856	25.128	.50001
#2	.02475	.10218	.25614	.25479	2.3667	24.939	.49940
#3	.02463	.10165	.25480	.25387	2.3928	25.422	.50263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.8827	.26549	.50048	27.421	.25617	F -94.078	.25408
Stddev	.0221	.00273	.00314	.204	.00146	9.571	.00031
%RSD	.37588	1.0300	.62686	.74293	.56953	10.173	.12087
#1	5.8665	.26593	.50264	27.371	.25636	-91.316	.25406
#2	5.8737	.26256	.50191	27.247	.25753	-86.193	.25440
#3	5.9079	.26797	.49688	27.645	.25463	-104.73	.25379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082108SD Acquired: 2/7/2012 13:27:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388591-05

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.821	F 18.387	F -553.41	.59334	.19445	7.4729	.53117
Stddev	8.853	.053	4.15	.00250	.00116	.0129	.00144
%RSD	64.054	.28885	.74925	.42217	.59498	.17314	.27052
#1	6.2750	18.395	-558.12	.59134	.19569	7.4705	.53103
#2	11.622	18.436	-551.78	.59615	.19340	7.4868	.53267
#3	23.566	18.331	-550.33	.59252	.19425	7.4613	.52981
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50664	.49162	.26029	.50455	.50783	.49313
Stddev	.00366	.00476	.00091	.00102	.00010	.11131
%RSD	.72174	.96752	.34843	.20142	.02066	22.572
#1	.50574	.49444	.25968	.50363	.50782	.61228
#2	.50352	.48613	.26133	.50439	.50794	.39181
#3	.51067	.49430	.25985	.50564	.50773	.47531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20660.	18027.
Stddev	53.	318.
%RSD	.25509	1.7657
#1	20719.	18360.
#2	20619.	17993.
#3	20640.	17726.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082111 Acquired: 2/7/2012 13:30:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	.08507	-.00055	.00993	.00922	-.00001	1.7128
Stddev	.00056	.01541	.00138	.00050	.00032	.00000	.0177
%RSD	196.72	18.110	252.87	5.0060	3.4493	26.740	1.0356
#1	-.00092	.08642	.00070	.01051	.00952	-.00001	1.6926
#2	-.00004	.06904	-.00203	.00964	.00889	-.00001	1.7194
#3	.00011	.09976	-.00031	.00965	.00925	-.00001	1.7262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	.00015	.00188	.00106	.28511	.40187	-.00027
Stddev	.00002	.00025	.00057	.00011	.00607	.05286	.00164
%RSD	98.570	172.49	30.566	10.775	2.1273	13.154	612.44
#1	.00003	.00002	.00180	.00119	.28014	.39182	.00163
#2	.00003	.00044	.00135	.00097	.28331	.45903	-.00128
#3	.00000	-.00002	.00249	.00102	.29187	.35475	-.00116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.87768	.01123	.00046	1.7984	.00052	F -67.459	.00025
Stddev	.01053	.00055	.00019	.0094	.00063	12.207	.00100
%RSD	1.1996	4.8795	41.621	.52063	122.38	18.095	405.42
#1	.88222	.01089	.00030	1.8087	.00083	-78.679	.00091
#2	.86564	.01186	.00067	1.7905	.00093	-69.238	-.00090
#3	.88517	.01094	.00041	1.7958	-.00021	-54.461	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082111 Acquired: 2/7/2012 13:30:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.374	F 11.694	F -490.35	.00162	-.00146	4.6336	.00018
Stddev	6.501	.182	4.43	.00153	.00272	.0239	.00032
%RSD	37.415	1.5558	.90391	94.414	186.62	.51617	173.63
#1	18.489	11.903	-495.35	-.00009	.00036	4.6517	.00040
#2	10.388	11.603	-488.78	.00287	-.00458	4.6065	-.00018
#3	23.246	11.575	-486.91	.00209	-.00014	4.6425	.00033
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01295	.00247	.00080	.00016	.00177	.03417
Stddev	.00012	.00058	.00045	.00035	.00011	.06298
%RSD	.88878	23.475	56.601	216.91	6.2934	184.30
#1	.01302	.00221	.00128	.00036	.00189	.09309
#2	.01301	.00314	.00039	-.00024	.00175	-.03221
#3	.01282	.00207	.00072	.00036	.00167	.04164
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21466.	18050.
Stddev	90.	405.
%RSD	.41780	2.2463
#1	21394.	17738.
#2	21437.	18508.
#3	21566.	17904.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082114 Acquired: 2/7/2012 13:33:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00085	.12345	.00087	.00608	.00905	.00000	1.6913
Stddev	.00062	.01253	.00130	.00095	.00021	.0000	.0222
%RSD	72.426	10.152	150.44	15.689	2.2879	898.77	1.3110
#1	-.00016	.10911	.00199	.00537	.00923	.00002	1.6665
#2	-.00105	.13232	.00117	.00572	.00911	-.00004	1.7093
#3	-.00135	.12892	-.00056	.00717	.00882	.00002	1.6981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	.00008	.00165	.00076	.29510	.43279	-.00366
Stddev	.00015	.00014	.00027	.00023	.00538	.01025	.00507
%RSD	576.56	178.99	16.563	30.158	1.8241	2.3679	138.45
#1	.00014	.00022	.00173	.00052	.29141	.43288	-.00948
#2	-.00015	-.00004	.00188	.00098	.30128	.42250	-.00130
#3	.00009	.00004	.00135	.00077	.29262	.44300	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.88444	.01168	.00009	1.7739	.00055	F -43.676	-.00039
Stddev	.01182	.00023	.00042	.0270	.00035	9.436	.00027
%RSD	1.3360	1.9850	490.48	1.5202	62.638	21.604	69.743
#1	.88864	.01158	-.00004	1.7804	.00092	-53.372	-.00044
#2	.87109	.01195	.00055	1.7970	.00049	-34.524	-.00063
#3	.89357	.01152	-.00025	1.7442	.00024	-43.133	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082114 Acquired: 2/7/2012 13:33:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.688	F 12.811	F -552.26	.00197	-.00257	4.5756	.00009
Stddev	6.975	.064	1.52	.00054	.00155	.0127	.00035
%RSD	59.677	.50271	.27441	27.318	60.510	.27677	401.73
#1	3.9352	12.756	-551.61	.00186	-.00413	4.5742	.00029
#2	17.454	12.882	-551.17	.00256	-.00102	4.5889	-.00032
#3	13.675	12.795	-553.99	.00150	-.00255	4.5637	.00029
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01283	.00246	-.00127	.00041	.00125	F -.05305
Stddev	.00012	.00134	.00069	.00017	.00012	.09988
%RSD	.96550	54.554	54.085	40.095	9.5600	188.27
#1	.01270	.00107	-.00107	.00036	.00135	-.09196
#2	.01295	.00374	-.00070	.00060	.00112	.06043
#3	.01283	.00257	-.00203	.00028	.00129	-.12763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21342.	18374.
Stddev	256.	51.
%RSD	1.1989	.27610
#1	21637.	18316.
#2	21189.	18397.
#3	21200.	18409.

Approved: February 08, 2012

Sample Name: L1201082117 Acquired: 2/7/2012 13:37:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00074	.06578	-.00046	.00595	.00981	.00000	2.0904
Stddev	.00024	.05886	.00114	.00018	.00040	.00001	.0083
%RSD	32.976	89.490	246.46	3.1063	4.1057	175.68	.39538
#1	-.00090	.06711	.00018	.00616	.01018	.00001	2.0899
#2	-.00085	.00626	.00021	.00591	.00986	.00000	2.0989
#3	-.00046	.12396	-.00178	.00580	.00938	.00000	2.0824
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00023	.00372	.00154	.19981	.36782	-.00153
Stddev	.00010	.00022	.00019	.00019	.00336	.07320	.00115
%RSD	668.84	95.667	5.1480	12.300	1.6829	19.901	75.093
#1	-.00009	-.00002	.00352	.00175	.19862	.42989	-.00071
#2	.00011	.00035	.00374	.00138	.20361	.38647	-.00104
#3	.00003	.00036	.00390	.00148	.19721	.28710	-.00285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0813	.01259	.00034	2.2505	.00050	F -5.4242	-.00041
Stddev	.0149	.00032	.00035	.0221	.00038	7.9822	.00208
%RSD	1.3786	2.5657	101.86	.98247	76.322	147.16	506.19
#1	1.0980	.01259	.00019	2.2540	.00094	-7.9149	-.00209
#2	1.0765	.01292	.00074	2.2269	.00028	3.5063	.00191
#3	1.0694	.01227	.00009	2.2707	.00028	-11.864	-.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082117 Acquired: 2/7/2012 13:37:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.4821**	F **17.633**	F **-766.64**	**.00113**	**-.00333**	**5.3782**	**.00046**
Stddev	2.0062	.035	2.37	.00209	.00172	.0039	.00019
%RSD	26.814	.19976	.30904	184.92	51.625	.07251	40.594
#1	5.2272	17.673	-767.09	.00334	-.00166	5.3748	.00061
#2	8.1496	17.606	-764.08	.00087	-.00510	5.3824	.00025
#3	9.0695	17.619	-768.75	-.00082	-.00324	5.3773	.00051
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01621**	**-.00014**	**-.00119**	**.00026**	**.00154**	F **-.05185**
Stddev	.00013	.00078	.00104	.00026	.00006	.14524
%RSD	.77614	559.43	87.414	97.633	3.8159	280.09
#1	.01627	.00013	-.00079	.00011	.00152	-.09733
#2	.01606	-.00102	-.00042	.00056	.00150	.11068
#3	.01629	.00047	-.00238	.00011	.00161	-.16891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20975.**	**17781.**
Stddev	200.	235.
%RSD	.95305	1.3219
#1	21168.	17803.
#2	20987.	17535.
#3	20769.	18004.

Approved: February 08, 2012

Sample Name: L1201082117PS Acquired: 2/7/2012 13:40:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388719-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20401	5.1048	.19923	.99930	.50756	.02502	6.7828
Stddev	.00101	.0246	.00036	.00349	.00227	.00014	.0215
%RSD	.49441	.48266	.18010	.34908	.44736	.57335	.31666
#1	.20400	5.0945	.19964	.99711	.50537	.02510	6.7750
#2	.20502	5.1330	.19896	1.0033	.50990	.02511	6.8071
#3	.20300	5.0871	.19908	.99747	.50740	.02486	6.7664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02566	.10384	.25688	.25990	2.1509	25.660	.50576
Stddev	.00003	.00053	.00147	.00151	.0175	.167	.00086
%RSD	.12382	.51010	.57058	.58227	.81268	.64989	.16986
#1	.02562	.10338	.25722	.25861	2.1390	25.565	.50483
#2	.02569	.10442	.25814	.26157	2.1710	25.852	.50652
#3	.02567	.10372	.25527	.25954	2.1427	25.563	.50593
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.1098	.26384	.50350	28.122	.25964	F -72.841	.25870
Stddev	.0550	.00118	.00123	.135	.00040	34.329	.00116
%RSD	.89960	.44738	.24389	.48152	.15589	47.128	.44868
#1	6.0655	.26297	.50471	28.019	.25994	-34.819	.25872
#2	6.1713	.26518	.50354	28.275	.25979	-82.149	.25753
#3	6.0927	.26338	.50225	28.073	.25918	-101.56	.25985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082117PS Acquired: 2/7/2012 13:40:42 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388719-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.4260**	F **21.184**	F **-687.64**	**.59540**	**.19776**	**7.4541**	**.00126**
Stddev	2.1239	.105	.90	.00083	.00211	.0153	.00016
%RSD	25.206	.49411	.13125	.13929	1.0684	.20560	13.016
#1	9.6103	21.123	-688.38	.59626	.19871	7.4365	.00143
#2	5.9740	21.305	-687.91	.59534	.19923	7.4615	.00126
#3	9.6938	21.124	-686.63	.59461	.19534	7.4644	.00110
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51356**	**.49791**	**.26551**	**.50626**	**.51724**	**.28699**
Stddev	.00260	.00307	.00119	.00225	.00049	.12216
%RSD	.50724	.61581	.44733	.44405	.09515	42.567
#1	.51125	.49453	.26521	.50755	.51675	.42214
#2	.51638	.50051	.26682	.50757	.51723	.25444
#3	.51305	.49869	.26450	.50366	.51774	.18440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19922.**	**16822.**
Stddev	30.	250.
%RSD	.14838	1.4856
#1	19950.	16676.
#2	19891.	16680.
#3	19926.	17111.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082117SDL Acquired: 2/7/2012 13:44:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388719-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.01425	-.00008	.00574	.00263	.00001	.37600
Stddev	.00050	.02477	.00053	.00112	.00034	.00002	.01460
%RSD	2925.4	173.85	691.92	19.510	12.946	175.98	3.8835
#1	-.00033	-.00470	-.00068	.00701	.00269	.00003	.38567
#2	.00056	.04228	.00014	.00490	.00294	.00002	.38314
#3	-.00028	.00516	.00031	.00530	.00227	-.00001	.35921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00001	.00037	.00095	.04196	.13219	-.00191
Stddev	.00011	.00022	.00009	.00034	.00994	.03757	.00101
%RSD	349.83	1484.5	23.817	35.561	23.699	28.423	52.930
#1	-.00011	-.00009	.00031	.00056	.04882	.12442	-.00297
#2	.00009	-.00013	.00047	.00109	.04652	.17304	-.00096
#3	-.00008	.00027	.00033	.00118	.03056	.09911	-.00180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.24144	.00174	.00036	.44001	.00001	F -3.0008	.00097
Stddev	.00347	.00090	.00025	.00225	.00069	15.378	.00045
%RSD	1.4362	51.542	69.934	.51197	13269.	512.46	46.730
#1	.23745	.00194	.00010	.43772	-.00077	12.964	.00143
#2	.24316	.00076	.00060	.44010	.00057	-17.716	.00053
#3	.24371	.00253	.00038	.44223	.00022	-4.2506	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082117SDL Acquired: 2/7/2012 13:44:00 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388719-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.1344**	**3.2213**	F **-137.19**	**.00065**	**-.00021**	**1.0858**	**-.00011**
Stddev	9.2336	.0772	4.56	.00177	.00260	.0142	.00027
%RSD	223.34	2.3977	3.3253	271.05	1234.7	1.3051	240.24
#1	14.587	3.1395	-132.69	.00195	.00193	1.0703	-.00004
#2	.72828	3.2930	-141.82	.00138	-.00311	1.0981	-.00042
#3	-2.9123	3.2313	-137.06	-.00137	.00054	1.0890	.00012
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00339**	**-.00147**	**-.00054**	**-.00010**	**-.00077**	F **-.03778**
Stddev	.00018	.00101	.00135	.00037	.00015	.08432
%RSD	5.4268	68.961	250.20	366.73	18.866	223.20
#1	.00345	-.00261	-.00153	-.00028	-.00090	.04707
#2	.00353	-.00070	.00100	.00033	-.00080	-.12156
#3	.00318	-.00109	-.00108	-.00035	-.00061	-.03885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21483.**	**16565.**
Stddev	163.	159.
%RSD	.76000	.95704
#1	21340.	16748.
#2	21661.	16464.
#3	21446.	16484.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 13:47:31 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40135	10.046	.40466	.50620	.99454	.04982	10.006
Stddev	.00377	.072	.00374	.00410	.00183	.00025	.032
%RSD	.93820	.71615	.92386	.80934	.18387	.50660	.31959
#1	.40116	10.008	.40183	.50588	.99495	.04994	9.9865
#2	.39767	10.129	.40325	.50227	.99613	.04953	10.043
#3	.40520	10.001	.40890	.51045	.99254	.04999	9.9879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05093	.20516	.49940	.51400	3.9748	50.424	1.0037
Stddev	.00051	.00130	.00375	.00343	.0088	.203	.0010
%RSD	.99472	.63480	.75058	.66741	.22066	.40194	.09955
#1	.05082	.20492	.49943	.51363	3.9651	50.207	1.0033
#2	.05049	.20400	.49564	.51077	3.9823	50.609	1.0049
#3	.05149	.20657	.50314	.51760	3.9769	50.457	1.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.062	.50390	.99815	50.988	.51122	F -28.544	.50995
Stddev	.013	.00236	.00601	.296	.00350	29.187	.00333
%RSD	.12736	.46922	.60238	.58043	.68382	102.25	.65331
#1	10.054	.50117	1.0025	50.711	.51195	-47.527	.50980
#2	10.055	.50522	.99129	51.300	.50741	-43.168	.50669
#3	10.077	.50531	1.0007	50.952	.51429	5.0639	.51335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 13:47:31 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.354	10.303	F 19.978	1.2233	.40644	5.0510	1.0181
Stddev	1.891	.114	2.271	.0130	.00252	.0337	.0099
%RSD	12.316	1.1037	11.368	1.0623	.61976	.66691	.97650
#1	15.004	10.337	18.492	1.2242	.40681	5.0497	1.0133
#2	17.396	10.176	18.850	1.2099	.40375	5.0180	1.0116
#3	13.663	10.396	22.593	1.2358	.40875	5.0853	1.0296
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0076	.99905	.51732	1.0055	1.0167	F .71387
Stddev	.0041	.00427	.00753	.0082	.0058	.10924
%RSD	.40540	.42738	1.4565	.81182	.57379	15.302
#1	1.0048	.99456	.51577	1.0081	1.0187	.81127
#2	1.0123	1.0031	.51068	.99631	1.0101	.59576
#3	1.0056	.99955	.52551	1.0120	1.0212	.73460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20935.	18064.
Stddev	123.	328.
%RSD	.58693	1.8168
#1	20900.	18438.
#2	21071.	17935.
#3	20833.	17821.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 13:50:43 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00050	-.03413	.00091	.00433	.00002	-.00002	-.01648
Stddev	.00067	.03996	.00086	.00087	.00020	.00003	.00639
%RSD	133.66	117.09	95.308	20.112	913.35	116.44	38.756
#1	.00011	-.07594	.00002	.00385	-.00018	-.00003	-.02341
#2	-.00040	.00368	.00174	.00534	.00003	-.00004	-.01082
#3	-.00122	-.03012	.00096	.00381	.00022	.00001	-.01522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00002	.00047	.00057	.00371	-.02709	.00065
Stddev	.00005	.00034	.00048	.00077	.00219	.04539	.00134
%RSD	170.80	1815.6	102.89	134.46	59.061	167.53	206.13
#1	-.00007	.00033	-.00004	.00117	.00204	-.06396	-.00082
#2	-.00004	-.00034	.00054	.00085	.00619	.02360	.00095
#3	.00002	.00006	.00091	-.00030	.00289	-.04091	.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01077	-.00008	.00058	-.01223	-.00054	F -14.462	-.00039
Stddev	.00917	.00041	.00038	.01229	.00008	42.875	.00068
%RSD	85.129	517.78	65.085	100.48	15.069	296.46	174.17
#1	.00318	.00039	.00015	-.02642	-.00048	11.233	.00021
#2	.02097	-.00025	.00082	-.00471	-.00063	9.3381	-.00113
#3	.00818	-.00038	.00078	-.00558	-.00051	-63.958	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 13:50:43 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1.7341	F -.31903	F 16.831	.00109	-.00126	.00424	.00034
Stddev	7.8158	.02329	1.027	.00196	.00084	.00083	.00028
%RSD	450.72	7.3007	6.0997	180.14	66.594	19.649	83.745
#1	4.4959	-.30903	15.818	-.00113	-.00088	.00501	.00003
#2	7.7939	-.34565	17.870	.00258	-.00222	.00436	.00058
#3	-7.0876	-.30240	16.805	.00181	-.00067	.00336	.00040
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	.00047	-.00059	.00046	.00001	-.08836
Stddev	.00019	.00104	.00103	.00017	.00012	.04578
%RSD	96.492	222.74	173.87	36.714	978.92	51.811
#1	.00038	.00167	-.00070	.00027	.00014	-.08367
#2	.00001	-.00019	-.00157	.00055	-.00008	-.13630
#3	.00020	-.00008	.00049	.00058	-.00003	-.04510
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21154.	17514.
Stddev	68.	146.
%RSD	.31997	.83332
#1	21185.	17444.
#2	21077.	17682.
#3	21201.	17417.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082120 Acquired: 2/7/2012 13:54:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00012	-.00302	.00000	.00269	.00032	-.00003	-.01015
Stddev	.00010	.01813	.0007	.00060	.00037	.00003	.00504
%RSD	80.320	600.00	28440.	22.238	115.46	119.13	49.660
#1	-.00007	.01230	-.00076	.00338	.00058	-.00003	-.01337
#2	-.00023	.00167	.00068	.00246	.00048	.00000	-.01275
#3	-.00006	-.02304	.00007	.00225	-.00010	-.00006	-.00434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	.00002	.00186	.00072	.02371	-.08513	.00646
Stddev	.00011	.00008	.00031	.00017	.00428	.03657	.00364
%RSD	293.23	562.32	16.509	23.087	18.037	42.955	56.330
#1	-.00015	.00008	.00221	.00060	.02703	-.08251	.00978
#2	-.00003	.00004	.00162	.00065	.01888	-.04994	.00257
#3	.00007	-.00008	.00176	.00091	.02521	-.12293	.00702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00966	.00003	.00043	-.03932	.00012	F -14.245	.00067
Stddev	.01080	.00017	.00012	.01157	.00048	34.247	.00031
%RSD	111.77	617.63	27.326	29.418	417.91	240.41	45.683
#1	.02096	.00010	.00044	-.05267	-.00038	-34.464	.00032
#2	.00857	.00014	.00030	-.03220	.00057	-33.567	.00088
#3	-.00055	-.00016	.00054	-.03310	.00016	25.296	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082120 Acquired: 2/7/2012 13:54:16 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.9181	7.7252	F -385.47	-.00008	.00077	.01245	.00022
Stddev	6.3761	.0691	6.24	.00033	.00167	.00100	.00029
%RSD	332.41	.89415	1.6183	407.46	217.49	8.0520	131.62
#1	-8.6650	7.6455	-378.40	.00017	.00092	.01192	.00048
#2	4.0076	7.7672	-387.82	.00004	-.00097	.01183	-.00009
#3	-1.0970	7.7630	-390.20	-.00045	.00236	.01361	.00026
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	-.00079	-.00123	-.00004	-.00096	F -.11755
Stddev	.00015	.00084	.00026	.00021	.00004	.08570
%RSD	186.67	107.30	20.858	588.44	4.4961	72.910
#1	.00023	-.00058	-.00147	-.00026	-.00091	-.02770
#2	.00008	-.00006	-.00096	.00016	-.00098	-.12655
#3	-.00007	-.00171	-.00127	.00000	-.00100	-.19839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21438.	17818.
Stddev	219.	18.
%RSD	1.0229	.10031
#1	21295.	17799.
#2	21328.	17834.
#3	21690.	17822.

Approved: February 08, 2012

Sample Name: L1201082123 Acquired: 2/7/2012 13:57:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00052	.00729	.00010	.00312	.00009	-.00001	-.00071
Stddev	.00025	.00723	.00058	.00145	.00019	.00001	.01241
%RSD	48.531	99.234	556.58	46.352	207.93	146.36	1740.3
#1	-.00058	.01147	.00037	.00474	.00031	.00000	-.01054
#2	-.00073	.01145	.00050	.00195	-.00005	-.00003	.01324
#3	-.00024	-.00106	-.00056	.00268	.00002	.00000	-.00484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00008	-.00008	.00195	.00112	.01053	-.06463	.00748
Stddev	.00011	.00002	.00021	.00020	.00194	.01870	.00072
%RSD	132.79	21.870	10.985	17.947	18.445	28.938	9.6434
#1	-.00021	-.00008	.00219	.00135	.00885	-.08293	.00811
#2	-.00002	-.00007	.00180	.00102	.01266	-.06541	.00763
#3	-.00002	-.00010	.00186	.00099	.01008	-.04555	.00669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00864	.00026	-.00007	-.02790	-.00010	15.602	.00064
Stddev	.02321	.00020	.00027	.00894	.00030	22.048	.00126
%RSD	268.77	76.531	401.42	32.051	296.13	141.32	197.60
#1	.00332	.00036	-.00001	-.03410	-.00045	19.662	.00121
#2	.03404	.00003	-.00036	-.01765	.00010	-8.1939	.00152
#3	-.01146	.00037	.00017	-.03195	.00004	35.337	-.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1201082123 Acquired: 2/7/2012 13:57:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.2761	.53771	F -26.362	.00111	-.00175	.01179	.00040
Stddev	1.8167	.01273	1.333	.00083	.00320	.00250	.00024
%RSD	142.36	2.3667	5.0583	74.842	183.23	21.175	59.740
#1	-.02030	.55176	-26.665	.00015	-.00461	.01318	.00064
#2	-3.3592	.52695	-27.518	.00159	-.00233	.01328	.00016
#3	-.44878	.53444	-24.903	.00160	.00171	.00891	.00041
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	.00011	-.00046	.00013	-.00099	F -.15808
Stddev	.00007	.00189	.00114	.00020	.00021	.20008
%RSD	458.76	1765.0	246.37	159.06	21.010	126.57
#1	.00002	-.00101	-.00178	.00026	-.00105	-.38841
#2	-.00006	-.00095	.00022	.00023	-.00116	-.02733
#3	.00009	.00229	.00017	-.00011	-.00076	-.05849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20619.	18401.
Stddev	115.	331.
%RSD	.55867	1.7971
#1	20512.	18224.
#2	20603.	18782.
#3	20741.	18196.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002103 Acquired: 2/7/2012 14:01:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00047	1.1718	.00078	.00918	.21187	.00043	.42151
Stddev	.00055	.0153	.00049	.00090	.00048	.00001	.01209
%RSD	115.74	1.3039	62.125	9.8504	.22702	1.9313	2.8684
#1	-.00085	1.1888	.00078	.00816	.21131	.00043	.41037
#2	.00016	1.1594	.00127	.00946	.21216	.00042	.43437
#3	-.00073	1.1671	.00030	.00991	.21213	.00042	.41980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	.00068	.01137	.03101	3.6715	.19480	.00457
Stddev	.00012	.00010	.00035	.00095	.0024	.03799	.00148
%RSD	353.39	14.883	3.0642	3.0521	.06487	19.502	32.372
#1	.00016	.00080	.01155	.03153	3.6695	.15232	.00455
#2	-.00007	.00062	.01097	.03159	3.6709	.20658	.00606
#3	.00000	.00062	.01159	.02992	3.6741	.22551	.00310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55842	.00916	.00015	4.1971	.00429	F -1816.5	.00823
Stddev	.01182	.00047	.00028	.0199	.00041	41.3	.00087
%RSD	2.1159	5.1497	188.36	.47366	9.6418	2.2749	10.551
#1	.57203	.00970	.00019	4.1755	.00430	-1776.0	.00874
#2	.55240	.00887	-.00015	4.2013	.00387	-1814.9	.00723
#3	.55081	.00890	.00041	4.2146	.00470	-1858.6	.00872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002103 Acquired: 2/7/2012 14:01:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -1.0855	2.0177	F -76.032	.00147	-.00190	4.3438	.00167
Stddev	8.9935	.0144	1.014	.00029	.00191	.0062	.00010
%RSD	828.49	.71360	1.3340	19.666	100.93	.14310	5.9620
#1	2.7522	2.0100	-76.621	.00121	-.00397	4.3404	.00169
#2	-11.361	2.0088	-76.614	.00141	-.00152	4.3400	.00177
#3	5.3525	2.0343	-74.860	.00178	-.00020	4.3509	.00157
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07002	.01820	-.00040	.00637	.03635	.55157
Stddev	.00035	.00133	.00038	.00048	.00022	.07081
%RSD	.49360	7.3322	96.780	7.5527	.59284	12.837
#1	.06968	.01740	-.00077	.00627	.03654	.63330
#2	.07037	.01974	-.00043	.00595	.03638	.50883
#3	.07002	.01746	.00000	.00690	.03611	.51258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21473.	17441.
Stddev	183.	205.
%RSD	.85423	1.1780
#1	21266.	17647.
#2	21538.	17236.
#3	21614.	17442.

Approved: February 08, 2012

Sample Name: L1202002104 Acquired: 2/7/2012 14:04:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00034	10.409	.00961	.02336	.57649	.00409	.22035
Stddev	.00025	.023	.00036	.00076	.00151	.00001	.01242
%RSD	73.588	.22069	3.7587	3.2494	.26269	.25180	5.6351
#1	.00053	10.383	.00925	.02274	.57525	.00409	.21091
#2	.00006	10.427	.00961	.02312	.57818	.00410	.23442
#3	.00042	10.416	.00998	.02421	.57605	.00409	.21573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	.00562	.09555	.05376	38.585	.38868	.00109
Stddev	.00008	.00009	.00084	.00056	.103	.04294	.00120
%RSD	113.33	1.5553	.88137	1.0504	.26671	11.048	110.80
#1	-.00011	.00569	.09516	.05311	38.467	.38488	.00067
#2	-.00011	.00552	.09652	.05409	38.657	.34777	.00015
#3	.00002	.00564	.09498	.05408	38.631	.43340	.00244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.15399	.02033	.00137	8.9224	.01595	F -10325.	.04324
Stddev	.00955	.00003	.00003	.0454	.00049	12.	.00059
%RSD	6.2035	.14249	2.5437	.50825	3.0461	.11660	1.3588
#1	.14815	.02031	.00137	8.8710	.01648	-10337.	.04391
#2	.14880	.02036	.00133	8.9567	.01586	-10325.	.04284
#3	.16501	.02031	.00140	8.9395	.01552	-10313.	.04296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002104 Acquired: 2/7/2012 14:04:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.0609	F 29.410	F -1467.1	.00186	.00205	11.123	.00610
Stddev	4.3070	.125	3.6	.00092	.00203	.023	.00003
%RSD	47.534	.42594	.24801	49.309	99.102	.20511	.42794
#1	4.2522	29.521	-1471.1	.00285	.00001	11.124	.00607
#2	12.564	29.275	-1466.3	.00104	.00406	11.100	.00611
#3	10.366	29.435	-1464.0	.00169	.00206	11.145	.00612
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.23996	.15393	.00085	.09228	.06875	9.3404
Stddev	.00052	.00093	.00145	.00033	.00013	.4638
%RSD	.21632	.60325	170.24	.35931	.19579	4.9655
#1	.23941	.15320	-.00009	.09240	.06873	9.7413
#2	.24044	.15361	.00012	.09254	.06889	9.4475
#3	.24005	.15497	.00253	.09191	.06863	8.8325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21662.	18296.
Stddev	63.	120.
%RSD	.29223	.65411
#1	21733.	18434.
#2	21642.	18229.
#3	21611.	18223.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002105 Acquired: 2/7/2012 14:07:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00026	3.7333	.00266	.01167	.04899	.00050	.69532
Stddev	.00031	.0481	.00154	.00028	.00028	.00001	.00479
%RSD	121.03	1.2873	58.038	2.4198	.57383	1.3979	.68948
#1	-.00062	3.7067	.00295	.01165	.04889	.00050	.70084
#2	-.00012	3.7044	.00099	.01139	.04931	.00049	.69293
#3	-.00004	3.7887	.00404	.01196	.04877	.00049	.69220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00025	.00098	.01389	.03634	7.6737	.27707	.00668
Stddev	.00013	.00013	.00021	.00062	.0202	.04135	.00147
%RSD	51.777	13.028	1.4895	1.7110	.26307	14.925	22.042
#1	.00039	.00084	.01410	.03675	7.6604	.31011	.00704
#2	.00017	.00109	.01369	.03563	7.6636	.23070	.00507
#3	.00018	.00101	.01388	.03665	7.6969	.29041	.00795
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.34061	.01955	.00049	.95735	.00717	F -1334.7	.01529
Stddev	.01104	.00031	.00013	.01139	.00054	23.7	.00078
%RSD	3.2410	1.5637	25.694	1.1901	7.5806	1.7787	5.0893
#1	.32802	.01982	.00064	.94721	.00779	-1332.4	.01561
#2	.34520	.01960	.00042	.95514	.00676	-1312.1	.01586
#3	.34862	.01922	.00042	.96968	.00697	-1359.5	.01441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002105 Acquired: 2/7/2012 14:07:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5405**	**4.3040**	F **-176.57**	**.00069**	**.00112**	**5.3034**	**.00233**
Stddev	1.7385	.0278	3.39	.00176	.00117	.0106	.00007
%RSD	112.86	.64672	1.9209	256.25	104.39	.20068	3.0651
#1	3.5329	4.2719	-173.79	-.00034	.00241	5.3151	.00229
#2	.75699	4.3212	-175.57	.00272	.00082	5.3006	.00241
#3	.33159	4.3189	-180.35	-.00032	.00013	5.2944	.00229
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02318**	**.05142**	**.00026**	**.01566**	**.09025**	**2.1369**
Stddev	.00018	.00146	.00081	.00018	.00005	.0626
%RSD	.77097	2.8436	311.50	1.1450	.05195	2.9289
#1	.02306	.05309	-.00053	.01576	.09024	2.0651
#2	.02339	.05074	.00108	.01545	.09030	2.1660
#3	.02310	.05041	.00023	.01576	.09021	2.1797
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21026.**	**17981.**
Stddev	87.	160.
%RSD	.41326	.89193
#1	21076.	18037.
#2	21076.	17800.
#3	20926.	18105.

Approved: February 08, 2012

Sample Name: L1202002301 Acquired: 2/7/2012 14:11:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00037	4.4503	.00417	.01156	.10560	.00068	.44605
Stddev	.00060	.0357	.00153	.00066	.00075	.00003	.00167
%RSD	164.27	.80231	36.672	5.7217	.70599	4.8715	.37381
#1	-.00052	4.4707	.00577	.01152	.10556	.00064	.44426
#2	.00030	4.4712	.00273	.01092	.10488	.00067	.44755
#3	-.00088	4.4091	.00401	.01224	.10637	.00071	.44633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	.00195	.01856	.01201	12.510	.40228	.00577
Stddev	.00013	.00015	.00018	.00017	.045	.06595	.00058
%RSD	170.85	7.5360	.95455	1.4387	.36304	16.395	10.137
#1	.00022	.00190	.01872	.01206	12.531	.35618	.00644
#2	.00003	.00212	.01859	.01216	12.458	.37283	.00541
#3	-.00002	.00184	.01837	.01182	12.541	.47782	.00546
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.45267	.02908	.00170	.89296	.00566	F -1614.3	.00560
Stddev	.02358	.00046	.00025	.02411	.00035	35.2	.00056
%RSD	5.2080	1.5808	14.438	2.7004	6.1854	2.1807	10.038
#1	.47659	.02905	.00182	.87240	.00562	-1654.9	.00496
#2	.45197	.02955	.00142	.91950	.00603	-1594.4	.00579
#3	.42945	.02863	.00186	.88698	.00533	-1593.5	.00604
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002301 Acquired: 2/7/2012 14:11:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.4702**	**2.7225**	F **-111.16**	**.00078**	**.00361**	**8.9805**	**.00185**
Stddev	7.3579	.0121	2.10	.00202	.00185	.0137	.00018
%RSD	212.03	.44369	1.8888	260.74	51.090	.15200	9.7188
#1	1.4447	2.7085	-108.76	.00071	.00479	8.9913	.00178
#2	-2.6629	2.7299	-112.05	.00283	.00149	8.9651	.00206
#3	11.629	2.7290	-112.66	-.00122	.00456	8.9849	.00173
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02272**	**.06629**	**.00091**	**.01909**	**.04588**	**1.5423**
Stddev	.00013	.00177	.00127	.00007	.00036	.0364
%RSD	.59363	2.6762	139.43	.38252	.79318	2.3584
#1	.02258	.06529	.00104	.01915	.04598	1.5395
#2	.02285	.06525	.00210	.01901	.04619	1.5074
#3	.02273	.06834	-.00042	.01910	.04548	1.5800
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22156.**	**17430.**
Stddev	298.	370.
%RSD	1.3464	2.1215
#1	21894.	17067.
#2	22092.	17807.
#3	22480.	17416.

Approved: February 08, 2012

Sample Name: L1202002302 Acquired: 2/7/2012 14:14:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00072	4.5140	.00502	.01781	.09949	.00295	.19603
Stddev	.00073	.0675	.00140	.00052	.00077	.00004	.01179
%RSD	100.66	1.4950	27.899	2.9338	.77584	1.4608	6.0148
#1	.00154	4.5772	.00617	.01783	.09860	.00290	.19933
#2	.00051	4.5218	.00346	.01832	.10002	.00295	.20581
#3	.00012	4.4429	.00543	.01728	.09984	.00299	.18294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00025	.00771	.05205	.00785	26.032	.57321	.00334
Stddev	.00010	.00023	.00101	.00044	.169	.01302	.00158
%RSD	38.593	2.9798	1.9375	5.5628	.64942	2.2716	47.260
#1	-.00036	.00759	.05089	.00746	25.858	.56377	.00249
#2	-.00023	.00757	.05266	.00778	26.196	.58807	.00516
#3	-.00017	.00798	.05261	.00832	26.042	.56780	.00237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48341	.03739	.00036	5.3768	.01493	F -2920.8	.01048
Stddev	.01033	.00063	.00034	.0169	.00016	15.4	.00025
%RSD	2.1379	1.6902	95.981	.31425	1.0856	.52752	2.4092
#1	.48021	.03692	.00048	5.3706	.01477	-2933.7	.01075
#2	.47505	.03811	.00062	5.3959	.01509	-2903.7	.01045
#3	.49496	.03714	-.00003	5.3639	.01493	-2924.9	.01024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002302 Acquired: 2/7/2012 14:14:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.210	1.9942	F -85.270	.00279	.00092	6.8657	.00141
Stddev	1.623	.0288	1.881	.00030	.00109	.0027	.00016
%RSD	10.670	1.4447	2.2061	10.753	119.36	.03885	11.097
#1	13.656	1.9972	-85.503	.00269	.00143	6.8683	.00123
#2	16.894	2.0213	-83.283	.00313	.00166	6.8659	.00148
#3	15.079	1.9640	-87.023	.00256	-.00034	6.8630	.00151
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01482	.10610	.00137	.05189	.04339	4.7327
Stddev	.00007	.00163	.00062	.00109	.00021	.1937
%RSD	.48360	1.5330	45.183	2.1021	.47669	4.0931
#1	.01485	.10495	.00175	.05067	.04317	4.8631
#2	.01474	.10796	.00171	.05222	.04341	4.8249
#3	.01488	.10539	.00066	.05278	.04358	4.5101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22240.	19348.
Stddev	567.	119.
%RSD	2.5515	.61394
#1	22847.	19366.
#2	22151.	19457.
#3	21723.	19222.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002303 Acquired: 2/7/2012 14:17:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	5.3466	.00638	.01201	.01787	.00049	.51617
Stddev	.00031	.0214	.00048	.00026	.00043	.00001	.00315
%RSD	715.41	.40018	7.5320	2.1495	2.4013	2.3257	.61028
#1	.00027	5.3514	.00688	.01197	.01787	.00050	.51955
#2	-.00005	5.3232	.00634	.01228	.01830	.00050	.51566
#3	-.00035	5.3652	.00592	.01177	.01744	.00048	.51331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00027	.00063	.03339	.00711	18.786	.38054	.00080
Stddev	.00008	.00013	.00053	.00035	.030	.03930	.00204
%RSD	28.928	20.043	1.5775	4.8562	.16157	10.328	255.70
#1	-.00036	.00068	.03396	.00695	18.768	.38071	.00244
#2	-.00023	.00072	.03328	.00751	18.768	.34116	.00143
#3	-.00022	.00048	.03293	.00688	18.821	.41977	-.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.29800	.00743	.00210	.83026	.00352	F -2153.6	.00672
Stddev	.01719	.00031	.00009	.01681	.00032	13.0	.00073
%RSD	5.7693	4.1712	4.4233	2.0252	9.1450	.60496	10.803
#1	.29120	.00727	.00201	.84398	.00330	-2151.2	.00709
#2	.31756	.00722	.00220	.83529	.00337	-2142.0	.00588
#3	.28525	.00778	.00210	.81150	.00389	-2167.7	.00718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002303 Acquired: 2/7/2012 14:17:56 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.8641**	**2.6752**	F **-103.39**	**.00203**	**.00457**	**8.7785**	**.00207**
Stddev	7.5775	.0700	.24	.00208	.00128	.0338	.00011
%RSD	96.356	2.6182	.23478	102.79	27.900	.38552	5.2839
#1	16.166	2.5980	-103.53	.00432	.00453	8.7455	.00219
#2	6.1060	2.6929	-103.11	.00151	.00332	8.7768	.00203
#3	1.3201	2.7347	-103.53	.00025	.00587	8.8132	.00199
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01728**	**.06821**	**-.00015**	**.03800**	**.05491**	**2.3420**
Stddev	.00014	.00182	.00158	.00028	.00001	.0510
%RSD	.83697	2.6725	1037.4	.73036	.00987	2.1777
#1	.01724	.06716	.00167	.03828	.05491	2.3547
#2	.01744	.06716	-.00098	.03772	.05491	2.3855
#3	.01716	.07032	-.00114	.03801	.05492	2.2859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22220.**	**18925.**
Stddev	69.	122.
%RSD	.30862	.64352
#1	22143.	19059.
#2	22275.	18821.
#3	22241.	18896.

Approved: February 08, 2012

Sample Name: L1202002304 Acquired: 2/7/2012 14:21:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00034	11.840	.00852	.01411	.02865	.00032	.18071
Stddev	.00032	.050	.00129	.00059	.00035	.00004	.00553
%RSD	95.913	.42210	15.185	4.2031	1.2083	13.295	3.0589
#1	-.00041	11.786	.00935	.01480	.02848	.00028	.18433
#2	-.00062	11.885	.00918	.01376	.02905	.00031	.18346
#3	.00002	11.848	.00703	.01379	.02842	.00037	.17435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	.00063	.02481	.01180	16.925	.65186	-.00239
Stddev	.00006	.00010	.00063	.00055	.058	.03190	.00175
%RSD	35.913	16.468	2.5534	4.6404	.34051	4.8941	73.338
#1	-.00011	.00051	.02469	.01144	16.861	.65658	-.00251
#2	-.00022	.00069	.02425	.01243	16.941	.61787	-.00058
#3	-.00014	.00069	.02550	.01153	16.973	.68115	-.00407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56255	.00885	.00278	.95559	.00220	F -1307.7	.01297
Stddev	.01311	.00086	.00015	.02119	.00007	29.6	.00132
%RSD	2.3300	9.7514	5.2441	2.2176	3.0043	2.2659	10.149
#1	.57536	.00786	.00293	.93509	.00226	-1333.8	.01344
#2	.56314	.00941	.00277	.95428	.00219	-1275.5	.01399
#3	.54916	.00928	.00264	.97741	.00213	-1313.8	.01149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002304 Acquired: 2/7/2012 14:21:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.813	2.5248	F -119.94	.00057	.00214	16.493	.00237
Stddev	3.481	.0463	2.43	.00213	.00139	.081	.00033
%RSD	22.011	1.8342	2.0292	377.06	64.801	.49397	13.746
#1	19.474	2.5431	-122.67	.00119	.00313	16.506	.00212
#2	15.418	2.5592	-119.17	-.00181	.00275	16.567	.00274
#3	12.547	2.4722	-117.99	.00232	.00056	16.406	.00225
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01006	.06962	-.00026	.03576	.06812	2.8956
Stddev	.00011	.00135	.00032	.00037	.00031	.2195
%RSD	1.1050	1.9358	122.86	1.0402	.45327	7.5814
#1	.01018	.07023	-.00021	.03567	.06776	2.6653
#2	.00998	.07056	-.00061	.03544	.06832	2.9191
#3	.01001	.06808	.00003	.03617	.06827	3.1025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22194.	19123.
Stddev	402.	88.
%RSD	1.8092	.45803
#1	22425.	19046.
#2	22427.	19218.
#3	21731.	19105.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002305 Acquired: 2/7/2012 14:24:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00070	4.3026	.00932	.01672	.04664	.00106	.45240
Stddev	.00016	.0204	.00025	.00012	.00045	.00002	.01296
%RSD	22.515	.47465	2.7275	.69050	.95884	1.7084	2.8643
#1	.00062	4.2840	.00926	.01660	.04634	.00107	.43883
#2	.00059	4.2993	.00910	.01683	.04642	.00107	.46464
#3	.00088	4.3245	.00959	.01674	.04715	.00104	.45374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00021	.00192	.10294	.01150	26.795	.41673	.00364
Stddev	.00005	.00016	.00227	.00015	.042	.05069	.00382
%RSD	25.573	8.3058	2.2019	1.2625	.15507	12.163	105.14
#1	-.00019	.00189	.10050	.01141	26.783	.37393	.00664
#2	-.00017	.00177	.10498	.01166	26.762	.40356	-.00067
#3	-.00027	.00209	.10333	.01141	26.842	.47270	.00494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.66904	.00927	.00340	1.3765	.00401	F -2949.4	.00602
Stddev	.00822	.00044	.00016	.0192	.00056	13.5	.00117
%RSD	1.2279	4.7186	4.7351	1.3923	13.889	.45905	19.399
#1	.67356	.00878	.00350	1.3553	.00464	-2955.5	.00690
#2	.65956	.00941	.00350	1.3818	.00380	-2958.8	.00647
#3	.67400	.00963	.00322	1.3925	.00359	-2933.8	.00470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002305 Acquired: 2/7/2012 14:24:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.280	2.4619	F -96.647	.00192	.00537	7.2905	.00156
Stddev	3.874	.0547	2.856	.00142	.00238	.0184	.00044
%RSD	37.687	2.2202	2.9546	73.689	44.348	.25244	28.320
#1	10.788	2.4529	-97.501	.00290	.00613	7.2893	.00118
#2	6.1770	2.4122	-93.462	.00257	.00727	7.3095	.00146
#3	13.875	2.5204	-98.979	.00030	.00270	7.2728	.00204
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00718	.11007	.00068	.08181	.04837	5.3438
Stddev	.00014	.00227	.00083	.00097	.00008	.0215
%RSD	1.9591	2.0645	121.92	1.1917	.17195	.40259
#1	.00727	.11207	-.00005	.08068	.04830	5.3623
#2	.00702	.10760	.00050	.08243	.04837	5.3488
#3	.00726	.11052	.00159	.08230	.04846	5.3202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21631.	18626.
Stddev	213.	293.
%RSD	.98355	1.5719
#1	21859.	18519.
#2	21595.	18957.
#3	21438.	18401.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 14:28:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39843	10.101	.40124	.49991	1.0050	.05030	10.068
Stddev	.00143	.044	.00323	.00270	.0052	.00026	.015
%RSD	.35946	.43278	.80441	.54069	.51608	.50903	.14786
#1	.39995	10.059	.40480	.50225	1.0011	.05059	10.060
#2	.39825	10.097	.40042	.50054	1.0030	.05023	10.085
#3	.39710	10.146	.39850	.49695	1.0109	.05009	10.058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05062	.20420	.50055	.51402	4.0355	51.017	1.0315
Stddev	.00022	.00105	.00317	.00233	.0103	.111	.0060
%RSD	.43571	.51263	.63297	.45386	.25614	.21676	.58250
#1	.05080	.20506	.50421	.51550	4.0265	50.934	1.0259
#2	.05069	.20450	.49862	.51523	4.0332	50.974	1.0307
#3	.05037	.20303	.49883	.51133	4.0467	51.143	1.0379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.280	.51497	.98871	51.724	.50764	F -37.313	.50698
Stddev	.009	.00235	.00174	.104	.00206	19.245	.00207
%RSD	.08879	.45568	.17573	.20062	.40673	51.578	.40743
#1	10.275	.51436	.98881	51.646	.50938	-57.955	.50564
#2	10.290	.51756	.99039	51.842	.50818	-34.120	.50936
#3	10.274	.51299	.98692	51.684	.50536	-19.864	.50594
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 14:28:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -5.5407	10.090	F 25.538	1.1978	.39959	5.0336	1.0104
Stddev	8.2817	.059	1.150	.0019	.00196	.0301	.0027
%RSD	149.47	.58086	4.5032	.15481	.49168	.59755	.26203
#1	-13.395	10.151	26.849	1.1972	.40004	5.0548	1.0133
#2	3.1106	10.086	24.699	1.1999	.40128	5.0469	1.0097
#3	-6.3376	10.034	25.065	1.1963	.39743	4.9992	1.0081
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0196	1.0154	.51546	1.0123	1.0144	F 1.5836
Stddev	.0039	.0030	.00375	.0075	.0032	.0944
%RSD	.38202	.29547	.72834	.73900	.32076	5.9602
#1	1.0152	1.0121	.51895	1.0206	1.0157	1.6779
#2	1.0226	1.0162	.51593	1.0104	1.0167	1.4892
#3	1.0209	1.0179	.51149	1.0060	1.0107	1.5837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20192.	16769.
Stddev	45.	200.
%RSD	.22460	1.1902
#1	20219.	16550.
#2	20140.	16817.
#3	20218.	16940.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 14:31:32 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00114	-.02726	-.00051	.00319	.00070	-.00001	-.04372
Stddev	.00045	.02591	.00207	.00041	.00019	.00002	.00704
%RSD	39.295	95.060	405.69	12.917	27.119	157.87	16.096
#1	-.00100	-.02780	.00075	.00340	.00059	.00001	-.05182
#2	-.00164	-.00108	.00062	.00272	.00059	-.00002	-.04021
#3	-.00078	-.05289	-.00290	.00346	.00092	-.00003	-.03912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	-.00007	.00094	.00109	.00213	-.04080	.00535
Stddev	.00012	.00010	.00033	.00054	.00525	.05115	.00164
%RSD	167.29	143.28	34.974	49.116	246.60	125.36	30.689
#1	-.00021	-.00018	.00118	.00072	-.00343	-.09987	.00723
#2	.00002	.00002	.00057	.00171	.00282	-.01165	.00420
#3	-.00003	-.00006	.00107	.00084	.00700	-.01089	.00462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00105	.00016	.00063	-.06930	-.00061	F -24.746	-.00120
Stddev	.02612	.00056	.00025	.00514	.00064	18.080	.00066
%RSD	2491.9	350.68	39.576	7.4118	104.56	73.061	55.380
#1	-.02677	.00071	.00037	-.07522	-.00004	-7.9455	-.00170
#2	-.00184	-.00042	.00087	-.06657	-.00130	-22.413	-.00145
#3	.02546	.00019	.00065	-.06610	-.00050	-43.878	-.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 14:31:32 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -2.2131	F -.45268	F 20.366	-.00096	-.00203	.01975	.00072
Stddev	2.7081	.01047	1.294	.00203	.00197	.00180	.00026
%RSD	122.37	2.3131	6.3526	212.88	97.380	9.1080	36.836
#1	-3.7547	-.46244	18.883	-.00277	-.00430	.02106	.00098
#2	-3.7984	-.45397	21.266	.00125	-.00106	.02049	.00045
#3	.91380	-.44162	20.949	-.00135	-.00072	.01770	.00072
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00030	.00029	-.00121	-.00004	.00015	F -.29540
Stddev	.00015	.00048	.00026	.00025	.00005	.13166
%RSD	51.662	164.82	21.699	583.46	30.977	44.571
#1	.00014	.00077	-.00145	.00023	.00014	-.14868
#2	.00045	-.00019	-.00125	-.00009	.00019	-.33426
#3	.00030	.00029	-.00093	-.00027	.00011	-.40325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20082.	16462.
Stddev	224.	69.
%RSD	1.1138	.41636
#1	20339.	16392.
#2	19931.	16466.
#3	19975.	16529.

Approved: February 08, 2012

Sample Name: L1202002601 Acquired: 2/7/2012 14:35:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00091	.04280	.00013	.00390	.00257	-.00002	.41650
Stddev	.00060	.01857	.00040	.00038	.00010	.00002	.01046
%RSD	65.661	43.386	297.20	9.6664	4.0634	139.90	2.5114
#1	-.00028	.04042	-.00032	.00383	.00255	.00001	.41501
#2	-.00147	.02553	.00040	.00431	.00268	-.00003	.42762
#3	-.00099	.06244	.00032	.00356	.00247	-.00003	.40686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	-.00015	.00405	.01474	.25394	.27062	.00123
Stddev	.00004	.00026	.00037	.00046	.00147	.02447	.00139
%RSD	513.17	181.86	9.0796	3.1250	.57970	9.0408	113.12
#1	.00004	-.00026	.00419	.01482	.25504	.29745	.00263
#2	-.00001	-.00034	.00363	.01425	.25227	.24954	.00119
#3	-.00005	.00016	.00432	.01516	.25452	.26487	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09029	.00458	.00043	.35396	.00039	F -32.752	.00288
Stddev	.02025	.00034	.00029	.01569	.00040	21.696	.00088
%RSD	22.431	7.3394	66.954	4.4338	104.18	66.244	30.651
#1	.07418	.00497	.00041	.33596	.00079	-7.7051	.00226
#2	.11302	.00440	.00016	.36115	-.00002	-44.822	.00389
#3	.08366	.00437	.00074	.36477	.00038	-45.730	.00250
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002601 Acquired: 2/7/2012 14:35:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.1077**	**3.0261**	F **-128.23**	**.00003**	**-.00172**	**.17914**	**.00053**
Stddev	5.5001	.0191	2.11	.00112	.00130	.00077	.00032
%RSD	133.90	.62987	1.6446	4418.6	75.643	.42769	60.103
#1	-1.0681	3.0188	-126.97	-.00017	-.00063	.17865	.00050
#2	9.8829	3.0477	-130.66	.00124	-.00136	.17874	.00087
#3	3.5083	3.0117	-127.05	-.00099	-.00316	.18002	.00023
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00106**	**-.00089**	**.00046**	**.00288**	F **-.10823**
Stddev	.00010	.00055	.00080	.00051	.00003	.05101
%RSD	12.048	51.514	89.581	111.76	.94637	47.127
#1	.00079	.00093	-.00033	.00104	.00285	-.13734
#2	.00071	.00166	-.00181	.00028	.00289	-.13801
#3	.00090	.00059	-.00054	.00006	.00291	-.04934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20981.**	**17080.**
Stddev	33.	248.
%RSD	.15509	1.4512
#1	20976.	16803.
#2	21016.	17280.
#3	20951.	17159.

Approved: February 08, 2012

Sample Name: L1202002602 Acquired: 2/7/2012 14:38:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00036	-.01328	.00024	.00227	.00217	-.00003	.43001
Stddev	.00056	.01654	.00091	.00096	.00012	.00001	.01629
%RSD	155.79	124.61	381.22	42.186	5.5349	26.193	3.7876
#1	-.00039	-.03108	.00105	.00274	.00222	-.00002	.44798
#2	-.00090	-.01037	.00041	.00117	.00203	-.00004	.42584
#3	.00022	.00162	-.00075	.00290	.00226	-.00003	.41622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	-.00009	.00136	.00451	.02743	.14341	.00417
Stddev	.00011	.00028	.00016	.00077	.00403	.01479	.00247
%RSD	102.40	311.19	11.920	17.064	14.705	10.313	59.068
#1	.00001	-.00014	.00154	.00522	.02692	.15819	.00153
#2	-.00012	.00021	.00131	.00462	.03170	.14344	.00641
#3	-.00020	-.00034	.00123	.00369	.02368	.12861	.00459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09241	.00135	-.00006	.15906	.00006	F -24.081	.00060
Stddev	.00981	.00035	.00020	.00857	.00025	19.967	.00128
%RSD	10.619	25.845	346.84	5.3873	396.60	82.913	212.68
#1	.08988	.00100	.00011	.14947	.00025	-7.6037	-.00087
#2	.08411	.00133	-.00029	.16596	.00016	-46.285	.00117
#3	.10324	.00170	.00000	.16175	-.00022	-18.354	.00150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002602 Acquired: 2/7/2012 14:38:31 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.8632**	**1.4184**	F **-45.843**	**.00129**	**-.00040**	**.10942**	**.00034**
Stddev	4.5634	.0386	1.103	.00163	.00097	.00176	.00035
%RSD	93.835	2.7229	2.4064	126.06	244.57	1.6077	101.52
#1	.54453	1.3756	-44.926	-.00044	-.00151	.10742	.00002
#2	9.6373	1.4290	-47.068	.00279	.00011	.11010	.00071
#3	4.4079	1.4506	-45.536	.00153	.00022	.11073	.00030
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**.00011**	**-.00108**	**.00000**	**.00029**	F **-.08606**
Stddev	.00011	.00068	.00074	.00054	.00005	.22069
%RSD	13.695	638.54	69.139	21729.	17.077	256.43
#1	.00078	-.00058	-.00177	.00033	.00027	.16598
#2	.00095	.00078	-.00116	.00030	.00025	-.24463
#3	.00074	.00011	-.00029	-.00062	.00034	-.17954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21796.**	**16769.**
Stddev	155.	126.
%RSD	.71145	.75392
#1	21939.	16838.
#2	21631.	16845.
#3	21818.	16623.

Approved: February 08, 2012

Sample Name: L1202002603 Acquired: 2/7/2012 14:41:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00076**	**-.02198**	**.00035**	**.00274**	**.00072**	**-.00003**	**.12325**
Stddev	.00046	.02354	.00040	.00114	.00007	.00002	.00575
%RSD	59.837	107.09	112.95	41.748	10.007	85.471	4.6627
#1	-.00033	-.04869	.00079	.00398	.00080	-.00004	.12059
#2	-.00124	-.00429	.00002	.00252	.00070	.00000	.12984
#3	-.00072	-.01295	.00024	.00172	.00067	-.00005	.11931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**-.00015**	**.00360**	**.00466**	**.02404**	**-.01921**	**.00447**
Stddev	.00008	.00014	.00065	.00099	.00071	.03755	.00048
%RSD	264.85	99.092	18.174	21.155	2.9659	195.48	10.752
#1	.00002	-.00030	.00422	.00404	.02374	.02396	.00487
#2	.00012	-.00011	.00366	.00414	.02486	-.04431	.00394
#3	-.00005	-.00002	.00292	.00579	.02353	-.03728	.00460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06111**	**.00063**	**.00030**	**.16349**	**.00110**	F **-.15041**	**-.00061**
Stddev	.01530	.00071	.00004	.01685	.00047	24.057	.00075
%RSD	25.037	111.82	14.874	10.305	42.486	15995.	122.93
#1	.07872	.00080	.00026	.14602	.00090	-25.111	.00025
#2	.05353	-.00014	.00035	.17964	.00077	1.7714	-.00116
#3	.05108	.00125	.00029	.16482	.00164	22.888	-.00093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202002603 Acquired: 2/7/2012 14:41:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41770	.95955	F -41.181	-.00072	-.00169	.08809	.00000
Stddev	4.4683	.00746	1.287	.00085	.00129	.00121	.0002
%RSD	1069.8	.77738	3.1247	117.66	76.284	1.3683	5340.0
#1	-4.7063	.95293	-40.902	-.00170	-.00179	.08884	-.00011
#2	3.5037	.95808	-42.584	-.00029	-.00035	.08873	-.00012
#3	2.4557	.96763	-40.056	-.00018	-.00292	.08670	.00021
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00044	-.00043	-.00120	.00001	-.00047	F -.04868
Stddev	.00006	.00100	.00088	.00023	.00002	.14974
%RSD	13.331	234.46	73.068	1628.2	4.4718	307.60
#1	.00038	-.00027	-.00088	-.00009	-.00045	-.13778
#2	.00043	.00048	-.00220	.00028	-.00049	.12420
#3	.00050	-.00150	-.00053	-.00015	-.00048	-.13246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21450.	18327.
Stddev	98.	422.
%RSD	.45649	2.3007
#1	21353.	18141.
#2	21446.	18809.
#3	21549.	18030.

Approved: February 08, 2012

Sample Name: L1202002604 Acquired: 2/7/2012 14:45:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00154	-.01790	.00056	.00238	.00256	-.00001	.20558
Stddev	.00071	.01023	.00082	.00061	.00018	.00002	.00590
%RSD	46.140	57.162	147.43	25.516	6.9787	189.51	2.8701
#1	-.00201	-.00647	.00004	.00197	.00255	.00001	.21026
#2	-.00189	-.02621	.00012	.00210	.00238	-.00001	.19895
#3	-.00072	-.02101	.00151	.00308	.00274	-.00004	.20754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	-.00022	.00149	.00878	.02398	.09999	.00463
Stddev	.00005	.00015	.00032	.00012	.00437	.05518	.00208
%RSD	52.353	66.992	21.214	1.4195	18.239	55.190	44.874
#1	-.00012	-.00028	.00177	.00892	.02521	.12569	.00337
#2	-.00012	-.00033	.00115	.00871	.02760	.13764	.00348
#3	-.00004	-.00005	.00157	.00871	.01912	.03664	.00702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08492	.00047	-.00012	.21917	.00052	F -70.142	-.00068
Stddev	.00233	.00058	.00013	.01876	.00025	4.657	.00146
%RSD	2.7418	124.70	101.71	8.5582	47.855	6.6395	215.59
#1	.08644	-.00002	.00002	.19908	.00079	-67.281	-.00231
#2	.08224	.00030	-.00017	.22220	.00049	-67.630	-.00023
#3	.08607	.00111	-.00022	.23623	.00029	-75.516	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002604 Acquired: 2/7/2012 14:45:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.41202	1.3301	F -53.849	-.00085	-.00031	.10493	.00022
Stddev	8.3713	.0299	2.074	.00079	.00139	.00182	.00011
%RSD	2031.8	2.2438	3.8515	93.459	454.55	1.7385	51.112
#1	-10.031	1.3036	-51.483	-.00008	-.00184	.10638	.00013
#2	5.2216	1.3244	-55.353	-.00166	.00007	.10554	.00019
#3	3.5738	1.3624	-54.712	-.00080	.00086	.10288	.00035
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00061	.00057	-.00131	.00013	.00366	F -.19173
Stddev	.00006	.00136	.00080	.00013	.00003	.12280
%RSD	9.1232	238.31	61.303	100.31	.76090	64.048
#1	.00064	-.00015	-.00041	.00018	.00368	-.05191
#2	.00054	.00214	-.00157	.00023	.00363	-.24123
#3	.00064	-.00027	-.00194	-.00002	.00365	-.28205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20659.	17324.
Stddev	248.	105.
%RSD	1.2003	.60864
#1	20455.	17274.
#2	20587.	17445.
#3	20935.	17253.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002605 Acquired: 2/7/2012 14:48:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00078	-.00529	-.00046	.00168	.00135	.00000	.08283
Stddev	.00058	.03330	.00039	.00107	.00017	.0000	.00907
%RSD	73.911	629.46	86.617	64.090	12.342	149.60	10.954
#1	-.00111	.00620	-.00013	.00254	.00128	-.00001	.07536
#2	-.00111	.02074	-.00035	.00201	.00154	.00000	.09293
#3	-.00011	-.04282	-.00089	.00047	.00123	.00000	.08021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	-.00018	.00185	.00209	.00428	-.02520	-.00030
Stddev	.00009	.00015	.00021	.00084	.00555	.04830	.00361
%RSD	326.69	84.984	11.552	40.081	129.74	191.65	1211.7
#1	-.00013	-.00025	.00186	.00301	.00531	.02919	-.00072
#2	.00002	.00000	.00206	.00190	-.00171	-.04172	.00350
#3	.00003	-.00027	.00163	.00137	.00925	-.06307	-.00368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04018	-.00020	.00009	.10880	.00015	F -10.856	-.00124
Stddev	.01008	.00050	.00025	.01614	.00023	24.463	.00092
%RSD	25.074	254.38	267.90	14.833	152.13	225.35	73.921
#1	.04233	-.00067	.00021	.09936	.00015	-27.662	-.00057
#2	.02921	-.00026	-.00020	.12743	-.00008	17.210	-.00229
#3	.04902	.00034	.00027	.09960	.00038	-22.115	-.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002605 Acquired: 2/7/2012 14:48:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.1218**	**.78172**	F **-35.632**	**.00147**	**.00022**	**.07054**	**.00001**
Stddev	9.4082	.05185	3.227	.00100	.00265	.00092	.00023
%RSD	228.25	6.6328	9.0570	67.767	1225.9	1.3064	1574.9
#1	9.3076	.75614	-39.342	.00090	.00288	.07016	-.00023
#2	9.7961	.74763	-33.479	.00090	-.00242	.07159	.00021
#3	-6.7382	.84139	-34.074	.00263	.00019	.06987	.00007
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**-.00166**	**-.00060**	**-.00002**	**-.00079**	F **-.23249**
Stddev	.00005	.00139	.00162	.00040	.00001	.18183
%RSD	9.1530	83.693	270.66	1698.9	1.4941	78.210
#1	.00046	-.00313	-.00110	-.00047	-.00080	-.06203
#2	.00055	-.00150	.00121	.00029	-.00078	-.42388
#3	.00052	-.00036	-.00190	.00011	-.00078	-.21156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21092.**	**17348.**
Stddev	402.	228.
%RSD	1.9050	1.3149
#1	20817.	17151.
#2	20905.	17598.
#3	21553.	17296.

Approved: February 08, 2012

Sample Name: L1202002606 Acquired: 2/7/2012 14:52:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00060	.02278	.00009	.00364	.00098	-.00002	.27815
Stddev	.00074	.01603	.00246	.00055	.00020	.00002	.00170
%RSD	122.44	70.367	2762.7	15.107	20.607	118.77	.61005
#1	.00004	.01700	.00229	.00393	.00116	.00000	.27648
#2	-.00141	.04089	.00054	.00300	.00103	-.00002	.27987
#3	-.00044	.01044	-.00256	.00398	.00076	-.00004	.27811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	.00003	.00397	.02625	.06636	.18441	-.00237
Stddev	.00003	.00012	.00046	.00019	.00569	.03732	.00235
%RSD	159.30	417.30	11.717	.71179	8.5763	20.239	99.469
#1	-.00001	-.00007	.00444	.02629	.06916	.14504	-.00508
#2	.00005	.00016	.00395	.02641	.05981	.18890	-.00095
#3	.00001	.00000	.00351	.02604	.07011	.21928	-.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06262	.00241	.00009	.30414	.00135	F -3.3061	.00083
Stddev	.00700	.00024	.00019	.02193	.00072	13.637	.00216
%RSD	11.180	10.147	205.96	7.2120	53.714	412.47	259.13
#1	.06301	.00242	-.00013	.29628	.00185	8.2455	.00258
#2	.06942	.00266	.00020	.28722	.00052	.18521	-.00158
#3	.05543	.00217	.00021	.32892	.00168	-18.349	.00149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202002606 Acquired: 2/7/2012 14:52:15 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.513	2.3470	F -103.36	.00182	-.00142	.14359	.00060
Stddev	8.068	.0205	1.51	.00144	.00206	.00031	.00011
%RSD	64.480	.87352	1.4581	79.352	144.68	.21657	18.444
#1	3.2679	2.3371	-104.97	.00336	.00086	.14375	.00072
#2	18.133	2.3332	-101.98	.00050	-.00314	.14379	.00053
#3	16.137	2.3705	-103.14	.00160	-.00200	.14323	.00054
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00055	.00064	.00020	.00030	.00387	F -.08047
Stddev	.00012	.00102	.00058	.00004	.00010	.07453
%RSD	21.572	159.03	291.06	13.925	2.5188	92.620
#1	.00066	-.00018	.00045	.00032	.00381	-.15199
#2	.00042	.00178	-.00047	.00034	.00383	-.00326
#3	.00058	.00032	.00062	.00026	.00399	-.08616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21462.	18048.
Stddev	510.	310.
%RSD	2.3745	1.7157
#1	21313.	17924.
#2	21044.	17820.
#3	22030.	18401.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 14:55:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .00974	k -.03310	k -.00013	k .00067	.01050	k .00193
Stddev	.00063	.01753	.00178	.00038	.00019	.00003
%RSD	6.5199	52.979	1391.6	56.363	1.7638	1.2989
#1	k .01044	k -.04188	k .00031	k .00040	.01050	k .00195
#2	.00957	-.04450	-.00209	.00051	.01068	.00194
#3	.00920	-.01291	.00139	.00111	.01031	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00286	k .00995	k .02127	k .02193	k .02244	k .00013
Stddev	.00797	.00025	.00017	.00049	.00984	.00400
%RSD	278.61	2.4934	.82105	2.2572	43.841	3062.8
#1	-.00464	k .00967	k .02147	k .02247	k .01134	k .00218
#2	.00199	.01006	.02118	.02183	.03009	.00269
#3	.01124	.01013	.02116	.02149	.02588	-.00448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.10133	.00396	k .00988	k .01154	k .00017	.51578
Stddev	.02826	.00244	.02004	.00086	.00007	.02025
%RSD	27.887	61.660	202.77	7.4293	39.142	3.9262
#1	-.13113	.00469	k -.01194	k .01057	k .00022	.53756
#2	-.07493	.00595	.02745	.01221	.00010	.49753
#3	-.09792	.00124	.01413	.01185	.00020	.51225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012
Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 14:55:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	kF -26.469	k .00023	8.7343	4.2197	F -206.76
Stddev	-----	37.270	.00173	4.7264	5.1261	256.22
%RSD	-----	140.80	762.71	54.113	121.48	123.92
#1	^ -----	k -58.793	k .00140	3.4357	2.4392	-114.26
#2	1.1016	-34.913	.00105	10.251	9.9986	-496.38
#3	.42653	14.298	-.00176	12.516	.22135	-9.629
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit		900.00				9.0000
Low Limit		-.00400				-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .00053	-.00139	.05891	k .00037	.00014	k -.00081
Stddev	.00049	.00123	.06043	.00016	.00008	.00056
%RSD	93.169	88.237	102.59	43.385	58.481	68.705
#1	k .00091	-.00199	.12548	k .00024	.00017	k -.00136
#2	.00070	.00002	.04375	.00033	.00021	-.00024
#3	-.00003	-.00221	.00750	.00056	.00005	-.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	k -.00114	k .01126	^ *****	kF -.29828
Stddev	.00063	.00008	-----	.06082
%RSD	55.000	.68299	-----	20.389
#1	k -.00172	k .01135	^ -----	k -.23458
#2	-.00121	.01121	.07769	-.30453
#3	-.00048	.01122	.02050	-.35573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 14:55:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21193.**	**18773.**
Stddev	189.	212.
%RSD	.89206	1.1286
#1	20983.	18807.
#2	21249.	18546.
#3	21348.	18966.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 15:03:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19518	-.01017	.00253	.00060	.21265	.03827	-.00677
Stddev	.00178	.02347	.00105	.00139	.00467	.00012	.01225
%RSD	.91242	230.89	41.625	230.85	2.1961	.32610	180.93
#1	.19430	-.02392	.00375	-.00047	.21596	.03841	.00416
#2	.19401	-.02351	.00201	.00218	.20731	.03821	-.00445
#3	.19723	.01694	.00184	.00010	.21468	.03819	-.02001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20448	.41689	.42537	.49053	.00265	-.03260	.00089
Stddev	.00095	.00097	.00082	.00089	.00043	.07021	.00108
%RSD	.46260	.23260	.19220	.18042	16.272	215.38	121.55
#1	.20557	.41781	.42570	.49126	.00215	-.11251	.00213
#2	.20401	.41588	.42444	.48955	.00291	.01921	.00018
#3	.20386	.41698	.42598	.49078	.00288	-.00449	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01138	.22049	.00064	10.258	8.3934	7.1256	-.00046
Stddev	.00723	.00445	.00015	.210	.0190	16.147	.00135
%RSD	63.500	2.0176	23.311	2.0469	.22680	226.61	295.53
#1	.00785	.22384	.00052	10.417	8.4058	-1.4433	.00050
#2	.00660	.21544	.00061	10.020	8.3715	-2.9307	.00014
#3	.01969	.22219	.00081	10.337	8.4028	25.751	-.00201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 15:03:41 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.321	F -.21327	F 16.949	.00390	-.00040	.00512	-.00010
Stddev	11.350	.01802	.661	.00018	.00085	.00030	.00023
%RSD	109.97	8.4486	3.8999	4.5599	214.97	5.9436	228.32
#1	-2.0230	-.20511	16.522	.00407	.00048	.00537	-.00014
#2	20.307	-.20078	16.614	.00372	-.00123	.00519	.00015
#3	12.678	-.23393	17.710	.00389	-.00044	.00478	-.00031
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.00044	.00564	.22402	.43124	F -.18429
Stddev	.00015	.00124	.00055	.00029	.00071	.11690
%RSD	346.58	279.21	9.8181	.12772	.16465	63.430
#1	.00022	.00175	.00628	.22435	.43061	-.31141
#2	-.00003	.00029	.00533	.22385	.43109	-.16006
#3	-.00005	-.00071	.00531	.22387	.43201	-.08141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22318.	19268.
Stddev	166.	357.
%RSD	.74315	1.8537
#1	22501.	18872.
#2	22277.	19566.
#3	22177.	19368.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 15:24:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00787	-.01065	.00059	.00025	.01008	.00178	-.00482
Stddev	.00093	.06363	.00064	.00116	.00024	.00001	.00552
%RSD	11.809	597.38	108.55	460.55	2.3711	.30157	114.33
#1	.00786	.06269	.00079	.00158	.01012	.00179	-.00160
#2	.00694	-.04343	-.00013	-.00049	.00982	.00178	-.00168
#3	.00880	-.05121	.00110	-.00034	.01029	.00178	-.01119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00934	.01983	.02083	.02396	.00275	.03830	-.00406
Stddev	.00010	.00026	.00012	.00053	.00259	.02193	.00409
%RSD	1.0740	1.2896	.58807	2.2310	94.237	57.247	100.78
#1	.00945	.02010	.02081	.02438	.00237	.02070	-.00878
#2	.00930	.01979	.02096	.02414	.00036	.03135	-.00156
#3	.00926	.01959	.02071	.02336	.00550	.06287	-.00184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01955	.01124	.00042	.49194	.40919	29.308	-.00011
Stddev	.02680	.00062	.00005	.01844	.00078	21.303	.00009
%RSD	137.07	5.5177	11.414	3.7486	.19080	72.687	81.100
#1	.02921	.01095	.00044	.47252	.41008	42.493	-.00017
#2	-.01074	.01082	.00037	.49410	.40887	40.700	-.00001
#3	.04019	.01195	.00046	.50921	.40863	4.7312	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 15:24:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.1218**	F **-.15193**	**6.0630**	**.00200**	**-.00207**	**.00368**	**.00151**
Stddev	8.2253	.02426	1.8491	.00055	.00088	.00096	.00035
%RSD	115.49	15.967	30.498	27.575	42.442	25.953	23.374
#1	.49733	-.15613	5.8945	.00239	-.00251	.00264	.00163
#2	4.5398	-.17381	7.9906	.00137	-.00265	.00451	.00178
#3	16.328	-.12584	4.3039	.00224	-.00106	.00389	.00111
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000					
Low Limit		-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**-.00150**	**.00039**	**.01043**	**.02073**	F **-.16693**
Stddev	.00015	.00215	.00150	.00022	.00018	.06933
%RSD	93.990	142.79	379.89	2.1466	.87723	41.534
#1	.00031	-.00024	-.00133	.01019	.02079	-.10722
#2	.00014	-.00398	.00114	.01064	.02087	-.24297
#3	.00002	-.00028	.00137	.01046	.02052	-.15061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21788.**	**17564.**
Stddev	200.	99.
%RSD	.91832	.56382
#1	21610.	17464.
#2	21749.	17566.
#3	22004.	17663.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 15:28:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39332	10.076	.39012	.49155	.98244	.04843	9.9080
Stddev	.00772	.054	.00063	.00986	.00191	.00099	.0431
%RSD	1.9620	.53136	.16135	2.0067	.19476	2.0506	.43482
#1	.38459	10.028	.39085	.48078	.98228	.04733	9.8931
#2	.39614	10.134	.38973	.49373	.98062	.04872	9.8743
#3	.39923	10.065	.38979	.50014	.98444	.04925	9.9565
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04922	.19629	.49685	.49413	3.9756	49.500	.98232
Stddev	.00016	.00022	.00837	.00076	.0144	.214	.00475
%RSD	.31612	.11329	1.6836	.15315	.36230	.43137	.48386
#1	.04939	.19604	.48745	.49417	3.9922	49.445	.98060
#2	.04909	.19647	.49962	.49335	3.9676	49.319	.97868
#3	.04919	.19637	.50348	.49486	3.9670	49.735	.98770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9699	.48913	.99211	49.481	.49865	F -20.451	.49929
Stddev	.0472	.00228	.00130	.255	.00121	43.848	.00196
%RSD	.47377	.46552	.13130	.51539	.24329	214.40	.39274
#1	10.000	.48691	.99194	49.273	.49963	-70.981	.49720
#2	9.9154	.48900	.99349	49.403	.49729	2.0445	.49957
#3	9.9941	.49146	.99090	49.765	.49903	7.5836	.50109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 15:28:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.567**	**10.111**	F **16.895**	**1.1819**	**.39062**	**4.8894**	**.99220**
Stddev	2.147	.070	.321	.0022	.00236	.0055	.00098
%RSD	20.316	.69055	1.8998	.18899	.60477	.11296	.09843
#1	8.1127	10.147	17.035	1.1809	.38939	4.8954	.99171
#2	12.097	10.031	16.528	1.1803	.38912	4.8846	.99156
#3	11.491	10.156	17.122	1.1844	.39334	4.8883	.99332
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			10.000				
Range			10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97779**	**.97060**	**.50293**	**.96178**	**.99996**	F **.87745**
Stddev	.00528	.00181	.00106	.01747	.00073	.18275
%RSD	.54011	.18672	.20997	1.8162	.07272	20.827
#1	.97390	.96935	.50302	.94241	.99935	.73932
#2	.97567	.96978	.50183	.96659	.99978	.80836
#3	.98380	.97268	.50394	.97634	1.0008	1.0847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21304.**	**17695.**
Stddev	144.	101.
%RSD	.67461	.57202
#1	21370.	17747.
#2	21404.	17758.
#3	21140.	17578.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 15:31:40 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00064	-.01009	.00004	.00293	-.00012	-.00002	-.00947
Stddev	.00038	.03938	.00160	.00136	.00024	.00003	.00282
%RSD	58.976	390.40	3782.0	46.304	193.00	163.94	29.760
#1	-.00022	.02115	.00189	.00424	.00009	-.00002	-.01092
#2	-.00095	-.05433	-.00083	.00153	-.00037	-.00004	-.01125
#3	-.00074	.00292	-.00093	.00302	-.00009	.00001	-.00622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00008	-.00023	.00042	.00089	.00565	.05929	-.00050
Stddev	.00012	.00024	.00038	.00023	.00427	.01514	.00129
%RSD	152.01	105.52	88.682	25.548	75.569	25.542	256.25
#1	-.00007	-.00039	.00084	.00103	.00313	.04216	.00035
#2	-.00020	.00005	.00010	.00100	.00325	.07089	-.00199
#3	.00004	-.00033	.00033	.00062	.01059	.06483	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00172	-.00037	.00072	-.01038	-.00088	F -9.5757	.00093
Stddev	.00407	.00048	.00033	.01410	.00044	14.219	.00078
%RSD	236.42	129.47	45.283	135.87	50.113	148.49	84.181
#1	.00174	-.00087	.00035	.00352	-.00037	2.2714	.00182
#2	-.00621	-.00031	.00086	-.00999	-.00117	-25.344	.00056
#3	-.00070	.00008	.00095	-.02466	-.00110	-5.6545	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 15:31:40 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.2515	F -.18271	F 6.7379	.00077	-.00232	.00685	.00093
Stddev	5.1609	.08000	1.9938	.00067	.00279	.00113	.00018
%RSD	71.170	43.785	29.591	87.434	120.00	16.434	19.201
#1	12.781	-.15702	8.8209	.00063	-.00444	.00793	.00099
#2	2.5631	-.27240	6.5456	.00150	-.00336	.00694	.00107
#3	6.4099	-.11871	4.8472	.00018	.00083	.00568	.00073
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	-.00038	-.00117	-.00021	-.00047	F -.16294
Stddev	.00013	.00073	.00099	.00035	.00012	.18451
%RSD	56.054	189.97	84.701	165.46	24.631	113.23
#1	.00024	-.00086	-.00107	.00017	-.00052	-.31982
#2	.00037	-.00074	-.00221	-.00053	-.00054	-.20935
#3	.00010	.00045	-.00023	-.00028	-.00033	.04034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21103.	17660.
Stddev	90.	163.
%RSD	.42441	.92496
#1	21097.	17848.
#2	21195.	17582.
#3	21017.	17551.

Approved: February 08, 2012

Sample Name: PBW 4A Acquired: 2/7/2012 15:35:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00110	.00040	.00116	.00243	-.00024	-.00005	-.01614
Stddev	.00071	.04965	.00020	.00031	.00016	.00001	.00992
%RSD	64.759	12298.	16.928	12.750	64.744	22.694	61.452
#1	-.00089	-.02857	.00127	.00230	-.00010	-.00006	-.02737
#2	-.00189	-.02794	.00094	.00278	-.00022	-.00005	-.00857
#3	-.00051	.05773	.00128	.00220	-.00041	-.00004	-.01248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00013	-.00030	.00114	.00086	.00532	.06918	-.00615
Stddev	.00006	.00024	.00045	.00085	.00343	.05427	.00187
%RSD	48.657	80.504	39.969	98.665	64.422	78.447	30.347
#1	-.00006	-.00041	.00088	.00092	.00644	.03281	-.00752
#2	-.00019	-.00002	.00087	-.00002	.00148	.04318	-.00690
#3	-.00015	-.00048	.00166	.00167	.00806	.13157	-.00402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02041	-.00022	.00006	-.01897	-.00055	2.6467	-.00059
Stddev	.01624	.00027	.00025	.01271	.00047	12.452	.00075
%RSD	79.556	122.95	400.69	66.973	85.989	470.46	127.35
#1	.03636	-.00005	.00013	-.02336	-.00044	6.1701	-.00130
#2	.00390	-.00008	-.00022	-.00465	-.00014	12.957	.00019
#3	.02097	-.00053	.00028	-.02890	-.00106	-11.187	-.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW 4A Acquired: 2/7/2012 15:35:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.6212	F -.15078	3.9332	.00050	-.00375	.01063	.00019
Stddev	2.9826	.00818	.7907	.00076	.00306	.00085	.00026
%RSD	31.000	5.4262	20.102	150.44	81.514	8.0386	139.40
#1	11.558	-.15349	4.7349	-.00007	-.00652	.01133	.00033
#2	6.1866	-.14158	3.1540	.00021	-.00047	.01089	-.00011
#3	11.119	-.15726	3.9108	.00136	-.00427	.00968	.00035
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000					
Low Limit	-.00400	-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	-.00073	-.00092	-.00015	-.00105	F -.00702
Stddev	.00016	.00145	.00098	.00040	.00010	.10791
%RSD	117.07	197.94	106.59	258.10	9.3954	1537.9
#1	-.00005	-.00211	-.00049	-.00038	-.00096	.01227
#2	.00024	.00078	-.00022	-.00040	-.00102	-.12327
#3	.00020	-.00086	-.00203	.00031	-.00115	.08995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21192.	17523.
Stddev	280.	138.
%RSD	1.3190	.78613
#1	20877.	17667.
#2	21408.	17509.
#3	21292.	17393.

Approved: February 08, 2012

Sample Name: LCSW 4A Acquired: 2/7/2012 15:38:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20017	4.9889	.19566	.99017	.48642	.02428	4.8872
Stddev	.00138	.0945	.00103	.00901	.00081	.00028	.0228
%RSD	.69075	1.8940	.52736	.91003	.16716	1.1638	.46749
#1	.20070	4.8869	.19535	.98968	.48553	.02421	4.8633
#2	.19860	5.0063	.19482	.98142	.48713	.02403	4.8896
#3	.20121	5.0735	.19681	.99942	.48660	.02458	4.9088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02467	.10053	.24758	.25263	1.9492	24.835	.49250
Stddev	.00015	.00026	.00304	.00008	.0024	.083	.00112
%RSD	.59576	.25392	1.2290	.03274	.12356	.33358	.22724
#1	.02477	.10076	.24785	.25254	1.9520	24.761	.49242
#2	.02474	.10026	.24441	.25268	1.9480	24.819	.49365
#3	.02451	.10057	.25048	.25268	1.9477	24.925	.49142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.0278	.24956	.49685	25.645	.25351	F -17.119	.25303
Stddev	.0399	.00077	.00161	.118	.00054	25.972	.00081
%RSD	.79354	.30985	.32443	.45986	.21343	151.71	.31892
#1	4.9821	.24889	.49680	25.514	.25379	-15.619	.25338
#2	5.0458	.25041	.49527	25.682	.25288	8.0696	.25361
#3	5.0555	.24937	.49849	25.741	.25385	-43.809	.25211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW 4A Acquired: 2/7/2012 15:38:40 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.714	5.2046	5.4961	.59149	.19693	2.5613	.46550
Stddev	1.627	.0297	.6061	.00147	.00249	.0027	.00150
%RSD	9.7356	.57061	11.028	.24797	1.2623	.10637	.32179
#1	16.653	5.2350	5.8791	.59069	.19843	2.5626	.46696
#2	18.372	5.2031	5.8119	.59318	.19831	2.5631	.46396
#3	15.119	5.1756	4.7973	.59060	.19406	2.5582	.46559
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49120	.48557	.26129	.49048	.50517	.22161
Stddev	.00149	.00049	.00186	.00527	.00115	.05413
%RSD	.30323	.09991	.71096	1.0739	.22669	24.425
#1	.48948	.48544	.26201	.48986	.50516	.28298
#2	.49196	.48610	.25917	.48555	.50403	.18069
#3	.49215	.48516	.26267	.49603	.50632	.20115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21039.	17820.
Stddev	251.	62.
%RSD	1.1947	.34696
#1	21027.	17882.
#2	21296.	17758.
#3	20793.	17821.

Approved: February 08, 2012

Sample Name: L1202001601 Acquired: 2/7/2012 15:41:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00045	.11077	-.00066	.04311	.06619	.00001	97.679
Stddev	.00047	.02314	.00124	.00126	.00073	.00003	.244
%RSD	106.65	20.891	188.64	2.9319	1.0996	225.57	.24957
#1	-.00006	.10369	.00064	.04414	.06684	-.00001	97.843
#2	-.00030	.09200	-.00183	.04349	.06540	.00004	97.398
#3	-.00098	.13663	-.00078	.04170	.06633	.00001	97.795
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00030	.00013	.00419	.00119	.27784	3.3252	.01581
Stddev	.00009	.00008	.00025	.00092	.00098	.0101	.00083
%RSD	30.584	59.454	6.0334	76.974	.35096	.30538	5.2449
#1	.00021	.00014	.00390	.00165	.27699	3.3194	.01566
#2	.00031	.00005	.00429	.00014	.27890	3.3369	.01506
#3	.00039	.00020	.00437	.00179	.27763	3.3192	.01670
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.641	.00115	.00124	35.933	.00016	F -3579.6	.00199
Stddev	.042	.00048	.00023	.038	.00040	41.7	.00111
%RSD	.22691	42.209	18.200	.10613	244.18	1.1641	55.437
#1	18.679	.00150	.00149	35.968	.00058	-3591.7	.00227
#2	18.596	.00135	.00118	35.892	-.00021	-3614.0	.00078
#3	18.648	.00059	.00105	35.938	.00012	-3533.3	.00294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001601 Acquired: 2/7/2012 15:41:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.5355	F 1484.3	F -71049.	.00140	-.00027	18.436	.00040
Stddev	8.1538	3.0	137.	.00137	.00055	.034	.00028
%RSD	147.30	.20150	.19212	97.831	202.88	.18440	68.884
#1	-2.0321	1480.9	-70925.	-.00015	.00023	18.403	.00009
#2	14.170	1486.5	-71195.	.00190	-.00085	18.471	.00060
#3	4.4681	1485.4	-71026.	.00245	-.00019	18.435	.00053
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.74306	-.00130	.00013	.00283	.00892	F -.16509
Stddev	.00087	.00108	.00100	.00018	.00011	.08371
%RSD	.11742	83.125	792.16	6.2277	1.1927	50.705
#1	.74317	-.00072	.00108	.00269	.00904	-.12882
#2	.74214	-.00063	-.00092	.00277	.00885	-.26082
#3	.74387	-.00254	.00022	.00303	.00886	-.10563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20704.	17522.
Stddev	76.	216.
%RSD	.36817	1.2356
#1	20636.	17302.
#2	20786.	17735.
#3	20690.	17527.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001602S Acquired: 2/7/2012 15:45:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19937	5.0429	.19968	1.0448	.55592	.02508	101.19
Stddev	.00152	.0183	.00204	.0056	.00259	.00017	.22
%RSD	.76329	.36363	1.0231	.53930	.46504	.67763	.21753
#1	.19956	5.0640	.19808	1.0438	.55303	.02505	101.17
#2	.20079	5.0334	.20198	1.0509	.55802	.02526	101.42
#3	.19776	5.0312	.19896	1.0397	.55669	.02492	100.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02514	.09939	.25072	.25038	2.1971	28.180	.51528
Stddev	.00012	.00018	.00204	.00117	.0075	.086	.00311
%RSD	.46631	.18567	.81502	.46694	.34278	.30423	.60410
#1	.02503	.09918	.24999	.25050	2.1893	28.085	.51192
#2	.02527	.09947	.25303	.25148	2.2043	28.203	.51585
#3	.02513	.09951	.24915	.24915	2.1978	28.252	.51807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.375	.25104	.49712	60.967	.24964	F -3438.7	.24924
Stddev	.112	.00032	.00167	.090	.00112	7.3	.00175
%RSD	.47986	.12776	.33522	.14688	.44698	.21118	.70114
#1	23.257	.25096	.49525	61.046	.24838	-3437.1	.24818
#2	23.480	.25139	.49768	60.985	.25001	-3432.3	.24828
#3	23.387	.25077	.49844	60.870	.25051	-3446.6	.25126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001602S Acquired: 2/7/2012 15:45:20 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-04

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -5.2832	F 1490.5	F -70327.	.59397	.19748	20.675	.52332
Stddev	.5863	6.3	129.	.00486	.00078	.052	.00183
%RSD	11.097	.42536	.18305	.81787	.39265	.24953	.34874
#1	-5.9069	1496.5	-70475.	.58841	.19795	20.734	.52260
#2	-4.7435	1491.0	-70267.	.59735	.19789	20.651	.52540
#3	-5.1991	1483.9	-70240.	.59616	.19658	20.639	.52197
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.2310	.48860	.25017	.50092	.50838	.23724
Stddev	.0019	.00126	.00054	.00288	.00079	.18367
%RSD	.15076	.25708	.21480	.57579	.15575	77.421
#1	1.2303	.48736	.24965	.50042	.50919	.44403
#2	1.2331	.48855	.25013	.50402	.50834	.09307
#3	1.2296	.48988	.25073	.49832	.50761	.17462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20317.	17192.
Stddev	33.	96.
%RSD	.16361	.55582
#1	20345.	17190.
#2	20280.	17098.
#3	20325.	17289.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001603SD Acquired: 2/7/2012 15:48:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20316	5.1213	.20133	1.0631	.56426	.02529	104.13
Stddev	.00107	.0211	.00064	.0060	.00333	.00015	.58
%RSD	.52802	.41292	.31640	.56725	.58932	.59907	.55708
#1	.20404	5.1432	.20060	1.0672	.56046	.02541	103.49
#2	.20196	5.1199	.20180	1.0562	.56664	.02512	104.61
#3	.20347	5.1010	.20157	1.0660	.56568	.02533	104.28
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02562	.10065	.25390	.25237	2.2212	28.722	.52483
Stddev	.00020	.00036	.00182	.00089	.0167	.080	.00455
%RSD	.77210	.36081	.71609	.35426	.75378	.27970	.86682
#1	.02584	.10090	.25501	.25299	2.2093	28.629	.51998
#2	.02544	.10023	.25181	.25134	2.2403	28.772	.52551
#3	.02559	.10081	.25490	.25277	2.2139	28.765	.52900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.898	.25187	.50855	62.351	.25297	F -3474.4	.25082
Stddev	.132	.00162	.00172	.331	.00112	39.3	.00118
%RSD	.55275	.64305	.33733	.53099	.44436	1.1311	.46983
#1	23.746	.25001	.51029	61.987	.25380	-3501.5	.25168
#2	23.987	.25292	.50686	62.634	.25169	-3429.3	.24948
#3	23.960	.25270	.50848	62.433	.25342	-3492.3	.25130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001603SD Acquired: 2/7/2012 15:48:37 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388649-05

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.176	F 1526.6	F -72774.	.60455	.20042	21.357	.53792
Stddev	10.711	8.4	203.	.00189	.00266	.056	.00160
%RSD	105.26	.55312	.27880	.31334	1.3295	.25995	.29696
#1	1.3944	1527.1	-72821.	.60345	.19911	21.387	.53957
#2	22.109	1517.9	-72552.	.60347	.19867	21.293	.53638
#3	7.0245	1534.8	-72949.	.60674	.20349	21.392	.53782
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.2610	.49563	.25480	.50727	.51043	.24464
Stddev	.0093	.00243	.00123	.00249	.00149	.15380
%RSD	.73869	.48939	.48304	.49064	.29248	62.868
#1	1.2503	.49369	.25606	.50933	.51215	.13657
#2	1.2669	.49835	.25360	.50450	.50960	.42071
#3	1.2659	.49486	.25474	.50797	.50953	.17662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20590.	17820.
Stddev	140.	147.
%RSD	.67783	.82598
#1	20470.	17693.
#2	20557.	17788.
#3	20743.	17981.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001604 Acquired: 2/7/2012 15:51:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00024	.01456	.00073	.03147	.06363	-.00005	60.752
Stddev	.00025	.01779	.00106	.00107	.00038	.00002	.115
%RSD	104.54	122.13	145.50	3.3919	.59128	42.641	.18856
#1	-.00044	.03351	.00045	.03264	.06320	-.00003	60.677
#2	.00004	.01196	-.00016	.03056	.06380	-.00007	60.884
#3	-.00031	-.00178	.00191	.03119	.06390	-.00005	60.695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	-.00024	.00380	.00015	.19647	2.6633	.01579
Stddev	.00010	.00029	.00043	.00008	.00493	.0205	.00103
%RSD	74.872	122.01	11.436	57.445	2.5113	.77151	6.5477
#1	.00006	-.00013	.00397	.00008	.19193	2.6550	.01649
#2	.00024	-.00056	.00330	.00024	.20172	2.6867	.01629
#3	.00009	-.00002	.00412	.00012	.19576	2.6482	.01460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.082	.00068	.00194	29.796	.00065	F -1632.3	-.00061
Stddev	.017	.00051	.00009	.107	.00051	36.9	.00176
%RSD	.14957	75.495	4.4915	.35928	78.291	2.2613	286.40
#1	11.071	.00038	.00204	29.834	.00057	-1606.5	-.00265
#2	11.101	.00039	.00187	29.879	.00120	-1674.6	.00046
#3	11.074	.00128	.00192	29.675	.00019	-1615.9	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001604 Acquired: 2/7/2012 15:51:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.2218**	F **793.15**	F **-37349.**	**.00239**	**-.00309**	**18.396**	**-.00005**
Stddev	2.1862	.99	72.	.00403	.00255	.032	.00026
%RSD	26.590	.12524	.19400	168.66	82.357	.17153	500.23
#1	10.492	792.51	-37266.	.00700	-.00073	18.362	.00025
#2	8.0419	794.29	-37400.	.00070	-.00276	18.403	-.00017
#3	6.1311	792.65	-37381.	-.00052	-.00579	18.424	-.00023
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46304**	**-.00195**	**-.00081**	**.00348**	**.00046**	F **-.12522**
Stddev	.00164	.00115	.00223	.00016	.00005	.11409
%RSD	.35519	58.868	276.86	4.4651	10.070	91.109
#1	.46276	-.00124	-.00039	.00360	.00049	-.16939
#2	.46481	-.00133	.00119	.00354	.00041	.00435
#3	.46155	-.00327	-.00321	.00330	.00050	-.21062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21317.**	**18592.**
Stddev	184.	119.
%RSD	.86165	.64072
#1	21105.	18485.
#2	21426.	18571.
#3	21421.	18721.

Approved: February 08, 2012

Sample Name: L1202001605 Acquired: 2/7/2012 15:55:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00106	.50718	-.00209	.04187	.05019	-.00002	77.392
Stddev	.00029	.05225	.00156	.00031	.00009	.00002	.231
%RSD	27.638	10.302	74.946	.74712	.17623	134.17	.29885
#1	-.00078	.56047	-.00356	.04151	.05009	-.00001	77.499
#2	-.00104	.45603	-.00045	.04202	.05026	.00000	77.550
#3	-.00137	.50505	-.00225	.04208	.05022	-.00004	77.127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00028	.00013	.00438	.00020	.59160	2.9397	.01735
Stddev	.00005	.00023	.00049	.00102	.00052	.0377	.00228
%RSD	16.509	169.02	11.293	512.51	.08831	1.2813	13.137
#1	.00024	-.00006	.00484	-.00073	.59172	2.9383	.01546
#2	.00033	.00009	.00445	.00003	.59205	2.9780	.01988
#3	.00028	.00038	.00385	.00129	.59102	2.9027	.01672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.271	.01243	.00089	34.584	.00115	F -1200.0	-.00042
Stddev	.048	.00083	.00032	.179	.00020	18.0	.00159
%RSD	.33359	6.6424	35.582	.51742	17.055	1.4988	377.06
#1	14.235	.01237	.00087	34.693	.00137	-1214.9	-.00213
#2	14.325	.01164	.00059	34.682	.00106	-1204.9	-.00014
#3	14.253	.01329	.00122	34.378	.00101	-1180.0	.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001605 Acquired: 2/7/2012 15:55:09 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2954	F 1147.5	F -54740.	.00273	.00037	19.486	.00079
Stddev	6.0906	14.8	560.	.00210	.00155	.199	.00002
%RSD	265.34	1.2901	1.0224	76.786	417.93	1.0235	2.1132
#1	5.5136	1152.9	-55007.	.00443	.00159	19.581	.00078
#2	-4.7292	1158.9	-55116.	.00338	-.00137	19.620	.00080
#3	6.1019	1130.8	-54097.	.00039	.00089	19.257	.00081
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57062	.00813	-.00048	.00399	.05466	.05644
Stddev	.00236	.00108	.00106	.00041	.00028	.18855
%RSD	.41344	13.241	222.64	10.238	.50415	334.04
#1	.57128	.00689	-.00075	.00354	.05477	-.06367
#2	.57258	.00885	.00069	.00434	.05486	-.04075
#3	.56801	.00864	-.00137	.00410	.05434	.27376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21214.	18114.
Stddev	38.	248.
%RSD	.17759	1.3673
#1	21210.	18008.
#2	21179.	17938.
#3	21254.	18398.

Approved: February 08, 2012

Sample Name: L1202001606 Acquired: 2/7/2012 15:58:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00051	.11805	-.00006	.04165	.04860	-.00002	77.511
Stddev	.00034	.03650	.00129	.00166	.00019	.00001	.138
%RSD	66.006	30.919	2089.8	3.9823	.39559	52.126	.17787
#1	-.00015	.10329	.00135	.04224	.04839	-.00001	77.661
#2	-.00056	.09124	-.00035	.04292	.04863	-.00004	77.483
#3	-.00082	.15961	-.00119	.03977	.04877	-.00002	77.390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00029	-.00024	.00397	.00211	.29814	2.8620	.01732
Stddev	.00008	.00012	.00038	.00045	.00161	.0343	.00047
%RSD	27.821	49.001	9.5896	21.414	.53927	1.1973	2.7183
#1	.00034	-.00038	.00431	.00206	.29920	2.8817	.01683
#2	.00020	-.00016	.00405	.00259	.29629	2.8225	.01776
#3	.00033	-.00019	.00356	.00169	.29894	2.8819	.01737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.201	.00356	.00094	34.680	.00081	F -1116.4	.00204
Stddev	.050	.00031	.00009	.098	.00053	18.8	.00248
%RSD	.35279	8.7317	9.4439	.28164	65.549	1.6816	121.37
#1	14.246	.00327	.00084	34.792	.00020	-1137.7	.00041
#2	14.147	.00388	.00101	34.613	.00118	-1102.4	.00082
#3	14.209	.00352	.00095	34.636	.00105	-1109.1	.00489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001606 Acquired: 2/7/2012 15:58:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.4665	F 1135.2	F -54698.	.00014	-.00248	18.647	.00012
Stddev	6.0352	2.2	59.	.00333	.00133	.029	.00010
%RSD	110.40	.19023	.10827	2449.4	53.565	.15572	90.712
#1	3.1044	1133.6	-54757.	.00315	-.00363	18.665	.00003
#2	12.326	1137.7	-54639.	.00070	-.00102	18.662	.00023
#3	.96972	1134.4	-54698.	-.00344	-.00279	18.613	.00009
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56794	-.00055	-.00046	.00338	.02155	F -.12105
Stddev	.00212	.00108	.00132	.00023	.00012	.10962
%RSD	.37267	195.86	286.78	6.9083	.55694	90.556
#1	.57039	.00019	.00085	.00359	.02168	-.22325
#2	.56664	-.00006	-.00179	.00313	.02145	-.13462
#3	.56680	-.00179	-.00044	.00341	.02153	-.00528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21541.	17745.
Stddev	266.	169.
%RSD	1.2347	.95406
#1	21435.	17560.
#2	21345.	17893.
#3	21844.	17783.

Approved: February 08, 2012

Sample Name: L1202001606PS Acquired: 2/7/2012 16:01:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388773-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19860	5.0954	.20044	1.0337	.53279	.02447	74.495
Stddev	.00481	.0180	.00204	.0224	.00011	.00039	.189
%RSD	2.4204	.35387	1.0166	2.1635	.02031	1.6085	.25388
#1	.20044	5.1037	.19833	1.0503	.53291	.02478	74.332
#2	.20222	5.0748	.20240	1.0425	.53274	.02461	74.451
#3	.19315	5.1079	.20058	1.0083	.53271	.02403	74.702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02531	.09835	.24729	.24808	2.2159	27.463	.50837
Stddev	.00018	.00084	.00421	.00136	.0074	.088	.00081
%RSD	.70907	.85421	1.7018	.54853	.33587	.32146	.15866
#1	.02551	.09927	.24926	.24936	2.2175	27.408	.50875
#2	.02516	.09763	.25016	.24823	2.2224	27.417	.50891
#3	.02525	.09815	.24246	.24665	2.2077	27.565	.50744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.591	.25017	.49948	56.688	.24898	F -1034.6	.24900
Stddev	.046	.00041	.00229	.264	.00082	37.4	.00198
%RSD	.26056	.16287	.45917	.46648	.32952	3.6137	.79417
#1	17.555	.24989	.50189	56.464	.24992	-1010.5	.24886
#2	17.576	.24999	.49921	56.622	.24843	-1077.6	.25105
#3	17.643	.25064	.49733	56.980	.24859	-1015.6	.24710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001606PS Acquired: 2/7/2012 16:01:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388773-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.556	F 1033.8	F -49551.	.59341	.19658	19.302	.53513
Stddev	4.909	5.6	188.	.00508	.00104	.060	.00291
%RSD	42.477	.53980	.37862	.85641	.52932	.31062	.54362
#1	17.210	1040.2	-49768.	.59924	.19701	19.371	.53806
#2	9.0706	1029.7	-49439.	.59107	.19734	19.275	.53510
#3	8.3871	1031.7	-49448.	.58992	.19539	19.260	.53224
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0057	.48879	.25150	.49169	.52440	.35704
Stddev	.0036	.00178	.00357	.01008	.00198	.03010
%RSD	.35384	.36334	1.4189	2.0500	.37823	8.4294
#1	1.0024	.48856	.25249	.49852	.52558	.37165
#2	1.0052	.48715	.25446	.49642	.52552	.37704
#3	1.0095	.49068	.24754	.48011	.52211	.32243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21344.	18191.
Stddev	174.	168.
%RSD	.81605	.92172
#1	21370.	18181.
#2	21158.	18363.
#3	21504.	18028.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001606SDL Acquired: 2/7/2012 16:05:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388773-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00026	-.00667	.00085	.01309	.00949	-.00004	15.679
Stddev	.00063	.02562	.00128	.00084	.00007	.00002	.087
%RSD	246.47	384.10	150.96	6.4179	.69668	56.491	.55747
#1	-.00084	-.01928	.00147	.01344	.00956	-.00004	15.677
#2	.00041	.02281	-.00063	.01370	.00946	-.00001	15.768
#3	-.00034	-.02355	.00170	.01213	.00943	-.00005	15.593
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	-.00030	.00114	.00039	.06215	.56571	.00584
Stddev	.00014	.00023	.00026	.00061	.00788	.03977	.00152
%RSD	191.77	78.160	23.128	157.01	12.671	7.0306	26.002
#1	.00004	-.00054	.00083	-.00029	.05743	.59966	.00437
#2	-.00005	-.00007	.00131	.00056	.07124	.57551	.00575
#3	.00023	-.00028	.00127	.00089	.05779	.52195	.00740
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.9071	.00035	.00066	7.0921	-.00047	F -232.67	-.00089
Stddev	.0225	.00098	.00018	.0408	.00022	23.22	.00112
%RSD	.77495	281.12	27.004	.57572	46.434	9.9811	125.93
#1	2.8840	.00052	.00053	7.1014	-.00044	-259.29	-.00086
#2	2.9290	.00124	.00086	7.1275	-.00026	-216.55	-.00202
#3	2.9084	-.00071	.00058	7.0474	-.00070	-222.16	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001606SDL Acquired: 2/7/2012 16:05:03 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388773-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.6494	F 227.31	F -10799.	.00065	-.00230	3.7641	.00018
Stddev	2.4135	.86	23.	.00086	.00185	.0149	.00006
%RSD	31.552	.38024	.21736	131.14	80.139	.39474	36.373
#1	9.1659	227.38	-10775.	.00164	-.00318	3.7511	.00016
#2	8.9160	228.14	-10822.	.00020	-.00018	3.7803	.00025
#3	4.8662	226.41	-10800.	.00012	-.00355	3.7608	.00013
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11608	-.00043	-.00111	.00084	.00390	F -.18917
Stddev	.00081	.00140	.00029	.00027	.00009	.16953
%RSD	.70128	327.17	26.266	32.532	2.4066	89.619
#1	.11572	-.00173	-.00078	.00059	.00379	-.35093
#2	.11701	-.00061	-.00128	.00080	.00396	-.20377
#3	.11551	.00105	-.00129	.00113	.00395	-.01281
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21170.	18043.
Stddev	58.	124.
%RSD	.27309	.68626
#1	21184.	17900.
#2	21219.	18117.
#3	21106.	18112.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 16:08:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.38730	9.9704	.39051	.48783	.97718	.04801	9.8748
Stddev	.00197	.0668	.00155	.00168	.00566	.00021	.0499
%RSD	.50894	.66961	.39776	.34336	.57936	.43420	.50551
#1	.38936	9.9036	.39168	.48976	.97114	.04822	9.8209
#2	.38709	9.9707	.39109	.48705	.97804	.04800	9.8840
#3	.38544	10.037	.38875	.48670	.98237	.04780	9.9194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04937	.19765	.48477	.49735	3.9239	49.566	.99237
Stddev	.00010	.00045	.00226	.00146	.0208	.196	.00540
%RSD	.20290	.22647	.46638	.29427	.53060	.39609	.54420
#1	.04932	.19798	.48725	.49800	3.9005	49.346	.98649
#2	.04949	.19783	.48284	.49837	3.9308	49.724	.99352
#3	.04931	.19714	.48421	.49567	3.9404	49.629	.99711
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9332	.49435	.98147	50.089	.49822	F -21.581	.49850
Stddev	.0287	.00212	.00178	.240	.00091	23.366	.00474
%RSD	.28879	.42812	.18186	.47971	.18194	108.27	.95073
#1	9.9108	.49195	.97953	49.812	.49864	-12.362	.49765
#2	9.9656	.49595	.98305	50.208	.49883	-4.2311	.50360
#3	9.9232	.49515	.98183	50.246	.49718	-48.150	.49424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 16:08:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.4463	10.124	F 15.598	1.1827	.39358	4.8852	.99340
Stddev	6.5350	.019	.537	.0013	.00400	.0058	.00213
%RSD	77.371	.18414	3.4451	.10841	1.0158	.11784	.21474
#1	1.0965	10.103	15.884	1.1812	.39302	4.8892	.99478
#2	10.641	10.136	15.931	1.1830	.39783	4.8877	.99447
#3	13.601	10.134	14.978	1.1837	.38989	4.8786	.99094
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98559	.97623	.50533	.96370	.99393	F .71451
Stddev	.00500	.00745	.00081	.00293	.00152	.06084
%RSD	.50709	.76287	.16036	.30406	.15249	8.5151
#1	.97986	.96821	.50508	.96684	.99416	.78094
#2	.98781	.98292	.50623	.96324	.99532	.70110
#3	.98909	.97757	.50466	.96103	.99231	.66149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20916.	17372.
Stddev	138.	187.
%RSD	.66027	1.0774
#1	20774.	17583.
#2	20923.	17226.
#3	21050.	17307.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 16:11:48 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00091	-.03506	.00041	.00275	.00021	-.00002	-.02423
Stddev	.00048	.02693	.00096	.00087	.00013	.00003	.01085
%RSD	52.134	76.814	232.47	31.628	63.108	116.74	44.798
#1	-.00145	-.06572	.00114	.00373	.00011	.00001	-.03536
#2	-.00056	-.01527	.00078	.00243	.00015	-.00004	-.02364
#3	-.00072	-.02417	-.00068	.00208	.00036	-.00004	-.01368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	-.00018	.00047	.00085	.00146	.09487	-.00328
Stddev	.00018	.00014	.00033	.00061	.00623	.01309	.00227
%RSD	275.92	76.920	68.827	71.837	427.61	13.798	69.165
#1	.00014	-.00023	.00085	.00091	.00477	.10221	-.00503
#2	-.00019	-.00003	.00026	.00021	-.00573	.10264	-.00408
#3	-.00014	-.00029	.00032	.00144	.00533	.07976	-.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00611	-.00029	.00051	-.00314	-.00022	F 11.488	.00040
Stddev	.00358	.00022	.00011	.02329	.00038	19.949	.00181
%RSD	58.636	75.797	21.382	740.87	173.54	173.66	446.16
#1	.00842	-.00006	.00039	-.02637	-.00061	15.119	-.00124
#2	.00198	-.00049	.00061	.02022	-.00019	29.372	.00234
#3	.00794	-.00032	.00052	-.00328	.00015	-10.028	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 16:11:48 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 3.4208	F -.21905	F 8.5793	-.00105	-.00172	.00656	.00026
Stddev	8.3544	.09637	1.8057	.00044	.00272	.00085	.00036
%RSD	244.22	43.996	21.047	41.607	157.60	13.005	140.48
#1	4.8272	-.18782	7.2953	-.00133	-.00452	.00705	.00067
#2	10.983	-.32716	7.7986	-.00128	-.00155	.00706	.00010
#3	-5.5475	-.14216	10.644	-.00055	.00090	.00558	.00000
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	-.00065	-.00066	-.00004	-.00042	F -.18833
Stddev	.00007	.00233	.00157	.00024	.00004	.13280
%RSD	50.239	357.08	238.16	611.54	10.628	70.512
#1	.00006	.00040	-.00243	-.00031	-.00046	-.11806
#2	.00018	.00096	-.00009	.00015	-.00038	-.34150
#3	.00019	-.00332	.00055	.00004	-.00041	-.10544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21205.	17434.
Stddev	223.	80.
%RSD	1.0495	.45734
#1	21059.	17342.
#2	21095.	17479.
#3	21461.	17481.

Approved: February 08, 2012

Sample Name: L1202001607 Acquired: 2/7/2012 16:15:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00078	.04445	-.00094	.02051	.10718	-.00001	43.265
Stddev	.00061	.02359	.00102	.00077	.00099	.00000	.234
%RSD	78.303	53.058	108.06	3.7587	.92340	20.951	.53971
#1	-.00108	.06916	-.00157	.02110	.10671	-.00002	43.127
#2	-.00008	.04203	-.00148	.02080	.10651	-.00002	43.134
#3	-.00118	.02217	.00023	.01964	.10832	-.00001	43.535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	-.00029	.00528	.00018	.17505	2.4230	.00394
Stddev	.00002	.00009	.00054	.00046	.00209	.0496	.00252
%RSD	12.510	30.394	10.313	261.05	1.1932	2.0471	63.966
#1	.00013	-.00029	.00490	-.00028	.17342	2.3751	.00125
#2	.00016	-.00020	.00590	.00017	.17431	2.4196	.00625
#3	.00015	-.00037	.00502	.00064	.17740	2.4742	.00432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.6989	.00030	.00286	23.682	-.00030	F -1293.0	.00132
Stddev	.0403	.00022	.00009	.155	.00059	11.6	.00062
%RSD	.52337	73.375	3.1785	.65355	193.36	.89532	47.046
#1	7.6739	.00007	.00291	23.569	.00030	-1306.3	.00204
#2	7.6773	.00050	.00292	23.620	-.00033	-1287.4	.00096
#3	7.7454	.00032	.00276	23.859	-.00087	-1285.4	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202001607 Acquired: 2/7/2012 16:15:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.5280**	F **453.75**	F **-20791.**	**.00069**	**.00044**	**17.283**	**.00000**
Stddev	3.7979	3.41	81.	.00189	.00172	.073	.0002
%RSD	44.534	.75161	.38844	271.89	391.64	.42320	7156.9
#1	12.320	449.81	-20703.	.00097	-.00105	17.200	.00003
#2	8.5393	455.71	-20862.	-.00132	.00005	17.340	-.00024
#3	4.7245	455.73	-20807.	.00242	.00233	17.308	.00021
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35724**	**-.00081**	**-.00131**	**.00458**	**.00521**	F **-.22095**
Stddev	.00232	.00112	.00090	.00031	.00012	.17505
%RSD	.65040	139.38	68.785	6.7257	2.2152	79.229
#1	.35576	-.00135	-.00144	.00494	.00530	-.30981
#2	.35603	.00049	-.00035	.00445	.00524	-.33375
#3	.35991	-.00155	-.00213	.00436	.00508	-.01929
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21336.**	**17848.**
Stddev	100.	91.
%RSD	.46791	.51108
#1	21227.	17847.
#2	21423.	17940.
#3	21358.	17758.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004401 Acquired: 2/7/2012 16:18:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00033	-.00305	.00163	.02895	.08162	-.00003	34.883
Stddev	.00048	.01958	.00031	.00068	.00075	.00001	.040
%RSD	142.52	642.60	19.229	2.3401	.91829	52.285	.11387
#1	-.00087	.00234	.00171	.02903	.08163	-.00004	34.848
#2	-.00017	.01328	.00129	.02959	.08237	-.00001	34.926
#3	.00004	-.02476	.00190	.02824	.08087	-.00003	34.874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	-.00013	.00474	.00049	.01526	2.0436	.01481
Stddev	.00017	.00028	.00048	.00013	.00302	.0513	.00304
%RSD	92.545	212.50	10.206	26.541	19.768	2.5111	20.549
#1	.00013	-.00043	.00442	.00064	.01212	1.9940	.01578
#2	.00005	.00013	.00530	.00040	.01551	2.0965	.01724
#3	.00037	-.00010	.00450	.00042	.01814	2.0402	.01140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.8559	.00022	.00366	21.246	-.00013	F -58.765	.00188
Stddev	.0655	.00030	.00031	.054	.00014	16.742	.00080
%RSD	1.1189	138.57	8.3489	.25505	109.82	28.490	42.511
#1	5.8182	-.00012	.00335	21.235	-.00016	-39.811	.00252
#2	5.9316	.00030	.00397	21.305	.00003	-71.537	.00098
#3	5.8180	.00048	.00367	21.198	-.00025	-64.947	.00215
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202004401 Acquired: 2/7/2012 16:18:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.769	F 500.66	F -23435.	.00140	-.00025	14.715	-.00015
Stddev	5.627	3.35	62.	.00089	.00039	.055	.00019
%RSD	40.868	.66879	.26301	63.631	159.06	.37103	131.33
#1	19.461	498.32	-23394.	.00038	.00016	14.668	.00007
#2	13.635	504.49	-23506.	.00202	-.00062	14.775	-.00021
#3	8.2096	499.15	-23404.	.00180	-.00029	14.703	-.00030
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.32160	-.00159	.00001	.00750	.01356	F -.20290
Stddev	.00136	.00011	.00111	.00022	.00011	.08600
%RSD	.42300	7.1691	8201.7	2.9122	.78012	42.383
#1	.32131	-.00150	.00088	.00728	.01345	-.10788
#2	.32309	-.00172	.00040	.00772	.01355	-.27538
#3	.32042	-.00156	-.00124	.00750	.01366	-.22546
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21559.	18554.
Stddev	114.	235.
%RSD	.52647	1.2666
#1	21685.	18801.
#2	21465.	18334.
#3	21528.	18526.

Approved: February 08, 2012

Sample Name: L1202004402 Acquired: 2/7/2012 16:22:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00017	-.03005	.00052	.01820	.07359	-.00004	74.322
Stddev	.00056	.00416	.00179	.00083	.00115	.00000	.500
%RSD	333.75	13.844	341.71	4.5509	1.5594	5.6230	.67324
#1	-.00065	-.02981	-.00153	.01725	.07380	-.00005	74.030
#2	.00045	-.03433	.00136	.01856	.07462	-.00004	74.899
#3	-.00030	-.02602	.00174	.01878	.07235	-.00005	74.036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	-.00017	.00338	.00058	.18742	2.8365	.01360
Stddev	.00008	.00006	.00017	.00014	.00322	.0980	.00339
%RSD	30.274	34.426	5.0307	24.522	1.7180	3.4550	24.899
#1	.00024	-.00022	.00333	.00051	.18621	2.8015	.01507
#2	.00036	-.00019	.00356	.00049	.19108	2.9472	.01601
#3	.00020	-.00010	.00324	.00074	.18499	2.7608	.00973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.058	.00045	.00138	35.103	-.00023	F -37.659	.00007
Stddev	.234	.00031	.00016	.187	.00062	17.744	.00229
%RSD	1.7882	68.834	11.865	.53286	266.65	47.118	3466.7
#1	13.056	.00027	.00154	34.955	.00019	-41.653	-.00068
#2	13.292	.00027	.00138	35.313	.00006	-53.065	-.00176
#3	12.825	.00080	.00121	35.040	-.00095	-18.258	.00264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004402 Acquired: 2/7/2012 16:22:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.5276	F 1069.7	F -50685.	.00090	-.00201	17.801	.00016
Stddev	10.757	2.3	71.	.00205	.00143	.008	.00023
%RSD	142.90	.21699	.13926	228.48	70.939	.04348	145.65
#1	-1.2684	1069.0	-50604.	.00177	-.00039	17.794	-.00009
#2	4.3305	1067.7	-50718.	.00236	-.00307	17.800	.00038
#3	19.521	1072.2	-50733.	-.00144	-.00257	17.809	.00019
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57407	-.00167	.00017	.00420	.02596	F -.20494
Stddev	.00432	.00038	.00128	.00020	.00011	.01318
%RSD	.75307	22.590	743.88	4.7022	.41860	6.4291
#1	.57176	-.00202	-.00130	.00407	.02584	-.20667
#2	.57906	-.00173	.00101	.00443	.02605	-.19098
#3	.57139	-.00127	.00081	.00410	.02600	-.21716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21153.	18039.
Stddev	78.	173.
%RSD	.36746	.96040
#1	21074.	17943.
#2	21229.	17935.
#3	21154.	18239.

Approved: February 08, 2012

Sample Name: L1202004403 Acquired: 2/7/2012 16:25:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00061	-.01900	-.00136	.01970	.07232	-.00003	73.889
Stddev	.00012	.04559	.00102	.00170	.00045	.00003	.442
%RSD	19.097	239.96	75.199	8.6455	.62009	105.50	.59815
#1	-.00067	-.02096	-.00204	.02052	.07244	-.00005	73.708
#2	-.00069	.02754	-.00018	.02083	.07183	-.00005	73.566
#3	-.00048	-.06357	-.00186	.01774	.07270	.00001	74.392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00032	-.00014	.00319	.00076	.17815	2.7766	.01536
Stddev	.00021	.00016	.00035	.00073	.00235	.0652	.00400
%RSD	65.689	114.94	10.853	96.035	1.3168	2.3476	26.023
#1	.00036	-.00012	.00352	.00037	.17649	2.7386	.01588
#2	.00009	-.00032	.00283	.00160	.17713	2.7394	.01908
#3	.00050	.00001	.00322	.00031	.18084	2.8519	.01113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.945	-.00046	.00147	34.764	.00038	F -36.760	.00116
Stddev	.054	.00027	.00006	.239	.00044	21.134	.00089
%RSD	.41584	59.091	3.7812	.68714	117.83	57.491	76.393
#1	12.975	-.00061	.00153	34.704	.00013	-24.678	.00137
#2	12.883	-.00015	.00146	34.561	.00089	-61.163	.00192
#3	12.977	-.00063	.00142	35.028	.00011	-24.439	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004403 Acquired: 2/7/2012 16:25:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.4097	F 1067.9	F -50313.	.00145	-.00115	17.673	.00011
Stddev	1.7157	11.4	477.	.00187	.00254	.116	.00001
%RSD	18.233	1.0690	.94868	128.86	221.02	.65892	10.501
#1	7.4744	1067.0	-50064.	.00304	.00098	17.644	.00010
#2	10.744	1057.0	-50011.	.00194	-.00047	17.574	.00011
#3	10.011	1079.8	-50863.	-.00062	-.00395	17.801	.00012
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57018	-.00194	-.00096	.00385	.01971	F -.15391
Stddev	.00336	.00076	.00060	.00015	.00012	.11874
%RSD	.58937	39.142	62.712	3.8925	.58624	77.148
#1	.56933	-.00145	-.00079	.00395	.01962	-.24109
#2	.56733	-.00282	-.00162	.00392	.01966	-.20195
#3	.57389	-.00156	-.00046	.00367	.01984	-.01868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20882.	19061.
Stddev	363.	123.
%RSD	1.7388	.64774
#1	20562.	19037.
#2	20807.	19195.
#3	21277.	18952.

Approved: February 08, 2012

Sample Name: L1202004602 Acquired: 2/7/2012 16:28:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	-.01267	.00113	.30207	.18112	-.00002	111.67
Stddev	.00054	.03626	.00025	.00586	.00078	.00002	.17
%RSD	332.49	286.28	22.224	1.9399	.43026	126.11	.15594
#1	-.00004	.02199	.00129	.29695	.18075	-.00001	111.51
#2	.00031	-.00965	.00126	.30078	.18201	.00000	111.85
#3	-.00075	-.05034	.00084	.30846	.18059	-.00004	111.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	.00004	.00404	.19032	.29918	3.5094	.03031
Stddev	.00020	.00013	.00015	.00146	.00323	.0477	.00245
%RSD	77.066	339.02	3.6795	.76615	1.0796	1.3604	8.0860
#1	.00050	.00001	.00399	.19194	.30190	3.5301	.03084
#2	.00011	-.00008	.00392	.18993	.29561	3.5434	.03245
#3	.00018	.00018	.00421	.18910	.30002	3.4549	.02764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.606	.12895	.00153	47.788	.00639	F -182.57	.01145
Stddev	.040	.00041	.00023	.071	.00050	14.49	.00117
%RSD	.25614	.31905	14.722	.14904	7.8181	7.9363	10.232
#1	15.567	.12849	.00179	47.707	.00689	-171.78	.01015
#2	15.604	.12927	.00142	47.844	.00639	-199.04	.01242
#3	15.647	.12909	.00138	47.812	.00589	-176.89	.01179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202004602 Acquired: 2/7/2012 16:28:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.8466**	F **631.39**	F **-26316.**	**.00140**	**-.00420**	**10.798**	**.00298**
Stddev	3.6438	9.07	146.	.00156	.00118	.069	.00072
%RSD	41.188	1.4364	.55468	111.75	28.028	.63820	24.039
#1	5.5890	641.76	-26480.	.00260	-.00293	10.877	.00373
#2	12.782	627.43	-26269.	.00195	-.00442	10.768	.00291
#3	8.1693	624.97	-26200.	-.00037	-.00525	10.750	.00231
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.62185**	**-.00424**	**-.00076**	**.00087**	**.05311**	F **-.35933**
Stddev	.00115	.00168	.00209	.00027	.00029	.13185
%RSD	.18524	39.651	276.85	30.934	.54392	36.694
#1	.62063	-.00230	-.00275	.00096	.05341	-.40889
#2	.62292	-.00508	-.00095	.00109	.05283	-.20988
#3	.62201	-.00532	.00143	.00057	.05310	-.45921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21019.**	**17881.**
Stddev	79.	262.
%RSD	.37602	1.4628
#1	21088.	17612.
#2	21038.	17894.
#3	20933.	18135.

Approved: February 08, 2012

Sample Name: L1202004604 Acquired: 2/7/2012 16:32:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00027	-.04144	.00188	.30501	.18317	-.00001	113.91
Stddev	.00041	.02547	.00112	.00009	.00119	.00001	.59
%RSD	152.36	61.460	59.288	.03087	.64859	109.15	.52018
#1	-.00074	-.07082	.00315	.30490	.18201	-.00001	113.44
#2	.00000	-.02784	.00105	.30508	.18438	-.00002	114.57
#3	-.00007	-.02566	.00145	.30504	.18312	.00000	113.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00022	.00008	.00338	.00110	.28182	3.5572	.02711
Stddev	.00011	.00010	.00026	.00022	.00174	.0379	.00188
%RSD	51.296	126.01	7.8308	20.220	.61855	1.0648	6.9332
#1	.00010	.00015	.00313	.00116	.27981	3.5143	.02920
#2	.00032	.00013	.00334	.00085	.28281	3.5713	.02660
#3	.00025	-.00004	.00366	.00128	.28284	3.5859	.02554
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.834	.12799	.00147	48.990	.00144	F -137.86	.00044
Stddev	.133	.00167	.00016	.218	.00048	37.52	.00107
%RSD	.83980	1.3025	10.742	.44458	33.512	27.219	242.10
#1	15.777	.12705	.00145	48.863	.00089	-180.84	-.00079
#2	15.986	.12991	.00164	49.241	.00179	-121.11	.00102
#3	15.739	.12700	.00132	48.865	.00164	-111.63	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004604 Acquired: 2/7/2012 16:32:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.730	F 645.74	F -27054.	.00136	-.00246	11.083	.00161
Stddev	3.087	3.73	95.	.00201	.00287	.045	.00042
%RSD	28.770	.57800	.35064	147.75	116.93	.40507	26.013
#1	14.293	642.75	-26947.	.00247	-.00105	11.033	.00189
#2	8.8512	649.93	-27088.	.00258	-.00576	11.120	.00180
#3	9.0462	644.55	-27128.	-.00096	-.00056	11.097	.00113
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.63328	-.00424	-.00002	.00089	.00360	F -.25199
Stddev	.00345	.00087	.00070	.00027	.00008	.07218
%RSD	.54513	20.634	4336.2	29.928	2.1918	28.644
#1	.63109	-.00394	-.00069	.00093	.00369	-.28776
#2	.63726	-.00355	-.00006	.00061	.00354	-.29930
#3	.63149	-.00522	.00070	.00114	.00357	-.16891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20936.	17864.
Stddev	85.	135.
%RSD	.40665	.75336
#1	20864.	17863.
#2	20914.	17729.
#3	21030.	17999.

Approved: February 08, 2012

Sample Name: L1202004605 Acquired: 2/7/2012 16:35:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00075	-.01281	.00148	.34824	.17954	-.00004	108.83
Stddev	.00079	.04056	.00125	.00062	.00034	.00001	.27
%RSD	104.60	316.49	84.263	.17908	.18991	14.832	.24881
#1	-.00115	.01453	.00288	.34765	.17994	-.00003	108.58
#2	-.00126	.00644	.00051	.34890	.17938	-.00004	109.12
#3	.00015	-.05941	.00104	.34819	.17931	-.00003	108.80
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00023	-.00017	.00296	.00118	.05698	3.3745	.03447
Stddev	.00005	.00009	.00001	.00069	.00320	.0157	.00118
%RSD	20.794	50.264	.37527	58.719	5.6229	.46371	3.4109
#1	.00018	-.00025	.00297	.00195	.06068	3.3824	.03312
#2	.00023	-.00008	.00295	.00099	.05510	3.3846	.03500
#3	.00028	-.00018	.00296	.00061	.05516	3.3564	.03528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.464	.00041	.00156	48.105	.00073	F -84.437	.00135
Stddev	.064	.00043	.00030	.141	.00017	35.815	.00286
%RSD	.41412	103.66	18.955	.29360	23.417	42.416	212.18
#1	15.430	.00081	.00140	47.969	.00067	-71.049	-.00061
#2	15.538	-.00004	.00190	48.251	.00059	-57.245	.00002
#3	15.425	.00047	.00137	48.095	.00092	-125.02	.00464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004605 Acquired: 2/7/2012 16:35:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.4897	F 626.62	F -26361.	-.00127	-.00083	10.840	-.00005
Stddev	4.1731	.87	127.	.00028	.00201	.042	.00047
%RSD	76.016	.13833	.48036	22.164	241.18	.38773	948.27
#1	9.7363	627.61	-26312.	-.00111	-.00049	10.822	-.00055
#2	1.3943	626.28	-26267.	-.00110	-.00300	10.810	.00037
#3	5.3386	625.98	-26505.	-.00159	.00099	10.888	.00003
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.62770	-.00371	.00033	.00043	.00527	F -.21924
Stddev	.00165	.00145	.00019	.00047	.00006	.22507
%RSD	.26261	39.169	58.353	108.40	1.1019	102.66
#1	.62581	-.00529	.00014	.00031	.00528	-.02525
#2	.62882	-.00343	.00033	.00004	.00532	-.46601
#3	.62848	-.00242	.00053	.00095	.00520	-.16644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20596.	17813.
Stddev	9.	72.
%RSD	.04298	.40696
#1	20603.	17733.
#2	20599.	17833.
#3	20586.	17874.

Approved: February 08, 2012

Sample Name: L1202004607 Acquired: 2/7/2012 16:38:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.00455	.00378	.32236	.19254	-.00002	119.28
Stddev	.00039	.03636	.00132	.00101	.00025	.00001	.32
%RSD	2466.4	799.38	34.828	.31237	.12857	30.245	.27148
#1	.00034	-.02418	.00369	.32238	.19257	-.00002	119.39
#2	-.00043	-.00760	.00515	.32134	.19228	-.00003	118.91
#3	.00004	.04542	.00252	.32336	.19277	-.00001	119.53
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	-.00005	.00509	.00183	.57046	3.5992	.03277
Stddev	.00009	.00010	.00020	.00014	.00605	.0196	.00243
%RSD	51.538	213.35	3.9006	7.4155	1.0608	.54366	7.4027
#1	.00026	.00004	.00486	.00194	.56551	3.6202	.03120
#2	.00016	-.00016	.00520	.00187	.57721	3.5816	.03154
#3	.00009	-.00003	.00522	.00168	.56865	3.5957	.03556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.187	.19745	.00165	50.328	.00067	F -173.43	.00097
Stddev	.021	.00062	.00005	.097	.00017	13.93	.00126
%RSD	.12666	.31648	3.2959	.19348	26.113	8.0344	130.69
#1	16.167	.19817	.00159	50.419	.00054	-160.63	.00166
#2	16.184	.19703	.00165	50.225	.00087	-188.27	-.00049
#3	16.208	.19716	.00170	50.339	.00060	-171.39	.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004607 Acquired: 2/7/2012 16:38:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.6163	F 665.90	F -27540.	.00128	-.00118	11.419	.00268
Stddev	14.099	2.38	65.	.00130	.00217	.025	.00015
%RSD	185.12	.35672	.23526	101.56	183.47	.21483	5.4891
#1	-2.3594	663.74	-27525.	.00029	-.00013	11.406	.00261
#2	1.4619	668.44	-27610.	.00079	-.00368	11.448	.00257
#3	23.746	665.51	-27483.	.00275	.00026	11.405	.00284
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.65505	-.00423	-.00064	.00067	.00384	F -.27206
Stddev	.00149	.00105	.00114	.00021	.00017	.17774
%RSD	.22808	24.742	177.58	30.569	4.3412	65.331
#1	.65539	-.00496	-.00141	.00044	.00368	-.12920
#2	.65341	-.00303	-.00118	.00084	.00384	-.47110
#3	.65634	-.00471	.00067	.00074	.00401	-.21587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20356.	17996.
Stddev	88.	375.
%RSD	.43413	2.0856
#1	20422.	17578.
#2	20390.	18305.
#3	20255.	18103.

Approved: February 08, 2012

Sample Name: L1202004608 Acquired: 2/7/2012 16:42:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00020	-.02881	.00021	.32102	.10483	-.00004	113.52
Stddev	.00038	.03785	.00112	.00333	.00008	.00002	.30
%RSD	195.66	131.37	529.96	1.0377	.07215	66.263	.26536
#1	-.00028	-.03476	.00122	.31719	.10482	-.00004	113.86
#2	.00022	.01166	-.00099	.32320	.10477	-.00001	113.37
#3	-.00054	-.06334	.00040	.32268	.10491	-.00006	113.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	-.00013	.00457	.00081	.03206	2.5973	.01991
Stddev	.00015	.00008	.00036	.00046	.00377	.0394	.00178
%RSD	79.594	61.676	7.9599	56.810	11.754	1.5175	8.9577
#1	.00024	-.00023	.00487	.00107	.03556	2.5671	.01860
#2	.00029	-.00009	.00416	.00108	.02807	2.5828	.01918
#3	.00002	-.00008	.00468	.00028	.03255	2.6419	.02194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.6790	.00077	.00050	45.728	.00121	F -138.24	.00047
Stddev	.0157	.00032	.00005	.125	.00066	53.90	.00142
%RSD	.23430	41.341	10.690	.27268	54.599	38.989	299.09
#1	6.6767	.00055	.00051	45.864	.00045	-121.66	.00202
#2	6.6957	.00114	.00045	45.702	.00161	-94.581	.00018
#3	6.6646	.00063	.00056	45.618	.00157	-198.48	-.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004608 Acquired: 2/7/2012 16:42:05 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.779	F 505.50	F -19696.	.00065	-.00265	13.496	.00003
Stddev	3.318	.87	71.	.00068	.00157	.037	.00020
%RSD	25.969	.17113	.36104	103.37	59.291	.27085	694.68
#1	16.361	506.48	-19772.	.00097	-.00096	13.534	-.00019
#2	12.165	505.16	-19684.	.00111	-.00294	13.494	.00007
#3	9.8100	504.86	-19632.	-.00012	-.00407	13.461	.00021
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.24951	-.00379	-.00024	.01028	.00881	F -.15011
Stddev	.00100	.00075	.00032	.00017	.00009	.15619
%RSD	.39973	19.935	134.59	1.6562	.96502	104.05
#1	.25064	-.00443	-.00005	.01028	.00871	-.27049
#2	.24913	-.00397	-.00006	.01045	.00888	.02639
#3	.24875	-.00296	-.00061	.01011	.00884	-.20623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21085.	19152.
Stddev	335.	324.
%RSD	1.5900	1.6896
#1	21442.	19522.
#2	21034.	19016.
#3	20778.	18919.

Approved: February 08, 2012

Sample Name: L1202004609 Acquired: 2/7/2012 16:45:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	-.02208	-.00007	.31206	.10756	-.00002	116.48
Stddev	.00049	.00805	.00027	.00197	.00035	.00001	.34
%RSD	173.88	36.463	409.29	.63260	.32527	51.522	.29269
#1	-.00080	-.01543	.00016	.31210	.10759	-.00002	116.21
#2	.00017	-.03103	-.00036	.31006	.10790	-.00001	116.35
#3	-.00022	-.01978	.00001	.31401	.10720	-.00003	116.86
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	-.00021	.00189	.00026	.02000	2.6926	.02167
Stddev	.00003	.00024	.00019	.00018	.00177	.0440	.00185
%RSD	48.074	116.36	9.8417	68.550	8.8447	1.6340	8.5239
#1	.00005	-.00029	.00207	.00036	.02184	2.6700	.02129
#2	.00010	.00006	.00170	.00037	.01987	2.7433	.02368
#3	.00005	-.00040	.00190	.00005	.01830	2.6644	.02005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.9389	.00030	.00020	47.377	-.00030	F -162.38	.00111
Stddev	.0044	.00014	.00012	.131	.00034	24.90	.00168
%RSD	.06379	46.507	61.421	.27635	111.97	15.337	151.39
#1	6.9342	.00020	.00017	47.326	-.00035	-190.19	-.00082
#2	6.9395	.00023	.00009	47.279	-.00061	-142.14	.00190
#3	6.9430	.00046	.00033	47.526	.00006	-154.80	.00225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202004609 Acquired: 2/7/2012 16:45:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.3062**	F **518.73**	F **-20428.**	**.00180**	**.00178**	**13.937**	**.00002**
Stddev	5.2060	3.65	80.	.00157	.00172	.070	.00015
%RSD	82.554	.70455	.39132	87.221	96.729	.50557	825.04
#1	6.1194	514.51	-20336.	.00010	.00156	13.856	.00001
#2	1.1961	520.95	-20485.	.00211	.00361	13.974	.00017
#3	11.603	520.73	-20462.	.00319	.00018	13.982	-.00013
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25731**	**-.00374**	**-.00016**	**.00985**	**-.00074**	F **-.28121**
Stddev	.00068	.00156	.00124	.00027	.00013	.11222
%RSD	.26505	41.661	753.78	2.7515	17.245	39.907
#1	.25730	-.00416	-.00152	.00983	-.00073	-.38772
#2	.25664	-.00202	.00092	.00959	-.00088	-.29186
#3	.25800	-.00505	.00010	.01013	-.00062	-.16404
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21419.**	**18033.**
Stddev	79.	36.
%RSD	.37039	.19995
#1	21328.	18074.
#2	21476.	18005.
#3	21452.	18019.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 16:48:54 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39062	9.8717	.39197	.49172	.97192	.04820	9.7877
Stddev	.00144	.0667	.00201	.00311	.00387	.00015	.0464
%RSD	.36961	.67612	.51362	.63261	.39829	.31400	.47428
#1	.39158	9.7964	.39428	.49519	.96971	.04835	9.7379
#2	.38896	9.8952	.39103	.48918	.97639	.04805	9.8299
#3	.39131	9.9235	.39060	.49080	.96965	.04819	9.7952
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04925	.19749	.48342	.49640	3.8794	49.297	.98866
Stddev	.00015	.00137	.00348	.00200	.0269	.195	.00725
%RSD	.31446	.69292	.72043	.40340	.69316	.39625	.73351
#1	.04929	.19777	.48678	.49618	3.8540	49.105	.98146
#2	.04937	.19870	.47983	.49850	3.9076	49.496	.99596
#3	.04907	.19600	.48365	.49451	3.8767	49.290	.98855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8025	.48942	.97506	49.921	.49563	F 4.5506	.49476
Stddev	.0574	.00215	.00043	.274	.00145	24.546	.00037
%RSD	.58528	.43911	.04391	.54976	.29195	539.40	.07528
#1	9.7481	.48701	.97542	49.607	.49645	-21.872	.49498
#2	9.8625	.49113	.97458	50.118	.49648	26.644	.49433
#3	9.7970	.49012	.97516	50.036	.49396	8.8797	.49497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 16:48:54 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.502	10.036	F 15.047	1.1843	.39797	4.9008	.98716
Stddev	6.697	.066	2.292	.0053	.00101	.0092	.00341
%RSD	58.225	.65732	15.235	.44643	.25419	.18806	.34545
#1	11.663	10.109	12.763	1.1892	.39740	4.9097	.99087
#2	18.117	10.018	15.029	1.1850	.39914	4.9012	.98646
#3	4.7260	9.9806	17.348	1.1787	.39738	4.8913	.98416
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98444	.97220	.50060	.96901	.98567	F .68740
Stddev	.00503	.00520	.00404	.00405	.00175	.15105
%RSD	.51045	.53527	.80653	.41762	.17736	21.974
#1	.97895	.96682	.50524	.97209	.98581	.85774
#2	.98881	.97721	.49861	.96443	.98735	.63473
#3	.98556	.97257	.49794	.97052	.98386	.56974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21755.	18704.
Stddev	109.	142.
%RSD	.50320	.75823
#1	21818.	18658.
#2	21628.	18590.
#3	21818.	18863.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 16:52:07 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.01291	-.00035	.00320	-.00005	-.00004	-.01011
Stddev	.00005	.00927	.00140	.00071	.00034	.00002	.00225
%RSD	5.7349	71.824	403.64	22.281	624.42	68.506	22.299
#1	-.00088	.01063	.00127	.00354	.00032	-.00005	-.00766
#2	-.00092	.02312	-.00121	.00367	-.00033	-.00005	-.01055
#3	-.00082	.00500	-.00109	.00238	-.00015	-.00001	-.01210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00015	.00005	.00065	.00108	.00219	.01077	.00648
Stddev	.00014	.00013	.00035	.00063	.00127	.03614	.00328
%RSD	93.533	285.82	53.758	58.348	57.751	335.47	50.630
#1	-.00031	.00002	.00060	.00049	.00361	-.02569	.00830
#2	-.00013	-.00007	.00033	.00174	.00178	.04659	.00845
#3	-.00002	.00019	.00102	.00100	.00119	.01142	.00269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00433	-.00021	.00061	-.01380	-.00042	F 2.6832	-.00009
Stddev	.00947	.00018	.00004	.01620	.00006	37.000	.00146
%RSD	218.56	87.164	6.7421	117.39	14.939	1379.0	1628.4
#1	-.00311	-.00001	.00056	-.02168	-.00038	-14.039	.00156
#2	-.01435	-.00026	.00064	-.02457	-.00049	45.093	-.00122
#3	.00447	-.00036	.00063	.00483	-.00038	-23.004	-.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 16:52:07 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .69171	F -.31024	F 12.789	.00128	-.00245	.00527	.00073
Stddev	10.377	.03412	2.603	.00144	.00064	.00085	.00031
%RSD	1500.2	10.999	20.356	112.19	26.229	16.064	42.330
#1	-8.8564	-.27084	15.792	.00078	-.00287	.00602	.00067
#2	11.735	-.32997	11.179	.00016	-.00276	.00435	.00046
#3	-.80366	-.32993	11.395	.00290	-.00171	.00543	.00107
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.00006	-.00041	-.00016	-.00033	-.07349
Stddev	.00006	.00109	.00117	.00013	.00004	.11434
%RSD	55.717	1766.8	288.23	81.723	11.151	155.58
#1	.00014	.00128	-.00089	-.00009	-.00036	-.19811
#2	.00016	-.00028	.00093	-.00032	-.00029	.02658
#3	.00004	-.00082	-.00126	-.00008	-.00035	-.04895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21451.	18248.
Stddev	83.	257.
%RSD	.38597	1.4100
#1	21358.	18077.
#2	21515.	18122.
#3	21480.	18544.

Approved: February 08, 2012

Sample Name: L1202005801 Acquired: 2/7/2012 16:55:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00102	.27386	.00357	.02433	.22964	.00007	13.767
Stddev	.00020	.02355	.00224	.00051	.00061	.00000	.043
%RSD	19.986	8.5996	62.776	2.0827	.26717	2.5115	.31253
#1	-.00105	.24668	.00187	.02374	.22961	.00006	13.756
#2	-.00121	.28671	.00273	.02464	.23027	.00007	13.815
#3	-.00080	.28820	.00611	.02460	.22905	.00007	13.731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.00053	.00208	-.00005	.00089	44.693	1.4726	-.00005
Stddev	.00007	.00016	.00044	.00038	.150	.0348	.00213
%RSD	13.706	7.5739	846.79	42.714	.33636	2.3609	4692.1
#1	-.00061	.00196	-.00050	.00057	44.685	1.4430	.00150
#2	-.00047	.00202	-.00005	.00131	44.848	1.5109	-.00248
#3	-.00052	.00226	.00039	.00079	44.547	1.4638	.00085
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	16.200						
Low Limit	-.00050						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.0274	.98710	-.00036	35.393	.00048	F -1251.6	.00170
Stddev	.0261	.00266	.00013	.112	.00070	18.1	.00065
%RSD	.43345	.26922	37.450	.31568	144.15	1.4460	37.986
#1	6.0096	.98554	-.00049	35.346	.00120	-1234.1	.00243
#2	6.0574	.99017	-.00036	35.521	-.00020	-1250.5	.00150
#3	6.0151	.98559	-.00022	35.313	.00045	-1270.3	.00118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202005801 Acquired: 2/7/2012 16:55:39 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.335	F 353.01	F -17564.	.00194	-.00247	7.4226	.00038
Stddev	5.829	3.12	30.	.00245	.00139	.0211	.00042
%RSD	40.661	.88382	.16979	125.87	56.438	.28393	110.07
#1	12.367	356.55	-17589.	.00105	-.00102	7.4469	.00083
#2	9.7452	351.81	-17572.	.00471	-.00380	7.4118	.00001
#3	20.893	350.66	-17531.	.00007	-.00258	7.4092	.00030
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08771	.00447	.00001	.00049	.00542	F -1.6483
Stddev	.00039	.00121	.00130	.00042	.00003	.0478
%RSD	.44562	27.115	15511.	85.857	.55368	2.9027
#1	.08728	.00526	.00151	.00098	.00543	-1.6334
#2	.08804	.00507	-.00070	.00029	.00538	-1.7018
#3	.08780	.00307	-.00079	.00021	.00544	-1.6096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21752.	18294.
Stddev	62.	85.
%RSD	.28719	.46216
#1	21732.	18246.
#2	21821.	18244.
#3	21701.	18391.

Approved: February 08, 2012

Sample Name: L1202005802 Acquired: 2/7/2012 16:58:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.20559	.00147	.02371	.23178	.00005	13.954
Stddev	.00063	.00537	.00219	.00105	.00224	.00003	.111
%RSD	1398.6	2.6115	148.82	4.4231	.96699	63.427	.79384
#1	.00075	.20457	.00322	.02377	.22921	.00009	13.829
#2	-.00015	.20080	.00217	.02473	.23278	.00002	14.039
#3	-.00046	.21140	-.00098	.02264	.23335	.00005	13.994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.00052	.00221	-.00022	.00093	45.387	1.4682	.00206
Stddev	.00007	.00019	.00018	.00054	.386	.0204	.00246
%RSD	12.813	8.5571	79.779	58.779	.85083	1.3908	119.38
#1	-.00053	.00239	-.00002	.00031	44.950	1.4467	.00450
#2	-.00058	.00223	-.00031	.00135	45.529	1.4874	.00208
#3	-.00045	.00202	-.00035	.00111	45.682	1.4704	-.00041
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	16.200						
Low Limit	-.00050						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.0643	1.0004	-.00034	35.933	.00082	F -1654.8	.00248
Stddev	.0559	.0085	.00017	.248	.00055	28.0	.00066
%RSD	.92232	.84836	48.641	.69013	67.595	1.6941	26.518
#1	6.0006	.99071	-.00051	35.651	.00018	-1623.0	.00276
#2	6.1053	1.0039	-.00018	36.118	.00113	-1676.0	.00295
#3	6.0871	1.0066	-.00033	36.030	.00114	-1665.4	.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202005802 Acquired: 2/7/2012 16:58:57 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.4624	F 367.69	F -18183.	.00040	.00031	7.5211	.00025
Stddev	3.0889	2.40	96.	.00148	.00316	.0331	.00019
%RSD	32.644	.65339	.53002	367.20	1004.9	.43953	77.402
#1	6.1722	368.91	-18218.	.00175	-.00167	7.5391	.00022
#2	9.9148	364.92	-18074.	.00064	.00396	7.4830	.00008
#3	12.300	369.24	-18257.	-.00118	-.00134	7.5413	.00046
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08946	.00250	.00098	.00088	.00392	F -1.5956
Stddev	.00068	.00174	.00100	.00023	.00000	.1652
%RSD	.75635	69.485	102.17	26.062	.03737	10.354
#1	.08868	.00414	.00000	.00113	.00392	-1.5946
#2	.08983	.00068	.00093	.00069	.00393	-1.7613
#3	.08986	.00267	.00200	.00081	.00392	-1.4309
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21906.	18491.
Stddev	103.	107.
%RSD	.46850	.57610
#1	21812.	18554.
#2	21889.	18368.
#3	22015.	18552.

Approved: February 08, 2012

Erin D. Long

Sample Name: ICSA Acquired: 2/7/2012 17:02:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00070	248.18	-.00338	.05721	.00029	-.00005	246.29
Stddev	.00043	.57	.00338	.00099	.00012	.00003	.76
%RSD	61.061	.22900	99.835	1.7334	41.804	63.062	.30908
#1	-.00047	248.80	-.00716	.05609	.00038	-.00007	247.15
#2	-.00044	248.07	-.00232	.05757	.00034	-.00002	245.99
#3	-.00120	247.68	-.00067	.05796	.00015	-.00005	245.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	-.00008	.00088	-.00015	95.838	-.01379	.01701
Stddev	.00004	.00024	.00039	.00099	.236	.04881	.00276
%RSD	38.377	299.30	44.406	678.95	.24618	353.93	16.241
#1	.00013	-.00035	.00069	.00081	96.101	-.05223	.01387
#2	.00006	-.00001	.00132	-.00008	95.768	-.03028	.01907
#3	.00009	.00012	.00062	-.00116	95.645	.04113	.01809
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	241.43	-.00133	-.00034	.04609	-.00032	F 797.03	-.00122
Stddev	1.17	.00062	.00021	.00985	.00012	27.07	.00109
%RSD	.48503	46.979	61.739	21.368	38.296	3.3962	89.275
#1	242.65	-.00186	-.00057	.05654	-.00029	810.96	-.00002
#2	241.33	-.00064	-.00026	.04473	-.00045	814.30	-.00214
#3	240.32	-.00148	-.00017	.03699	-.00021	765.83	-.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.50000	
Low Limit						-.50000	

Approved: February 08, 2012

Sample Name: ICSA Acquired: 2/7/2012 17:02:16 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.993	F 236.97	F 26.257	-.00584	-.00238	.23872	.00059
Stddev	5.530	.42	1.921	.00263	.00142	.00218	.00021
%RSD	36.885	.17662	7.3148	44.944	59.759	.91244	35.031
#1	18.270	237.32	27.086	-.00531	-.00395	.23876	.00036
#2	8.6078	237.08	24.061	-.00869	-.00118	.24087	.00074
#3	18.100	236.50	27.624	-.00352	-.00201	.23652	.00069
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.04000	.04000	.04000				
Low Limit	-.04000	-.04000	-.04000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00374	-.00788	.00223	-.00065	-.00023	F -3.4514
Stddev	.00025	.00067	.00064	.00025	.00003	.0821
%RSD	6.7198	8.4605	28.804	38.208	11.061	2.3800
#1	.00345	-.00794	.00227	-.00090	-.00025	-3.4804
#2	.00385	-.00851	.00157	-.00064	-.00023	-3.5152
#3	.00391	-.00718	.00286	-.00041	-.00020	-3.3587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20432.	18567.
Stddev	36.	144.
%RSD	.17576	.77690
#1	20432.	18469.
#2	20396.	18498.
#3	20468.	18732.

Approved: February 08, 2012

Sample Name: ICSAB Acquired: 2/7/2012 17:05:34 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50026	247.81	.24413	.03644	.24434	.25060	246.08
Stddev	.00383	.61	.00174	.00037	.00084	.00265	.48
%RSD	.76544	.24663	.71175	1.0063	.34294	1.0582	.19356
#1	.49954	248.48	.24213	.03649	.24528	.24960	246.60
#2	.49684	247.67	.24522	.03605	.24408	.24860	246.00
#3	.50440	247.28	.24504	.03677	.24366	.25361	245.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.45407	.23756	.24895	.24673	95.890	4.9530	.01798
Stddev	.00070	.00066	.00261	.00115	.328	.0996	.00302
%RSD	.15480	.27760	1.0468	.46687	.34162	2.0109	16.809
#1	.45329	.23698	.24862	.24585	96.246	4.9860	.01465
#2	.45428	.23740	.24652	.24629	95.823	4.8411	.02054
#3	.45465	.23828	.25170	.24803	95.601	5.0320	.01875
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	240.76	.23691	-.00040	5.1172	.48327	F 783.28	.48293
Stddev	.27	.00062	.00047	.0185	.00202	27.03	.00245
%RSD	.11237	.26008	115.97	.36200	.41804	3.4513	.50797
#1	241.06	.23706	-.00062	5.1295	.48124	809.61	.48055
#2	240.71	.23623	-.00072	5.0959	.48328	784.66	.48277
#3	240.53	.23743	.00013	5.1263	.48528	755.59	.48545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.50000	
Low Limit						-.50000	

Approved: February 08, 2012

Erin D. Long

Sample Name: ICSAB Acquired: 2/7/2012 17:05:34 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.563	F 239.00	F 27.584	.48418	.23684	.01161	.00047
Stddev	5.039	.39	3.256	.00384	.00292	.00203	.00007
%RSD	47.703	.16323	11.803	.79367	1.2343	17.476	14.781
#1	14.737	238.70	28.719	.48672	.23673	.00938	.00041
#2	4.9652	238.87	23.913	.47976	.23397	.01335	.00047
#3	11.988	239.44	30.120	.48607	.23981	.01210	.00055
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.60000	.60000	.60000				
Low Limit	.40000	.40000	.40000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00323	-.00788	.45920	.24901	.49144	F -3.8712
Stddev	.00016	.00054	.00147	.00157	.00114	.1092
%RSD	4.8238	6.8365	.31985	.63049	.23190	2.8214
#1	.00338	-.00823	.46074	.24809	.49104	-3.9520
#2	.00324	-.00815	.45781	.24812	.49056	-3.7469
#3	.00307	-.00726	.45906	.25083	.49273	-3.9147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19831.	18187.
Stddev	131.	162.
%RSD	.66060	.89190
#1	19959.	18366.
#2	19836.	18049.
#3	19697.	18148.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 17:08:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00949	.01302	.00004	.00070	.01089	.00185	-.00665
Stddev	.00031	.00568	.00038	.00009	.00010	.00002	.02444
%RSD	3.3026	43.651	1058.9	12.752	.95542	1.1323	367.62
#1	.00921	.01929	.00034	.00062	.01086	.00187	.01192
#2	.00983	.00821	.00015	.00070	.01080	.00183	.00248
#3	.00943	.01156	-.00038	.00080	.01100	.00186	-.03434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00961	.02061	.02093	.02540	.01587	.05388	-.00057
Stddev	.00005	.00035	.00051	.00048	.01122	.05510	.00135
%RSD	.50430	1.6999	2.4394	1.8917	70.693	102.27	239.36
#1	.00956	.02055	.02071	.02528	.00328	.11658	-.00128
#2	.00965	.02029	.02057	.02499	.01951	.01318	-.00141
#3	.00961	.02099	.02151	.02593	.02481	.03187	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02286	.01112	.00004	.51489	.41892	10.844	.00074
Stddev	.01511	.00061	.00007	.01471	.00063	19.125	.00068
%RSD	66.121	5.4758	189.34	2.8567	.15094	176.37	92.711
#1	.00784	.01046	.00002	.51339	.41935	-6.3300	.00034
#2	.02267	.01124	.00011	.53029	.41819	7.4074	.00152
#3	.03806	.01165	-.00002	.50098	.41922	31.453	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 17:08:47 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.9369	F -.28674	F 12.661	.00114	-.00160	.00388	.00000
Stddev	9.7221	.02971	2.856	.00200	.00541	.00075	.00042
%RSD	246.95	10.363	22.557	175.59	338.25	19.389	8744.3
#1	12.613	-.25919	12.721	-.00116	.00272	.00376	-.00039
#2	5.7689	-.28280	9.7753	.00243	.00015	.00468	-.00004
#3	-6.5708	-.31823	15.486	.00215	-.00767	.00319	.00045
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00030	-.00072	.00048	.01087	.02107	F -.16177
Stddev	.00011	.00074	.00006	.00025	.00012	.12200
%RSD	35.957	102.20	12.165	2.3239	.58814	75.419
#1	.00023	-.00156	.00052	.01104	.02096	-.29726
#2	.00043	-.00017	.00041	.01099	.02104	-.06061
#3	.00025	-.00043	.00050	.01058	.02120	-.12744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21509.	17431.
Stddev	176.	223.
%RSD	.81749	1.2814
#1	21567.	17606.
#2	21649.	17507.
#3	21312.	17180.

Approved: February 08, 2012

Sample Name: LLICV Acquired: 2/7/2012 17:12:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00053	-.01558	.00049	-.00025	-.00007	-.00002	-.02113
Stddev	.00025	.01739	.00119	.00009	.00029	.00003	.00770
%RSD	47.229	111.65	242.58	36.730	394.24	125.29	36.427
#1	-.00081	-.03462	.00040	-.00015	.00026	-.00005	-.02527
#2	-.00036	-.01159	.00173	-.00025	-.00020	.00001	-.02588
#3	-.00041	-.00053	-.00065	-.00033	-.00028	-.00002	-.01225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	-.00013	.00026	.00065	.00253	-.02243	.00198
Stddev	.00009	.00023	.00027	.00023	.00129	.03136	.00092
%RSD	1285.2	177.93	103.75	35.917	51.018	139.80	46.400
#1	.00008	-.00038	.00032	.00047	.00285	-.04681	.00105
#2	-.00010	.00008	-.00004	.00056	.00363	-.03344	.00289
#3	.00000	-.00009	.00048	.00091	.00111	.01295	.00201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00506	-.00068	.00002	-.02961	.04243	F -34.039	-.00061
Stddev	.00612	.00090	.00011	.01623	.00041	29.436	.00161
%RSD	121.09	132.21	427.34	54.823	.96664	86.479	262.99
#1	-.00083	-.00105	.00001	-.03625	.04203	-1.5940	-.00009
#2	-.01208	.00035	-.00007	-.04147	.04241	-41.486	-.00241
#3	-.00227	-.00133	.00014	-.01111	.04285	-59.036	.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LLICV Acquired: 2/7/2012 17:12:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5345**	F **-.28526**	F **11.292**	**-.00035**	**-.00169**	**.00534**	**-.00004**
Stddev	5.4093	.03377	2.001	.00119	.00119	.00007	.00020
%RSD	119.29	11.837	17.716	337.03	70.138	1.2210	567.82
#1	.15375	-.30787	11.610	.00071	-.00232	.00527	.00020
#2	2.8691	-.30147	13.115	-.00163	-.00032	.00536	-.00015
#3	10.581	-.24645	9.1517	-.00013	-.00242	.00539	-.00015
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**-.00058**	**-.00009**	**-.00028**	**-.00077**	F **-.14291**
Stddev	.00005	.00074	.00025	.00021	.00003	.18315
%RSD	139.57	127.80	275.19	74.014	4.1414	128.16
#1	-.00001	-.00077	.00009	-.00052	-.00073	.06776
#2	.00009	.00024	-.00037	-.00013	-.00079	-.23211
#3	.00003	-.00121	.00001	-.00019	-.00078	-.26438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21228.**	**17628.**
Stddev	104.	26.
%RSD	.48785	.14966
#1	21342.	17647.
#2	21140.	17598.
#3	21202.	17639.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 17:15:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40082	10.001	.39720	.50106	.98035	.04933	9.9092
Stddev	.00458	.140	.00218	.00860	.00884	.00077	.0893
%RSD	1.1424	1.3999	.54914	1.7162	.90188	1.5616	.90111
#1	.39565	10.014	.39871	.49129	.97044	.04845	9.8224
#2	.40246	9.8543	.39820	.50436	.98319	.04988	9.9043
#3	.40436	10.133	.39470	.50751	.98743	.04967	10.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04963	.19936	.50169	.50060	3.9161	49.847	.98798
Stddev	.00020	.00011	.00819	.00062	.0405	.353	.00830
%RSD	.41283	.05639	1.6331	.12437	1.0348	.70885	.83975
#1	.04985	.19944	.49224	.50130	3.8767	49.470	.98053
#2	.04944	.19923	.50677	.50039	3.9138	49.900	.98649
#3	.04960	.19942	.50607	.50011	3.9577	50.171	.99692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8674	.49016	.99581	50.436	.50373	F -14.118	.50429
Stddev	.0845	.00334	.00311	.342	.00108	22.636	.00156
%RSD	.85599	.68193	.31280	.67898	.21370	160.33	.30848
#1	9.7739	.48742	.99927	50.171	.50497	-33.092	.50558
#2	9.8903	.48918	.99491	50.313	.50308	10.937	.50472
#3	9.9381	.49388	.99324	50.822	.50313	-20.199	.50256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 17:15:40 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.681	10.102	F 18.015	1.1989	.39742	4.9485	1.0054
Stddev	5.487	.090	1.735	.0056	.00603	.0182	.0013
%RSD	34.989	.88788	9.6313	.46466	1.5175	.36829	.12469
#1	19.700	10.005	18.338	1.2019	.40416	4.9691	1.0052
#2	17.914	10.121	16.141	1.1925	.39557	4.9419	1.0042
#3	9.4302	10.181	19.566	1.2024	.39252	4.9345	1.0067
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99074	.97474	.50814	.99061	1.0045	F .68953
Stddev	.00787	.00686	.00306	.01281	.0006	.15917
%RSD	.79455	.70407	.60252	1.2931	.05984	23.084
#1	.98403	.96890	.50919	.97600	1.0045	.74143
#2	.98877	.97302	.50469	.99593	1.0039	.51088
#3	.99941	.98230	.51053	.99991	1.0051	.81628
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20936.	18326.
Stddev	283.	261.
%RSD	1.3496	1.4241
#1	21229.	18611.
#2	20916.	18271.
#3	20665.	18098.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 17:18:53 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	.00178	-.00105	.00184	.00001	-.00003	-.02415
Stddev	.00042	.01704	.00274	.00109	.00007	.00002	.01889
%RSD	137.91	957.65	261.05	59.297	605.86	47.409	78.219
#1	-.00072	.01572	-.00406	.00078	.00008	-.00005	-.03207
#2	-.00032	-.01721	-.00036	.00296	-.00004	-.00003	-.03780
#3	.00012	.00683	.00128	.00178	-.00001	-.00002	-.00259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	-.00004	.00048	.00013	.00197	-.06583	.00577
Stddev	.00005	.00012	.00059	.00043	.00482	.04578	.00252
%RSD	89.591	306.44	124.07	334.91	244.00	69.548	43.693
#1	-.00001	-.00013	.00113	-.00028	.00478	-.10206	.00558
#2	-.00011	.00009	.00032	.00010	-.00359	-.01437	.00839
#3	-.00006	-.00007	-.00002	.00057	.00473	-.08106	.00335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00630	-.00013	.00067	-.01930	-.00014	F 14.512	.00050
Stddev	.01418	.00045	.00042	.01084	.00050	45.216	.00104
%RSD	225.25	337.28	61.856	56.166	370.40	311.58	206.37
#1	-.00315	-.00010	.00044	-.00802	.00013	41.155	-.00069
#2	.02261	.00030	.00042	-.02964	-.00071	-37.695	.00119
#3	-.00057	-.00060	.00115	-.02025	.00018	40.076	.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 17:18:53 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 3.2634	F -.31664	F 15.411	-.00014	-.00113	.00433	.00052
Stddev	3.8640	.04490	2.150	.00058	.00086	.00085	.00053
%RSD	118.40	14.181	13.952	411.02	75.671	19.642	102.11
#1	.51861	-.35355	14.177	.00002	-.00015	.00491	.00107
#2	7.6822	-.26665	14.162	-.00079	-.00174	.00473	.00002
#3	1.5895	-.32974	17.894	.00034	-.00151	.00336	.00046
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.00045	-.00194	-.00007	-.00030	F -.21451
Stddev	.00012	.00171	.00187	.00027	.00014	.02025
%RSD	114.18	382.46	96.315	375.59	46.224	9.4411
#1	.00018	.00081	-.00365	-.00001	-.00044	-.19843
#2	-.00003	-.00141	.00006	-.00037	-.00029	-.23725
#3	.00016	.00194	-.00223	.00016	-.00016	-.20785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21425.	17310.
Stddev	153.	261.
%RSD	.71599	1.5056
#1	21303.	17095.
#2	21375.	17235.
#3	21597.	17600.

Approved: February 08, 2012

Sample Name: PBW B6 Acquired: 2/7/2012 17:22:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	-.01223	-.00033	.00128	-.00009	-.00006	-.00944
Stddev	.00023	.01236	.00102	.00014	.00014	.00003	.00453
%RSD	141.66	101.04	308.40	11.098	168.81	46.083	47.944
#1	.00010	-.00419	-.00089	.00116	-.00002	-.00006	-.01430
#2	-.00025	-.02646	.00084	.00124	.00002	-.00008	-.00534
#3	-.00033	-.00604	-.00095	.00143	-.00025	-.00003	-.00869
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	-.00009	.00152	.00092	.01145	-.07629	.00222
Stddev	.00011	.00013	.00037	.00030	.00135	.03646	.00141
%RSD	108.69	139.08	24.402	33.144	11.821	47.788	63.503
#1	-.00001	.00002	.00115	.00126	.01183	-.06076	.00372
#2	-.00008	-.00024	.00189	.00070	.00995	-.11794	.00091
#3	-.00022	-.00007	.00152	.00078	.01257	-.05017	.00204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00950	-.00026	.00012	-.02636	.00017	F -1.7100	-.00090
Stddev	.00931	.00054	.00020	.02114	.00043	7.3463	.00143
%RSD	97.996	208.10	173.59	80.212	262.61	429.60	160.15
#1	.01955	.00036	.00025	-.05035	.00059	4.2524	.00076
#2	.00119	-.00056	-.00012	-.01825	.00018	.53420	-.00173
#3	.00775	-.00058	.00022	-.01047	-.00027	-9.9167	-.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: PBW B6 Acquired: 2/7/2012 17:22:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.0169	F -.28982	F 14.358	-.00016	-.00183	.01142	.00026
Stddev	4.7472	.02946	3.678	.00182	.00196	.00143	.00032
%RSD	78.898	10.165	25.617	1172.2	107.01	12.477	125.82
#1	5.9783	-.25826	18.597	.00155	-.00272	.01223	.00042
#2	1.2890	-.29461	12.468	.00007	-.00320	.01226	.00047
#3	10.783	-.31660	12.009	-.00208	.00041	.00978	-.00012
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	.00117	-.00093	-.00003	.00251	F -.06482
Stddev	.00018	.00103	.00100	.00003	.00002	.07263
%RSD	16279.	87.998	107.69	105.57	.76678	112.05
#1	-.00015	.00224	-.00195	-.00001	.00252	-.06184
#2	.00020	.00018	.00005	-.00001	.00251	-.13890
#3	-.00005	.00110	-.00088	-.00006	.00248	.00627
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21789.	18382.
Stddev	75.	310.
%RSD	.34334	1.6861
#1	21836.	18149.
#2	21703.	18263.
#3	21828.	18734.

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW B6 Acquired: 2/7/2012 17:25:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20299	5.0301	.19940	.99619	.49463	.02460	4.9514
Stddev	.00393	.0076	.00113	.01810	.00094	.00040	.0430
%RSD	1.9365	.15215	.56550	1.8168	.18963	1.6102	.86831
#1	.20444	5.0376	.19973	1.0064	.49357	.02482	4.9021
#2	.20599	5.0305	.20032	1.0069	.49496	.02484	4.9710
#3	.19854	5.0223	.19814	.97529	.49536	.02415	4.9811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02499	.10162	.25043	.25539	1.9481	25.113	.50141
Stddev	.00024	.00055	.00508	.00070	.0064	.055	.00095
%RSD	.94740	.53891	2.0302	.27541	.32888	.21885	.18864
#1	.02507	.10208	.25350	.25601	1.9414	25.052	.50090
#2	.02518	.10177	.25322	.25554	1.9542	25.130	.50084
#3	.02473	.10101	.24456	.25463	1.9486	25.158	.50251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.0052	.24638	.50482	25.912	.25652	F -19.926	.25647
Stddev	.0249	.00060	.00209	.153	.00121	21.569	.00211
%RSD	.49741	.24502	.41302	.59105	.47241	108.25	.82324
#1	5.0155	.24570	.50585	25.736	.25610	-38.831	.25730
#2	4.9769	.24686	.50620	25.979	.25788	-24.516	.25804
#3	5.0234	.24658	.50243	26.020	.25557	3.5690	.25407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW B6 Acquired: 2/7/2012 17:25:50 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 18.593	5.1894	F 10.476	.60447	.20016	2.6134	.49540
Stddev	6.999	.0648	1.712	.00148	.00426	.0120	.00261
%RSD	37.645	1.2482	16.344	.24545	2.1279	.45975	.52695
#1	26.400	5.2626	8.6516	.60583	.19912	2.6271	.49817
#2	12.879	5.1396	10.729	.60469	.19651	2.6080	.49505
#3	16.500	5.1658	12.048	.60289	.20484	2.6049	.49298
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49464	.48763	.26321	.49321	.51603	.26884
Stddev	.00319	.00046	.00031	.00962	.00230	.12367
%RSD	.64579	.09516	.11892	1.9513	.44603	46.000
#1	.49120	.48710	.26341	.49843	.51867	.12744
#2	.49520	.48779	.26285	.49910	.51450	.32225
#3	.49751	.48799	.26338	.48211	.51491	.35682
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21835.	18482.
Stddev	107.	186.
%RSD	.49106	1.0083
#1	21714.	18501.
#2	21872.	18287.
#3	21919.	18658.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007502 Acquired: 2/7/2012 17:29:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00052	.28004	-.00010	.00644	.01867	.00004	.46146
Stddev	.00025	.00983	.00146	.00044	.00034	.00004	.01461
%RSD	47.989	3.5110	1400.7	6.7858	1.8311	111.99	3.1656
#1	-.00054	.28825	-.00162	.00689	.01849	-.00001	.44963
#2	-.00077	.28272	.00129	.00642	.01846	.00004	.45695
#3	-.00026	.26914	.00002	.00601	.01907	.00007	.47779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00053	.00644	.00121	.42469	.61306	-.00034
Stddev	.00010	.00002	.00024	.00046	.00722	.03317	.00246
%RSD	334.47	3.5047	3.7928	37.739	1.7002	5.4097	721.82
#1	-.00008	.00055	.00622	.00164	.41871	.58250	.00246
#2	.00009	.00052	.00670	.00128	.42265	.64833	-.00134
#3	-.00010	.00053	.00639	.00073	.43272	.60836	-.00214
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40460	.02650	.00061	2.1023	.00457	F -62.493	.00091
Stddev	.01870	.00045	.00007	.0085	.00064	16.742	.00210
%RSD	4.6208	1.6968	12.124	.40586	13.920	26.790	230.29
#1	.41620	.02687	.00066	2.1023	.00409	-47.533	-.00126
#2	.41457	.02600	.00052	2.0938	.00434	-59.369	.00294
#3	.38303	.02662	.00063	2.1109	.00529	-80.577	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007502 Acquired: 2/7/2012 17:29:06 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.016	2.9825	F -127.46	.00011	-.00252	4.3206	.00018
Stddev	5.201	.0604	3.72	.00081	.00121	.0162	.00020
%RSD	30.566	2.0264	2.9178	762.78	48.065	.37459	111.68
#1	13.143	3.0203	-130.64	-.00073	-.00276	4.3387	-.00004
#2	14.978	3.0143	-123.37	.00089	-.00120	4.3152	.00036
#3	22.928	2.9128	-128.37	.00016	-.00359	4.3077	.00021
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00358	.00438	-.00109	.00038	.00111	F -.05052
Stddev	.00007	.00122	.00133	.00025	.00012	.08417
%RSD	1.8713	27.736	122.61	64.670	11.246	166.63
#1	.00360	.00578	.00043	.00043	.00103	.03670
#2	.00351	.00378	-.00205	.00011	.00104	-.05698
#3	.00364	.00358	-.00164	.00060	.00125	-.13127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21720.	19213.
Stddev	211.	219.
%RSD	.97051	1.1378
#1	21963.	19458.
#2	21605.	19146.
#3	21591.	19036.

Approved: February 08, 2012

Sample Name: L1202007505 Acquired: 2/7/2012 17:32:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00066	.02342	-.00050	.00368	.01369	.00000	.71020
Stddev	.00083	.02802	.00122	.00129	.00020	.0000	.00526
%RSD	125.80	119.64	242.69	35.166	1.4411	634.29	.74045
#1	-.00077	.00327	-.00112	.00326	.01371	.00001	.70439
#2	-.00143	.01157	-.00129	.00513	.01348	-.00003	.71158
#3	.00022	.05542	.00090	.00265	.01387	.00001	.71463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	.00011	.00238	.00078	.06340	.35378	.00785
Stddev	.00011	.00015	.00049	.00042	.00091	.01695	.00108
%RSD	69.448	136.12	20.535	53.899	1.4311	4.7920	13.753
#1	-.00006	.00015	.00274	.00101	.06277	.37114	.00796
#2	-.00013	-.00005	.00258	.00030	.06300	.35292	.00888
#3	-.00028	.00024	.00182	.00105	.06444	.33727	.00672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.58162	.00715	.00016	1.5106	.00141	F -19.073	.00083
Stddev	.00461	.00029	.00029	.0036	.00007	12.112	.00037
%RSD	.79263	4.0623	179.79	.23590	4.7503	63.506	45.259
#1	.57640	.00683	.00032	1.5090	.00136	-5.3622	.00081
#2	.58513	.00723	-.00017	1.5081	.00139	-28.320	.00121
#3	.58334	.00739	.00034	1.5146	.00149	-23.536	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007505 Acquired: 2/7/2012 17:32:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9225**	**3.0092**	F **-114.14**	**-.00101**	**-.00288**	**4.9844**	**.00015**
Stddev	2.4288	.0432	1.70	.00076	.00378	.0081	.00031
%RSD	126.34	1.4352	1.4888	75.164	130.90	.16220	207.71
#1	3.8787	3.0319	-112.18	-.00069	-.00653	4.9876	-.00020
#2	-.79605	2.9594	-115.19	-.00188	.00101	4.9752	.00039
#3	2.6850	3.0363	-115.05	-.00047	-.00313	4.9904	.00025
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00505**	**.00050**	**-.00122**	**.00015**	**.00487**	F **-.13282**
Stddev	.00018	.00058	.00062	.00053	.00012	.17502
%RSD	3.6476	115.82	51.334	354.00	2.5055	131.77
#1	.00487	.00100	-.00133	.00059	.00498	-.12037
#2	.00505	.00063	-.00054	-.00044	.00474	.03564
#3	.00524	-.00013	-.00177	.00030	.00489	-.31373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21228.**	**17851.**
Stddev	24.	92.
%RSD	.11286	.51558
#1	21230.	17822.
#2	21251.	17777.
#3	21203.	17954.

Approved: February 08, 2012

Sample Name: L1202007508S Acquired: 2/7/2012 17:35:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20134	5.1331	.19579	.98749	.51523	.02468	5.6618
Stddev	.00037	.0398	.00300	.00527	.00098	.00008	.0211
%RSD	.18274	.77499	1.5329	.53363	.18942	.31213	.37306
#1	.20150	5.1357	.19252	.99206	.51501	.02476	5.6626
#2	.20092	5.1715	.19643	.98172	.51630	.02466	5.6825
#3	.20161	5.0921	.19841	.98868	.51439	.02461	5.6403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02495	.10148	.25323	.25436	2.0217	25.703	.51213
Stddev	.00006	.00010	.00125	.00108	.0062	.101	.00278
%RSD	.23893	.10038	.49287	.42497	.30742	.39203	.54245
#1	.02490	.10141	.25423	.25329	2.0190	25.593	.51379
#2	.02495	.10145	.25183	.25432	2.0288	25.792	.51368
#3	.02502	.10160	.25362	.25546	2.0174	25.722	.50892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.6213	.25557	.50793	27.464	.25828	F -21.887	.25605
Stddev	.0172	.00149	.00114	.012	.00120	28.154	.00262
%RSD	.30652	.58345	.22517	.04430	.46529	128.63	1.0223
#1	5.6213	.25386	.50725	27.453	.25695	10.361	.25314
#2	5.6385	.25660	.50728	27.463	.25929	-34.453	.25821
#3	5.6041	.25625	.50925	27.477	.25859	-41.570	.25680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007508S Acquired: 2/7/2012 17:35:55 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-04

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.9636**	**8.2912**	F **-115.93**	**.59361**	**.19622**	**7.4600**	**.53039**
Stddev	6.0054	.0070	2.59	.00248	.00175	.0144	.00166
%RSD	86.241	.08404	2.2349	.41725	.89166	.19310	.31213
#1	9.7014	8.2947	-117.08	.59229	.19519	7.4444	.52911
#2	.07709	8.2832	-117.75	.59207	.19824	7.4728	.52980
#3	11.112	8.2958	-112.96	.59647	.19522	7.4628	.53226
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50058**	**.49051**	**.25966**	**.49276**	**.51985**	**.24847**
Stddev	.00095	.00284	.00100	.00184	.00094	.21901
%RSD	.18988	.57922	.38608	.37318	.18155	88.142
#1	.49976	.48747	.25941	.49483	.51908	.02970
#2	.50162	.49311	.26076	.49134	.51956	.24800
#3	.50037	.49095	.25880	.49209	.52090	.46771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21025.**	**17461.**
Stddev	67.	75.
%RSD	.32062	.43074
#1	21061.	17488.
#2	21067.	17376.
#3	20947.	17519.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007511SD Acquired: 2/7/2012 17:39:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20262	5.0916	.19783	1.0009	.51368	.02486	5.6956
Stddev	.00056	.0526	.00066	.0066	.00297	.00014	.0349
%RSD	.27471	1.0339	.33336	.66424	.57831	.55873	.61236
#1	.20211	5.0333	.19817	.99318	.51135	.02471	5.6554
#2	.20321	5.1059	.19707	1.0043	.51702	.02499	5.7131
#3	.20255	5.1356	.19826	1.0050	.51267	.02489	5.7182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02492	.10160	.25464	.25459	2.0116	25.759	.50558
Stddev	.00021	.00038	.00066	.00153	.0116	.112	.00204
%RSD	.85433	.37381	.25866	.60204	.57827	.43664	.40415
#1	.02483	.10123	.25388	.25365	2.0002	25.636	.50323
#2	.02516	.10199	.25506	.25636	2.0112	25.856	.50653
#3	.02476	.10157	.25498	.25377	2.0235	25.785	.50697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.6358	.25526	.50568	27.544	.25771	F -39.192	.25586
Stddev	.0485	.00057	.00160	.119	.00148	24.835	.00339
%RSD	.86103	.22217	.31567	.43123	.57607	63.367	1.3256
#1	5.5824	.25463	.50416	27.423	.25618	-11.603	.25258
#2	5.6478	.25573	.50734	27.547	.25915	-59.761	.25563
#3	5.6772	.25542	.50553	27.661	.25780	-46.212	.25936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007511SD Acquired: 2/7/2012 17:39:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388812-05

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.516	8.4561	F -122.59	.59886	.20124	7.6483	.53376
Stddev	2.244	.1037	4.68	.00153	.00078	.0104	.00278
%RSD	17.929	1.2261	3.8172	.25470	.38606	.13597	.52112
#1	9.9332	8.3395	-118.34	.59711	.20040	7.6514	.53056
#2	13.624	8.5379	-121.82	.59993	.20192	7.6567	.53548
#3	13.990	8.4910	-127.61	.59952	.20141	7.6366	.53526
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50129	.48855	.26144	.49540	.51992	.42377
Stddev	.00222	.00186	.00136	.00243	.00056	.17583
%RSD	.44259	.38134	.52072	.49012	.10813	41.492
#1	.49887	.48656	.26221	.49266	.51950	.42607
#2	.50178	.48884	.26224	.49624	.52056	.24680
#3	.50323	.49025	.25987	.49729	.51971	.59843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21463.	18032.
Stddev	102.	74.
%RSD	.47624	.41056
#1	21578.	17949.
#2	21431.	18054.
#3	21381.	18093.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007514 Acquired: 2/7/2012 17:42:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00026	3.3882	.00106	.00946	.03836	.00012	.87655
Stddev	.00046	.0287	.00231	.00114	.00045	.00001	.01006
%RSD	177.13	.84820	218.75	12.100	1.1662	7.5943	1.1472
#1	.00000	3.3583	.00364	.01033	.03883	.00011	.87475
#2	.00001	3.4156	.00033	.00816	.03831	.00011	.88738
#3	-.00079	3.3905	-.00081	.00989	.03794	.00013	.86752
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	.00385	.01015	.00620	7.5516	.86741	.01056
Stddev	.00011	.00007	.00015	.00053	.0459	.02960	.00386
%RSD	104.50	1.8868	1.4996	8.5868	.60716	3.4124	36.542
#1	-.00023	.00383	.01032	.00664	7.6028	.89892	.01165
#2	-.00005	.00393	.01013	.00635	7.5379	.84018	.00627
#3	-.00003	.00379	.01001	.00561	7.5142	.86314	.01375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6256	.17847	.00130	1.5806	.01307	F -638.70	.00823
Stddev	.0201	.00044	.00006	.0118	.00103	8.45	.00074
%RSD	1.2388	.24728	4.4624	.74424	7.8711	1.3232	8.9952
#1	1.6484	.17885	.00124	1.5865	.01294	-638.90	.00860
#2	1.6104	.17799	.00131	1.5882	.01210	-647.05	.00738
#3	1.6180	.17858	.00135	1.5670	.01415	-630.15	.00873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007514 Acquired: 2/7/2012 17:42:26 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.5159**	**3.8735**	F **-153.60**	**.00150**	**.00136**	**8.7455**	**.00101**
Stddev	3.5589	.0344	2.39	.00098	.00269	.0196	.00048
%RSD	41.791	.88858	1.5592	65.242	197.01	.22460	47.607
#1	10.984	3.8338	-152.87	.00096	.00378	8.7302	.00155
#2	4.4363	3.8931	-151.65	.00091	-.00153	8.7387	.00063
#3	10.128	3.8936	-156.27	.00263	.00185	8.7677	.00085
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00738**	**.01056**	**.00016**	**.00300**	**.04341**	**.33743**
Stddev	.00019	.00181	.00161	.00019	.00058	.05823
%RSD	2.5560	17.151	1036.4	6.3073	1.3451	17.256
#1	.00751	.00938	-.00140	.00300	.04305	.36904
#2	.00716	.00966	.00004	.00281	.04310	.27023
#3	.00746	.01265	.00182	.00319	.04408	.37301
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**22771.**	**18937.**
Stddev	135.	311.
%RSD	.59145	1.6403
#1	22633.	18716.
#2	22902.	18803.
#3	22777.	19292.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007517 Acquired: 2/7/2012 17:45:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	2.3220	.00021	.00678	.02275	.00006	1.1259
Stddev	.00044	.0332	.00115	.00109	.00036	.00003	.0073
%RSD	713.55	1.4315	546.03	16.047	1.5792	47.387	.64551
#1	-.00024	2.2837	-.00058	.00556	.02238	.00004	1.1193
#2	-.00015	2.3431	-.00032	.00715	.02309	.00004	1.1337
#3	.00057	2.3392	.00154	.00764	.02280	.00009	1.1248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	.00219	.00993	.00488	4.4463	.57844	.01236
Stddev	.00007	.00016	.00042	.00024	.0316	.03103	.00348
%RSD	94.255	7.4569	4.2051	4.8330	.71021	5.3650	28.154
#1	-.00014	.00201	.00946	.00462	4.4103	.60398	.00962
#2	-.00001	.00224	.01027	.00508	4.4697	.54390	.01628
#3	-.00007	.00232	.01005	.00495	4.4587	.58743	.01118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.3582	.08471	.00072	1.3876	.00939	F -446.32	.00263
Stddev	.0158	.00035	.00016	.0046	.00058	3.60	.00011
%RSD	1.1619	.41397	22.710	.32915	6.1429	.80710	4.0645
#1	1.3507	.08511	.00060	1.3823	.00905	-450.07	.00272
#2	1.3476	.08448	.00091	1.3905	.00907	-442.88	.00266
#3	1.3763	.08453	.00065	1.3899	.01006	-446.02	.00251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007517 Acquired: 2/7/2012 17:45:49 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.2698**	**4.6643**	F **-182.06**	**.00180**	**-.00126**	**7.5400**	**.00067**
Stddev	12.176	.1050	1.15	.00128	.00124	.0193	.00016
%RSD	147.24	2.2506	.63312	71.092	98.079	.25598	23.700
#1	-3.1034	4.5471	-181.05	.00306	-.00077	7.5256	.00085
#2	21.115	4.6959	-181.82	.00183	-.00267	7.5324	.00056
#3	6.7977	4.7498	-183.32	.00050	-.00034	7.5619	.00059
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00867**	**.00707**	**.00017**	**.00183**	**.02590**	**.25500**
Stddev	.00002	.00148	.00031	.00018	.00010	.05718
%RSD	.27616	20.880	179.73	9.7467	.39995	22.422
#1	.00868	.00870	.00043	.00180	.02578	.31183
#2	.00868	.00669	.00025	.00203	.02596	.25570
#3	.00864	.00582	-.00017	.00167	.02596	.19748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21959.**	**18810.**
Stddev	135.	242.
%RSD	.61429	1.2839
#1	22100.	18656.
#2	21831.	18687.
#3	21946.	19089.

Approved: February 08, 2012

Sample Name: L1202007517PS Acquired: 2/7/2012 17:49:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388881-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19069	6.8124	.18841	.94070	.49249	.02347	5.9437
Stddev	.00045	.0285	.00116	.00353	.00283	.00011	.0331
%RSD	.23457	.41804	.61421	.37499	.57390	.47110	.55628
#1	.19120	6.7796	.18965	.94477	.48949	.02360	5.9264
#2	.19053	6.8264	.18736	.93842	.49511	.02341	5.9229
#3	.19035	6.8311	.18823	.93893	.49287	.02342	5.9819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02403	.09821	.24579	.24613	5.8340	24.365	.49557
Stddev	.00008	.00038	.00039	.00107	.0283	.043	.00302
%RSD	.31715	.38543	.16040	.43562	.48481	.17595	.60884
#1	.02405	.09815	.24610	.24693	5.8014	24.324	.49553
#2	.02395	.09786	.24535	.24491	5.8524	24.362	.49860
#3	.02410	.09861	.24594	.24654	5.8482	24.410	.49257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.9627	.31252	.47675	25.876	.25060	F -387.01	.24411
Stddev	.0243	.00065	.00219	.084	.00147	23.96	.00235
%RSD	.40813	.20936	.45843	.32331	.58596	6.1909	.96257
#1	5.9349	.31233	.47650	25.944	.25107	-399.60	.24488
#2	5.9726	.31325	.47469	25.783	.24895	-359.38	.24147
#3	5.9805	.31199	.47904	25.902	.25177	-402.06	.24598
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007517PS Acquired: 2/7/2012 17:49:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388881-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.4964	F 9.8622	F -180.10	.56624	.18664	10.121	.51555
Stddev	4.1738	.1624	3.89	.00256	.00092	.019	.00186
%RSD	119.37	1.6470	2.1583	.45254	.49083	.18954	.36078
#1	-.65967	9.7812	-179.35	.56598	.18695	10.108	.51501
#2	7.6876	9.7562	-176.64	.56383	.18737	10.112	.51402
#3	3.4612	10.049	-184.31	.56893	.18561	10.143	.51762
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.47792	.46929	.24818	.46856	.51550	.78666
Stddev	.00063	.00197	.00140	.00212	.00132	.13971
%RSD	.13234	.42032	.56365	.45326	.25536	17.761
#1	.47824	.46896	.24727	.47025	.51462	.94560
#2	.47719	.47141	.24748	.46925	.51487	.73112
#3	.47833	.46751	.24979	.46618	.51701	.68325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20780.	17604.
Stddev	44.	133.
%RSD	.21015	.75503
#1	20737.	17638.
#2	20777.	17717.
#3	20824.	17458.

Approved: February 08, 2012

Sample Name: L1202007517SDL Acquired: 2/7/2012 17:52:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388881-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00108	.42872	-.00063	.00523	.00477	.00000	.20024
Stddev	.00042	.02827	.00090	.00121	.00005	.00002	.00904
%RSD	38.696	6.5939	143.51	23.149	1.0969	413.59	4.5148
#1	-.00128	.45947	-.00151	.00477	.00482	-.00002	.20883
#2	-.00136	.40386	.00028	.00432	.00471	.00002	.20107
#3	-.00060	.42284	-.00065	.00661	.00477	.00001	.19081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	.00030	.00226	.00215	.90793	.11508	.00183
Stddev	.00003	.00007	.00037	.00044	.00588	.04813	.00144
%RSD	53.649	22.812	16.509	20.705	.64758	41.822	78.332
#1	-.00009	.00038	.00190	.00241	.90431	.17054	.00206
#2	-.00003	.00027	.00224	.00239	.91472	.09043	.00030
#3	-.00006	.00025	.00264	.00163	.90477	.08427	.00315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.28004	.01728	.00061	.25513	.00209	F -92.637	.00001
Stddev	.01661	.00051	.00047	.02186	.00046	19.738	.00106
%RSD	5.9310	2.9665	77.667	8.5680	22.034	21.307	7443.7
#1	.29839	.01777	.00014	.22994	.00232	-115.43	.00020
#2	.27572	.01731	.00060	.26630	.00156	-81.270	-.00113
#3	.26603	.01675	.00109	.26914	.00240	-81.212	.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007517SDL Acquired: 2/7/2012 17:52:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388881-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.5075**	**.74664**	F **-25.553**	**-.00050**	**-.00166**	**1.5656**	**.00026**
Stddev	6.6917	.00923	.827	.00030	.00292	.0039	.00030
%RSD	102.83	1.2360	3.2351	60.118	175.52	.24750	114.44
#1	13.131	.75006	-25.634	-.00023	.00108	1.5697	.00052
#2	6.6423	.73619	-24.689	-.00082	-.00473	1.5649	.00034
#3	-.25061	.75367	-26.336	-.00044	-.00134	1.5620	-.00007
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00193**	**.00121**	**-.00025**	**.00055**	**.00508**	F **-.07776**
Stddev	.00004	.00150	.00035	.00036	.00006	.07752
%RSD	1.9511	124.16	138.29	64.480	1.1970	99.696
#1	.00196	.00217	.00009	.00094	.00508	-.07972
#2	.00193	-.00052	-.00024	.00023	.00513	.00072
#3	.00189	.00199	-.00061	.00049	.00501	-.15428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21160.**	**17563.**
Stddev	11.	91.
%RSD	.05194	.51728
#1	21152.	17663.
#2	21172.	17539.
#3	21155.	17486.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 17:55:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39007	9.8633	.38892	.48856	.97087	.04835	9.8357
Stddev	.00467	.0375	.00280	.00664	.00223	.00057	.0209
%RSD	1.1978	.38036	.72074	1.3589	.22959	1.1738	.21290
#1	.39080	9.8216	.38583	.49073	.96848	.04854	9.8116
#2	.38508	9.8942	.39131	.48111	.97290	.04772	9.8482
#3	.39434	9.8743	.38962	.49384	.97122	.04880	9.8474
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04875	.19651	.48827	.49368	3.8728	49.365	.97924
Stddev	.00007	.00055	.00490	.00284	.0144	.095	.00140
%RSD	.14308	.27997	1.0038	.57539	.37301	.19174	.14325
#1	.04876	.19595	.49042	.49304	3.8660	49.278	.97762
#2	.04881	.19652	.48266	.49121	3.8894	49.466	.97993
#3	.04867	.19705	.49173	.49678	3.8630	49.352	.98016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.7134	.48268	.97599	49.771	.49502	F -36.135	.49811
Stddev	.0479	.00121	.00133	.151	.00096	17.443	.00199
%RSD	.49306	.25144	.13671	.30397	.19475	48.272	.39905
#1	9.6801	.48179	.97723	49.609	.49463	-39.295	.50038
#2	9.7683	.48219	.97458	49.909	.49430	-51.781	.49721
#3	9.6919	.48407	.97618	49.795	.49611	-17.328	.49673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 17:55:56 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.994**	**9.8433**	F **19.845**	**1.1725**	**.38995**	**4.8974**	**.98785**
Stddev	2.627	.0744	2.915	.0008	.00113	.0168	.00082
%RSD	23.891	.75590	14.689	.06669	.28854	.34304	.08254
#1	8.4050	9.9161	16.517	1.1720	.38868	4.8783	.98692
#2	13.656	9.7674	21.946	1.1734	.39084	4.9100	.98815
#3	10.920	9.8465	21.071	1.1722	.39032	4.9039	.98847
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			10.000				
Range			10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97798**	**.96192**	**.49903**	**.96959**	**.98962**	F **.71230**
Stddev	.00364	.00468	.00133	.01257	.00253	.33463
%RSD	.37196	.48610	.26651	1.2969	.25548	46.978
#1	.97381	.95676	.49814	.97261	.99018	.56666
#2	.98044	.96588	.49839	.95578	.98686	.47518
#3	.97971	.96311	.50056	.98038	.99182	1.0951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21525.**	**18587.**
Stddev	149.	232.
%RSD	.68995	1.2460
#1	21465.	18435.
#2	21694.	18473.
#3	21416.	18854.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 17:59:10 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00025	-.00866	-.00060	.00372	-.00023	-.00004	-.01694
Stddev	.00026	.02676	.00080	.00109	.00020	.00004	.01166
%RSD	101.86	308.85	131.63	29.356	87.984	89.760	68.827
#1	-.00035	-.03848	-.00152	.00350	-.00012	-.00005	-.00353
#2	-.00044	-.00080	-.00012	.00491	-.00046	.00000	-.02465
#3	.00004	.01329	-.00017	.00276	-.00010	-.00006	-.02263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00013	-.00013	.00059	.00119	.00394	-.01591	.00306
Stddev	.00007	.00023	.00013	.00022	.00475	.02869	.00170
%RSD	55.797	187.44	22.657	18.471	120.44	180.29	55.401
#1	-.00013	.00015	.00053	.00114	.00167	.01066	.00375
#2	-.00006	-.00027	.00050	.00100	.00075	-.01207	.00430
#3	-.00021	-.00025	.00075	.00143	.00940	-.04632	.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00363	.00013	.00052	-.01417	-.00012	F 13.489	.00034
Stddev	.00871	.00026	.00022	.01555	.00014	22.401	.00056
%RSD	240.07	195.66	42.754	109.72	121.72	166.07	162.17
#1	-.01285	.00008	.00037	-.01585	-.00012	39.301	.00063
#2	-.00250	-.00010	.00041	.00215	-.00026	2.0319	-.00030
#3	.00446	.00041	.00077	-.02882	.00003	-.86576	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 17:59:10 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.834	F -.32153	F 14.891	-.00032	-.00102	.01932	.00057
Stddev	1.022	.02769	2.115	.00189	.00107	.00031	.00028
%RSD	9.4370	8.6107	14.205	591.56	104.81	1.6146	49.317
#1	12.006	-.33056	13.033	.00174	.00014	.01902	.00085
#2	10.373	-.29045	14.449	-.00073	-.00125	.01965	.00058
#3	10.123	-.34357	17.193	-.00197	-.00196	.01930	.00029
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.00142	.00022	.00023	-.00031	F -.12687
Stddev	.00006	.00183	.00111	.00057	.00010	.12975
%RSD	42.086	129.17	506.27	244.34	31.396	102.27
#1	.00011	.00192	.00114	-.00021	-.00027	.01982
#2	.00010	-.00061	-.00101	.00087	-.00023	-.22659
#3	.00021	.00294	.00053	.00004	-.00042	-.17383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21419.	18097.
Stddev	73.	245.
%RSD	.34231	1.3555
#1	21496.	18065.
#2	21349.	18357.
#3	21411.	17870.

Approved: February 08, 2012

Sample Name: L1202007520 Acquired: 2/7/2012 18:02:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00083	.27536	.00039	.00362	.00770	-.00002	.91385
Stddev	.00069	.02898	.00093	.00108	.00048	.00000	.00305
%RSD	82.735	10.524	240.68	29.822	6.2376	3.5852	.33405
#1	-.00152	.28264	.00146	.00485	.00739	-.00002	.91489
#2	-.00015	.30001	-.00020	.00284	.00825	-.00002	.91041
#3	-.00082	.24344	-.00010	.00317	.00745	-.00002	.91624
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	.00019	.00366	.00086	.52581	.14811	.00815
Stddev	.00004	.00026	.00020	.00033	.00375	.03014	.00161
%RSD	47.469	134.54	5.4730	37.979	.71366	20.353	19.707
#1	-.00005	.00010	.00379	.00056	.52192	.11443	.00648
#2	-.00009	.00049	.00377	.00081	.52612	.15734	.00830
#3	-.00013	.00000	.00343	.00121	.52940	.17256	.00968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.94325	.01938	.00034	1.7214	.00219	F -125.75	.00108
Stddev	.01819	.00074	.00022	.0182	.00026	12.00	.00128
%RSD	1.9281	3.8280	65.299	1.0594	11.927	9.5414	118.15
#1	.93896	.02023	.00040	1.7407	.00199	-134.24	.00084
#2	.96319	.01900	.00053	1.7192	.00210	-130.98	-.00006
#3	.92759	.01890	.00010	1.7044	.00248	-112.02	.00247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007520 Acquired: 2/7/2012 18:02:38 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -3.9797	4.7201	F -191.24	.00066	.00025	4.5613	-.00004
Stddev	2.8496	.0692	1.80	.00139	.00165	.0047	.00022
%RSD	71.601	1.4657	.94117	211.38	664.52	.10412	551.74
#1	-7.2292	4.6767	-189.95	.00081	.00008	4.5602	.00020
#2	-1.9070	4.7999	-193.30	.00197	.00197	4.5665	-.00011
#3	-2.8030	4.6837	-190.49	-.00080	-.00131	4.5572	-.00021
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00718	.00035	.00011	.00009	.00495	F -.04292
Stddev	.00009	.00060	.00184	.00035	.00007	.06088
%RSD	1.2202	168.75	1751.6	396.23	1.4046	141.82
#1	.00728	-.00032	.00207	.00016	.00498	-.00454
#2	.00711	.00081	-.00158	-.00029	.00487	-.11311
#3	.00715	.00057	-.00018	.00039	.00500	-.01112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21605.	18096.
Stddev	148.	174.
%RSD	.68597	.96012
#1	21632.	18003.
#2	21738.	17988.
#3	21445.	18296.

Approved: February 08, 2012

Sample Name: L1202007523 Acquired: 2/7/2012 18:06:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00042	4.8746	.00092	.00667	.04262	.00013	.88095
Stddev	.00071	.0539	.00041	.00030	.00021	.00003	.01108
%RSD	168.06	1.1063	44.919	4.4279	.50133	19.051	1.2576
#1	-.00101	4.8606	.00099	.00661	.04286	.00012	.88444
#2	-.00062	4.9341	.00129	.00641	.04255	.00012	.88986
#3	.00036	4.8290	.00047	.00699	.04246	.00016	.86854
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00017	.00584	.03951	.00918	10.704	.49949	.01591
Stddev	.00003	.00004	.00054	.00023	.065	.01924	.00188
%RSD	20.336	.73700	1.3565	2.5510	.61014	3.8523	11.789
#1	-.00020	.00581	.04003	.00903	10.757	.51937	.01807
#2	-.00013	.00582	.03953	.00945	10.725	.48096	.01503
#3	-.00017	.00589	.03896	.00906	10.631	.49813	.01464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2765	.26762	.00420	1.6540	.03235	F -1012.1	.00262
Stddev	.0055	.00196	.00033	.0127	.00023	23.8	.00098
%RSD	.23953	.73249	7.7368	.77048	.69684	2.3472	37.553
#1	2.2775	.26907	.00398	1.6525	.03258	-984.88	.00355
#2	2.2706	.26841	.00405	1.6675	.03234	-1022.9	.00272
#3	2.2814	.26539	.00458	1.6422	.03213	-1028.6	.00159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007523 Acquired: 2/7/2012 18:06:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.259	3.7590	F -150.14	.00132	-.00091	10.535	.00090
Stddev	1.846	.0260	2.29	.00080	.00068	.021	.00031
%RSD	17.991	.69106	1.5277	60.323	74.524	.20226	33.820
#1	8.2221	3.7849	-152.63	.00216	-.00047	10.559	.00082
#2	11.820	3.7329	-149.66	.00058	-.00056	10.522	.00124
#3	10.735	3.7592	-148.12	.00121	-.00168	10.523	.00065
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00804	.01156	-.00008	.00387	.04600	.05727
Stddev	.00021	.00140	.00144	.00016	.00024	.10771
%RSD	2.6455	12.082	1875.4	4.1886	.52044	188.07
#1	.00813	.01203	-.00145	.00388	.04625	.06409
#2	.00820	.01266	.00142	.00371	.04578	.16141
#3	.00780	.00999	-.00019	.00403	.04599	-.05369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21862.	18512.
Stddev	314.	524.
%RSD	1.4366	2.8298
#1	21506.	19006.
#2	21983.	18568.
#3	22098.	17962.

Approved: February 08, 2012

Sample Name: L1202007526 Acquired: 2/7/2012 18:09:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00020	2.9548	.00079	.00446	.02976	.00007	.82399
Stddev	.00014	.0415	.00059	.00124	.00044	.00002	.01088
%RSD	69.034	1.4041	73.688	27.904	1.4731	26.910	1.3201
#1	-.00025	2.9499	.00015	.00312	.03000	.00009	.83596
#2	-.00030	2.9160	.00093	.00558	.03003	.00006	.81471
#3	-.00004	2.9985	.00130	.00466	.02926	.00006	.82130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00015	.00403	.02801	.00558	6.3380	.44275	.00965
Stddev	.00004	.00022	.00060	.00019	.0313	.05619	.00199
%RSD	23.592	5.4868	2.1557	3.3856	.49443	12.691	20.615
#1	-.00011	.00429	.02814	.00537	6.3695	.50508	.00871
#2	-.00015	.00388	.02854	.00563	6.3379	.42721	.01193
#3	-.00018	.00393	.02736	.00574	6.3068	.39597	.00831
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6314	.16032	.00317	1.6110	.02208	F -641.82	.00161
Stddev	.0173	.00107	.00023	.0155	.00021	43.42	.00233
%RSD	1.0611	.66490	7.2474	.95875	.96683	6.7647	144.74
#1	1.6137	.16057	.00307	1.6101	.02209	-691.78	.00420
#2	1.6321	.16123	.00343	1.6269	.02228	-613.24	.00097
#3	1.6483	.15915	.00301	1.5961	.02185	-620.45	-.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007526 Acquired: 2/7/2012 18:09:22 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.4687	3.6659	F -148.80	.00084	-.00140	8.2094	.00091
Stddev	3.3034	.0069	2.84	.00186	.00312	.0183	.00057
%RSD	34.887	.18958	1.9116	222.01	222.41	.22309	63.206
#1	5.8205	3.6739	-152.03	-.00066	-.00471	8.2018	.00026
#2	10.328	3.6625	-147.73	.00026	-.00099	8.2303	.00111
#3	12.257	3.6614	-146.65	.00292	.00149	8.1961	.00135
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00720	.00681	.00028	.00222	.03281	.23464
Stddev	.00004	.00066	.00059	.00012	.00007	.23851
%RSD	.50237	9.7062	212.22	5.4253	.19941	101.65
#1	.00718	.00627	-.00030	.00225	.03286	.13837
#2	.00724	.00661	.00025	.00233	.03282	.05930
#3	.00717	.00755	.00088	.00209	.03273	.50623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21948.	17787.
Stddev	212.	195.
%RSD	.96469	1.0944
#1	21799.	17822.
#2	21853.	17577.
#3	22190.	17962.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007529 Acquired: 2/7/2012 18:12:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00040	-.03951	.00032	.00222	.00061	-.00004	-.00864
Stddev	.00042	.03461	.00121	.00032	.00017	.00002	.01257
%RSD	106.61	87.585	373.96	14.530	26.934	53.579	145.58
#1	-.00088	-.02485	-.00070	.00234	.00043	-.00003	.00576
#2	-.00009	-.07904	.00166	.00247	.00076	-.00006	-.01748
#3	-.00022	-.01466	.00001	.00186	.00065	-.00002	-.01419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	-.00001	.00164	.00072	.01159	-.01400	-.00011
Stddev	.00011	.00007	.00026	.00052	.00593	.01038	.00027
%RSD	111.57	728.85	15.570	72.058	51.208	74.139	243.15
#1	-.00015	-.00002	.00193	.00107	.01067	-.02466	-.00040
#2	.00003	-.00007	.00156	.00012	.00617	-.01342	-.00009
#3	-.00017	.00006	.00144	.00096	.01793	-.00392	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01888	-.00012	-.00009	1.1995	-.00058	F -40.629	.00006
Stddev	.01501	.00019	.00005	.0287	.00023	20.637	.00062
%RSD	79.483	155.38	58.962	2.3944	39.694	50.794	1024.8
#1	.01920	-.00015	-.00011	1.2282	-.00059	-22.225	.00034
#2	.00372	.00008	-.00003	1.1708	-.00080	-36.720	.00049
#3	.03374	-.00029	-.00013	1.1994	-.00034	-62.941	-.00065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007529 Acquired: 2/7/2012 18:12:45 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.179	.68862	F -34.775	.00075	-.00193	1.8315	.00009
Stddev	2.232	.02343	1.356	.00071	.00332	.0095	.00059
%RSD	19.964	3.4025	3.8992	94.887	171.63	.51705	648.12
#1	12.302	.66195	-36.264	.00010	-.00107	1.8422	.00074
#2	12.625	.70587	-33.612	.00151	-.00560	1.8282	-.00041
#3	8.6084	.69805	-34.450	.00064	.00087	1.8241	-.00006
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00042	.00093	-.00100	.00001	.00070	F -.06933
Stddev	.00005	.00060	.00061	.00049	.00004	.08355
%RSD	12.147	64.586	61.211	4427.1	6.3399	120.52
#1	.00040	.00075	-.00107	-.00051	.00075	-.07164
#2	.00047	.00160	-.00158	.00008	.00066	-.15170
#3	.00038	.00044	-.00036	.00047	.00068	.01535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21435.	18165.
Stddev	44.	135.
%RSD	.20638	.74436
#1	21385.	18320.
#2	21470.	18101.
#3	21450.	18074.

Approved: February 08, 2012

Sample Name: L1202007532 Acquired: 2/7/2012 18:16:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	-.00463	.00002	.00073	.00026	-.00001	-.01753
Stddev	.00034	.03153	.00160	.00119	.00009	.00002	.00884
%RSD	119.87	681.15	8634.7	163.23	35.462	248.28	50.426
#1	-.00067	-.00564	.00027	-.00046	.00027	-.00003	-.01531
#2	-.00010	-.03565	-.00169	.00073	.00016	.00000	-.02727
#3	-.00007	.02740	.00148	.00191	.00034	.00001	-.01001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.00007	.00240	.00094	.00907	-.10822	.00567
Stddev	.00013	.00021	.00040	.00017	.00693	.01938	.00209
%RSD	537.84	299.43	16.530	17.679	76.405	17.912	36.877
#1	-.00004	.00032	.00227	.00095	.01000	-.12902	.00377
#2	-.00014	-.00008	.00285	.00109	.00172	-.10498	.00532
#3	.00011	-.00002	.00209	.00076	.01549	-.09066	.00791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00576	-.00004	.00014	-.02522	-.00015	F -25.089	.00053
Stddev	.00849	.00003	.00006	.01349	.00053	30.922	.00034
%RSD	147.34	92.693	43.722	53.503	360.92	123.25	63.976
#1	.01202	-.00001	.00016	-.02580	-.00064	-55.048	.00086
#2	-.00390	-.00008	.00007	-.01145	.00041	-26.932	.00018
#3	.00916	-.00002	.00018	-.03842	-.00022	6.7139	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007532 Acquired: 2/7/2012 18:16:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.92646	.76558	F -41.760	.00112	-.00347	.02047	.00026
Stddev	11.234	.06630	1.435	.00180	.00100	.00090	.00012
%RSD	1212.6	8.6599	3.4360	161.14	28.905	4.3947	46.080
#1	6.8963	.69546	-43.310	.00133	-.00242	.02027	.00020
#2	7.9155	.77401	-40.479	-.00078	-.00442	.02145	.00040
#3	-12.032	.82725	-41.492	.00280	-.00356	.01968	.00018
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	-.00073	-.00121	-.00016	-.00071	F -.17826
Stddev	.00010	.00162	.00346	.00026	.00010	.17149
%RSD	71.956	223.39	286.50	163.26	14.498	96.205
#1	.00024	-.00260	-.00519	.00012	-.00078	-.34618
#2	.00014	.00008	.00098	-.00020	-.00077	-.18517
#3	.00004	.00033	.00060	-.00040	-.00059	-.00341
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20628.	17673.
Stddev	211.	75.
%RSD	1.0225	.42483
#1	20385.	17587.
#2	20735.	17701.
#3	20764.	17729.

Approved: February 08, 2012

Sample Name: L1202008601 Acquired: 2/7/2012 18:19:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00086	25.052	.00069	.09125	.09114	-.00002
Stddev	.00053	.109	.00055	.00187	.00084	.00003
%RSD	61.482	.43447	80.788	2.0478	.92575	171.47
#1	-.00145	25.041	.00132	.09339	.09195	-.00004
#2	-.00070	24.950	.00045	.09036	.09027	.00002
#3	-.00042	25.167	.00029	.08998	.09121	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.151	F -.00102	1.2922	.01711	.06096	2.6762
Stddev	.076	.00014	.0036	.00015	.00057	.0162
%RSD	.53873	13.411	.27618	.90559	.93000	.60582
#1	14.195	-.00087	1.2955	.01695	.06127	2.6862
#2	14.063	-.00104	1.2926	.01713	.06130	2.6575
#3	14.196	-.00114	1.2884	.01725	.06030	2.6850
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		16.200				
Low Limit		-.00050				

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.0803	2.5763	6.8394	.06200	.00870	F 340.75
Stddev	.0481	.0139	.0431	.00032	.00036	8.17
%RSD	1.5606	.54113	.63001	.51255	4.1790	2.3969
#1	3.0358	2.5920	6.8876	.06237	.00856	338.74
#2	3.0739	2.5655	6.8262	.06184	.00911	333.78
#3	3.1313	2.5714	6.8045	.06181	.00843	349.74
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Sample Name: L1202008601 Acquired: 2/7/2012 18:19:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.7081	F -121660.	.00378	F -1.4592	F 5781.9	F -305470.
Stddev	.0096	256.	.00089	3.2441	17.8	393.
%RSD	.16783	.21016	23.514	222.32	.30784	.12881
#1	5.7179	-121920.	.00286	-4.9925	5796.2	-305690.
#2	5.7077	-121630.	.00464	1.3850	5787.6	-305700.
#3	5.6987	-121410.	.00384	-.77020	5762.0	-305020.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00142	-.00096	2.1205	.00075	.14022	.00644
Stddev	.00208	.00317	.0085	.00008	.00083	.00030
%RSD	146.21	330.87	.40070	11.312	.58974	4.6175
#1	-.00148	.00214	2.1248	.00084	.14044	.00653
#2	.00068	-.00082	2.1259	.00067	.13930	.00667
#3	-.00348	-.00420	2.1107	.00074	.14090	.00610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00160	.00105	.60299	F -.11388
Stddev	.00131	.00018	.00031	.17276
%RSD	82.006	17.288	.05090	151.70
#1	-.00275	.00086	.60328	.07444
#2	-.00017	.00106	.60302	-.26501
#3	-.00188	.00123	.60267	-.15108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202008601 Acquired: 2/7/2012 18:19:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20287.	17368.
Stddev	70.	122.
%RSD	.34681	.70498
#1	20209.	17271.
#2	20307.	17506.
#3	20346.	17329.

Approved: February 08, 2012

Sample Name: L1202008602 Acquired: 2/7/2012 18:23:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00039	21.702	.00068	.08220	.03762	-.00002
Stddev	.00091	.018	.00183	.00244	.00056	.00001
%RSD	230.30	.08321	271.32	2.9644	1.4891	72.224
#1	.00038	21.691	.00111	.08108	.03698	.00000
#2	-.00017	21.691	-.00134	.08053	.03791	-.00002
#3	-.00139	21.722	.00225	.08500	.03798	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.232	F -.00108	1.2338	.01269	.05296	.49794
Stddev	.022	.00013	.0030	.00051	.00071	.00509
%RSD	.13718	11.854	.24360	4.0411	1.3386	1.0230
#1	16.210	-.00122	1.2306	.01236	.05327	.49431
#2	16.255	-.00106	1.2342	.01244	.05215	.49575
#3	16.231	-.00097	1.2366	.01328	.05345	.50377
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		16.200				
Low Limit		-.00050				

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.8469	2.5204	8.0038	.06015	.00119	F 357.28
Stddev	.0383	.0020	.0604	.00053	.00018	1.03
%RSD	1.3461	.07916	.75446	.88634	15.091	.28732
#1	2.8278	2.5195	8.0045	.06076	.00129	356.15
#2	2.8219	2.5227	8.0638	.05989	.00130	357.53
#3	2.8910	2.5190	7.9430	.05980	.00098	358.15
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Sample Name: L1202008602 Acquired: 2/7/2012 18:23:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.9700	F -79766.	.00066	7.0181	F 5611.5	F -299890.
Stddev	.0071	91.	.00100	2.9970	27.3	1059.
%RSD	.14277	.11346	151.86	42.704	.48608	.35324
#1	4.9688	-79746.	.00011	7.2932	5582.8	-299970.
#2	4.9635	-79865.	.00182	3.8930	5637.1	-300900.
#3	4.9776	-79687.	.00006	9.8681	5614.7	-298780.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00064	-.00304	1.6987	.00036	.14659	-.00044
Stddev	.00156	.00226	.0059	.00017	.00023	.00140
%RSD	244.76	74.340	.34678	47.500	.15916	321.95
#1	-.00174	-.00045	1.7019	.00026	.14638	.00072
#2	.00115	-.00409	1.6919	.00026	.14684	-.00200
#3	-.00133	-.00458	1.7023	.00056	.14655	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00236	.00059	.54545	F -.27001
Stddev	.00117	.00015	.00167	.24339
%RSD	49.669	26.006	.30530	90.140
#1	-.00315	.00043	.54501	-.00113
#2	-.00292	.00073	.54404	-.33363
#3	-.00101	.00061	.54729	-.47526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202008602 Acquired: 2/7/2012 18:23:02 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20534.**	**17454.**
Stddev	347.	44.
%RSD	1.6881	.25163
#1	20733.	17455.
#2	20736.	17409.
#3	20134.	17497.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 18:26:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40062	10.216	.39710	.49702	1.0022	.04944	10.149
Stddev	.00501	.020	.00136	.00493	.0032	.00022	.020
%RSD	1.2511	.19702	.34138	.99156	.31714	.45368	.19694
#1	.39768	10.206	.39861	.49335	1.0037	.04931	10.134
#2	.39778	10.240	.39670	.49508	1.0044	.04932	10.171
#3	.40641	10.204	.39599	.50262	.99860	.04970	10.141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04950	.19962	.50418	.50212	3.9947	51.180	1.0072
Stddev	.00025	.00074	.00340	.00085	.0049	.189	.0051
%RSD	.50421	.37109	.67377	.16987	.12281	.36988	.50701
#1	.04978	.20041	.50371	.50310	3.9928	51.305	1.0089
#2	.04940	.19895	.50104	.50156	4.0002	51.272	1.0113
#3	.04931	.19949	.50778	.50169	3.9909	50.962	1.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.060	.49620	1.0092	51.308	.50655	F -71.658	.50902
Stddev	.061	.00210	.0013	.027	.00051	39.488	.00280
%RSD	.60169	.42306	.12807	.05219	.10045	55.106	.55091
#1	10.080	.49707	1.0085	51.336	.50598	-104.07	.51215
#2	10.109	.49772	1.0107	51.283	.50694	-83.220	.50673
#3	9.9924	.49380	1.0084	51.303	.50674	-27.680	.50819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 18:26:35 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.944	10.261	10.111	1.1953	.39292	4.9607	1.0128
Stddev	8.986	.038	.611	.0027	.00103	.0150	.0010
%RSD	75.241	.37501	6.0398	.22326	.26328	.30156	.10341
#1	4.8068	10.217	10.535	1.1960	.39179	4.9774	1.0121
#2	22.035	10.289	9.4112	1.1923	.39316	4.9562	1.0123
#3	8.9886	10.277	10.387	1.1975	.39382	4.9485	1.0140
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000						
Range	10.000%						

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0052	.99164	.50857	.98839	1.0189	F .76992
Stddev	.0007	.00357	.00211	.00815	.0009	.05652
%RSD	.07242	.35960	.41581	.82416	.09038	7.3405
#1	1.0047	.99174	.50879	.98536	1.0181	.70877
#2	1.0060	.99515	.50635	.98219	1.0186	.82023
#3	1.0048	.98802	.51056	.99761	1.0199	.78077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20707.	17193.
Stddev	174.	211.
%RSD	.83908	1.2286
#1	20840.	17037.
#2	20771.	17108.
#3	20511.	17433.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 18:29:47 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00085	.00557	-.00025	.00296	.00026	-.00004	-.01870
Stddev	.00022	.02672	.00062	.00038	.00044	.00002	.01388
%RSD	25.756	480.07	248.29	13.008	172.35	65.257	74.213
#1	-.00083	.03117	.00046	.00287	.00014	-.00001	-.00419
#2	-.00065	-.02214	-.00070	.00263	.00075	-.00006	-.03185
#3	-.00109	.00767	-.00051	.00338	-.00011	-.00003	-.02007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.00015	.00071	.00107	.00372	.11132	-.00200
Stddev	.00015	.00009	.00027	.00048	.00801	.05615	.00075
%RSD	303.06	63.697	38.121	44.855	215.44	50.441	37.551
#1	.00007	.00009	.00054	.00069	-.00527	.15774	-.00252
#2	.00000	.00026	.00103	.00161	.00633	.12733	-.00233
#3	-.00021	.00010	.00057	.00091	.01009	.04891	-.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00279	-.00023	.00064	.06474	-.00059	F -26.913	-.00062
Stddev	.00703	.00065	.00022	.01158	.00022	18.756	.00206
%RSD	251.61	283.25	33.911	17.882	37.854	69.691	330.93
#1	-.00676	-.00018	.00054	.06591	-.00070	-26.337	.00175
#2	-.00694	.00039	.00088	.07568	-.00033	-45.951	-.00199
#3	.00532	-.00091	.00049	.05262	-.00074	-8.4517	-.00162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 18:29:47 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **10.042**	F **-.21645**	F **11.359**	**-.00092**	**-.00266**	**.01300**	**.00066**
Stddev	2.369	.01610	1.587	.00116	.00166	.00099	.00027
%RSD	23.594	7.4400	13.971	126.61	62.297	7.6095	41.195
#1	12.708	-.20230	10.265	-.00098	-.00246	.01413	.00064
#2	9.2391	-.23397	13.179	-.00204	-.00441	.01227	.00093
#3	8.1781	-.21308	10.633	.00028	-.00111	.01261	.00039
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00046**	**.00025**	**.00000**	**-.00048**	**-.08381**
Stddev	.00010	.00103	.00093	.00021	.00007	.05021
%RSD	144.03	223.41	368.92	8800.1	13.555	59.909
#1	.00018	-.00076	-.00066	.00023	-.00041	-.09199
#2	-.00002	-.00131	.00121	-.00018	-.00053	-.12943
#3	.00005	.00068	.00021	-.00004	-.00051	-.03001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20799.**	**17048.**
Stddev	101.	174.
%RSD	.48414	1.0219
#1	20913.	16860.
#2	20764.	17080.
#3	20721.	17204.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008603 Acquired: 2/7/2012 18:33:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	79.081	.00446	.24558	.26449	-.00003
Stddev	.00084	.141	.00125	.00130	.00112	.00004
%RSD	559.41	.17853	27.963	.53086	.42438	163.14
#1	-.00081	79.057	.00586	.24683	.26578	-.00001
#2	.00076	78.954	.00404	.24570	.26384	-.00008
#3	.00050	79.233	.00347	.24423	.26385	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	30.707	F -.00337	4.1227	.05286	.18721	7.5837
Stddev	.019	.00009	.0062	.00057	.00035	.0278
%RSD	.06291	2.7379	.14936	1.0696	.18913	.36633
#1	30.730	-.00339	4.1292	.05313	.18760	7.6155
#2	30.695	-.00326	4.1170	.05323	.18712	7.5714
#3	30.698	-.00344	4.1220	.05221	.18691	7.5642
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		16.200				
Low Limit		-.00050				

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.9063	3.5271	18.860	.19175	.01597	F 333.84
Stddev	.0972	.0108	.058	.00092	.00038	4.17
%RSD	1.0919	.30635	.30840	.48064	2.3589	1.2480
#1	8.8861	3.5393	18.922	.19264	.01585	329.05
#2	8.8208	3.5231	18.852	.19080	.01639	335.89
#3	9.0121	3.5188	18.807	.19180	.01567	336.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Sample Name: L1202008603 Acquired: 2/7/2012 18:33:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.565**	F **-368200.**	**.00851**	F **16.063**	F **5754.5**	F **-304020.**
Stddev	.042	685.	.00167	1.787	13.0	92.
%RSD	.23809	.18602	19.633	11.127	.22597	.03031
#1	17.607	-368840.	.00664	15.542	5766.5	-304030.
#2	17.523	-367480.	.00987	14.594	5740.7	-303920.
#3	17.565	-368300.	.00901	18.053	5756.3	-304110.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00364**	**.00251**	**5.0570**	**.00230**	**.34897**	**.01638**
Stddev	.00104	.00364	.0116	.00035	.00012	.00041
%RSD	28.535	144.66	.22883	15.238	.03482	2.4848
#1	-.00370	.00670	5.0696	.00215	.34903	.01600
#2	-.00257	.00010	5.0470	.00205	.34883	.01633
#3	-.00464	.00074	5.0543	.00270	.34905	.01681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	**-.01038**	**.00231**	**1.9036**	F **-.25983**
Stddev	.00051	.00004	.0037	.11036
%RSD	4.9447	1.9220	.19434	42.473
#1	-.00992	.00228	1.9078	-.37685
#2	-.01028	.00229	1.9008	-.15763
#3	-.01093	.00236	1.9023	-.24502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202008603 Acquired: 2/7/2012 18:33:18 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20933.	18404.
Stddev	83.	98.
%RSD	.39529	.53477
#1	20841.	18334.
#2	20957.	18516.
#3	21002.	18361.

Approved: February 08, 2012

Sample Name: L1202008604 Acquired: 2/7/2012 18:36:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**55.286**	**.00219**	**.18324**	**.04905**	**-.00006**
Stddev	.00055	.154	.00122	.00073	.00068	.00001
%RSD	103.82	.27848	55.826	.39788	1.3918	21.304
#1	-.00071	55.124	.00223	.18407	.04929	-.00008
#2	.00009	55.304	.00095	.18271	.04828	-.00006
#3	-.00096	55.431	.00340	.18293	.04959	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.776**	F **-.00264**	**3.1526**	**.03078**	**.13445**	**1.3123**
Stddev	.052	.00019	.0033	.00089	.00022	.0027
%RSD	.16405	7.2149	.10388	2.8868	.16586	.20731
#1	31.775	-.00282	3.1559	.03170	.13468	1.3127
#2	31.724	-.00266	3.1493	.02993	.13443	1.3148
#3	31.828	-.00244	3.1526	.03071	.13423	1.3094
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		16.200				
Low Limit		-.00050				

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.3209**	**3.3502**	**18.028**	**.15229**	**.00230**	F **348.65**
Stddev	.0790	.0107	.013	.00093	.00013	2.75
%RSD	1.2496	.31783	.07427	.61360	5.8537	.78969
#1	6.2306	3.3567	18.015	.15148	.00229	350.58
#2	6.3549	3.3379	18.027	.15207	.00217	345.49
#3	6.3772	3.3560	18.042	.15331	.00244	349.87
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008604 Acquired: 2/7/2012 18:36:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.594	F -202060.	.00251	F 9.2390	F 5488.9	F -293860.
Stddev	.008	177.	.00030	2.3599	17.4	163.
%RSD	.06159	.08771	11.868	25.542	.31621	.05559
#1	12.602	-202210.	.00249	9.1612	5497.0	-293980.
#2	12.586	-202100.	.00282	11.637	5468.9	-293680.
#3	12.593	-201860.	.00222	6.9190	5500.7	-293940.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00045	-.00252	3.3570	.00065	.30295	-.00260
Stddev	.00124	.00359	.0030	.00017	.00036	.00105
%RSD	278.11	142.50	.08860	26.259	.11781	40.378
#1	.00097	-.00199	3.3604	.00049	.30254	-.00288
#2	-.00135	.00078	3.3550	.00083	.30320	-.00144
#3	-.00096	-.00634	3.3554	.00064	.30311	-.00349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00588	.00071	1.3692	F -.21514
Stddev	.00073	.00042	.0023	.06484
%RSD	12.381	59.042	.16512	30.140
#1	-.00630	.00033	1.3697	-.24261
#2	-.00630	.00116	1.3711	-.26172
#3	-.00504	.00064	1.3667	-.14108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008604 Acquired: 2/7/2012 18:36:43 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20718.**	**17766.**
Stddev	56.	146.
%RSD	.27184	.82437
#1	20667.	17724.
#2	20709.	17928.
#3	20779.	17644.

Approved: February 08, 2012

Sample Name: L1202008605 Acquired: 2/7/2012 18:40:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.34087**	**-.00111**	**.01254**	**.00319**	**-.00006**
Stddev	.00035	.04854	.00071	.00088	.00028	.00002
%RSD	66.406	14.240	63.837	7.0494	8.7025	25.313
#1	-.00034	.31824	-.00105	.01312	.00297	-.00004
#2	-.00031	.39659	-.00044	.01299	.00310	-.00008
#3	-.00094	.30777	-.00185	.01152	.00350	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.6268**	**-.00016**	**.02226**	**.00075**	**.00216**	**.04452**
Stddev	.0294	.00005	.00011	.00035	.00062	.00424
%RSD	.52216	31.295	.50370	47.518	28.786	9.5337
#1	5.6036	-.00012	.02219	.00097	.00227	.04864
#2	5.6169	-.00014	.02219	.00094	.00149	.04476
#3	5.6598	-.00021	.02239	.00034	.00272	.04016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1174**	**.58734**	**1.7140**	**.00146**	**.00246**	**114.98**
Stddev	.0249	.00314	.0073	.00095	.00014	.49
%RSD	2.2263	.53380	.42624	65.098	5.6219	.42509
#1	1.1085	.58950	1.7201	.00046	.00260	114.43
#2	1.0981	.58876	1.7059	.00235	.00232	115.15
#3	1.1455	.58374	1.7161	.00155	.00247	115.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008605 Acquired: 2/7/2012 18:40:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08393	F -2907.5	.00203	7.4592	F 1889.0	F -100010.
Stddev	.00012	32.0	.00083	6.7558	14.6	221.
%RSD	.13710	1.0989	40.770	90.571	.77245	.22129
#1	.08387	-2885.6	.00290	10.589	1902.7	-100240.
#2	.08406	-2944.2	.00193	-.29399	1890.5	-99986.
#3	.08386	-2892.8	.00125	12.082	1873.6	-99796.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00070	-.00464	.70904	.00007	.03060	-.00042
Stddev	.00114	.00133	.00380	.00038	.00029	.00158
%RSD	163.65	28.695	.53597	506.05	.95192	377.21
#1	-.00054	-.00352	.71223	.00050	.03027	-.00190
#2	.00171	-.00429	.71006	-.00020	.03072	-.00061
#3	.00093	-.00611	.70484	-.00008	.03081	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00084	.00015	.06652	F -.21701
Stddev	.00082	.00020	.00023	.15383
%RSD	97.276	133.22	.34521	70.884
#1	-.00163	.00020	.06633	-.39116
#2	-.00091	-.00007	.06678	-.09967
#3	.00001	.00032	.06647	-.16020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202008605 Acquired: 2/7/2012 18:40:08 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20483.**	**17743.**
Stddev	79.	128.
%RSD	.38627	.72387
#1	20525.	17610.
#2	20532.	17752.
#3	20392.	17866.

Approved: February 08, 2012

Sample Name: L1202009101 Acquired: 2/7/2012 18:43:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00020	.02599	.00065	.02743	.02006	-.00003	31.677
Stddev	.00084	.01305	.00192	.00162	.00038	.00001	.129
%RSD	427.50	50.198	293.44	5.9110	1.8910	28.657	.40844
#1	.00045	.02419	.00060	.02665	.01997	-.00004	31.530
#2	-.00115	.03984	.00260	.02930	.02047	-.00002	31.772
#3	.00011	.01393	-.00124	.02635	.01973	-.00003	31.729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	-.00026	.00563	-.00010	.01878	2.2344	.01252
Stddev	.00012	.00013	.00045	.00015	.00350	.0135	.00504
%RSD	78.081	48.485	8.0258	158.99	18.635	.60411	40.274
#1	.00016	-.00038	.00513	-.00001	.01805	2.2258	.01830
#2	.00003	-.00028	.00575	-.00028	.02259	2.2500	.01019
#3	.00027	-.00013	.00600	.00000	.01571	2.2275	.00906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.7710	.00078	.00509	26.575	.00012	F -28.523	.00111
Stddev	.0232	.00073	.00009	.181	.00037	11.018	.00196
%RSD	.61424	92.979	1.6728	.68163	314.22	38.629	177.05
#1	3.7445	.00023	.00504	26.383	.00007	-19.162	-.00112
#2	3.7811	.00160	.00504	26.743	-.00023	-25.742	.00257
#3	3.7874	.00052	.00519	26.597	.00051	-40.666	.00188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202009101 Acquired: 2/7/2012 18:43:28 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.3365	F 491.81	F -24033.	-.00001	-.00028	13.540	-.00009
Stddev	2.1760	3.79	71.	.00312	.00176	.049	.00038
%RSD	29.660	.77064	.29608	61290.	618.68	.36435	421.68
#1	7.8708	495.53	-24066.	-.00342	.00166	13.580	-.00023
#2	9.1955	487.95	-23952.	.00270	-.00074	13.485	-.00038
#3	4.9430	491.95	-24082.	.00070	-.00177	13.555	.00034
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.24360	-.00143	-.00010	.00733	.01178	.02989
Stddev	.00160	.00151	.00061	.00034	.00005	.06857
%RSD	.65872	105.86	624.39	4.6813	.42927	229.41
#1	.24200	-.00313	.00046	.00760	.01177	-.03982
#2	.24521	-.00090	-.00075	.00746	.01174	.03223
#3	.24358	-.00025	-.00001	.00695	.01184	.09725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	22422.	16915.
Stddev	252.	169.
%RSD	1.1243	.99794
#1	22619.	17088.
#2	22138.	16905.
#3	22509.	16751.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 18:46:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41877	10.011	.40188	.52496	.99432	.05118	10.003
Stddev	.00572	.015	.00353	.00755	.00574	.00098	.037
%RSD	1.3647	.15259	.87741	1.4375	.57750	1.9113	.37232
#1	.41234	9.9992	.39785	.51668	.98772	.05011	9.9602
#2	.42327	10.007	.40343	.53145	.99814	.05203	10.030
#3	.42070	10.029	.40437	.52675	.99710	.05140	10.018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05037	.20101	.51922	.50460	3.9250	50.199	1.0039
Stddev	.00036	.00143	.00874	.00367	.0246	.101	.0066
%RSD	.71066	.70968	1.6834	.72644	.62785	.20059	.65329
#1	.04996	.19938	.50951	.50042	3.8982	50.095	.99662
#2	.05061	.20202	.52645	.50726	3.9301	50.296	1.0056
#3	.05055	.20163	.52170	.50613	3.9467	50.207	1.0094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8412	.49053	1.0050	50.618	.50742	F -41.144	.51019
Stddev	.0569	.00215	.0090	.144	.00395	16.364	.00306
%RSD	.57827	.43868	.89376	.28406	.77929	39.772	.59919
#1	9.7761	.48805	.99500	50.453	.50285	-22.273	.50794
#2	9.8817	.49155	1.0078	50.715	.50968	-49.757	.50896
#3	9.8657	.49198	1.0123	50.687	.50973	-51.403	.51367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 18:46:51 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 20.115	10.299	F 12.596	1.2120	.40475	5.0315	1.0121
Stddev	.545	.153	2.174	.0084	.00196	.0324	.0109
%RSD	2.7107	1.4838	17.259	.69174	.48301	.64407	1.0755
#1	19.501	10.126	15.103	1.2024	.40347	4.9941	.99956
#2	20.542	10.358	11.455	1.2177	.40700	5.0498	1.0190
#3	20.302	10.414	11.231	1.2160	.40379	5.0505	1.0178
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0003	.98370	.51437	1.0289	1.0137	F .80466
Stddev	.0040	.00685	.00561	.0180	.0094	.06903
%RSD	.39810	.69597	1.0911	1.7451	.93014	8.5792
#1	.99571	.97600	.50802	1.0089	1.0029	.82983
#2	1.0021	.98910	.51867	1.0436	1.0180	.72658
#3	1.0030	.98600	.51641	1.0344	1.0202	.85759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21581.	19611.
Stddev	314.	116.
%RSD	1.4543	.59370
#1	21943.	19744.
#2	21414.	19525.
#3	21386.	19565.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 18:50:04 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**-.00317**	**-.00054**	**.00223**	**-.00012**	**-.00006**	**-.01133**
Stddev	.00066	.02080	.00087	.00036	.00014	.00002	.00334
%RSD	327.46	656.33	160.85	16.322	118.41	36.392	29.434
#1	.00007	.01527	.00046	.00226	.00001	-.00003	-.01365
#2	.00027	.00094	-.00103	.00185	-.00027	-.00006	-.00751
#3	-.00095	-.02571	-.00105	.00258	-.00009	-.00007	-.01284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00014**	**-.00009**	**.00005**	**.00031**	**-.00119**	**.02105**	**.00214**
Stddev	.00003	.00029	.00058	.00075	.00449	.03136	.00418
%RSD	21.430	328.49	1189.3	244.27	377.23	148.93	194.92
#1	-.00015	.00010	.00021	-.00012	-.00573	.04521	.00602
#2	-.00016	.00006	.00053	-.00013	-.00110	.03233	.00268
#3	-.00010	-.00043	-.00059	.00117	.00325	-.01438	-.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00222**	**-.00022**	**.00074**	**.07276**	**.00012**	F **-13.838**	**.00047**
Stddev	.01583	.00010	.00013	.01356	.00038	23.612	.00150
%RSD	713.97	46.342	17.750	18.641	320.61	170.63	316.57
#1	.01683	-.00015	.00072	.06509	-.00030	-40.315	-.00125
#2	-.01460	-.00034	.00062	.08842	.00021	5.0350	.00150
#3	.00441	-.00017	.00088	.06477	.00044	-6.2340	.00117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 18:50:04 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.7630	F -.21914	F 9.3576	.00009	-.00198	.00752	.00026
Stddev	10.776	.07216	2.7111	.00129	.00257	.00136	.00012
%RSD	226.25	32.930	28.972	1416.6	129.75	18.074	45.436
#1	-5.6765	-.15110	6.2342	.00114	-.00361	.00898	.00036
#2	15.847	-.21151	10.737	.00048	-.00330	.00628	.00013
#3	4.1188	-.29482	11.102	-.00135	.00098	.00731	.00028
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	-.00043	-.00033	-.00004	-.00063	F -.16900
Stddev	.00012	.00089	.00073	.00015	.00006	.16576
%RSD	420.04	204.78	219.45	399.32	9.2252	98.085
#1	-.00003	-.00087	.00045	.00009	-.00069	-.33109
#2	.00016	-.00103	-.00100	.00000	-.00063	.00020
#3	-.00005	.00059	-.00045	-.00021	-.00057	-.17610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21464.	18043.
Stddev	159.	72.
%RSD	.74036	.39725
#1	21503.	18125.
#2	21600.	18012.
#3	21289.	17992.

Approved: February 08, 2012

Sample Name: PBW 8T Acquired: 2/7/2012 18:53:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00059	.03341	-.00044	.00167	.00021	-.00007	-.01137
Stddev	.00037	.03407	.00028	.00168	.00018	.00002	.01788
%RSD	63.384	101.98	63.478	100.11	85.681	25.609	157.33
#1	-.00100	.05319	-.00060	.00351	.00035	-.00007	-.00833
#2	-.00027	-.00593	-.00060	.00128	.00028	-.00008	.00481
#3	-.00049	.05298	-.00012	.00023	.00001	-.00005	-.03057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	-.00070	.00008	.00025	-.00017	-.05010	.00505
Stddev	.00012	.00020	.00052	.00037	.00500	.02699	.00044
%RSD	155.85	28.378	634.10	149.52	2954.5	53.882	8.6796
#1	-.00002	-.00089	.00022	-.00010	-.00154	-.02526	.00536
#2	.00003	-.00049	-.00050	.00020	.00538	-.04621	.00455
#3	.00021	-.00073	.00053	.00063	-.00434	-.07882	.00523
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01027	-.00022	.00010	-.01010	-.00089	42.841	.00076
Stddev	.01646	.00008	.00020	.00926	.00075	14.417	.00069
%RSD	160.32	36.485	205.98	91.630	84.364	33.653	90.971
#1	-.00290	-.00015	-.00006	-.00639	-.00120	34.202	.00045
#2	.00498	-.00031	.00032	-.00328	-.00143	34.836	.00028
#3	.02872	-.00021	.00002	-.02064	-.00003	59.484	.00155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW 8T Acquired: 2/7/2012 18:53:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.73995	F -.30556	F 11.638	.00165	-.00032	.00879	.00021
Stddev	4.4181	.01163	2.082	.00028	.00242	.00120	.00015
%RSD	597.08	3.8072	17.890	16.716	753.25	13.681	70.709
#1	4.2154	-.29486	9.9534	.00142	-.00277	.01011	.00034
#2	-2.1675	-.31794	10.995	.00157	.00207	.00851	.00022
#3	-4.2678	-.30388	13.966	.00195	-.00027	.00775	.00005
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00020	.00021	-.00130	.00020	-.00112	F -.27557
Stddev	.00007	.00168	.00242	.00012	.00011	.10203
%RSD	35.763	796.67	185.24	58.056	9.8924	37.026
#1	.00018	.00010	-.00107	.00017	-.00100	-.18833
#2	.00014	.00194	-.00383	.00033	-.00122	-.38777
#3	.00027	-.00141	.00099	.00010	-.00113	-.25060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20985.	17184.
Stddev	126.	208.
%RSD	.60142	1.2122
#1	20840.	17405.
#2	21054.	17157.
#3	21063.	16991.

Approved: February 08, 2012

Sample Name: LCSW 8T Acquired: 2/7/2012 18:57:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19237	4.9237	.18403	.90366	.48640	.02346	4.8241
Stddev	.00086	.0111	.00123	.00782	.00182	.00011	.0160
%RSD	.44489	.22433	.66878	.86529	.37463	.45704	.33117
#1	.19332	4.9302	.18274	.91238	.48437	.02359	4.8160
#2	.19211	4.9299	.18519	.89727	.48691	.02338	4.8425
#3	.19167	4.9109	.18417	.90133	.48790	.02342	4.8138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02351	.09780	.24841	.24386	1.9068	24.509	.49126
Stddev	.00013	.00029	.00193	.00143	.0160	.153	.00148
%RSD	.55293	.29505	.77658	.58613	.84109	.62550	.30144
#1	.02336	.09757	.25063	.24347	1.8918	24.335	.49201
#2	.02357	.09772	.24745	.24267	1.9050	24.622	.48956
#3	.02360	.09813	.24714	.24545	1.9237	24.570	.49222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.9066	.23765	.50135	25.137	.24823	18.627	.24625
Stddev	.0240	.00164	.00100	.146	.00066	2.970	.00210
%RSD	.48843	.69182	.19873	.57950	.26390	15.947	.85440
#1	4.8891	.23581	.50214	24.969	.24804	16.615	.24864
#2	4.8969	.23815	.50023	25.231	.24769	22.038	.24540
#3	4.9339	.23898	.50167	25.210	.24896	17.227	.24470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW 8T Acquired: 2/7/2012 18:57:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.2851	4.7825	F 13.028	.56224	.17835	2.4480	.00065
Stddev	2.4584	.0529	.814	.00373	.00228	.0034	.00017
%RSD	74.833	1.1053	6.2466	.66317	1.2761	.13958	26.616
#1	2.9720	4.7453	13.690	.55895	.17699	2.4472	.00085
#2	5.8851	4.7593	13.274	.56147	.18098	2.4451	.00056
#3	.99837	4.8430	12.119	.56629	.17708	2.4518	.00055
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.47969	.47319	.24696	.48735	.49151	.05296
Stddev	.00373	.00328	.00108	.00306	.00136	.10569
%RSD	.77857	.69322	.43541	.62855	.27617	199.56
#1	.47544	.46941	.24816	.49074	.49144	.16062
#2	.48246	.47520	.24666	.48477	.49019	-.05065
#3	.48117	.47498	.24607	.48654	.49290	.04892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20473.	17008.
Stddev	45.	24.
%RSD	.21784	.14050
#1	20479.	16992.
#2	20514.	17035.
#3	20425.	16996.

Approved: February 08, 2012

Sample Name: FBLK Acquired: 2/7/2012 19:00:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388639-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00057	-.00452	-.00168	.00380	.00038	-.00005	-.01897
Stddev	.00021	.03661	.00099	.00066	.00024	.00002	.01692
%RSD	36.204	810.00	58.635	17.326	62.724	47.265	89.221
#1	-.00046	.02515	-.00254	.00412	.00023	-.00005	-.02280
#2	-.00044	.00672	-.00190	.00423	.00025	-.00008	-.00046
#3	-.00081	-.04544	-.00060	.00304	.00065	-.00003	-.03364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	-.00046	.00038	.00074	-.00056	.08830	.00012
Stddev	.00004	.00031	.00054	.00018	.00426	.05521	.00195
%RSD	160.38	67.037	144.26	24.524	767.98	62.523	1558.3
#1	.00001	-.00082	-.00011	.00082	-.00510	.03381	.00230
#2	-.00002	-.00025	.00097	.00086	.00007	.14420	-.00047
#3	-.00006	-.00031	.00027	.00053	.00336	.08688	-.00146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02313	-.00055	-.00001	144.92	.00061	51.917	-.00111
Stddev	.00612	.00029	.00008	.33	.00073	8.666	.00124
%RSD	26.464	53.799	1246.8	.22676	119.07	16.692	111.37
#1	.01712	-.00021	.00006	144.81	.00103	57.820	-.00245
#2	.02936	-.00077	.00002	144.67	-.00023	41.968	.00001
#3	.02292	-.00066	-.00009	145.29	.00104	55.963	-.00091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Sample Name: FBLK Acquired: 2/7/2012 19:00:19 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388639-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.0394	F -.43735	F 12.556	-.00013	-.00122	.01796	.00313
Stddev	4.1015	.06577	2.826	.00045	.00241	.00104	.00011
%RSD	51.017	15.037	22.505	355.74	198.14	5.8142	3.6628
#1	7.6210	-.43008	9.3810	.00024	-.00259	.01714	.00326
#2	12.334	-.50645	14.795	-.00063	-.00264	.01760	.00308
#3	4.1632	-.37552	13.493	.00001	.00157	.01913	.00305
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00025	-.00057	-.00258	-.00002	.00056	F -.20061
Stddev	.00014	.00122	.00217	.00035	.00006	.12789
%RSD	54.142	214.25	84.109	2101.1	10.814	63.751
#1	.00012	.00001	-.00105	.00011	.00059	-.08682
#2	.00024	-.00197	-.00506	.00025	.00049	-.17599
#3	.00039	.00025	-.00162	-.00041	.00060	-.33902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20784.	17331.
Stddev	21.	28.
%RSD	.09946	.16172
#1	20772.	17361.
#2	20808.	17327.
#3	20773.	17305.

Approved: February 08, 2012

Sample Name: FBLK1 Acquired: 2/7/2012 19:03:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388895-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00053	.00599	-.00130	.00190	-.00033	-.00004	-.00472
Stddev	.00047	.01355	.00143	.00023	.00030	.00001	.00641
%RSD	88.715	226.11	110.73	12.136	90.730	26.722	135.90
#1	-.00104	.02038	-.00232	.00215	-.00061	-.00003	.00086
#2	-.00012	.00413	.00034	.00170	-.00037	-.00005	-.00329
#3	-.00043	-.00653	-.00190	.00184	-.00001	-.00005	-.01172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	-.00032	.00075	.00080	.00232	.06728	-.00091
Stddev	.00011	.00013	.00011	.00015	.00386	.03179	.00121
%RSD	129.46	40.846	15.265	19.296	166.64	47.245	132.40
#1	.00002	-.00032	.00086	.00089	.00079	.08959	-.00199
#2	.00022	-.00019	.00077	.00062	.00670	.03089	.00039
#3	.00002	-.00045	.00063	.00089	-.00055	.08138	-.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02018	.00011	-.00006	148.23	-.00007	28.703	.00050
Stddev	.00360	.00024	.00023	.22	.00027	14.646	.00087
%RSD	17.817	224.11	380.76	.14831	394.86	51.027	172.89
#1	.01616	-.00007	.00016	148.43	-.00035	39.130	.00121
#2	.02128	.00000	-.00003	148.26	.00019	11.958	.00075
#3	.02309	.00039	-.00031	148.00	-.00005	35.020	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: FBLK1 Acquired: 2/7/2012 19:03:44 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388895-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.9511**	F **-.37154**	**6.8362**	**.00043**	**-.00346**	**.01884**	**.00072**
Stddev	4.7136	.03354	2.7649	.00241	.00259	.00061	.00004
%RSD	52.660	9.0267	40.445	560.21	74.730	3.2497	5.0231
#1	12.109	-.40229	8.0518	.00321	-.00581	.01843	.00069
#2	3.5329	-.37655	8.7849	-.00084	-.00388	.01954	.00076
#3	11.212	-.33578	3.6717	-.00108	-.00069	.01854	.00070
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000					
Low Limit		-.00400					

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00022**	**-.00002**	**-.00006**	**.00024**	F **-.26833**
Stddev	.00007	.00191	.00057	.00005	.00013	.37707
%RSD	53.370	876.30	2620.9	89.387	55.652	140.52
#1	.00008	-.00058	.00055	-.00009	.00015	-.40051
#2	.00010	-.00116	-.00003	.00000	.00039	.15703
#3	.00020	.00240	-.00059	-.00008	.00017	-.56151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20805.**	**17848.**
Stddev	116.	252.
%RSD	.55679	1.4093
#1	20819.	18125.
#2	20913.	17785.
#3	20683.	17634.

Approved: February 08, 2012

Erin D. Long

Sample Name: FBLK2 Acquired: 2/7/2012 19:07:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388895-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	.04805	-.00024	.00066	-.00009	-.00004	.09432
Stddev	.00026	.01872	.00061	.00032	.00022	.00003	.00670
%RSD	85.694	38.959	257.28	49.156	251.94	78.702	7.0991
#1	-.00016	.06681	-.00094	.00090	.00006	-.00005	.09322
#2	-.00015	.04798	.00012	.00080	.00002	-.00006	.10150
#3	-.00061	.02937	.00011	.00029	-.00034	.00000	.08825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	-.00031	.00049	.00076	.05657	.02835	.00210
Stddev	.00005	.00019	.00056	.00036	.00386	.02110	.00142
%RSD	287.73	59.921	114.31	46.860	6.8174	74.431	67.397
#1	-.00007	-.00012	.00070	.00059	.06091	.05131	.00305
#2	.00000	-.00033	-.00015	.00117	.05525	.00982	.00047
#3	.00002	-.00049	.00093	.00052	.05354	.02392	.00279
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04891	.00118	.00001	.11186	-.00015	12.209	.00080
Stddev	.01520	.00062	.00033	.00723	.00040	24.869	.00099
%RSD	31.077	52.682	2610.1	6.4606	261.90	203.70	124.67
#1	.05967	.00143	-.00034	.11145	-.00008	36.090	.00162
#2	.05554	.00047	.00006	.11928	-.00058	14.078	.00107
#3	.03152	.00163	.00032	.10484	.00021	-13.543	-.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: FBLK2 Acquired: 2/7/2012 19:07:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388895-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.367	.32779	F -20.823	.00113	.00078	.09398	.00035
Stddev	3.187	.04876	2.152	.00171	.00189	.00127	.00018
%RSD	22.179	14.875	10.334	152.19	242.76	1.3551	51.679
#1	12.991	.36011	-22.943	.00300	-.00124	.09327	.00015
#2	12.100	.35156	-20.884	.00073	.00106	.09545	.00051
#3	18.011	.27171	-18.641	-.00036	.00251	.09322	.00039
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000		9.0000				
Low Limit	-.00400		-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00066	.00160	-.00282	.00012	.00082	F -.05325
Stddev	.00011	.00094	.00063	.00028	.00004	.21252
%RSD	17.085	58.926	22.505	243.38	4.5778	399.10
#1	.00079	.00254	-.00322	.00021	.00085	-.08166
#2	.00057	.00066	-.00209	-.00020	.00078	.17205
#3	.00063	.00160	-.00315	.00033	.00083	-.25014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21848.	18642.
Stddev	97.	339.
%RSD	.44308	1.8197
#1	21927.	18485.
#2	21878.	19031.
#3	21740.	18409.

Approved: February 08, 2012

Sample Name: L1202003901 Acquired: 2/7/2012 19:10:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	-.02102	-.00022	.04275	.10750	-.00004	55.972
Stddev	.00038	.02325	.00106	.00043	.00034	.00002	.103
%RSD	122.18	110.60	474.86	1.0169	.31632	41.010	.18354
#1	-.00063	.00558	-.00141	.04237	.10769	-.00003	55.861
#2	.00010	-.03117	.00013	.04322	.10711	-.00003	55.991
#3	-.00040	-.03748	.00061	.04264	.10771	-.00006	56.064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00220	.00001	.01147	.00038	.02605	.21870	.00887
Stddev	.00009	.00027	.00044	.00015	.00490	.02065	.00189
%RSD	4.1420	3416.5	3.8543	39.568	18.818	9.4441	21.323
#1	.00218	.00007	.01189	.00047	.03166	.24121	.01070
#2	.00230	.00024	.01152	.00046	.02393	.20062	.00692
#3	.00212	-.00028	.01101	.00021	.02257	.21427	.00900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.91125	.23545	-.00020	150.48	.00194	23.443	.00320
Stddev	.01593	.00032	.00006	.13	.00024	23.132	.00101
%RSD	1.7479	.13408	28.648	.08695	12.342	98.675	31.499
#1	.91389	.23574	-.00025	150.34	.00201	8.7648	.00435
#2	.92570	.23511	-.00021	150.60	.00168	11.455	.00249
#3	.89417	.23550	-.00014	150.50	.00214	50.108	.00275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202003901 Acquired: 2/7/2012 19:10:36 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.3324**	F **58.535**	F **-130.42**	**-.00553**	**-.00096**	**1.1462**	**.00056**
Stddev	6.1730	.116	2.06	.00014	.00208	.0051	.00021
%RSD	142.48	.19744	1.5770	2.4562	216.85	.44610	38.173
#1	10.129	58.661	-132.16	-.00552	.00095	1.1520	.00051
#2	5.0258	58.435	-128.15	-.00540	-.00318	1.1426	.00037
#3	-2.1580	58.509	-130.93	-.00567	-.00065	1.1440	.00079
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05753**	**-.00180**	**-.00129**	**.00021**	**14.478**	F **-.21507**
Stddev	.00014	.00040	.00053	.00016	.040	.08189
%RSD	.24745	22.222	40.810	74.003	.27780	38.075
#1	.05740	-.00134	-.00107	.00032	14.487	-.12658
#2	.05751	-.00209	-.00189	.00029	14.513	-.28817
#3	.05768	-.00196	-.00091	.00003	14.434	-.23047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**21257.**	**18496.**
Stddev	45.	170.
%RSD	.21052	.91963
#1	21268.	18403.
#2	21208.	18692.
#3	21295.	18392.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202006401 Acquired: 2/7/2012 19:13:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00057	.08918	-.00043	.03915	.17686	-.00003	328.98
Stddev	.00031	.02408	.00143	.00055	.00078	.00002	1.66
%RSD	54.297	27.001	333.31	1.3942	.43943	75.604	.50575
#1	-.00029	.11451	-.00190	.03886	.17611	-.00003	327.45
#2	-.00090	.08645	-.00034	.03978	.17682	-.00005	328.74
#3	-.00052	.06658	.00095	.03880	.17766	-.00001	330.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	-.00045	.00147	.00144	.22741	190.47	.03575
Stddev	.00015	.00018	.00027	.00085	.00246	.86	.00429
%RSD	350.01	39.707	18.555	59.072	1.0824	.44920	12.010
#1	-.00003	-.00054	.00120	.00126	.23025	189.78	.03365
#2	-.00006	-.00025	.00174	.00237	.22597	190.20	.03291
#3	.00022	-.00057	.00147	.00070	.22601	191.42	.04069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08941	.00422	.00245	228.95	.00019	F -288.01	.00913
Stddev	.01057	.00016	.00014	14.54	.00059	18.43	.00103
%RSD	11.820	3.7496	5.6483	6.3499	312.84	6.3988	11.264
#1	.10064	.00408	.00260	212.19	-.00030	-286.02	.01021
#2	.07965	.00420	.00241	236.54	.00003	-307.35	.00816
#3	.08795	.00439	.00233	238.13	.00084	-270.66	.00901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202006401 Acquired: 2/7/2012 19:13:58 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 23.760	F 356.15	F -1998.2	.00048	.07359	.16001	.00008
Stddev	5.649	1.31	8.5	.00262	.00207	.00240	.00010
%RSD	23.777	.36888	.42786	542.99	2.8078	1.5000	126.54
#1	29.998	355.81	-1991.1	.00340	.07234	.15823	.00001
#2	22.295	355.05	-1995.8	-.00032	.07245	.15906	.00004
#3	18.987	357.60	-2007.7	-.00164	.07598	.16274	.00020
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.37801	-.00749	-.00158	.00010	.01526	F -.35937
Stddev	.00130	.00030	.00168	.00013	.00013	.39874
%RSD	.34507	4.0322	105.92	125.80	.87142	110.96
#1	.37735	-.00715	-.00262	.00023	.01518	-.79152
#2	.37716	-.00762	-.00249	-.00003	.01518	-.00572
#3	.37951	-.00770	.00035	.00011	.01541	-.28086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20133.	19182.
Stddev	21.	303.
%RSD	.10649	1.5787
#1	20126.	19479.
#2	20157.	19193.
#3	20115.	18874.

Approved: February 08, 2012

Sample Name: L1202006401PS Acquired: 2/7/2012 19:17:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388967-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.18995	4.8640	.18863	.94150	.63167	.02324	305.95
Stddev	.00229	.0410	.00326	.00986	.00164	.00024	1.05
%RSD	1.2047	.84187	1.7305	1.0471	.25930	1.0119	.34188
#1	.18879	4.8224	.19237	.93814	.63348	.02326	305.09
#2	.19258	4.8651	.18720	.95260	.63124	.02346	307.11
#3	.18847	4.9043	.18634	.93377	.63029	.02299	305.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02382	.09310	.23746	.23449	2.0387	197.83	.50506
Stddev	.00003	.00031	.00211	.00027	.0114	.52	.00147
%RSD	.11048	.32961	.89004	.11376	.55772	.26100	.29124
#1	.02381	.09282	.23699	.23476	2.0516	197.51	.50660
#2	.02385	.09343	.23977	.23423	2.0299	198.43	.50490
#3	.02381	.09306	.23563	.23446	2.0348	197.55	.50367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.6583	.23397	.49438	237.59	.23601	F -283.40	.23931
Stddev	.0130	.00123	.00100	3.73	.00051	20.95	.00020
%RSD	.27952	.52722	.20322	1.5707	.21437	7.3913	.08346
#1	4.6528	.23314	.49391	233.34	.23543	-289.32	.23950
#2	4.6732	.23539	.49370	239.14	.23621	-260.13	.23911
#3	4.6490	.23339	.49554	240.30	.23638	-300.74	.23932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202006401PS Acquired: 2/7/2012 19:17:29 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388967-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 20.743	F 327.19	F -1824.5	.56011	.25084	2.6358	.00133
Stddev	4.259	.51	6.2	.00380	.00356	.0044	.00010
%RSD	20.531	.15698	.34116	.67882	1.4211	.16846	7.8708
#1	15.880	326.61	-1824.0	.55894	.24853	2.6320	.00143
#2	22.542	327.57	-1818.5	.55703	.25495	2.6407	.00132
#3	23.808	327.40	-1830.9	.56436	.24905	2.6346	.00123
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.81474	.45999	.22296	.47666	.49826	.15090
Stddev	.00324	.00119	.00121	.00553	.00071	.13686
%RSD	.39819	.25788	.54382	1.1598	.14278	90.695
#1	.81109	.45939	.22287	.47646	.49744	.13631
#2	.81728	.46135	.22421	.48229	.49871	.29447
#3	.81585	.45922	.22179	.47124	.49862	.02192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20200.	17657.
Stddev	104.	103.
%RSD	.51602	.58193
#1	20161.	17574.
#2	20121.	17625.
#3	20318.	17772.

Approved: February 08, 2012

Sample Name: L1202006401SDL Acquired: 2/7/2012 19:20:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388967-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.00969	.00019	.01224	.03620	.00000	68.869
Stddev	.00083	.02739	.00174	.00040	.00017	.0000	.217
%RSD	95.929	282.57	936.48	3.2339	.48038	232.69	.31567
#1	-.00103	-.02099	.00198	.01261	.03635	.00001	68.655
#2	-.00161	.01840	.00006	.01228	.03624	-.00001	68.863
#3	.00003	.03167	-.00148	.01182	.03601	-.00001	69.089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	-.00033	.00140	.00130	.04707	39.907	.00689
Stddev	.00017	.00005	.00066	.00069	.00705	.122	.00161
%RSD	1682.9	14.224	46.898	53.347	14.985	.30479	23.303
#1	-.00002	-.00034	.00065	.00207	.03980	39.778	.00702
#2	-.00018	-.00036	.00184	.00072	.05389	39.921	.00842
#3	.00017	-.00027	.00172	.00111	.04751	40.020	.00522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01324	.00095	.00052	50.237	-.00053	F -102.54	.00206
Stddev	.01312	.00042	.00021	.197	.00056	22.00	.00197
%RSD	99.067	44.267	40.392	.39234	105.62	21.456	95.652
#1	.02829	.00143	.00033	50.059	-.00009	-110.08	.00227
#2	.00424	.00073	.00049	50.203	-.00033	-77.764	.00391
#3	.00719	.00068	.00074	50.449	-.00115	-119.79	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202006401SDL Acquired: 2/7/2012 19:20:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388967-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **15.207**	F **79.100**	F **-399.88**	**.00163**	**.01483**	**.04090**	**.00143**
Stddev	1.131	.076	2.55	.00081	.00132	.00146	.00041
%RSD	7.4374	.09639	.63776	49.816	8.8893	3.5588	28.384
#1	16.389	79.148	-397.28	.00132	.01371	.04185	.00126
#2	15.099	79.141	-402.37	.00256	.01450	.04162	.00189
#3	14.134	79.013	-399.97	.00102	.01628	.03922	.00114
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07891**	**-.00097**	**.00092**	**.00009**	**.00327**	F **-.21077**
Stddev	.00035	.00116	.00062	.00017	.00009	.09727
%RSD	.43781	120.40	67.181	190.89	2.8776	46.152
#1	.07853	.00003	.00079	.00012	.00316	-.28189
#2	.07903	-.00224	.00158	.00024	.00329	-.25049
#3	.07919	-.00069	.00037	-.00009	.00335	-.09992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20623.**	**17619.**
Stddev	60.	111.
%RSD	.29058	.62753
#1	20691.	17708.
#2	20577.	17655.
#3	20602.	17495.

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 19:24:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40931	10.439	.40707	.51113	1.0200	.05020	10.317
Stddev	.00366	.062	.00096	.00446	.0086	.00045	.089
%RSD	.89496	.59662	.23681	.87228	.83785	.89744	.86065
#1	.40577	10.395	.40748	.50740	1.0112	.04992	10.252
#2	.41308	10.412	.40596	.51607	1.0207	.05072	10.281
#3	.40910	10.510	.40775	.50992	1.0282	.04997	10.418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05118	.20513	.51289	.51462	4.0603	52.007	1.0313
Stddev	.00017	.00070	.00516	.00146	.0430	.390	.0064
%RSD	.33333	.33948	1.0065	.28340	1.0596	.75004	.62300
#1	.05131	.20470	.50942	.51600	4.0140	51.660	1.0254
#2	.05099	.20474	.51882	.51475	4.0680	51.933	1.0303
#3	.05125	.20593	.51044	.51310	4.0990	52.429	1.0381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.252	.50631	1.0290	52.196	.51755	F .70149	.51806
Stddev	.086	.00348	.0025	.416	.00094	29.467	.00048
%RSD	.84122	.68694	.24022	.79625	.18204	4200.7	.09318
#1	10.178	.50328	1.0317	51.842	.51862	-33.271	.51775
#2	10.232	.50553	1.0268	52.093	.51685	19.340	.51861
#3	10.347	.51011	1.0284	52.654	.51718	16.036	.51781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 19:24:26 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.6034	10.394	F 19.433	1.2359	.40720	5.0945	1.0352
Stddev	3.4784	.122	2.916	.0029	.00176	.0058	.0049
%RSD	40.431	1.1764	15.006	.23489	.43272	.11432	.47686
#1	4.7976	10.514	16.296	1.2343	.40803	5.0902	1.0391
#2	11.618	10.270	19.942	1.2340	.40839	5.0922	1.0370
#3	9.3945	10.399	22.062	1.2392	.40518	5.1011	1.0297
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0267	1.0118	.52436	1.0072	1.0338	F .84227
Stddev	.0085	.0084	.00057	.0085	.0014	.23471
%RSD	.82487	.83464	.10831	.84485	.13357	27.866
#1	1.0201	1.0027	.52425	1.0010	1.0351	1.0767
#2	1.0237	1.0134	.52386	1.0169	1.0323	.60724
#3	1.0362	1.0194	.52498	1.0037	1.0338	.84293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20707.	17392.
Stddev	81.	84.
%RSD	.39233	.48226
#1	20766.	17451.
#2	20614.	17430.
#3	20740.	17296.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 19:27:38 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00059	-.01572	.00073	.00304	.00040	-.00004	-.02944
Stddev	.00067	.01922	.00177	.00079	.00018	.00001	.01868
%RSD	112.99	122.24	241.70	25.816	46.378	31.431	63.427
#1	-.00005	-.00315	.00204	.00279	.00056	-.00003	-.03438
#2	-.00134	-.00617	.00144	.00241	.00020	-.00005	-.04515
#3	-.00038	-.03784	-.00128	.00392	.00043	-.00005	-.00880
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00014	-.00021	.00045	.00122	.00307	.16328	.00856
Stddev	.00016	.00010	.00028	.00006	.00907	.05437	.00121
%RSD	117.96	49.415	61.715	5.1834	295.55	33.300	14.081
#1	.00003	-.00027	.00039	.00116	-.00606	.17949	.00820
#2	-.00016	-.00026	.00076	.00121	.00319	.10265	.00758
#3	-.00028	-.00009	.00021	.00129	.01207	.20770	.00991
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00389	.00017	.00074	.06697	-.00138	F -19.656	-.00075
Stddev	.01953	.00043	.00051	.00375	.00051	37.925	.00214
%RSD	501.47	253.93	68.849	5.5988	36.924	192.95	287.47
#1	-.01824	-.00014	.00041	.06702	-.00173	24.134	.00159
#2	.01125	.00066	.00132	.07069	-.00161	-41.947	-.00261
#3	.01867	-.00001	.00048	.06320	-.00079	-41.154	-.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 19:27:38 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.85849	F -.36007	F 16.307	.00011	-.00203	.00575	.00055
Stddev	1.7581	.03081	3.314	.00186	.00179	.00083	.00021
%RSD	204.79	8.5574	20.321	1649.9	88.074	14.399	38.866
#1	-1.7138	-.35516	19.490	-.00022	-.00396	.00498	.00040
#2	-2.0253	-.33201	12.876	-.00156	-.00042	.00564	.00079
#3	1.1636	-.39305	16.556	.00212	-.00171	.00663	.00046
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	-.00051	.00055	-.00015	-.00036	F -.21576
Stddev	.00008	.00112	.00048	.00028	.00016	.10207
%RSD	32.583	220.62	88.143	183.68	45.293	47.307
#1	.00025	-.00146	.00103	-.00013	-.00041	-.14339
#2	.00016	-.00078	.00007	.00012	-.00050	-.33251
#3	.00032	.00072	.00053	-.00044	-.00018	-.17139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20363.	17049.
Stddev	39.	172.
%RSD	.19047	1.0075
#1	20406.	17211.
#2	20330.	17067.
#3	20354.	16869.

Approved: February 08, 2012

Sample Name: L1202006701 Acquired: 2/7/2012 19:31:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00084	.29220	-.00083	.09881	.19896	-.00001	23.463
Stddev	.00045	.03009	.00190	.00181	.00246	.00001	.166
%RSD	53.299	10.298	228.11	1.8273	1.2346	205.82	.70701
#1	-.00044	.32200	.00083	.09689	.19614	.00000	23.274
#2	-.00132	.26183	-.00043	.09908	.20063	.00000	23.585
#3	-.00075	.29276	-.00291	.10047	.20012	-.00002	23.531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.00046	.00244	.00606	.48687	.92648	.00718
Stddev	.00007	.00017	.00018	.00038	.00473	.03328	.00084
%RSD	60.017	37.872	7.4992	6.1890	.97195	3.5916	11.718
#1	.00013	.00060	.00226	.00650	.48487	.91112	.00738
#2	.00004	.00051	.00263	.00585	.48347	.90366	.00791
#3	.00017	.00026	.00242	.00584	.49227	.96466	.00626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.61122	.03729	.00285	144.27	.00297	F -32.144	.01756
Stddev	.00837	.00052	.00019	.95	.00027	40.190	.00066
%RSD	1.3691	1.3914	6.5372	.66101	9.1222	125.03	3.7865
#1	.60235	.03683	.00268	143.18	.00266	-16.245	.01798
#2	.61897	.03717	.00282	144.93	.00314	-2.3354	.01679
#3	.61233	.03785	.00305	144.70	.00312	-77.851	.01791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202006701 Acquired: 2/7/2012 19:31:11 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.8835	F 37.942	F -738.42	.00165	.00163	.45806	.00045
Stddev	5.3820	.146	4.77	.00090	.00076	.00366	.00042
%RSD	68.268	.38498	.64658	54.295	46.588	.79854	91.748
#1	3.1918	37.777	-733.37	.00253	.00133	.45419	.00035
#2	13.759	38.054	-739.02	.00169	.00249	.46146	.00010
#3	6.7000	37.997	-742.87	.00074	.00107	.45853	.00091
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10809	.00144	-.00123	.00081	.04599	F -.08464
Stddev	.00088	.00140	.00100	.00054	.00029	.12031
%RSD	.81001	97.467	81.223	66.308	.62891	142.14
#1	.10711	.00039	-.00235	.00108	.04567	.05422
#2	.10878	.00089	-.00042	.00019	.04610	-.15756
#3	.10839	.00303	-.00092	.00116	.04622	-.15057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20659.	17524.
Stddev	271.	30.
%RSD	1.3137	.17216
#1	20970.	17551.
#2	20536.	17492.
#3	20470.	17531.

Approved: February 08, 2012

Sample Name: L1202007902 Acquired: 2/7/2012 19:34:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00025	.09592	-.00069	.08983	.16718	-.00001	59.014
Stddev	.00063	.04230	.00142	.00091	.00045	.00001	.201
%RSD	246.05	44.104	206.25	1.0179	.26860	52.311	.34092
#1	-.00010	.04922	.00029	.09000	.16670	-.00001	59.246
#2	-.00094	.10687	-.00231	.09064	.16758	-.00002	58.882
#3	.00028	.13167	-.00004	.08884	.16726	-.00001	58.915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.00150	.00153	.00110	.16360	1.5980	.00806
Stddev	.00007	.00005	.00032	.00075	.00372	.0147	.00219
%RSD	48.464	3.2228	21.300	67.839	2.2762	.91889	27.233
#1	.00007	.00145	.00124	.00158	.16553	1.6044	.00799
#2	.00021	.00150	.00188	.00148	.16597	1.5812	.00589
#3	.00014	.00154	.00146	.00024	.15931	1.6084	.01028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9153	.32387	.00189	145.26	.00597	F -115.88	.00143
Stddev	.0089	.00153	.00016	.53	.00073	11.25	.00132
%RSD	.46412	.47386	8.6249	.36750	12.232	9.7085	92.159
#1	1.9223	.32211	.00171	145.77	.00671	-105.71	-.00008
#2	1.9053	.32453	.00194	144.71	.00525	-127.96	.00202
#3	1.9183	.32496	.00202	145.31	.00595	-113.98	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202007902 Acquired: 2/7/2012 19:34:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.006	F 114.52	F -2857.3	.00240	.00050	2.5796	.00000
Stddev	.950	.74	7.4	.00145	.00140	.0072	.0002
%RSD	7.3023	.64397	.25950	60.120	280.23	.27868	15537.
#1	13.703	114.92	-2848.7	.00087	.00052	2.5856	.00007
#2	13.391	114.97	-2861.7	.00374	-.00091	2.5815	-.00024
#3	11.925	113.67	-2861.4	.00260	.00189	2.5716	.00016
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51496	.00327	-.00069	.00083	.02330	.07754
Stddev	.00165	.00074	.00042	.00012	.00018	.03499
%RSD	.32134	22.489	60.429	14.249	.79301	45.125
#1	.51567	.00307	-.00043	.00097	.02349	.07927
#2	.51307	.00409	-.00047	.00075	.02312	.04171
#3	.51615	.00266	-.00117	.00078	.02331	.11163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20883.	17448.
Stddev	379.	200.
%RSD	1.8127	1.1488
#1	20574.	17322.
#2	20772.	17341.
#3	21305.	17679.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008002 Acquired: 2/7/2012 19:37:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00028	.51386	.00001	.08797	.08846	-.00004	4.1768
Stddev	.00067	.01252	.00075	.00092	.00055	.00001	.0073
%RSD	239.11	2.4367	7210.4	1.0403	.61931	26.183	.17606
#1	.00035	.52831	-.00083	.08787	.08909	-.00003	4.1811
#2	-.00097	.50617	.00062	.08893	.08810	-.00005	4.1809
#3	-.00021	.50711	.00024	.08710	.08819	-.00004	4.1683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01180	.01693	.03445	.00791	.67743	.69031	.00293
Stddev	.00007	.00021	.00060	.00019	.00332	.01995	.00106
%RSD	.60244	1.2528	1.7315	2.3479	.48985	2.8900	36.058
#1	.01188	.01709	.03513	.00808	.67661	.70716	.00409
#2	.01174	.01669	.03413	.00793	.67459	.66828	.00201
#3	.01178	.01701	.03407	.00771	.68108	.69549	.00270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.28114	.06710	.00007	150.38	.00195	F -43.878	4.8051
Stddev	.00841	.00020	.00018	.59	.00033	34.218	.0054
%RSD	2.9924	.30133	261.64	.39044	16.792	77.985	.11234
#1	.27898	.06717	-.00010	151.02	.00160	-65.579	4.8075
#2	.27403	.06725	.00005	150.27	.00201	-4.4323	4.8090
#3	.29043	.06687	.00026	149.86	.00225	-61.623	4.7990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008002 Acquired: 2/7/2012 19:37:54 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-01

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 14.407	F 63.620	F -3105.3	.00039	.00046	.24589	.00069
Stddev	6.595	.304	6.1	.00313	.00304	.00487	.00022
%RSD	45.782	.47749	.19748	811.80	657.97	1.9806	31.831
#1	14.159	63.589	-3110.6	.00007	-.00199	.25114	.00050
#2	21.122	63.333	-3098.6	.00367	-.00048	.24499	.00064
#3	7.9382	63.938	-3106.8	-.00257	.00386	.24152	.00093
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00703	.00201	-.00266	.00043	44.828	F -.03157
Stddev	.00006	.00077	.00107	.00020	.365	.13034
%RSD	.81915	38.407	40.295	47.894	.81517	412.87
#1	.00700	.00214	-.00147	.00023	45.028	-.18185
#2	.00710	.00118	-.00297	.00040	45.050	.03632
#3	.00699	.00270	-.00355	.00064	44.406	.05082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21291.	17947.
Stddev	176.	151.
%RSD	.82823	.84226
#1	21103.	17799.
#2	21317.	17940.
#3	21453.	18101.

Approved: February 08, 2012

Sample Name: L1202008002S Acquired: 2/7/2012 19:41:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19607	5.7602	.19111	1.0190	.58237	.02418	8.9740
Stddev	.00275	.0438	.00146	.0160	.00180	.00035	.0201
%RSD	1.4021	.76056	.76599	1.5744	.30934	1.4492	.22441
#1	.19908	5.7974	.19191	1.0366	.58414	.02458	8.9860
#2	.19371	5.7119	.18942	1.0053	.58053	.02391	8.9508
#3	.19541	5.7714	.19200	1.0149	.58243	.02407	8.9854
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03566	.11604	.28412	.25310	2.7727	25.412	.49438
Stddev	.00019	.00043	.00513	.00145	.0181	.058	.00076
%RSD	.52240	.37442	1.8060	.57121	.65409	.22688	.15406
#1	.03579	.11630	.28987	.25429	2.7742	25.360	.49483
#2	.03545	.11554	.28001	.25149	2.7539	25.403	.49350
#3	.03574	.11628	.28248	.25353	2.7901	25.474	.49481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.1478	.32260	.50551	172.46	.25093	F -95.973	4.8646
Stddev	.0323	.00137	.00169	.73	.00093	27.242	.0334
%RSD	.62711	.42533	.33433	.42497	.36928	28.385	.68708
#1	5.1284	.32330	.50493	172.82	.25132	-65.449	4.8959
#2	5.1301	.32102	.50419	171.62	.24987	-117.82	4.8294
#3	5.1851	.32348	.50742	172.95	.25159	-104.65	4.8686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202008002S Acquired: 2/7/2012 19:41:25 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-04

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.061	F 66.707	F -2986.8	.57141	.18432	2.9339	.00110
Stddev	4.737	.176	10.1	.00328	.00276	.0071	.00015
%RSD	27.764	.26428	.33895	.57457	1.4991	.24251	13.961
#1	15.453	66.781	-2998.4	.57501	.18242	2.9385	.00104
#2	13.337	66.505	-2981.8	.56858	.18304	2.9257	.00099
#3	22.392	66.833	-2980.1	.57064	.18749	2.9375	.00128
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49711	.49250	.24151	.49770	44.166	3.4454
Stddev	.00198	.00280	.00187	.00648	.974	.1517
%RSD	.39752	.56812	.77305	1.3017	2.2046	4.4039
#1	.49830	.49476	.23938	.50457	44.897	3.6177
#2	.49482	.48937	.24287	.49170	43.061	3.3872
#3	.49820	.49337	.24228	.49683	44.540	3.3314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20818.	18073.
Stddev	309.	70.
%RSD	1.4855	.38456
#1	20495.	18132.
#2	21111.	18092.
#3	20850.	17996.

Approved: February 08, 2012

Sample Name: L1202008002SD Acquired: 2/7/2012 19:44:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19226	5.4630	.18787	1.0063	.58318	.02387	8.8969
Stddev	.00200	.0289	.00195	.0144	.00518	.00018	.0785
%RSD	1.0383	.52844	1.0367	1.4326	.88822	.75086	.88218
#1	.19134	5.4365	.18772	.99473	.57839	.02370	8.8084
#2	.19089	5.4938	.18600	1.0016	.58868	.02384	8.9580
#3	.19455	5.4589	.18989	1.0224	.58248	.02406	8.9242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03519	.11358	.28101	.24888	2.4987	25.473	.50244
Stddev	.00032	.00128	.00203	.00227	.0304	.212	.00697
%RSD	.90950	1.1307	.72294	.91268	1.2160	.83297	1.3866
#1	.03501	.11333	.27920	.24918	2.4639	25.276	.50088
#2	.03500	.11244	.28062	.24647	2.5201	25.698	.51005
#3	.03556	.11497	.28321	.25099	2.5121	25.446	.49638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.1132	.30912	.50131	177.35	.24692	F -64.968	4.9001
Stddev	.0539	.00293	.00498	1.25	.00201	6.641	.0395
%RSD	1.0533	.94713	.99403	.70565	.81232	10.222	.80555
#1	5.0806	.30662	.50250	176.12	.24742	-69.332	4.9019
#2	5.1754	.31234	.49584	178.62	.24471	-57.325	4.8598
#3	5.0836	.30839	.50559	177.31	.24862	-68.246	4.9386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008002SD Acquired: 2/7/2012 19:44:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388934-05

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.6336	F 65.195	F -2952.2	.55760	.17851	2.6010	.00095
Stddev	3.3061	.722	27.9	.00303	.00127	.0253	.00027
%RSD	90.989	1.1076	.94492	.54345	.70940	.97149	28.893
#1	3.3615	65.075	-2959.4	.55800	.17709	2.6024	.00100
#2	7.0673	64.540	-2921.4	.55439	.17894	2.5750	.00065
#3	.47187	65.969	-2975.7	.56041	.17951	2.6255	.00119
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49648	.48748	.23673	.48766	44.797	1.5309
Stddev	.00353	.00509	.00088	.00455	.479	.1243
%RSD	.71044	1.0436	.36981	.93264	1.0701	8.1195
#1	.49357	.48330	.23772	.48407	45.252	1.4431
#2	.50041	.49315	.23606	.48613	44.296	1.6732
#3	.49547	.48600	.23641	.49277	44.841	1.4765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20225.	17007.
Stddev	191.	187.
%RSD	.94377	1.1004
#1	20325.	17209.
#2	20345.	16840.
#3	20005.	16971.

Approved: February 08, 2012

Sample Name: L1202008101 Acquired: 2/7/2012 19:48:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00109	.24885	-.00113	.09331	.11439	-.00004	6.4006
Stddev	.00085	.01661	.00231	.00375	.00023	.00004	.0533
%RSD	77.504	6.6728	204.53	4.0218	.19927	95.673	.83272
#1	-.00046	.25940	-.00351	.09752	.11442	-.00001	6.3949
#2	-.00077	.22971	-.00097	.09206	.11460	-.00008	6.4565
#3	-.00206	.25744	.00110	.09034	.11415	-.00002	6.3504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04630	.00198	.00835	.02775	5.5459	.60945	.00170
Stddev	.00048	.00019	.00047	.00097	.0636	.06806	.00421
%RSD	1.0285	9.3852	5.6588	3.5038	1.1461	11.168	247.59
#1	.04674	.00217	.00864	.02822	5.5280	.63112	.00116
#2	.04637	.00195	.00860	.02839	5.6165	.53319	.00615
#3	.04579	.00180	.00780	.02663	5.4932	.66403	-.00221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.68192	.27296	.00013	153.26	.22581	F -39.918	.01274
Stddev	.01349	.00273	.00008	1.38	.00218	5.169	.00203
%RSD	1.9787	1.0003	60.303	.89782	.96341	12.950	15.956
#1	.66802	.27237	.00014	153.64	.22783	-35.932	.01194
#2	.68279	.27593	.00021	154.40	.22611	-38.063	.01122
#3	.69496	.27056	.00005	151.73	.22351	-45.759	.01505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Sample Name: L1202008101 Acquired: 2/7/2012 19:48:12 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5888**	F **35.204**	F **-1532.7**	**-.00117**	**.00049**	**.30530**	**.00053**
Stddev	10.104	.429	9.0	.00130	.00129	.00246	.00018
%RSD	220.18	1.2173	.58635	110.72	264.14	.80627	34.039
#1	-6.9830	35.629	-1538.8	-.00029	.00035	.30759	.00062
#2	9.0895	35.213	-1537.0	-.00057	.00184	.30563	.00032
#3	11.660	34.772	-1522.4	-.00266	-.00072	.30270	.00065
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02356**	**-.00027**	**-.00141**	**-.00003**	**4.9571**	F **-.42888**
Stddev	.00028	.00095	.00223	.00019	.0557	.15580
%RSD	1.1959	349.61	157.79	576.14	1.1241	36.328
#1	.02349	-.00133	.00068	.00009	5.0159	-.54725
#2	.02387	.00049	-.00376	.00006	4.9503	-.25236
#3	.02332	.00003	-.00115	-.00025	4.9051	-.48702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20258.**	**16426.**
Stddev	389.	168.
%RSD	1.9211	1.0249
#1	19826.	16325.
#2	20367.	16334.
#3	20580.	16621.

Approved: February 08, 2012

Sample Name: L1202008202 Acquired: 2/7/2012 19:51:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00029	.02789	-.00015	.07222	.33992	-.00003	69.088
Stddev	.00082	.05824	.00134	.00041	.00169	.00002	.450
%RSD	277.62	208.80	917.28	.57256	.49832	54.118	.65183
#1	.00022	.03109	-.00013	.07258	.34156	-.00002	69.575
#2	.00014	-.03188	-.00149	.07232	.33817	-.00005	68.686
#3	-.00124	.08447	.00118	.07177	.34004	-.00002	69.004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	.00133	.00153	.00345	.04101	.64514	.00490
Stddev	.00012	.00021	.00039	.00080	.00478	.01924	.00059
%RSD	29.946	15.582	25.257	23.098	11.647	2.9817	12.042
#1	.00052	.00110	.00110	.00256	.04348	.66052	.00453
#2	.00032	.00139	.00167	.00368	.03550	.62357	.00460
#3	.00032	.00150	.00183	.00411	.04404	.65133	.00558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.89788	.29735	.00135	152.53	.00742	F -76.592	.00042
Stddev	.01150	.00257	.00037	1.02	.00041	18.150	.00083
%RSD	1.2812	.86467	27.604	.66653	5.4868	23.697	196.68
#1	.91088	.29930	.00177	153.60	.00784	-97.532	.00022
#2	.88904	.29443	.00111	151.59	.00702	-66.865	-.00029
#3	.89371	.29831	.00115	152.39	.00742	-65.380	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202008202 Acquired: 2/7/2012 19:51:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 15.086	F 78.531	F -494.37	.00032	-.00293	.41930	.00038
Stddev	8.627	.096	1.27	.00238	.00105	.00528	.00015
%RSD	57.181	.12176	.25732	733.72	35.787	1.2594	37.958
#1	5.2076	78.501	-495.19	-.00183	-.00353	.42534	.00025
#2	18.920	78.454	-495.01	-.00008	-.00172	.41558	.00054
#3	21.132	78.638	-492.90	.00288	-.00353	.41696	.00036
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.16858	.00037	-.00160	.00021	.08225	.02274
Stddev	.00108	.00156	.00137	.00023	.00018	.17015
%RSD	.64328	425.19	85.511	109.81	.22291	748.33
#1	.16956	-.00112	-.00316	-.00003	.08246	-.17081
#2	.16741	.00023	-.00099	.00024	.08216	.09022
#3	.16877	.00199	-.00064	.00042	.08212	.14879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20121.	17733.
Stddev	32.	206.
%RSD	.16087	1.1594
#1	20120.	17496.
#2	20089.	17837.
#3	20153.	17865.

Approved: February 08, 2012

Sample Name: L1202013506 Acquired: 2/7/2012 19:54:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00051	.16521	-.00123	.07026	.08653	-.00003	83.427
Stddev	.00049	.02771	.00205	.00100	.00109	.00001	.937
%RSD	96.500	16.772	166.85	1.4179	1.2607	27.933	1.1226
#1	-.00069	.19719	.00072	.06920	.08531	-.00003	82.403
#2	-.00087	.15015	-.00105	.07117	.08689	-.00004	83.637
#3	.00005	.14829	-.00336	.07042	.08740	-.00003	84.240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	.00031	.00167	.00123	.35673	.57247	.00290
Stddev	.00011	.00011	.00018	.00023	.00409	.05105	.00148
%RSD	35.541	36.231	10.998	19.011	1.1470	8.9176	51.180
#1	.00022	.00035	.00146	.00111	.35216	.51906	.00405
#2	.00029	.00018	.00180	.00108	.36006	.62077	.00122
#3	.00044	.00040	.00174	.00150	.35796	.57760	.00342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.5312	.36595	-.00013	147.05	.00041	F -86.779	.00033
Stddev	.0238	.00406	.00027	1.69	.00091	26.541	.00151
%RSD	1.5508	1.1090	205.58	1.1489	223.67	30.585	453.20
#1	1.5039	.36143	-.00019	145.26	-.00047	-97.503	.00202
#2	1.5469	.36714	-.00036	147.29	.00135	-56.554	-.00089
#3	1.5427	.36927	.00016	148.61	.00034	-106.28	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202013506 Acquired: 2/7/2012 19:54:52 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.823	F 297.42	F -11151.	.00078	-.00379	.31500	.00054
Stddev	2.265	1.48	36.	.00190	.00051	.00240	.00026
%RSD	13.465	.49838	.32170	243.31	13.429	.76124	49.118
#1	16.622	295.71	-11110.	.00280	-.00428	.31270	.00041
#2	19.182	298.22	-11168.	-.00097	-.00383	.31748	.00084
#3	14.665	298.33	-11175.	.00051	-.00326	.31483	.00036
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000	9.0000	9.0000				
Low Limit	-.00400	-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11857	.00344	-.00175	.00018	.02172	F -.14191
Stddev	.00129	.00158	.00119	.00023	.00015	.18917
%RSD	1.0870	45.920	68.170	125.50	.70501	133.30
#1	.11724	.00231	-.00041	.00019	.02155	.06257
#2	.11867	.00524	-.00269	.00041	.02184	-.17761
#3	.11981	.00276	-.00216	-.00005	.02178	-.31069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19689.	17144.
Stddev	163.	98.
%RSD	.82588	.57032
#1	19858.	17256.
#2	19673.	17092.
#3	19534.	17082.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 19:58:20 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39237	10.147	.39522	.48928	.99413	.04872	10.042
Stddev	.00144	.028	.00204	.00219	.00156	.00007	.031
%RSD	.36723	.27584	.51696	.44748	.15659	.15190	.31000
#1	.39172	10.159	.39450	.49024	.99234	.04880	10.006
#2	.39137	10.167	.39753	.48678	.99510	.04865	10.056
#3	.39402	10.115	.39364	.49083	.99496	.04873	10.063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04956	.19973	.49445	.50274	3.9688	50.922	1.0006
Stddev	.00012	.00039	.00245	.00153	.0139	.012	.0029
%RSD	.24102	.19300	.49513	.30342	.35018	.02423	.29081
#1	.04943	.19960	.49517	.50179	3.9528	50.919	.99728
#2	.04965	.20017	.49172	.50450	3.9775	50.936	1.0025
#3	.04961	.19943	.49645	.50193	3.9762	50.912	1.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.077	.49662	1.0070	50.994	.50581	F -16.835	.50632
Stddev	.049	.00133	.0008	.056	.00058	24.282	.00151
%RSD	.48466	.26726	.07870	.10989	.11526	144.24	.29763
#1	10.123	.49815	1.0061	50.944	.50532	-19.161	.50561
#2	10.082	.49575	1.0076	51.054	.50646	-39.869	.50805
#3	10.026	.49597	1.0072	50.983	.50565	8.5266	.50529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 19:58:20 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.7270	10.145	F 16.888	1.1936	.39495	4.9515	1.0064
Stddev	3.3426	.044	1.799	.0025	.00326	.0034	.0035
%RSD	58.366	.43607	10.649	.21277	.82661	.06959	.34833
#1	3.2502	10.193	16.576	1.1938	.39696	4.9494	1.0051
#2	9.5290	10.135	18.822	1.1960	.39671	4.9555	1.0104
#3	4.4017	10.106	15.266	1.1910	.39118	4.9497	1.0037
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0000	.98598	.50812	.97518	1.0140	F .78179
Stddev	.0023	.00263	.00176	.00159	.0011	.17506
%RSD	.22685	.26718	.34643	.16352	.10436	22.392
#1	.99744	.98490	.50886	.97656	1.0140	.81047
#2	1.0015	.98406	.50611	.97343	1.0151	.59416
#3	1.0012	.98898	.50938	.97555	1.0130	.94074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	21145.	17144.
Stddev	52.	473.
%RSD	.24402	2.7574
#1	21133.	16598.
#2	21100.	17404.
#3	21201.	17429.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 20:01:33 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00072**	**.00498**	**-.00097**	**.00374**	**.00014**	**-.00003**	**-.03147**
Stddev	.00033	.03235	.00119	.00090	.00037	.00001	.00578
%RSD	46.527	649.78	122.96	24.049	274.72	32.133	18.356
#1	-.00077	.04233	-.00032	.00424	.00042	-.00005	-.02794
#2	-.00102	-.01344	-.00234	.00270	-.00029	-.00003	-.03813
#3	-.00036	-.01396	-.00024	.00427	.00027	-.00003	-.02833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**-.00009**	**.00042**	**.00080**	**-.00205**	**.12244**	**.00289**
Stddev	.00010	.00006	.00012	.00009	.00382	.05067	.00101
%RSD	64.595	64.779	28.770	11.859	186.00	41.382	34.892
#1	-.00007	-.00005	.00039	.00087	-.00210	.15647	.00177
#2	-.00027	-.00016	.00031	.00069	.00179	.14663	.00318
#3	-.00013	-.00007	.00055	.00084	-.00585	.06421	.00371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00340**	**-.00015**	**.00070**	**.13726**	**-.00054**	F **5.5199**	**-.00066**
Stddev	.02074	.00013	.00035	.02782	.00054	35.418	.00180
%RSD	610.69	86.278	49.849	20.266	100.46	641.64	271.81
#1	.00551	-.00028	.00034	.12452	-.00056	3.5863	.00023
#2	.02299	-.00001	.00104	.16916	.00001	41.865	.00051
#3	-.01832	-.00017	.00072	.11810	-.00107	-28.892	-.00273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 20:01:33 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.7107	F -.34995	F 11.612	.00031	-.00082	.00652	.00054
Stddev	2.2411	.04048	1.905	.00084	.00301	.00078	.00010
%RSD	29.065	11.566	16.409	275.49	367.65	11.963	18.031
#1	9.8971	-.31117	9.5048	.00037	.00183	.00562	.00056
#2	5.4186	-.39193	12.116	.00112	-.00020	.00700	.00044
#3	7.8164	-.34674	13.214	-.00057	-.00409	.00695	.00063
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.00000	-.00133	.00005	-.00060	F -.21141
Stddev	.00004	.00179	.00256	.00032	.00002	.14760
%RSD	30.379	87476.	192.82	590.35	3.4375	69.819
#1	.00020	-.00167	.00037	.00041	-.00059	-.07967
#2	.00012	.00189	-.00427	-.00021	-.00059	-.37092
#3	.00012	-.00022	-.00008	-.00004	-.00062	-.18363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20929.	17539.
Stddev	107.	31.
%RSD	.51238	.17777
#1	21050.	17523.
#2	20844.	17519.
#3	20893.	17575.

Approved: February 08, 2012

Sample Name: PBW 2T Acquired: 2/7/2012 20:05:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00068	-.00301	-.00015	.00175	.00114	-.00004	-.03085
Stddev	.00033	.03960	.00157	.00077	.00013	.00004	.00385
%RSD	48.970	1314.6	1024.3	44.170	11.672	123.71	12.470
#1	-.00031	.01970	-.00025	.00125	.00122	.00001	-.03510
#2	-.00078	-.04873	-.00167	.00136	.00120	-.00008	-.02760
#3	-.00094	.01999	.00146	.00263	.00098	-.00004	-.02986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.00001	.00074	.00074	.00510	.03259	.00756
Stddev	.00012	.00019	.00028	.00059	.00387	.04643	.00268
%RSD	265.12	2221.9	37.407	79.245	75.851	142.50	35.443
#1	.00004	-.00008	.00084	.00065	.00461	.07262	.00472
#2	.00001	.00022	.00042	.00020	.00150	-.01832	.01005
#3	-.00018	-.00012	.00095	.00136	.00919	.04346	.00791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01128	-.00072	.00001	.02117	-.00019	F -24.964	-.00045
Stddev	.01075	.00027	.00016	.01156	.00016	21.181	.00036
%RSD	95.336	37.111	1255.2	54.604	83.136	84.847	79.487
#1	-.00025	-.00103	-.00011	.03432	-.00009	-19.964	-.00059
#2	.02104	-.00060	.00019	.01657	-.00038	-6.7298	-.00005
#3	.01304	-.00054	-.00004	.01262	-.00011	-48.198	-.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: PBW 2T Acquired: 2/7/2012 20:05:04 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-02

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.9591	F -.29541	F 15.072	-.00024	-.00563	.00845	-.00031
Stddev	1.3949	.02981	3.229	.00097	.00130	.00106	.00022
%RSD	23.408	10.090	21.425	402.85	23.161	12.545	70.861
#1	4.3542	-.26866	18.743	.00001	-.00641	.00968	-.00041
#2	6.6434	-.29002	12.669	-.00131	-.00413	.00786	-.00046
#3	6.8797	-.32754	13.804	.00058	-.00637	.00782	-.00006
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9.0000	9.0000				
Low Limit		-.00400	-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00016	-.00104	.00036	-.00008	.00114	F -.14986
Stddev	.00008	.00040	.00116	.00007	.00009	.08595
%RSD	49.808	38.695	320.51	95.076	7.9505	57.355
#1	.00024	-.00118	.00167	-.00009	.00103	-.15739
#2	.00013	-.00058	-.00056	.00000	.00119	-.06039
#3	.00010	-.00134	-.00002	-.00015	.00119	-.23180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						45.000
Low Limit						-.00400

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20974.	16963.
Stddev	259.	311.
%RSD	1.2325	1.8320
#1	21232.	17259.
#2	20974.	16989.
#3	20715.	16639.

Approved: February 08, 2012

Sample Name: LCSW 2T Acquired: 2/7/2012 20:08:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19857	5.0075	.19400	.97703	.49546	.02435	4.9182
Stddev	.00282	.0625	.00179	.01330	.00126	.00028	.0282
%RSD	1.4223	1.2486	.92321	1.3613	.25377	1.1384	.57341
#1	.19658	4.9853	.19413	.96955	.49446	.02416	4.8889
#2	.20180	4.9591	.19215	.99239	.49505	.02467	4.9206
#3	.19732	5.0781	.19572	.96915	.49687	.02423	4.9451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02464	.09990	.24996	.25085	1.9322	25.215	.50861
Stddev	.00012	.00024	.00336	.00009	.0055	.155	.00452
%RSD	.49551	.23888	1.3458	.03632	.28584	.61408	.88910
#1	.02476	.10017	.24733	.25095	1.9384	25.185	.50507
#2	.02451	.09977	.25375	.25083	1.9300	25.077	.50707
#3	.02464	.09975	.24880	.25077	1.9280	25.382	.51371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.0169	.24429	.50493	25.824	.25307	F -9.5014	.25389
Stddev	.0468	.00026	.00182	.182	.00043	38.838	.00156
%RSD	.93225	.10636	.36057	.70560	.16802	408.76	.61444
#1	4.9867	.24399	.50671	25.637	.25356	-39.018	.25342
#2	4.9933	.24447	.50308	25.835	.25279	34.497	.25263
#3	5.0708	.24440	.50501	26.001	.25285	-23.983	.25564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						900.00	
Low Limit						-.00400	

Approved: February 08, 2012

Erin D. Long

Sample Name: LCSW 2T Acquired: 2/7/2012 20:08:30 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-03

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6706	5.0212	F 15.645	.59007	.19432	2.5440	.00059
Stddev	3.2767	.0273	2.887	.00213	.00055	.0035	.00030
%RSD	196.14	.54328	18.450	.36046	.28546	.13840	51.201
#1	2.5363	4.9899	15.746	.59004	.19394	2.5436	.00086
#2	-1.9521	5.0334	12.709	.59221	.19496	2.5407	.00026
#3	4.4275	5.0402	18.479	.58795	.19407	2.5477	.00066
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			9.0000				
Low Limit			-.00400				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48975	.48244	.25896	.48438	.51136	.30588
Stddev	.00353	.00257	.00229	.00532	.00099	.13174
%RSD	.72004	.53349	.88322	1.0975	.19270	43.069
#1	.48581	.48200	.25729	.48227	.51114	.15514
#2	.49082	.48011	.25803	.49043	.51243	.36353
#3	.49261	.48520	.26157	.48045	.51050	.39897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20616.	16810.
Stddev	99.	93.
%RSD	.48155	.55531
#1	20705.	16846.
#2	20509.	16880.
#3	20635.	16704.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010301 Acquired: 2/7/2012 20:11:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00070	.05725	.00062	.01752	.00989	.00002
Stddev	.00023	.03459	.00157	.00033	.00079	.00003
%RSD	33.060	60.408	252.11	1.9032	7.9860	125.10
#1	-.00070	.06023	.00239	.01790	.00904	.00000
#2	-.00047	.09026	.00005	.01725	.01002	.00005
#3	-.00093	.02128	-.00058	.01742	.01060	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	366.55	.00229	.00358	.00235	.00148	.05132
Stddev	.97	.00010	.00023	.00025	.00032	.00891
%RSD	.26425	4.3973	6.5712	10.845	21.927	17.365
#1	366.05	.00240	.00385	.00255	.00181	.04558
#2	365.93	.00221	.00344	.00206	.00116	.06159
#3	367.66	.00226	.00344	.00244	.00147	.04679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.9577	.11833	683.96	1.2934	.00024	37.884
Stddev	.0430	.00259	3.97	.0079	.00016	.104
%RSD	.61739	2.1898	.58097	.60861	68.682	.27401
#1	6.9578	.11575	681.22	1.2900	.00028	37.882
#2	6.9146	.12093	682.15	1.2878	.00006	37.781
#3	7.0006	.11829	688.52	1.3024	.00038	37.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012
Erin D. Long

Sample Name: L1202010301 Acquired: 2/7/2012 20:11:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07329	F -124.70	.00053	F 13.447	F 27424.	F -1601e3
Stddev	.00036	24.68	.00156	2.211	214.	13505.
%RSD	.48544	19.790	294.97	16.441	.78165	.84358
#1	.07341	-98.345	.00011	12.295	27234.	-1595e3
#2	.07289	-147.26	-.00078	15.995	27381.	-1592e3
#3	.07357	-128.50	.00226	12.049	27657.	-1616e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00032	-.00223	3.4521	-.00038	.32672	-.01268
Stddev	.00149	.00274	.0030	.00008	.00122	.00105
%RSD	464.13	122.96	.08676	20.645	.37430	8.3050
#1	.00147	.00002	3.4515	-.00035	.32642	-.01333
#2	.00085	-.00529	3.4494	-.00032	.32567	-.01147
#3	-.00136	-.00142	3.4553	-.00047	.32806	-.01324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00016	-.00053	.09888	F -.42162
Stddev	.00159	.00031	.00014	.07324
%RSD	1005.7	57.918	.14122	17.371
#1	-.00163	-.00087	.09897	-.39552
#2	.00068	-.00044	.09872	-.36501
#3	.00142	-.00028	.09895	-.50433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202010301 Acquired: 2/7/2012 20:11:48 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19068.**	**16715.**
Stddev	48.	52.
%RSD	.25228	.30958
#1	19048.	16726.
#2	19123.	16760.
#3	19034.	16658.

Approved: February 08, 2012

Sample Name: L1202010302 Acquired: 2/7/2012 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00065	.05305	.00019	.01354	.01775	.00002
Stddev	.00052	.02193	.00084	.00146	.00009	.00002
%RSD	79.763	41.342	441.22	10.755	.53041	103.31
#1	-.00022	.05152	.00115	.01377	.01783	.00004
#2	-.00122	.03192	-.00032	.01487	.01778	.00002
#3	-.00051	.07571	-.00026	.01198	.01765	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	360.99	.00234	.00404	.00234	.00231	.04846
Stddev	1.22	.00010	.00002	.00050	.00022	.00261
%RSD	.33856	4.3993	.37206	21.407	9.4595	5.3832
#1	359.63	.00242	.00404	.00182	.00250	.05093
#2	361.32	.00222	.00405	.00281	.00235	.04573
#3	362.01	.00238	.00402	.00239	.00207	.04871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.8029	.11898	674.60	1.2964	-.00031	37.810
Stddev	.0348	.00198	3.84	.0121	.00010	.107
%RSD	.51153	1.6671	.56982	.93615	33.267	.28244
#1	6.7655	.11674	670.38	1.2847	-.00024	37.756
#2	6.8090	.11970	675.54	1.2956	-.00027	37.740
#3	6.8343	.12051	677.89	1.3089	-.00043	37.933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Sample Name: L1202010302 Acquired: 2/7/2012 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-01

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07265	F -105.70	.00020	7.0035	F 27829.	F -1588e3
Stddev	.00051	64.52	.00086	9.2915	261.	6270.
%RSD	.69834	61.038	435.45	132.67	.93962	.39497
#1	.07323	-156.91	.00112	6.7300	28051.	-1592e3
#2	.07229	-126.95	-.00057	-2.1483	27541.	-1590e3
#3	.07242	-33.237	.00004	16.429	27896.	-1580e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	.00012	3.4462	.00016	.32420	-.01226
Stddev	.00238	.00109	.0347	.00033	.00168	.00064
%RSD	606.61	882.36	1.0070	202.77	.51929	5.2541
#1	-.00135	.00087	3.4752	.00039	.32284	-.01250
#2	-.00058	.00064	3.4556	-.00021	.32369	-.01153
#3	.00311	-.00113	3.4077	.00030	.32608	-.01274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00033	-.00099	.09036	F -.45918
Stddev	.00099	.00016	.00121	.21683
%RSD	301.01	16.089	1.3443	47.221
#1	-.00079	-.00100	.09170	-.24557
#2	.00110	-.00115	.09007	-.67909
#3	.00067	-.00083	.08932	-.45289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010302 Acquired: 2/7/2012 20:15:24 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19537.**	**16743.**
Stddev	199.	220.
%RSD	1.0164	1.3133
#1	19321.	16567.
#2	19578.	16673.
#3	19712.	16990.

Approved: February 08, 2012

Sample Name: L1202010302DUP Acquired: 2/7/2012 20:18:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00025	.02585	.00009	.01369	.01710	.00003
Stddev	.00041	.03626	.00127	.00111	.00009	.00001
%RSD	168.68	140.24	1440.8	8.1281	.55056	58.572
#1	-.00036	.03375	.00134	.01324	.01712	.00003
#2	-.00059	-.01370	-.00119	.01288	.01700	.00001
#3	.00021	.05751	.00011	.01496	.01719	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	356.93	.00205	.00370	.00231	.00180	.04968
Stddev	1.15	.00007	.00014	.00004	.00054	.00029
%RSD	.32223	3.1837	3.6912	1.6882	29.841	.58500
#1	355.74	.00211	.00374	.00229	.00221	.04942
#2	357.03	.00198	.00355	.00229	.00200	.04962
#3	358.03	.00204	.00382	.00236	.00119	.04999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.6751	.12002	667.86	1.2870	-.00036	37.579
Stddev	.0133	.00089	2.35	.0084	.00024	.145
%RSD	.19890	.74244	.35249	.64998	66.737	.38667
#1	6.6896	.11906	665.55	1.2805	-.00032	37.412
#2	6.6635	.12083	667.77	1.2841	-.00062	37.642
#3	6.6721	.12018	670.26	1.2965	-.00015	37.681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010302DUP Acquired: 2/7/2012 20:18:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-04

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07126	F -59.418	.00144	F 14.957	F 27079.	F -1581e3
Stddev	.00033	13.954	.00320	4.492	627.	16878.
%RSD	.46604	23.485	222.63	30.031	2.3148	1.0673
#1	.07158	-46.111	.00023	13.712	27089.	-1595e3
#2	.07127	-73.940	-.00098	11.219	26447.	-1563e3
#3	.07092	-58.203	.00507	19.940	27701.	-1587e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00113	-.00343	3.4122	-.00014	.32418	-.01199
Stddev	.00242	.00087	.0017	.00021	.00098	.00130
%RSD	215.06	25.262	.04916	154.41	.30320	10.853
#1	.00049	-.00248	3.4123	-.00031	.32313	-.01346
#2	-.00092	-.00417	3.4138	.00010	.32436	-.01150
#3	.00380	-.00364	3.4104	-.00019	.32507	-.01101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00073	-.00088	.08848	F -.18776
Stddev	.00188	.00013	.00063	.12241
%RSD	259.03	14.342	.71743	65.195
#1	-.00049	-.00077	.08921	-.15406
#2	-.00022	-.00101	.08815	-.08573
#3	.00290	-.00086	.08808	-.32349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202010302DUP Acquired: 2/7/2012 20:18:59 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-04

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20179.**	**17540.**
Stddev	273.	56.
%RSD	1.3530	.31746
#1	19863.	17477.
#2	20335.	17581.
#3	20337.	17563.

Approved: February 08, 2012

Sample Name: L1202010302S Acquired: 2/7/2012 20:22:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20514	5.0266	.19799	1.0014	.50587	.02461
Stddev	.00219	.0235	.00229	.0052	.00315	.00015
%RSD	1.0670	.46711	1.1562	.51428	.62202	.59722
#1	.20759	5.0523	.20014	1.0073	.50223	.02477
#2	.20336	5.0211	.19824	.99814	.50764	.02448
#3	.20448	5.0064	.19558	.99865	.50772	.02459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	360.88	.02713	.09839	.24606	.23927	1.9101
Stddev	.96	.00010	.00042	.00134	.00071	.0099
%RSD	.26681	.38688	.43112	.54638	.29563	.51969
#1	359.80	.02724	.09888	.24674	.23971	1.8986
#2	361.65	.02704	.09816	.24452	.23965	1.9162
#3	361.20	.02710	.09813	.24694	.23846	1.9154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.943	.63311	663.93	1.5123	.49531	63.318
Stddev	.087	.00534	2.84	.0078	.00308	.063
%RSD	.27096	.84324	.42810	.51773	.62159	.09892
#1	31.846	.62740	660.72	1.5034	.49860	63.327
#2	32.013	.63398	666.12	1.5180	.49485	63.376
#3	31.969	.63797	664.94	1.5155	.49250	63.252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010302S Acquired: 2/7/2012 20:22:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-05

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.30808	F -82.112	.23398	8.2122	F 26890.	F -1555e3
Stddev	.00147	22.329	.00278	6.9371	218.	10371.
%RSD	.47786	27.194	1.1876	84.473	.81169	.66708
#1	.30946	-57.798	.23692	15.156	26675.	-1559e3
#2	.30825	-101.70	.23363	1.2819	27111.	-1562e3
#3	.30653	-86.835	.23140	8.1987	26883.	-1543e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.58622	.19935	5.8569	.00065	.81288	.46637
Stddev	.00356	.00229	.0353	.00037	.00153	.00198
%RSD	.60740	1.1497	.60340	57.572	.18772	.42403
#1	.59030	.19672	5.8977	.00106	.81130	.46554
#2	.58374	.20094	5.8362	.00054	.81434	.46862
#3	.58462	.20038	5.8369	.00034	.81301	.46493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.22991	.49318	.56871	.03310
Stddev	.00205	.00264	.00195	.24624
%RSD	.89184	.53555	.34367	743.84
#1	.22868	.49619	.57058	-.18520
#2	.22878	.49126	.56668	-.01551
#3	.23228	.49209	.56888	.30003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010302S Acquired: 2/7/2012 20:22:35 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388911-05

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19409.	17551.
Stddev	40.	86.
%RSD	.20625	.49255
#1	19363.	17632.
#2	19432.	17562.
#3	19433.	17460.

Approved: February 08, 2012

Sample Name: L1202010303 Acquired: 2/7/2012 20:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.03387**	**-.00049**	**.01335**	**.00929**	**.00001**
Stddev	.00026	.02098	.00101	.00106	.00027	.00001
%RSD	110.41	61.937	207.65	7.9561	2.9230	102.88
#1	-.00049	.04616	-.00165	.01290	.00960	.00000
#2	.00003	.04581	.00009	.01457	.00920	.00001
#3	-.00024	.00965	.00010	.01259	.00908	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**322.21**	**.00158**	**.00234**	**.00141**	**.00063**	**.05623**
Stddev	.42	.00005	.00014	.00069	.00101	.00503
%RSD	.12896	3.1249	6.0224	49.185	160.60	8.9525
#1	322.61	.00158	.00249	.00211	.00180	.05885
#2	321.78	.00163	.00231	.00072	.00003	.05942
#3	322.25	.00153	.00222	.00139	.00006	.05043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.816**	**.04201**	**360.92**	**.23574**	**.00046**	**109.36**
Stddev	.035	.00269	1.50	.00168	.00012	.06
%RSD	.31924	6.3954	.41495	.71172	26.896	.05641
#1	10.827	.03987	361.19	.23658	.00032	109.37
#2	10.777	.04503	359.30	.23380	.00050	109.30
#3	10.843	.04114	362.26	.23682	.00056	109.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010303 Acquired: 2/7/2012 20:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02386	F -91.171	.00095	F 9.3383	F 17066.	F -943570.
Stddev	.00012	30.899	.00072	4.1549	35.	591.
%RSD	.51170	33.891	75.577	44.493	.20679	.06261
#1	.02399	-98.547	.00037	5.7413	17028.	-943220.
#2	.02383	-57.251	.00072	13.886	17075.	-944250.
#3	.02375	-117.71	.00175	8.3874	17096.	-943240.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00082	-.00405	2.5707	-.00016	.42720	-.01045
Stddev	.00097	.00179	.0069	.00032	.00077	.00239
%RSD	117.41	44.219	.26973	200.57	.18100	22.851
#1	-.00028	-.00564	2.5635	-.00009	.42717	-.01266
#2	.00151	-.00211	2.5774	-.00050	.42645	-.00791
#3	.00124	-.00442	2.5712	.00012	.42799	-.01078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00015	-.00029	.02776	F -.25679
Stddev	.00075	.00011	.00010	.10237
%RSD	516.08	38.782	.35685	39.865
#1	-.00067	-.00030	.02770	-.19184
#2	.00029	-.00040	.02788	-.20374
#3	.00081	-.00018	.02772	-.37479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010303 Acquired: 2/7/2012 20:26:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20124.**	**16978.**
Stddev	69.	150.
%RSD	.34076	.88289
#1	20187.	16811.
#2	20051.	17020.
#3	20134.	17102.

Approved: February 08, 2012

Sample Name: L1202010304 Acquired: 2/7/2012 20:29:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00055	.00408	-.00025	.01168	.01214	.00000
Stddev	.00019	.01957	.00106	.00048	.00041	.0000
%RSD	34.674	479.82	418.40	4.0776	3.4083	1235.1
#1	-.00061	.02556	.00030	.01215	.01238	.00000
#2	-.00071	-.00059	-.00148	.01119	.01166	.00002
#3	-.00034	-.01273	.00041	.01171	.01237	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	318.09	.00165	.00253	.00254	.00132	.04725
Stddev	.31	.00008	.00002	.00026	.00009	.00547
%RSD	.09889	4.7348	.85984	10.350	7.0591	11.574
#1	318.30	.00160	.00254	.00225	.00140	.04727
#2	317.73	.00174	.00254	.00263	.00134	.04177
#3	318.24	.00161	.00250	.00275	.00122	.05271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.634	.03678	356.99	.23132	.00000	111.74
Stddev	.070	.00049	.91	.00036	.0003	.06
%RSD	.65912	1.3457	.25576	.15540	53987.	.05007
#1	10.648	.03718	357.82	.23123	-.00014	111.77
#2	10.558	.03692	356.01	.23101	.00036	111.68
#3	10.696	.03622	357.15	.23172	-.00022	111.77
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Sample Name: L1202010304 Acquired: 2/7/2012 20:29:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02237	F -180.43	.00068	F 11.136	F 16763.	F -938320.
Stddev	.00074	19.91	.00184	5.909	112.	1495.
%RSD	3.3114	11.034	272.68	53.065	.66757	.15932
#1	.02261	-203.01	-.00145	16.232	16753.	-938680.
#2	.02297	-165.41	.00186	12.516	16880.	-939610.
#3	.02154	-172.88	.00161	4.6584	16657.	-936680.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00072	-.00457	2.6101	-.00006	.42154	-.01086
Stddev	.00078	.00153	.0016	.00012	.00029	.00076
%RSD	108.33	33.508	.06233	184.91	.06850	6.9772
#1	-.00002	-.00321	2.6116	-.00020	.42171	-.01001
#2	-.00057	-.00622	2.6084	-.00002	.42121	-.01146
#3	-.00155	-.00427	2.6103	.00002	.42171	-.01110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00016	-.00032	.04538	F -.40734
Stddev	.00056	.00004	.00015	.09533
%RSD	349.28	13.315	.33315	23.404
#1	-.00061	-.00037	.04537	-.33778
#2	.00046	-.00028	.04523	-.36823
#3	-.00033	-.00031	.04553	-.51601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202010304 Acquired: 2/7/2012 20:29:34 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19747.**	**17230.**
Stddev	171.	165.
%RSD	.86501	.95589
#1	19882.	17121.
#2	19804.	17419.
#3	19555.	17150.

Approved: February 08, 2012

Sample Name: L1202010304PS Acquired: 2/7/2012 20:33:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388971-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19531	4.9242	.19420	.96849	.48932	.02362
Stddev	.00277	.0077	.00214	.01087	.00158	.00023
%RSD	1.4179	.15634	1.1040	1.1227	.32226	.96507
#1	.19214	4.9276	.19368	.95749	.48764	.02339
#2	.19724	4.9296	.19236	.96875	.49077	.02361
#3	.19654	4.9154	.19655	.97924	.48956	.02385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	291.16	.02574	.09508	.24037	.23363	1.8788
Stddev	.63	.00014	.00039	.00302	.00037	.0050
%RSD	.21580	.55871	.41236	1.2579	.15755	.26428
#1	290.43	.02564	.09472	.23700	.23321	1.8795
#2	291.52	.02590	.09549	.24125	.23376	1.8833
#3	291.52	.02568	.09502	.24285	.23391	1.8735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.374	.52370	325.75	.43688	.49011	125.42
Stddev	.078	.00331	.93	.00222	.00125	.19
%RSD	.22806	.63193	.28552	.50843	.25440	.15370
#1	34.284	.51993	324.80	.43439	.48880	125.20
#2	34.422	.52506	326.66	.43867	.49128	125.46
#3	34.417	.52612	325.79	.43757	.49024	125.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010304PS Acquired: 2/7/2012 20:33:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388971-01

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.25653	F -169.97	.23231	F 9.6026	F 15280.	F -846540.
Stddev	.00081	30.40	.00176	12.906	40.	466.
%RSD	.31498	17.885	.75808	134.41	.26400	.05507
#1	.25629	-144.85	.23071	20.633	15234.	-846500.
#2	.25744	-203.77	.23420	-4.5916	15300.	-847030.
#3	.25587	-161.30	.23202	12.767	15307.	-846100.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57340	.18930	4.9034	.00120	.85816	.45911
Stddev	.00191	.00232	.0006	.00012	.00250	.00360
%RSD	.33339	1.2238	.01246	9.8470	.29176	.78408
#1	.57135	.19047	4.9031	.00132	.85532	.45605
#2	.57514	.18663	4.9041	.00109	.86003	.46308
#3	.57370	.19079	4.9030	.00117	.85914	.45821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.22727	.47657	.52093	F -.06688
Stddev	.00088	.00468	.00070	.05814
%RSD	.38840	.98121	.13524	86.927
#1	.22656	.47147	.52021	-.03290
#2	.22700	.47756	.52098	-.13402
#3	.22826	.48066	.52161	-.03374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010304PS Acquired: 2/7/2012 20:33:01 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment: WG388971-01

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19549.	16708.
Stddev	93.	73.
%RSD	.47824	.43748
#1	19627.	16635.
#2	19574.	16781.
#3	19445.	16709.

Approved: February 08, 2012

Sample Name: L1202010304SDL Acquired: 2/7/2012 20:36:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388971-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00072**	**.00584**	**-.00004**	**.00653**	**.00256**	**-.00004**
Stddev	.00048	.01518	.00152	.00121	.00020	.00003
%RSD	66.508	260.16	3730.3	18.546	7.6693	73.424
#1	-.00108	.01930	.00059	.00518	.00277	-.00001
#2	-.00018	.00882	-.00177	.00688	.00239	-.00007
#3	-.00090	-.01062	.00106	.00752	.00251	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**63.598**	**.00074**	**.00040**	**.00105**	**.00128**	**.01198**
Stddev	.078	.00014	.00014	.00044	.00056	.00359
%RSD	.12191	19.152	35.494	42.207	43.852	29.941
#1	63.586	.00068	.00029	.00054	.00155	.01339
#2	63.527	.00091	.00056	.00132	.00166	.01465
#3	63.681	.00065	.00035	.00129	.00064	.00790
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1769**	**.01044**	**72.472**	**.04749**	**.00026**	**22.570**
Stddev	.0883	.00285	.114	.00085	.00020	.053
%RSD	4.0582	27.338	.15768	1.7974	78.204	.23520
#1	2.1067	.00871	72.535	.04773	.00043	22.590
#2	2.2761	.01373	72.341	.04654	.00029	22.510
#3	2.1479	.00887	72.542	.04820	.00004	22.611
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010304SDL Acquired: 2/7/2012 20:36:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388971-02

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00425	F -77.078	-.00026	3.5212	F 3646.7	F -188040.
Stddev	.00032	11.040	.00080	8.0401	18.1	160.
%RSD	7.5149	14.323	302.28	228.33	.49647	.08500
#1	.00400	-73.626	.00066	10.607	3646.4	-188100.
#2	.00413	-68.176	-.00066	-5.2163	3628.7	-187860.
#3	.00461	-89.432	-.00078	5.1724	3664.9	-188160.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00121	-.00304	.52261	.00124	.08528	-.00237
Stddev	.00200	.00174	.00075	.00054	.00041	.00112
%RSD	165.98	57.154	.14258	43.573	.47702	47.249
#1	.00191	-.00346	.52251	.00101	.08555	-.00180
#2	.00276	-.00454	.52192	.00185	.08481	-.00365
#3	-.00105	-.00113	.52340	.00085	.08548	-.00164
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00191	-.00028	.00905	F -.28912
Stddev	.00183	.00010	.00002	.24199
%RSD	95.569	35.094	.16868	83.701
#1	-.00178	-.00030	.00904	-.03055
#2	-.00380	-.00037	.00905	-.51015
#3	-.00015	-.00018	.00907	-.32664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010304SDL Acquired: 2/7/2012 20:36:17 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG388971-02

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20330.**	**16812.**
Stddev	58.	45.
%RSD	.28637	.26636
#1	20323.	16791.
#2	20391.	16782.
#3	20275.	16863.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 20:39:43 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39836	10.254	.40072	.49881	1.0065	.04967	10.187
Stddev	.00207	.015	.00440	.00297	.0012	.00023	.016
%RSD	.51892	.14842	1.0983	.59555	.11462	.45635	.15541
#1	.39625	10.248	.40427	.49631	1.0073	.04941	10.170
#2	.39847	10.243	.39580	.49804	1.0069	.04980	10.201
#3	.40038	10.272	.40210	.50210	1.0051	.04980	10.189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05037	.20257	.50110	.51054	3.9747	51.653	1.0195
Stddev	.00039	.00107	.00204	.00317	.0183	.095	.0044
%RSD	.77619	.52869	.40746	.62065	.45969	.18451	.43280
#1	.04997	.20180	.49891	.50743	3.9880	51.732	1.0152
#2	.05040	.20211	.50296	.51042	3.9823	51.547	1.0193
#3	.05075	.20379	.50142	.51377	3.9539	51.679	1.0240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.088	.49719	1.0111	51.924	.51113	F -4.5627	.51302
Stddev	.030	.00089	.0037	.220	.00186	39.246	.00258
%RSD	.29549	.17887	.37129	.42316	.36480	860.16	.50207
#1	10.109	.49820	1.0069	51.797	.50921	-45.508	.51262
#2	10.102	.49681	1.0123	51.797	.51125	32.729	.51067
#3	10.054	.49655	1.0141	52.178	.51293	-.9094	.51577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCV Acquired: 2/7/2012 20:39:43 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.1600	10.790	F -10.778	1.2059	.39916	5.0030	1.0195
Stddev	3.0955	.064	3.189	.0027	.00331	.0234	.0061
%RSD	50.252	.59345	29.583	.22036	.82824	.46853	.59666
#1	9.2987	10.731	-10.040	1.2055	.39679	4.9816	1.0183
#2	6.0716	10.781	-8.0234	1.2035	.39774	4.9994	1.0141
#3	3.1096	10.858	-14.271	1.2088	.40293	5.0281	1.0261
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000		10.000				
Range	-10.000%		-10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0131	.99494	.51293	.99433	1.0223	F .64927
Stddev	.0040	.00021	.00262	.00529	.0042	.18805
%RSD	.39205	.02076	.51051	.53224	.40909	28.964
#1	1.0109	.99487	.51254	.99045	1.0180	.72132
#2	1.0107	.99479	.51053	.99219	1.0225	.79064
#3	1.0177	.99518	.51573	1.0004	1.0263	.43584
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20404.	16724.
Stddev	103.	81.
%RSD	.50236	.48500
#1	20505.	16633.
#2	20407.	16787.
#3	20300.	16752.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 20:42:56 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00073	-.00359	-.00070	.00256	.00052	-.00005	-.03653
Stddev	.00033	.01600	.00164	.00026	.00003	.00000	.00901
%RSD	45.888	445.83	233.18	10.306	6.1873	7.3755	24.664
#1	-.00035	.00498	-.00060	.00244	.00052	-.00005	-.02696
#2	-.00088	-.02205	.00088	.00286	.00049	-.00005	-.04485
#3	-.00096	.00630	-.00240	.00238	.00055	-.00005	-.03778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.00004	.00092	.00117	-.00110	.01533	.00710
Stddev	.00005	.00008	.00040	.00020	.00396	.04269	.00147
%RSD	104.12	190.20	43.926	16.684	359.40	278.51	20.648
#1	-.00004	.00006	.00131	.00096	-.00564	.01253	.00801
#2	.00000	.00010	.00094	.00134	.00162	-.02589	.00787
#3	-.00010	-.00005	.00050	.00122	.00072	.05935	.00541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00223	-.00027	.00071	.01890	-.00089	F -25.523	-.00147
Stddev	.01814	.00067	.00002	.00871	.00062	30.163	.00104
%RSD	814.12	249.55	2.4162	46.092	69.152	118.18	70.821
#1	-.01244	.00015	.00070	.02340	-.00043	-53.004	-.00083
#2	.02251	-.00104	.00073	.02444	-.00160	-30.313	-.00267
#3	-.00338	.00008	.00071	.00886	-.00065	6.7489	-.00091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 20:42:56 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -3.6762	F .21534	F -14.367	.00058	.00018	.00882	.00044
Stddev	1.6231	.00264	4.112	.00038	.00221	.00090	.00028
%RSD	44.152	1.2263	28.622	65.665	1234.9	10.239	63.595
#1	-4.1472	.21415	-12.913	.00099	.00049	.00981	.00012
#2	-5.0117	.21836	-11.179	.00052	-.00217	.00804	.00057
#3	-1.8697	.21350	-19.008	.00023	.00222	.00861	.00063
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00023	.00029	-.00105	-.00018	-.00036	F -.29449
Stddev	.00023	.00073	.00023	.00028	.00009	.11882
%RSD	98.997	249.10	22.342	154.52	25.464	40.349
#1	.00027	-.00016	-.00128	.00002	-.00045	-.26118
#2	.00043	.00113	-.00081	-.00006	-.00036	-.42641
#3	-.00001	-.00010	-.00105	-.00049	-.00027	-.19587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20137.	16345.
Stddev	76.	13.
%RSD	.37966	.08207
#1	20066.	16332.
#2	20218.	16358.
#3	20127.	16344.

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010305 Acquired: 2/7/2012 20:46:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**-.01473**	**-.00037**	**.00879**	**.00786**	**.00002**
Stddev	.00049	.02506	.00084	.00091	.00021	.00002
%RSD	108.92	170.11	225.15	10.398	2.6563	90.750
#1	-.00072	-.03877	-.00033	.00959	.00801	.00003
#2	.00012	-.01667	-.00123	.00780	.00762	.00001
#3	-.00074	.01124	.00044	.00900	.00795	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**270.53**	**.00161**	**.00150**	**.00196**	**.00139**	**.06647**
Stddev	1.00	.00010	.00011	.00094	.00078	.00661
%RSD	.36858	6.1970	7.4784	48.011	56.523	9.9473
#1	269.42	.00170	.00162	.00290	.00194	.06753
#2	271.34	.00150	.00147	.00195	.00049	.07249
#3	270.85	.00164	.00140	.00102	.00173	.05940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.4040**	**.02520**	**317.50**	**.34313**	**.00029**	**130.03**
Stddev	.0526	.00192	1.08	.00180	.00032	.38
%RSD	.82162	7.6044	.34138	.52359	107.51	.28995
#1	6.3774	.02736	316.36	.34121	.00038	129.69
#2	6.4646	.02456	318.52	.34477	-.00006	130.43
#3	6.3699	.02369	317.61	.34340	.00056	129.96
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010305 Acquired: 2/7/2012 20:46:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02949	F -69.690	.00122	2.7056	F 16539.	F -920730.
Stddev	.00072	21.281	.00055	4.4236	197.	5390.
%RSD	2.4459	30.537	44.934	163.50	1.1926	.58539
#1	.03006	-51.401	.00182	-2.3847	16658.	-921960.
#2	.02868	-64.621	.00111	4.8829	16311.	-925390.
#3	.02974	-93.048	.00073	5.6184	16648.	-914820.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00055	-.00178	2.5466	.00031	.31917	-.01006
Stddev	.00140	.00117	.0120	.00024	.00124	.00173
%RSD	253.28	65.579	.47068	76.677	.38780	17.174
#1	-.00186	-.00047	2.5579	.00043	.31826	-.01097
#2	.00093	-.00272	2.5478	.00046	.32058	-.00806
#3	-.00073	-.00214	2.5341	.00004	.31867	-.01113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00029	-.00049	.02314	F -.33675
Stddev	.00022	.00008	.00025	.12099
%RSD	78.246	16.782	1.0596	35.929
#1	-.00017	-.00059	.02340	-.47471
#2	-.00014	-.00044	.02311	-.24871
#3	-.00054	-.00046	.02291	-.28682
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010305 Acquired: 2/7/2012 20:46:27 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20099.	16213.
Stddev	302.	68.
%RSD	1.5028	.42228
#1	19904.	16142.
#2	20447.	16218.
#3	19945.	16279.

Approved: February 08, 2012

Sample Name: L1202010306 Acquired: 2/7/2012 20:49:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00069	-.00770	-.00014	.00776	.00758	.00001
Stddev	.00025	.01904	.00165	.00033	.00035	.00003
%RSD	35.552	247.09	1199.1	4.2860	4.5677	317.94
#1	-.00089	-.02849	-.00182	.00815	.00719	-.00001
#2	-.00077	.00889	.00147	.00757	.00785	.00004
#3	-.00042	-.00351	-.00006	.00758	.00770	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	257.60	.00162	.00147	.00270	.00170	.04145
Stddev	.82	.00008	.00018	.00033	.00081	.00296
%RSD	.31758	5.0389	12.253	12.195	47.489	7.1398
#1	256.86	.00153	.00134	.00271	.00166	.03853
#2	257.47	.00164	.00139	.00237	.00252	.04139
#3	258.48	.00169	.00168	.00303	.00091	.04445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.1418	.02170	300.41	.32252	-.00002	123.38
Stddev	.0478	.00166	1.57	.00136	.00019	.64
%RSD	.77852	7.6427	.52213	.42114	882.19	.52016
#1	6.0981	.02340	298.91	.32210	-.00015	122.92
#2	6.1929	.02161	300.30	.32142	.00020	123.11
#3	6.1345	.02009	302.04	.32404	-.00012	124.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010306 Acquired: 2/7/2012 20:49:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02804	F -112.48	.00033	F 15.472	F 15945.	F -875760.
Stddev	.00045	32.65	.00098	9.014	45.	720.
%RSD	1.6062	29.029	301.49	58.257	.28210	.08219
#1	.02855	-96.212	.00062	24.522	15918.	-876330.
#2	.02787	-91.151	-.00077	15.398	15919.	-874950.
#3	.02770	-150.06	.00113	6.4958	15996.	-875990.
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	-.00299	2.4143	.00038	.30396	-.00967
Stddev	.00190	.00241	.0049	.00022	.00149	.00047
%RSD	606.34	80.511	.20126	59.179	.49026	4.8320
#1	.00194	-.00022	2.4184	.00060	.30277	-.00913
#2	-.00177	-.00454	2.4089	.00015	.30348	-.00995
#3	.00077	-.00421	2.4156	.00039	.30563	-.00993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.00075	-.00041	.02097	F -.32535
Stddev	.00074	.00017	.00019	.19574
%RSD	98.858	40.544	.89646	60.163
#1	.00134	-.00035	.02116	-.53684
#2	.00101	-.00029	.02096	-.15055
#3	-.00009	-.00060	.02078	-.28865
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010306 Acquired: 2/7/2012 20:49:51 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19725.**	**17018.**
Stddev	76.	37.
%RSD	.38708	.21613
#1	19809.	17046.
#2	19703.	17031.
#3	19661.	16976.

Approved: February 08, 2012

Sample Name: L1202010307 Acquired: 2/7/2012 20:53:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00069**	**-.02571**	**-.00088**	**.01290**	**.00845**	**.00002**
Stddev	.00011	.02363	.00108	.00054	.00005	.00002
%RSD	16.433	91.916	123.08	4.1663	.58708	144.24
#1	-.00082	-.05287	-.00203	.01352	.00844	.00003
#2	-.00065	-.01447	.00011	.01262	.00840	-.00001
#3	-.00061	-.00980	-.00071	.01256	.00850	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**345.32**	**.00166**	**.00087**	**.00251**	**.00062**	**.04549**
Stddev	.20	.00003	.00014	.00045	.00053	.00359
%RSD	.05728	1.5632	16.177	17.966	86.354	7.8895
#1	345.22	.00166	.00089	.00219	.00119	.04171
#2	345.19	.00164	.00099	.00231	.00054	.04592
#3	345.55	.00169	.00072	.00302	.00013	.04885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.9371**	**.05946**	**610.45**	**.08755**	**-.00012**	**46.934**
Stddev	.0067	.00201	.63	.00036	.00013	.041
%RSD	.11274	3.3751	.10321	.41664	109.28	.08687
#1	5.9308	.06178	610.80	.08792	.00003	46.976
#2	5.9364	.05830	610.82	.08754	-.00022	46.931
#3	5.9441	.05830	609.72	.08719	-.00017	46.895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012
Erin D. Long

Sample Name: L1202010307 Acquired: 2/7/2012 20:53:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01518	F -71.372	-.00129	F 10.591	F 25171.	F -1467e3
Stddev	.00017	48.355	.00138	2.384	300.	22487.
%RSD	1.1200	67.751	106.68	22.507	1.1928	1.5325
#1	.01498	-42.413	-.00267	9.2799	25516.	-1484e3
#2	.01527	-127.19	-.00131	9.1511	25017.	-1442e3
#3	.01529	-44.508	.00009	13.343	24978.	-1477e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00138	-.00308	2.8052	.00020	.42474	-.01296
Stddev	.00068	.00171	.0091	.00053	.00048	.00014
%RSD	49.061	55.578	.32561	261.24	.11329	1.1175
#1	-.00062	-.00111	2.8158	.00024	.42422	-.01310
#2	-.00190	-.00389	2.8001	.00070	.42483	-.01281
#3	-.00162	-.00422	2.7998	-.00034	.42517	-.01296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00109	-.00063	.01584	F -.43990
Stddev	.00129	.00009	.00010	.11724
%RSD	118.11	14.728	.63049	26.651
#1	-.00060	-.00073	.01595	-.31121
#2	-.00012	-.00060	.01575	-.54062
#3	-.00255	-.00055	.01583	-.46787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202010307 Acquired: 2/7/2012 20:53:10 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**19439.**	**17037.**
Stddev	121.	126.
%RSD	.62274	.73854
#1	19331.	16893.
#2	19570.	17124.
#3	19415.	17094.

Approved: February 08, 2012

Sample Name: L1202010308 Acquired: 2/7/2012 20:56:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00090	-.02070	.00014	.01192	.00847	.00003
Stddev	.00009	.03402	.00066	.00021	.00022	.00002
%RSD	10.501	164.34	479.23	1.7751	2.5997	73.674
#1	-.00098	.01796	.00008	.01188	.00857	.00003
#2	-.00080	-.03401	-.00049	.01173	.00863	.00001
#3	-.00093	-.04606	.00082	.01215	.00822	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	339.47	.00178	.00093	.00291	.00106	.05212
Stddev	1.27	.00006	.00027	.00052	.00033	.00333
%RSD	.37347	3.5806	29.410	17.993	30.783	6.3941
#1	338.01	.00184	.00069	.00334	.00124	.05408
#2	340.20	.00180	.00088	.00233	.00125	.05401
#3	340.21	.00171	.00123	.00306	.00068	.04828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.8105	.06044	598.70	.09006	-.00003	46.400
Stddev	.0253	.00181	3.96	.00047	.00025	.138
%RSD	.43572	2.9906	.66086	.51870	904.75	.29655
#1	5.8071	.05842	594.21	.09010	-.00024	46.249
#2	5.7871	.06190	600.25	.08958	-.00009	46.435
#3	5.8374	.06100	601.65	.09051	.00025	46.517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010308 Acquired: 2/7/2012 20:56:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01521	F -63.280	.00074	F 11.070	F 25160.	F -1444e3
Stddev	.00074	8.404	.00387	8.561	101.	8326.
%RSD	4.8930	13.281	522.77	77.334	.40286	.57660
#1	.01547	-55.612	.00437	20.631	25275.	-1444e3
#2	.01579	-61.963	-.00334	4.1139	25121.	-1435e3
#3	.01437	-72.265	.00120	8.4656	25084.	-1452e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
High Limit		900.00		9.0000	9.0000	9.0000
Low Limit		-.00400		-.00400	-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00168	-.00265	2.7634	-.00016	.41739	-.01197
Stddev	.00115	.00313	.0036	.00020	.00247	.00253
%RSD	68.574	117.93	.12868	125.48	.59218	21.156
#1	.00036	-.00620	2.7619	-.00036	.41458	-.01463
#2	.00247	-.00028	2.7675	-.00014	.41835	-.00959
#3	.00222	-.00147	2.7609	.00003	.41924	-.01169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00022	-.00052	.01652	F -.31638
Stddev	.00068	.00038	.00013	.14413
%RSD	303.71	71.976	.81613	45.556
#1	-.00063	-.00029	.01665	-.19621
#2	-.00060	-.00032	.01653	-.47618
#3	.00056	-.00096	.01638	-.27675
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Sample Name: L1202010308 Acquired: 2/7/2012 20:56:46 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	19211.	16945.
Stddev	28.	106.
%RSD	.14338	.62443
#1	19228.	16998.
#2	19179.	17013.
#3	19226.	16823.

Approved: February 08, 2012

Sample Name: L1202010309 Acquired: 2/7/2012 21:00:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00098	.03906	-.00228	.01416	.01401	-.00002
Stddev	.00087	.01917	.00066	.00066	.00032	.00003
%RSD	89.475	49.067	29.033	4.6773	2.2789	137.45
#1	-.00142	.06024	-.00302	.01490	.01366	-.00003
#2	-.00154	.03404	-.00172	.01361	.01429	-.00004
#3	.00003	.02291	-.00212	.01397	.01407	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	328.16	.00007	.00249	.00188	.00096	.05184
Stddev	.32	.00009	.00001	.00030	.00067	.00217
%RSD	.09600	125.24	.31532	15.863	69.028	4.1922
#1	328.05	.00004	.00249	.00195	.00074	.05032
#2	328.51	.00000	.00250	.00213	.00044	.05087
#3	327.91	.00017	.00249	.00155	.00171	.05432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.0641	.09248	15.314	.20967	.00038	F 986.16
Stddev	.0940	.00026	.134	.00139	.00051	8.35
%RSD	1.8565	.28281	.87743	.66195	134.04	.84664
#1	4.9696	.09218	15.451	.21084	.00055	988.53
#2	5.0650	.09267	15.182	.20814	-.00019	976.89
#3	5.1576	.09259	15.309	.21003	.00078	993.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010309 Acquired: 2/7/2012 21:00:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00598	F -57.547	-.00065	6.9877	F 21555.	F -1198e3
Stddev	.00054	40.006	.00137	14.990	257.	6202.
%RSD	9.0229	69.519	210.57	214.52	1.1925	.51763
#1	.00548	-18.309	.00058	6.1423	21848.	-1204e3
#2	.00655	-56.054	-.00213	-7.5615	21369.	-1192e3
#3	.00589	-98.279	-.00040	22.382	21448.	-1199e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00060	-.00391	1.0120	-.00013	.34507	-.01100
Stddev	.00167	.00129	.0024	.00040	.00083	.00054
%RSD	279.58	32.958	.23481	323.22	.24064	4.9557
#1	-.00074	-.00249	1.0142	-.00054	.34526	-.01162
#2	.00247	-.00500	1.0124	.00026	.34579	-.01077
#3	.00006	-.00423	1.0095	-.00009	.34416	-.01060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00036	.00015	.01353	F -.51424
Stddev	.00177	.00043	.00015	.11394
%RSD	499.21	290.12	1.0725	22.156
#1	-.00021	-.00016	.01354	-.55151
#2	.00134	-.00004	.01338	-.60487
#3	-.00220	.00063	.01367	-.38634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010309 Acquired: 2/7/2012 21:00:23 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**18920.**	**16544.**
Stddev	9.	124.
%RSD	.04869	.74925
#1	18929.	16458.
#2	18911.	16488.
#3	18920.	16686.

Approved: February 08, 2012

Sample Name: L1202010310 Acquired: 2/7/2012 21:04:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00074	-.01846	-.00123	.01342	.01794	-.00007
Stddev	.00049	.03738	.00112	.00101	.00038	.00002
%RSD	66.177	202.46	90.503	7.5074	2.1016	29.581
#1	-.00044	-.06022	-.00252	.01438	.01836	-.00007
#2	-.00130	-.00707	-.00065	.01351	.01785	-.00009
#3	-.00047	.01190	-.00053	.01237	.01762	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	318.79	-.00002	-.00045	.00177	.00176	.04226
Stddev	.32	.00012	.00018	.00031	.00059	.00529
%RSD	.10032	711.89	40.194	17.230	33.573	12.509
#1	319.13	-.00015	-.00049	.00150	.00113	.04387
#2	318.74	.00002	-.00061	.00172	.00185	.04655
#3	318.50	.00008	-.00025	.00210	.00231	.03635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.5146	.08403	1.0756	.00242	.00067	F 944.40
Stddev	.0549	.00308	.0223	.00081	.00013	8.97
%RSD	.99612	3.6604	2.0719	33.578	19.380	.95024
#1	5.4543	.08753	1.0760	.00222	.00082	954.60
#2	5.5278	.08285	1.0976	.00332	.00062	937.71
#3	5.5617	.08173	1.0530	.00173	.00058	940.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						315.00
Low Limit						-.50000

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010310 Acquired: 2/7/2012 21:04:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Rb7800	S_1807	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00109	F -143.04	.00082	.00962	F 20522.	F -1162e3
Stddev	.00034	17.55	.00198	4.3539	269.	3496.
%RSD	31.343	12.269	241.21	45261.	1.3122	.30077
#1	-.00147	-161.59	.00019	4.4943	20239.	-1159e3
#2	-.00097	-140.83	.00303	-4.2006	20776.	-1162e3
#3	-.00082	-126.70	-.00077	-.26478	20552.	-1166e3
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail
High Limit		900.00			9.0000	9.0000
Low Limit		-.00400			-.00400	-.00400

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00212	-.00487	.87201	-.00018	.33455	-.01102
Stddev	.00245	.00147	.00460	.00024	.00069	.00205
%RSD	115.69	30.247	.52749	132.27	.20750	18.617
#1	.00249	-.00341	.86905	-.00001	.33516	-.00869
#2	-.00050	-.00484	.87731	-.00045	.33470	-.01184
#3	.00437	-.00635	.86966	-.00008	.33379	-.01254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	-.00051	.00031	.00173	F -.69343
Stddev	.00112	.00014	.00011	.07921
%RSD	220.76	45.637	6.3788	11.423
#1	-.00112	.00018	.00161	-.75436
#2	.00078	.00047	.00177	-.72204
#3	-.00118	.00030	.00182	-.60390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit				45.000
Low Limit				-.00400

Approved: February 08, 2012

Erin D. Long

Sample Name: L1202010310 Acquired: 2/7/2012 21:04:07 Type: Unk
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**18716.**	**16044.**
Stddev	122.	102.
%RSD	.65063	.63616
#1	18807.	15937.
#2	18577.	16054.
#3	18764.	16140.

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 21:08:00 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.38801	10.297	.39537	.48321	1.0151	.04866	10.264
Stddev	.01120	.026	.00134	.01201	.0026	.00144	.015
%RSD	2.8878	.25591	.33907	2.4848	.25521	2.9522	.14206
#1	.39381	10.268	.39607	.49069	1.0124	.04953	10.249
#2	.39512	10.319	.39622	.48957	1.0154	.04945	10.263
#3	.37509	10.304	.39383	.46936	1.0176	.04701	10.278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04975	.20062	.49375	.50704	3.9877	52.407	1.0232
Stddev	.00010	.00115	.01383	.00197	.0010	.138	.0059
%RSD	.19470	.57155	2.8003	.38853	.02643	.26284	.58101
#1	.04977	.20156	.50107	.50849	3.9889	52.257	1.0174
#2	.04983	.20096	.50238	.50783	3.9870	52.436	1.0229
#3	.04964	.19934	.47780	.50479	3.9872	52.528	1.0293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.124	.49468	1.0134	52.027	.50902	F -29.863	.51105
Stddev	.070	.00197	.0060	.287	.00347	24.078	.00128
%RSD	.68857	.39739	.59023	.55162	.68085	80.628	.25090
#1	10.065	.49417	1.0182	51.770	.51153	-34.189	.51234
#2	10.105	.49302	1.0154	51.974	.51048	-51.486	.50978
#3	10.201	.49685	1.0067	52.337	.50507	-3.9155	.51103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						10.000	
Range						-10.000%	

Approved: February 08, 2012

Sample Name: CCV Acquired: 2/7/2012 21:08:00 Type: QC
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.8082	F 11.623	F -57.076	1.1973	.39316	4.9542	1.0179
Stddev	8.5024	.098	3.455	.0003	.00144	.0019	.0048
%RSD	96.529	.84697	6.0540	.02783	.36535	.03780	.47284
#1	3.3588	11.723	-61.064	1.1969	.39176	4.9540	1.0224
#2	4.4604	11.619	-54.977	1.1973	.39308	4.9523	1.0184
#3	18.605	11.526	-55.187	1.1976	.39463	4.9561	1.0128
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000	10.000	10.000				
Range	-10.000%	10.000%	-10.000%				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0142	.99668	.50990	.97136	1.0267	F .72239
Stddev	.0056	.00575	.00178	.02765	.0081	.09667
%RSD	.55043	.57651	.34994	2.8465	.79254	13.381
#1	1.0085	.99099	.51119	.98725	1.0326	.74241
#2	1.0146	.99658	.51064	.98740	1.0300	.61728
#3	1.0196	1.0025	.50786	.93943	1.0174	.80747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value						1.0000
Range						-10.000%

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	20281.	15998.
Stddev	572.	48.
%RSD	2.8192	.30277
#1	19924.	16052.
#2	19979.	15981.
#3	20941.	15960.

Approved: February 08, 2012

Sample Name: CCB Acquired: 2/7/2012 21:11:13 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00098	-.00232	-.00082	.00284	-.00010	-.00001	-.02397
Stddev	.00059	.03584	.00149	.00084	.00020	.00003	.00609
%RSD	60.659	1545.7	182.15	29.501	194.38	181.52	25.423
#1	-.00077	.02266	-.00084	.00238	-.00019	.00000	-.02483
#2	-.00164	.01377	.00068	.00233	-.00024	.00000	-.02959
#3	-.00052	-.04338	-.00229	.00380	.00013	-.00004	-.01749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00021	-.00007	.00009	.00105	.00340	.16432	.00154
Stddev	.00004	.00017	.00042	.00068	.00554	.02716	.00237
%RSD	17.749	246.59	445.04	64.628	163.28	16.530	154.58
#1	-.00017	.00004	.00057	.00139	-.00163	.15462	-.00036
#2	-.00024	.00002	-.00023	.00149	.00934	.14334	.00420
#3	-.00022	-.00027	-.00005	.00027	.00248	.19500	.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00721	.00010	.00076	.17863	-.00041	F 2.6905	-.00084
Stddev	.01444	.00016	.00015	.01921	.00039	11.589	.00072
%RSD	200.25	155.99	20.147	10.757	95.304	430.72	86.485
#1	.02286	.00026	.00058	.19806	-.00013	-5.5120	-.00088
#2	-.00558	-.00006	.00083	.15964	-.00025	15.948	-.00009
#3	.00435	.00011	.00086	.17819	-.00085	-2.3644	-.00154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: February 08, 2012

Erin D. Long

Sample Name: CCB Acquired: 2/7/2012 21:11:13 Type: Blank
Method: ICP-THERMO2_6010_200.7(v1728) Mode: CONC Corr. Factor: 1.000000
User: EDL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Rb7800	S_1807	S_1820	Sb2068	Se1960	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **14.611**	F **.54102**	F **-31.869**	**.00005**	**-.00190**	**.00658**	**.00078**
Stddev	4.383	.04267	2.261	.00042	.00165	.00040	.00007
%RSD	30.002	7.8863	7.0956	867.91	86.872	6.0437	9.1670
#1	17.672	.56608	-29.267	.00009	-.00105	.00614	.00072
#2	16.571	.49176	-32.977	-.00039	-.00379	.00669	.00076
#3	9.5894	.56523	-33.362	.00045	-.00084	.00691	.00086
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.01000	.01000	.01000				
Low Limit	-.01000	-.01000	-.01000				

Elem	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**-.00056**	**.00045**	**.00001**	**-.00030**	F **-.15120**
Stddev	.00002	.00063	.00114	.00010	.00012	.17459
%RSD	12.758	113.76	254.75	1794.4	38.446	115.47
#1	.00012	-.00030	-.00066	.00010	-.00039	-.02082
#2	.00012	-.00009	.00161	-.00011	-.00034	-.34955
#3	.00015	-.00128	.00039	.00003	-.00017	-.08321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						.10000
Low Limit						-.10000

Int. Std.	Y_2243	Y_3774
Units	Cts/S	Cts/S
Avg	**20695.**	**16986.**
Stddev	195.	106.
%RSD	.94392	.62207
#1	20544.	16988.
#2	20625.	17091.
#3	20916.	16880.

Approved: February 08, 2012

Erin D. Long

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L12020091
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: WG388946 - The continuing calibration blank analyzed on 06-FEB-2012 at 17:15 yielded a noncompliant result for thallium. Client sample 01 as well as the batch QA/QC were reanalyzed on a later calibration for thallium. The continuing calibration blank analyzed initially on 07-Feb-2012 at 12:58 yielded a noncompliant result for thallium. The continuing calibration blank was reanalyzed at 13:07 prior to sample analysis and was compliant for all analytes of concern.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG388879 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 41860
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL23-0212-1	**Prep Method:**	3015	**Prep Date:**	02/06/2012 08:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/06/2012 16:22
Workgroup #:	WG388879	**Analyst:**	JYH	**Run Date:**	02/06/2012 19:43
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EL.020612.194301
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00166		0.00100	0.000500
Barium, Total	7440-39-3	0.0198		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00489		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1	0.000688	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.00183	J	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00168		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	MPL23-0212-1	**Prep Method:**	3015	**Prep Date:**	02/06/2012 08:24
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/07/2012 12:05
Workgroup #:	WG388879	**Analyst:**	JYH	**Run Date:**	02/07/2012 15:52
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EL.020712.155210
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Thallium, Total	7440-28-0		U	0.000200	0.000100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.1.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN 6100

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	100
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/L)	0.25

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	200
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/kg)	40

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	40
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	50

50 ug/kg = 0.050 mg/kg

Perkin Elmer ELAN ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - LLICV
QC Std 4 - ICSA
QC Std 5 - ICSAB
QC Std 6 - CCV
QC Std 7 - CCB
QC Std 8 - LLCCV

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
U	1000	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG388814
Analyst: REK
Spike Analyst: REK
Run Date: 02/06/2012 08:24
Method: 3015
Balance: BAL016
Instrument: MW-2

SOP: ME407 Revison 12
Spike Solution: STD47574
Spike Witness: VC
HNO3 Lot #: COA15925
Digestion Tubes Lot #: COA15940
MS FILTERS- WG375661 Lot COA15665

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG388814-02	BLANK	1	40 mL	100 mL	207.567 g	207.555 g		
2	WG388814-03	LCS	1	40 mL	100 mL	209.015 g	209.011 g	.25 mL	
3	L12020057-01	SAMP	1	40 mL	100 mL	203.358 g	203.352 g		02/09/12
4	L12020075-02	SAMP	1	40 mL	100 mL	207.156 g	207.15 g		02/16/12
5	WG388814-01	REF	1	40 mL	100 mL	208.097 g	208.089 g		
6	L12020075-05	RS02	1	40 mL	100 mL	208.097 g	208.089 g		02/16/12
7	WG388814-04	MS	1	40 mL	100 mL	209.705 g	209.701 g	.25 mL	
8	L12020075-08	MS02	1	40 mL	100 mL	209.705 g	209.701 g	.25 mL	02/16/12
9	WG388814-05	MSD	1	40 mL	100 mL	209.496 g	209.485 g	.25 mL	
10	L12020075-11	SD02	1	40 mL	100 mL	209.496 g	209.485 g	.25 mL	02/16/12
11	L12020075-14	SAMP	1	40 mL	100 mL	210.338 g	210.328 g		02/16/12
12	L12020075-17	SAMP	1	40 mL	100 mL	206.456 g	206.444 g		02/16/12
13	L12020075-20	SAMP	1	40 mL	100 mL	207.691 g	207.673 g		02/16/12
14	L12020075-23	SAMP	1	40 mL	100 mL	206.737 g	206.735 g		02/16/12
15	L12020075-26	SAMP	1	40 mL	100 mL	208.134 g	208.127 g		02/16/12
16	L12020075-29	SAMP	1	40 mL	100 mL	207.558 g	207.531 g		02/16/12
17	L12020075-32	SAMP	1	40 mL	100 mL	206.756 g	206.742 g		02/16/12
18	L12020091-01	SAMP	1	40 mL	100 mL	208.829 g	208.813 g		02/14/12

L12020075-14	FILTERED DIGESTATE
L12020075-17	FILTERED DIGESTATE

Analyst: [signature]

Reviewer: Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 2299258
Report generated: 02/06/2012 12:55

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 020612B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40537

Calibration Std: STD49937 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49941 LLCCV: STD49510

Workgroups: 388879, 388710

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.020612.155147	Blank	Blank		1		02/06/12 15:51
2	EL.020612.155923	WG388956-01	Calibration Point		1		02/06/12 15:59
3	EL.020612.160659	WG388956-02	Calibration Point		1		02/06/12 16:06
4	EL.020612.161435	WG388956-03	Calibration Point		1		02/06/12 16:14
5	EL.020612.162213	WG388956-04	Calibration Point		1		02/06/12 16:22
6	EL.020612.162949	WG388956-05	Initial Calibration Verification		1		02/06/12 16:29
7	EL.020612.163725	WG388956-06	Initial Calib Blank		1		02/06/12 16:37
8	EL.020612.164503	WG388956-07	Low Level Initial Calibration V		1		02/06/12 16:45
9	EL.020612.165242	WG388956-08	Interference Check		1		02/06/12 16:52
10	EL.020612.170021	WG388956-09	Interference Check		1		02/06/12 17:00
11	EL.020612.170800	WG388956-10	CCV		1		02/06/12 17:08
12	EL.020612.171537	WG388956-11	CCB		1		02/06/12 17:15
13	EL.020612.172313	WG388814-02	Method/Prep Blank	40/100	1		02/06/12 17:23
14	EL.020612.173100	WG388814-03	Laboratory Control S	40/100	1		02/06/12 17:31
15	EL.020612.173847	L12020057-01	IDW-1	40/100	1		02/06/12 17:38
16	EL.020612.174635	WG388814-01	Reference Sample		1	L12020075-05	02/06/12 17:46
17	EL.020612.175423	WG388814-04	Matrix Spike	40/100	1	L12020075-05	02/06/12 17:54
18	EL.020612.180211	WG388814-05	Matrix Spike Duplica	40/100	1	L12020075-05	02/06/12 18:02
19	EL.020612.180959	L12020075-02	MW2B-269-14	40/100	1		02/06/12 18:09
20	EL.020612.181746	WG388879-01	Post Digestion Spike		1	L12020075-02	02/06/12 18:17
21	EL.020612.182532	WG388879-02	Serial Dilution		5	L12020075-02	02/06/12 18:25
22	EL.020612.183319	WG388956-12	CCV		1		02/06/12 18:33
23	EL.020612.184056	WG388956-13	CCB		1		02/06/12 18:40
24	EL.020612.184832	L12020075-14	MW4B-269-14	40/100	1		02/06/12 18:48
25	EL.020612.185618	L12020075-17	MW4C-269-14	40/100	1		02/06/12 18:56
26	EL.020612.190404	L12020075-20	MW5A-269-14	40/100	1		02/06/12 19:04
27	EL.020612.191151	L12020075-23	OW1B-269-14	40/100	1		02/06/12 19:11
28	EL.020612.191938	L12020075-26	OW1B2-269-14	40/100	1		02/06/12 19:19
29	EL.020612.192725	L12020075-29	OW2A-269-14	40/100	1		02/06/12 19:27
30	EL.020612.193513	L12020075-32	OW3A-269-14	40/100	1		02/06/12 19:35
31	EL.020612.194301	L12020091-01	MPL23-0212-1	40/100	1		02/06/12 19:43
32	EL.020612.195049	WG388956-14	CCV		1		02/06/12 19:50
33	EL.020612.195826	WG388956-15	CCB		1		02/06/12 19:58
34	EL.020612.200602	WG388646-03	Method/Prep Blank	40/100	1		02/06/12 20:06

Page: 1 Approved: February 09, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 020612B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40537

Calibration Std: STD49937 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49941 LLCCV: STD49510

Workgroups: 388879, 388710

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	EL.020612.201351	WG388646-04	Laboratory Control S	40/100	1		02/06/12 20:13
36	EL.020612.202138	L12020016-01	MPL4-0112-1		1	WG388646-01	02/06/12 20:21
37	EL.020612.202924	L12020016-02	MPL4-0112-MS	40/100	1	WG388646-05	02/06/12 20:29
38	EL.020612.203710	L12020016-03	MPL4-0112-MSD	40/100	1	WG388646-06	02/06/12 20:37
39	EL.020612.204456	L12020016-04	MPL2-0112-1	40/100	1		02/06/12 20:44
40	EL.020612.205243	WG388710-01	Post Digestion Spike		1	L12020016-04	02/06/12 20:52
41	EL.020612.210030	WG388710-02	Serial Dilution		5	L12020016-04	02/06/12 21:00
42	EL.020612.210817	WG388956-16	CCV		1		02/06/12 21:08
43	EL.020612.211554	WG388956-17	CCB		1		02/06/12 21:15
44	EL.020612.212330	L12020016-05	MPL3-0112-1	40/100	1		02/06/12 21:23
45	EL.020612.213117	L12020016-06	MPL3-0112-2	40/100	1		02/06/12 21:31
46	EL.020612.213905	L12020016-07	MPL1-0112-1	40/100	1		02/06/12 21:39
47	EL.020612.214653	L12020046-02	KY038PS0390212		1		02/06/12 21:46
48	EL.020612.215441	L12020046-04	KY038PS0370212		1		02/06/12 21:54
49	EL.020612.220230	L12020046-05	KY038PS0380212		1		02/06/12 22:02
50	EL.020612.221017	L12020046-07	KY038PS0270212		1		02/06/12 22:10
51	EL.020612.221803	L12020046-08	SS052PS7410212		1		02/06/12 22:18
52	EL.020612.222550	L12020046-09	SS052PS5900212		1		02/06/12 22:25
53	EL.020612.223337	WG388956-18	CCV		1		02/06/12 22:33
54	EL.020612.224114	WG388956-19	CCB		1		02/06/12 22:41

Page: 2 Approved: February 09, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 020712A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40550

Calibration Std: STD49937 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49941 LLCCV: STD49510

Workgroups: 388946,388879

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.020712.113445	Blank	Blank		1		02/07/12 11:34
2	EL.020712.114221	WG389020-01	Calibration Point		1		02/07/12 11:42
3	EL.020712.114957	WG389020-02	Calibration Point		1		02/07/12 11:49
4	EL.020712.115733	WG389020-03	Calibration Point		1		02/07/12 11:57
5	EL.020712.120510	WG389020-04	Calibration Point		1		02/07/12 12:05
6	EL.020712.121247	WG389020-05	Initial Calibration Verification		1		02/07/12 12:12
7	EL.020712.122023	WG389020-06	Initial Calib Blank		1		02/07/12 12:20
8	EL.020712.122801	WG389020-07	Low Level Initial Calibration V		1		02/07/12 12:28
9	EL.020712.123540	WG389020-08	Interference Check		1		02/07/12 12:35
10	EL.020712.124320	WG389020-09	Interference Check		1		02/07/12 12:43
11	EL.020712.125058	WG389020-10	CCV		1		02/07/12 12:50
12	EL.020712.125835	WG389020-11	CCB		1		02/07/12 12:58
13	EL.020712.130757	WG389020-12	CCB		1		02/07/12 13:07
14	EL.020712.131707	WG388918-02	Method/Prep Blank	.5/200	1		02/07/12 13:17
15	EL.020712.132454	WG388918-03	Laboratory Control S	.5/200	1		02/07/12 13:24
16	EL.020712.133241	WG388918-01	Reference Sample		5	L12020135-05	02/07/12 13:32
17	EL.020712.134028	WG388918-04	Matrix Spike	.509/200	5	L12020135-05	02/07/12 13:40
18	EL.020712.134816	WG388918-05	Matrix Spike Duplica	.509/200	5	L12020135-05	02/07/12 13:48
19	EL.020712.135604	L12010795-20	1115-686-C-013	.51/200	5		02/07/12 13:56
20	EL.020712.140352	L12010795-21	1115-686-C-014	.532/200	5		02/07/12 14:03
21	EL.020712.141141	WG388946-01	Post Digestion Spike		5	L12010795-21	02/07/12 14:11
22	EL.020712.141930	WG388946-02	Serial Dilution		25	L12010795-21	02/07/12 14:19
23	EL.020712.142718	WG389020-13	CCV		1		02/07/12 14:27
24	EL.020712.143455	WG389020-14	CCB		1		02/07/12 14:34
25	EL.020712.144231	L12010795-22	1115-686-C-015	.5/200	5		02/07/12 14:42
26	EL.020712.145016	L12020135-01	1109-116C-001	.511/200	5		02/07/12 14:50
27	EL.020712.145802	L12020135-02	1109-116C-002	.53/200	5		02/07/12 14:58
28	EL.020712.150548	L12020135-03	1109-116C-003	.528/200	5		02/07/12 15:05
29	EL.020712.151335	L12020135-04	1109-116C-004	.524/200	5		02/07/12 15:13
30	EL.020712.152122	WG389020-15	CCV		1		02/07/12 15:21
31	EL.020712.152859	WG389020-16	CCB		1		02/07/12 15:28
32	EL.020712.153635	WG388814-02	Method/Prep Blank	40/100	1		02/07/12 15:36
33	EL.020712.154422	WG388814-03	Laboratory Control S	40/100	1		02/07/12 15:44
34	EL.020712.155210	L12020091-01	MPL23-0212-1	40/100	1		02/07/12 15:52

Page: 1 Approved: February 09, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 020712A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 7
Maintenance Log ID: 40550

Calibration Std: STD49937 ICV Std: STD49511 Post Spike: STD47984
ICSA: STD49577 ICSAB: STD49578 Int. Std: STD49729
CCV: STD49941 LLCCV: STD49510

Workgroups: 388946,388879

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	EL.020712.155957	L12020075-05	MW2D-269-14		1	WG388814-01	02/07/12 15:59
36	EL.020712.161621	L12020075-08	MW2D-269-14	40/100	1	WG388814-04	02/07/12 16:16
37	EL.020712.162409	L12020075-11	MW2D-269-14	40/100	1	WG388814-05	02/07/12 16:24
38	EL.020712.163158	L12020075-02	MW2B-269-14	40/100	1		02/07/12 16:31
39	EL.020712.163945	WG388879-01	Post Digestion Spike		1	L12020075-02	02/07/12 16:39
40	EL.020712.164730	WG388879-02	Serial Dilution		5	L12020075-02	02/07/12 16:47
41	EL.020712.165517	WG389020-17	CCV		1		02/07/12 16:55
42	EL.020712.170254	WG389020-18	CCB		1		02/07/12 17:02

Comments

Seq.	Rerun	Dil.	Reason	Analytes
12			Data not used due to noncompliant result for thallium.	

Page: 2 Approved: February 09, 2012

Microbac Laboratories Inc.

Data Checklist

Date: 06-FEB-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 388956
Runlog ID: 45009
Analytical Workgroups: 388879, 388710

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	057, 091, 016, 044
Client Forms	X
Level X	
Level 3	
Level 4	057, 091, 016, 044
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	EDL
Comments	

Primary Reviewer:

Secondary Reviewer:
09-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-09-2012 08:38:26

Microbac Laboratories Inc.

Data Checklist

Date: 07-FEB-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 389020
Runlog ID: 45029
Analytical Workgroups: 388946, 388879

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	795, 135, 091
Client Forms	X
Level X	
Level 3	
Level 4	795, 135, 091
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	EDL
Comments	

Primary Reviewer:

Secondary Reviewer:
09-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-09-2012 09:39:28

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG388879

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12					02/06/12	3.9	180		02/06/12	4.3	180	
MPL23-0212-1	01	02/02/12					02/06/12	3.9	180		02/07/12	5.2	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2300635
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: EL.020612.172313
Prep Date: 02/06/12 08:24
Analyzed Date: 02/06/12 17:23
Analyst: JYH

Work Group: WG388879
Blank Sample ID: WG388814-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388814-03	EL.020612.173100	02/06/12 17:31	01
MPL23-0212-1	L12020091-01	EL.020612.194301	02/06/12 19:43	01
LCS	WG388814-03	EL.020712.154422	02/07/12 15:44	02
MPL23-0212-1	L12020091-01	EL.020712.155210	02/07/12 15:52	02

Report Name: BLANK_SUMMARY
PDF File ID: 2300653
Report generated 02/08/2012 09:45

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: EL.020712.153635
Prep Date: 02/06/12 08:24
Analyzed Date: 02/07/12 15:36
Analyst: JYH

Work Group: WG388879
Blank Sample ID: WG388814-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388814-03	EL.020612.173100	02/06/12 17:31	01
MPL23-0212-1	L12020091-01	EL.020612.194301	02/06/12 19:43	01
LCS	WG388814-03	EL.020712.154422	02/07/12 15:44	02
MPL23-0212-1	L12020091-01	EL.020712.155210	02/07/12 15:52	02

Report Name: BLANK_SUMMARY
PDF File ID: 2300653
Report generated 02/08/2012 09:45

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 08:24 Sample ID: WG388814-02
Instrument ID: ELAN-ICP Run Date: 02/06/12 17:23 Prep Method: 3015
File ID: EL.020612.172313 Analyst: JYH Method: 6020
Workgroup (AAB#): WG388879 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-06-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Arsenic, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Cobalt, Total	0.000500	0.00100	0.000500	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Silver, Total	0.000500	0.00100	0.000500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2300654
08-FEB-2012 09:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 08:24 Sample ID: WG388814-02
Instrument ID: ELAN-ICP Run Date: 02/07/12 15:36 Prep Method: 3015
File ID: EL.020712.153635 Analyst: JYH Method: 6020
Workgroup (AAB#): WG388879 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-07-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Thallium, Total	0.000100	0.000200	0.000100	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2300654
08-FEB-2012 09:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/06/2012 Sample ID: WG388814-03
Instrument ID: ELAN-ICP Run Time: 17:31 Prep Method: 3015
File ID: EL.020612.173100 Analyst: JYH Method: 6020
Workgroup (AAB#): WG388879 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD47574 Cal ID: ELAN-I-06-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0569	91.1	80 - 120	
Arsenic, Total	0.0625	0.0588	94.1	80 - 120	
Barium, Total	0.0625	0.0584	93.5	80 - 120	
Cadmium, Total	0.0625	0.0593	94.9	80 - 120	
Chromium, Total	0.0625	0.0614	98.3	80 - 120	
Cobalt, Total	0.0625	0.0598	95.6	80 - 120	
Copper, Total	0.0625	0.0616	98.6	80 - 120	
Lead, Total	0.0625	0.0577	92.4	80 - 120	
Manganese, Total	0.0625	0.0587	93.9	80 - 120	
Nickel, Total	0.0625	0.0594	95.0	80 - 120	
Selenium, Total	0.0625	0.0587	93.9	80 - 120	
Silver, Total	0.0625	0.0605	96.9	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2300655
Report generated: 02/08/2012 09:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388814-03
Instrument ID: ELAN-ICP Run Time: 15:44 Prep Method: 3015
File ID: EL.020712.154422 Analyst: JYH Method: 6020
Workgroup (AAB#): WG388879 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD47574 Cal ID: ELAN-I-07-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Thallium, Total	0.0625	0.0617	98.7	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2300655
Report generated: 02/08/2012 09:50

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L12020091 Cal ID: ELAN-ICP- Worknum: WG388879
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG388814-01 File ID: EL.020612.174635 Dil: 1 Matrix: WATER
Sample ID: WG388814-04 MS File ID: EL.020612.175423 Dil: 1 Units: mg/L
Sample ID: WG388814-05 MSD File ID: EL.020612.180211 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony	ND	0.0625	0.0597	95.5	0.0625	0.0584	93.5	2.14	80 - 120	20	
Arsenic	ND	0.0625	0.0581	93.0	0.0625	0.0588	94.0	1.08	80 - 120	20	
Barium	0.0129	0.0625	0.0731	96.3	0.0625	0.0733	96.6	0.282	80 - 120	20	
Cadmium	ND	0.0625	0.0613	98.1	0.0625	0.0611	97.7	0.362	80 - 120	20	
Chromium	0.00187	0.0625	0.0638	99.1	0.0625	0.0653	101	2.32	80 - 120	20	
Cobalt	ND	0.0625	0.0617	98.8	0.0625	0.0634	101	2.73	80 - 120	20	
Copper	ND	0.0625	0.0631	101	0.0625	0.0665	106	5.29	80 - 120	20	
Lead	ND	0.0625	0.0608	97.3	0.0625	0.0624	99.9	2.60	80 - 120	20	
Manganese	0.00711	0.0625	0.0682	97.8	0.0625	0.0684	98.1	0.341	80 - 120	20	
Nickel	ND	0.0625	0.0644	103	0.0625	0.0657	105	2.11	80 - 120	20	
Selenium	ND	0.0625	0.0556	88.9	0.0625	0.0561	89.8	0.947	80 - 120	20	
Silver	ND	0.0625	0.0608	97.3	0.0625	0.0605	96.9	0.415	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2300656
Report generated 02/08/2012 09:49

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L12020091 Cal ID: ELAN-ICP- Worknum: WG388879
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG388814-01 File ID: EL.020712.155957 Dil: 1 Matrix: WATER
Sample ID: WG388814-04 MS File ID: EL.020712.161621 Dil: 1 Units: mg/L
Sample ID: WG388814-05 MSD File ID: EL.020712.162409 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Thallium	ND	0.0625	0.0627	100	0.0625	0.0626	100	0.146	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2300656
Report generated 02/08/2012 09:49

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12020091 **Worknum:** WG388879
Instrument: ELAN-ICP **Method:** 6020
Serial Dil: WG388879-02 **File ID:** EL.020612.182532 **Dil:** 5 **Units:** ug/L
Sample: L12020075-02 **File ID:** EL.020612.180959 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	ND	U	ND	U		
Barium	6.56	X	6.57	X	0.19	
Cadmium	ND	U	ND	U		
Chromium	1.07	X	ND	U		
Cobalt	0.210	F	ND	U		
Copper	ND	U	ND	U		
Lead	ND	U	ND	U		
Manganese	9.60	X	8.86	X	7.67	
Nickel	0.957	F	ND	U		
Selenium	ND	U	ND	U		
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2300650
02/08/2012 09:44

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12020091 **Worknum:** WG388879
Instrument: ELAN-ICP **Method:** 6020
Serial Dil: WG388879-02 **File ID:** EL.020712.164730 **Dil:** 5 **Units:** ug/L
Sample: L12020075-02 **File ID:** EL.020712.163158 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	ND	U	ND	U		
Barium	6.62	X	6.76	X	2.11	
Cadmium	ND	U	ND	U		
Chromium	0.832	X	ND	U		
Cobalt	0.261	F	ND	U		
Copper	ND	U	ND	U		
Lead	ND	U	ND	U		
Manganese	10.2	X	10.2	X	0.66	
Nickel	0.986	F	ND	U		
Selenium	0.221	F	1.15	F	423.00	
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2300650
02/08/2012 09:44

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12020091 **Worknum:** WG388879
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG388879-01 **File ID:** EL.020612.181746 **Dil:** 1 **Units:** ug/L
Sample ID: L12020075-02 **File ID:** EL.020612.180959 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	47.7		0	U	50	95.4	75 - 125	
ARSENIC	47.8		0	U	50	95.5	75 - 125	
BARIUM	53.7		6.56		50	94.2	75 - 125	
CADMIUM	49.3		0	U	50	98.6	75 - 125	
CHROMIUM	52.9		1.07		50	103.6	75 - 125	
COBALT	48.7		0.210	F	50	97.1	75 - 125	
COPPER	51.6		0	U	50	103.2	75 - 125	
LEAD	48.6		0	U	50	97.3	75 - 125	
MANGANESE	58.2		9.60		50	97.1	75 - 125	
NICKEL	51.4		0.957	F	50	100.8	75 - 125	
SELENIUM	46.3		0	U	50	92.6	75 - 125	
SILVER	52.4		0	U	50	104.7	75 - 125	
THALLIUM	47.9		0	U	50	95.8	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2300652
Report generated: 02/08/2012 09:44

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12020091 **Worknum:** WG388879
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG388879-01 **File ID:** EL.020712.163945 **Dil:** 1 **Units:** ug/L
Sample ID: L12020075-02 **File ID:** EL.020712.163158 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	49.6		0	U	50	99.3	75 - 125	
ARSENIC	47.3		0	U	50	94.6	75 - 125	
BARIUM	55.9		6.62		50	98.5	75 - 125	
CADMIUM	49.1		0	U	50	98.2	75 - 125	
CHROMIUM	53.0		0.832		50	104.3	75 - 125	
COBALT	53.8		0.261	F	50	107.0	75 - 125	
COPPER	54.6		0	U	50	109.1	75 - 125	
LEAD	53.7		0	U	50	107.4	75 - 125	
MANGANESE	63.4		10.2		50	106.5	75 - 125	
NICKEL	53.5		0.986	F	50	105.0	75 - 125	
SELENIUM	44.7		0.221	F	50	89.0	75 - 125	
SILVER	51.3		0	U	50	102.6	75 - 125	
THALLIUM	53.6		0	U	50	107.3	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2300652
Report generated: 02/08/2012 09:44

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12020091**	Workgroup (AAB#):	**WG388879**
Analytical Method:	**6020**	Instrument ID:	**ELAN-ICP**
ICAL Worknum:	**WG388956**	Initial Calibration Date:	**06-FEB-2012 16:22**

	WG388956-01		WG388956-02		WG388956-03		WG388956-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	41.5	.4	1880	50	230000	100	472000	.999919	
ARSENIC	0	-171	.4	343	50	64600	100	121000	.999815	
BARIUM	0	35.7	.4	679	50	84700	100	177000	.999682	
CADMIUM	0	8.84	.4	536	50	67900	100	138000	.999986	
CHROMIUM	0	7600	.4	10600	50	401000	100	806000	.999772	
COBALT	0	120	.4	4150	50	477000	100	965000	.999781	
COPPER	0	179	.4	905	50	95700	100	186000	1	
LEAD	0	1150	.4	10100	50	1110000	100	2220000	.999939	
MANGANESE	0	528	.4	5970	50	644000	100	1270000	.999956	
NICKEL	0	73.3	.4	860	50	98400	100	194000	.999961	
SELENIUM	0	3.60	.4	40.9	50	5520	100	10800	.999998	
SILVER	0	107	.4	2510	50	302000	100	586000	.999853	
THALLIUM	0	111	.4	2740	50	335000	100	651000	.999995	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2300643
Report generated: 08-FEB-2012 08:40

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12020091**	Workgroup (AAB#):	**WG388879**
Analytical Method:	**6020**	Instrument ID:	**ELAN-ICP**
ICAL Worknum:	**WG389020**	Initial Calibration Date:	**07-FEB-2012 12:05**

	WG389020-01		WG389020-02		WG389020-03		WG389020-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	12.4	.4	2090	50	253000	100	506000	.999973	
ARSENIC	0	-196	.4	363	50	70200	100	141000	.999994	
BARIUM	0	21.0	.4	805	50	95700	100	191000	1	
CADMIUM	0	3.92	.4	640	50	79100	100	164000	.999665	
CHROMIUM	0	8860	.4	12900	50	463000	100	919000	.999995	
COBALT	0	75.3	.4	4340	50	513000	100	1020000	.999998	
COPPER	0	105	.4	999	50	104000	100	203000	.999949	
LEAD	0	1020	.4	10900	50	1150000	100	2320000	.999933	
MANGANESE	0	321	.4	6210	50	703000	100	1370000	.999939	
NICKEL	0	36.0	.4	911	50	108000	100	213000	.999996	
SELENIUM	0	7.48	.4	43.8	50	6010	100	12400	.999863	
SILVER	0	87.3	.4	3000	50	350000	100	690000	1	
THALLIUM	0	19.0	.4	2910	50	344000	100	683000	.999982	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 2300643
Report generated: 08-FEB-2012 08:40

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12020091
Run Date: 02/06/2012
Sample ID: WG388956-06
Instrument ID: ELAN-ICP
Run Time: 16:37
Method: 6020
File ID: EL.020612.163725
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-ICP - 06-FEB-12
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
MANGANESE	.4	.8	.4	U
NICKEL	.8	1.6	.8	U
LEAD	.2	.4	.2	U
ANTIMONY	.2	.4	.2	U
SELENIUM	.2	.4	.2	U
THALLIUM	.04	.08	.04	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 2300645
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-06
Instrument ID: ELAN-ICP
Run Time: 12:20
Method: 6020
File ID: EL.020712.122023
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-ICP - 07-FEB-12
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
MANGANESE	.4	.8	.4	U
NICKEL	.8	1.6	.8	U
LEAD	.2	.4	.2	U
ANTIMONY	.2	.4	.2	U
SELENIUM	.2	.4	.2	U
THALLIUM	.04	.08	.04	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 2300645
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/06/2012
Sample ID: WG388956-11
Instrument ID: ELAN-ICP
Run Time: 17:15
Method: 6020
File ID: EL.020612.171537
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0409	F

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/06/2012
Sample ID: WG388956-13
Instrument ID: ELAN-ICP
Run Time: 18:40
Method: 6020
File ID: EL.020612.184056
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/06/2012
Sample ID: WG388956-15
Instrument ID: ELAN-ICP
Run Time: 19:58
Method: 6020
File ID: EL.020612.195826
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-12
Instrument ID: ELAN-ICP
Run Time: 13:07
Method: 6020
File ID: EL.020712.130757
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-16
Instrument ID: ELAN-ICP
Run Time: 15:28
Method: 6020
File ID: EL.020712.152859
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-18
Instrument ID: ELAN-ICP
Run Time: 17:02
Method: 6020
File ID: EL.020712.170254
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2300648
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12020091 Run Date: 02/06/2012 Sample ID: WG388956-05
Instrument ID: ELAN-ICP Run Time: 16:29 Method: 6020
File ID: EL.020612.162949 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG388879 Cal ID: ELAN-I - 06-FEB-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	49.2	98.4	90 - 110	
Arsenic		50	49.1	98.3	90 - 110	
Barium		50	49.3	98.5	90 - 110	
Cadmium		50	49.0	98.1	90 - 110	
Chromium		50	50.5	101	90 - 110	
Cobalt		50	49.9	99.7	90 - 110	
Copper		50	49.4	98.8	90 - 110	
Lead		50	48.7	97.4	90 - 110	
Manganese		50	49.2	98.5	90 - 110	
Nickel		50	49.7	99.5	90 - 110	
Selenium		50	48.5	97.0	90 - 110	
Silver		50	49.4	98.8	90 - 110	
Thallium		50	47.6	95.2	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2300644
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)

(Alternate Source)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG389020-05

Instrument ID: ELAN-ICP Run Time: 12:12 Method: 6020

File ID: EL.020712.121247 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG388879 Cal ID: ELAN-I - 07-FEB-12

QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	48.5	97.0	90 - 110	
Arsenic		50	47.8	95.7	90 - 110	
Barium		50	48.2	96.4	90 - 110	
Cadmium		50	48.4	96.9	90 - 110	
Chromium		50	48.8	97.6	90 - 110	
Cobalt		50	49.5	99.0	90 - 110	
Copper		50	48.3	96.7	90 - 110	
Lead		50	48.5	97.1	90 - 110	
Manganese		50	49.4	98.8	90 - 110	
Nickel		50	48.3	96.6	90 - 110	
Selenium		50	47.6	95.2	90 - 110	
Silver		50	47.8	95.5	90 - 110	
Thallium		50	48.9	97.7	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2300644
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091 Run Date: 02/06/2012 Sample ID: WG388956-10
Instrument ID: ELAN-ICP Run Time: 17:08 Method: 6020
File ID: EL.020612.170800 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG388879 Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	47.8	ug/L	95.7	90 - 110		
Arsenic		50.0	49.3	ug/L	98.6	90 - 110		
Barium		50.0	49.2	ug/L	98.4	90 - 110		
Cadmium		50.0	47.6	ug/L	95.2	90 - 110		
Chromium		50.0	49.7	ug/L	99.5	90 - 110		
Cobalt		50.0	48.8	ug/L	97.6	90 - 110		
Copper		50.0	50.3	ug/L	101	90 - 110		
Lead		50.0	48.3	ug/L	96.6	90 - 110		
Manganese		50.0	48.7	ug/L	97.5	90 - 110		
Nickel		50.0	49.5	ug/L	99.0	90 - 110		
Selenium		50.0	49.9	ug/L	99.7	90 - 110		
Silver		50.0	51.1	ug/L	102	90 - 110		
Thallium		50.0	49.3	ug/L	98.5	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091 Run Date: 02/06/2012 Sample ID: WG388956-12
Instrument ID: ELAN-ICP Run Time: 18:33 Method: 6020
File ID: EL.020612.183319 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG388879 Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.9	ug/L	97.7	90 - 110		
Arsenic		50.0	48.0	ug/L	96.0	90 - 110		
Barium		50.0	48.2	ug/L	96.3	90 - 110		
Cadmium		50.0	47.8	ug/L	95.7	90 - 110		
Chromium		50.0	48.5	ug/L	97.0	90 - 110		
Cobalt		50.0	48.2	ug/L	96.4	90 - 110		
Copper		50.0	48.6	ug/L	97.2	90 - 110		
Lead		50.0	47.5	ug/L	95.1	90 - 110		
Manganese		50.0	47.4	ug/L	94.7	90 - 110		
Nickel		50.0	47.8	ug/L	95.5	90 - 110		
Selenium		50.0	48.2	ug/L	96.4	90 - 110		
Silver		50.0	50.0	ug/L	100	90 - 110		
Thallium		50.0	48.3	ug/L	96.5	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091 Run Date: 02/06/2012 Sample ID: WG388956-14
Instrument ID: ELAN-ICP Run Time: 19:50 Method: 6020
File ID: EL.020612.195049 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG388879 Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.3	ug/L	96.5	90 - 110		
Arsenic		50.0	47.8	ug/L	95.6	90 - 110		
Barium		50.0	50.2	ug/L	100	90 - 110		
Cadmium		50.0	50.6	ug/L	101	90 - 110		
Chromium		50.0	47.4	ug/L	94.8	90 - 110		
Cobalt		50.0	48.0	ug/L	96.0	90 - 110		
Copper		50.0	49.8	ug/L	99.5	90 - 110		
Lead		50.0	49.8	ug/L	99.7	90 - 110		
Manganese		50.0	47.2	ug/L	94.3	90 - 110		
Nickel		50.0	49.7	ug/L	99.4	90 - 110		
Selenium		50.0	46.6	ug/L	93.1	90 - 110		
Silver		50.0	48.8	ug/L	97.6	90 - 110		
Thallium		50.0	48.9	ug/L	97.8	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-10
Instrument ID: ELAN-ICP
Run Time: 12:50
Method: 6020
File ID: EL.020712.125058
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.5	ug/L	97.0	90 - 110		
Arsenic		50.0	48.0	ug/L	96.0	90 - 110		
Barium		50.0	48.0	ug/L	96.1	90 - 110		
Cadmium		50.0	49.2	ug/L	98.4	90 - 110		
Chromium		50.0	48.6	ug/L	97.3	90 - 110		
Cobalt		50.0	49.7	ug/L	99.3	90 - 110		
Copper		50.0	49.5	ug/L	99.0	90 - 110		
Lead		50.0	49.9	ug/L	99.8	90 - 110		
Manganese		50.0	49.8	ug/L	99.6	90 - 110		
Nickel		50.0	47.6	ug/L	95.2	90 - 110		
Selenium		50.0	47.6	ug/L	95.2	90 - 110		
Silver		50.0	48.7	ug/L	97.3	90 - 110		
Thallium		50.0	48.7	ug/L	97.4	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-15
Instrument ID: ELAN-ICP
Run Time: 15:21
Method: 6020
File ID: EL.020712.152122
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	47.5	ug/L	94.9	90 - 110		
Arsenic		50.0	48.3	ug/L	96.6	90 - 110		
Barium		50.0	48.2	ug/L	96.3	90 - 110		
Cadmium		50.0	47.6	ug/L	95.2	90 - 110		
Chromium		50.0	51.1	ug/L	102	90 - 110		
Cobalt		50.0	52.3	ug/L	105	90 - 110		
Copper		50.0	52.5	ug/L	105	90 - 110		
Lead		50.0	50.3	ug/L	101	90 - 110		
Manganese		50.0	52.8	ug/L	106	90 - 110		
Nickel		50.0	52.2	ug/L	104	90 - 110		
Selenium		50.0	50.4	ug/L	101	90 - 110		
Silver		50.0	48.9	ug/L	97.8	90 - 110		
Thallium		50.0	50.9	ug/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-17
Instrument ID: ELAN-ICP
Run Time: 16:55
Method: 6020
File ID: EL.020712.165517
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.7	ug/L	97.5	90 - 110		
Arsenic		50.0	48.4	ug/L	96.9	90 - 110		
Barium		50.0	48.4	ug/L	96.7	90 - 110		
Cadmium		50.0	50.8	ug/L	102	90 - 110		
Chromium		50.0	49.6	ug/L	99.1	90 - 110		
Cobalt		50.0	51.7	ug/L	103	90 - 110		
Copper		50.0	50.3	ug/L	101	90 - 110		
Lead		50.0	50.6	ug/L	101	90 - 110		
Manganese		50.0	49.3	ug/L	98.5	90 - 110		
Nickel		50.0	49.7	ug/L	99.4	90 - 110		
Selenium		50.0	49.0	ug/L	98.0	90 - 110		
Silver		50.0	50.6	ug/L	101	90 - 110		
Thallium		50.0	50.5	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2300647
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L12020091
Run Date: 02/06/2012
Sample ID: WG388956-07
Instrument ID: ELAN-ICP
Run Time: 16:45
Method: 6020
File ID: EL.020612.164503
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 06-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Cadmium		0.200	0.204	ug/L	102	80 - 120		
Thallium		0.0800	0.0929	ug/L	116	80 - 120		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 2300658
Report generated 02/09/2012 11:09

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L12020091
Run Date: 02/07/2012
Sample ID: WG389020-07
Instrument ID: ELAN-ICP
Run Time: 12:28
Method: 6020
File ID: EL.020712.122801
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG388879
Cal ID: ELAN-I - 07-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Cadmium		0.200	0.216	ug/L	108	80 - 120		
Thallium		0.0800	0.0779	ug/L	97.4	80 - 120		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 2300658
Report generated 02/09/2012 11:09

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12020091 **Workgroup (AAB#):** WG388879
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG388956-08 **File ID:** EL.020612.165242 **Units:** ug/L
Sol. AB : WG388956-09 **File ID:** EL.020612.170021 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0373	NS	100	98.6	98.6	
Arsenic	NS	0.00100	NS	100	95.1	95.1	
Barium	NS	0.0681	NS	100	97.2	97.2	
Cadmium	NS	0.0717	NS	100	97.8	97.8	
Chromium	NS	0.150	NS	100	94.5	94.5	
Cobalt	NS	-0.00380	NS	100	91.2	91.2	
Copper	NS	0.179	NS	100	93.3	93.3	
Lead	NS	0.00210	NS	100	92.7	92.7	
Manganese	NS	0.0331	NS	100	95.5	95.5	
Nickel	NS	0.468	NS	100	90.5	90.5	
Selenium	NS	0.0331	NS	100	91.9	91.9	
Silver	NS	-0.0168	NS	100	99.9	99.9	
Thallium	NS	-0.00450	NS	100	92.4	92.4	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 2300646
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12020091 **Workgroup (AAB#):** WG388879
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG389020-08 **File ID:** EL.020712.123540 **Units:** ug/L
Sol. AB : WG389020-09 **File ID:** EL.020712.124320 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0749	NS	100	106	106	
Arsenic	NS	0.0333	NS	100	96.3	96.3	
Barium	NS	0.0322	NS	100	99.4	99.4	
Cadmium	NS	0.146	NS	100	95.9	95.9	
Chromium	NS	0.0975	NS	100	93.4	93.4	
Cobalt	NS	0.0236	NS	100	95.2	95.2	
Copper	NS	0.179	NS	100	95.1	95.1	
Lead	NS	0.00540	NS	100	97.6	97.6	
Manganese	NS	0.0564	NS	100	95.5	95.5	
Nickel	NS	0.490	NS	100	93.6	93.6	
Selenium	NS	0.0227	NS	100	95.0	95.0	
Silver	NS	-0.000800	NS	100	103	103	
Thallium	NS	-0.00210	NS	100	94.1	94.1	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 2300646
Report generated 02/08/2012 08:40

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12020091 **Analytical Method:** 6020
Analytical Workgroup: WG388879 **Matrix:** 1
Instrument: ELAN-ICP **Analyst:** JYH
ICAL Date: 06-FEB-2012 15:59

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12020075-02	SAMP	06-FEB-2012 18:09	111.848	105.552	102.632	109.374
L12020091-01	SAMP	06-FEB-2012 19:43	104.821	100.592	96.204	103.532
WG388814-02	BLANK	06-FEB-2012 17:23	103.553	99.244	98.949	103.407
WG388814-03	LCS	06-FEB-2012 17:31	106.877	105.353	103.704	107.898
WG388879-01	PSPK	06-FEB-2012 18:17	114.117	105.409	103.563	112.601
WG388879-02	SERIAL	06-FEB-2012 18:25	104.989	97.658	95.244	97.865
WG388956-05	ICV	06-FEB-2012 16:29	100.698	101.125	101.322	105.102
WG388956-06	ICB	06-FEB-2012 16:37	104.957	101.971	103.605	105.777
WG388956-07	LLICV	06-FEB-2012 16:45	103.381	98.257	101.501	104.813
WG388956-08	ICS	06-FEB-2012 16:52	98.056	98.999	96.019	98.018
WG388956-09	ICS	06-FEB-2012 17:00	100.538	98.586	90.303	95.624
WG388956-10	CCV	06-FEB-2012 17:08	98.807	99.842	97.871	101.518
WG388956-11	CCB	06-FEB-2012 17:15	103.882	103.256	102.191	107.126
WG388956-12	CCV	06-FEB-2012 18:33	105.168	103.436	100.623	105.568
WG388956-13	CCB	06-FEB-2012 18:40	103.749	99.994	96.497	99.449
WG388956-14	CCV	06-FEB-2012 19:50	101.96	102.729	98.514	101.871
WG388956-15	CCB	06-FEB-2012 19:58	102.932	103.789	95.902	104.14

Acceptance criteria: 30% - 120% Underlined recoveries are out of range
Acceptance criteria for CCVs and CCBs for method SW846-6020: 80% - 120%

INT_STD_ICPMS - Modified 07/28/2010
PDF File ID: 2300657
Report generated: 02/08/2012 09:45

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12020091 **Analytical Method:** 6020
Analytical Workgroup: WG388879 **Matrix:** 1
Instrument: ELAN-ICP **Analyst:** JYH
ICAL Date: 07-FEB-2012 11:42

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12020075-02	SAMP	07-FEB-2012 16:31	98.446	88.867	87.064	91.864
L12020091-01	SAMP	07-FEB-2012 15:52	94.696	84.992	83.862	88.629
WG388814-02	BLANK	07-FEB-2012 15:36	100.063	90.124	92.108	92.675
WG388814-03	LCS	07-FEB-2012 15:44	95.563	89.935	88.743	90.864
WG388879-01	PSPK	07-FEB-2012 16:39	94.074	85.75	84.147	90.078
WG388879-02	SERIAL	07-FEB-2012 16:47	97.064	86.658	83.801	88.521
WG389020-05	ICV	07-FEB-2012 12:12	95.636	92.775	94.522	97.072
WG389020-06	ICB	07-FEB-2012 12:20	95.002	91.144	93.057	95.231
WG389020-07	LLICV	07-FEB-2012 12:28	97.839	92.244	91.356	96.114
WG389020-08	ICS	07-FEB-2012 12:35	89.298	86.679	85.033	85.517
WG389020-09	ICS	07-FEB-2012 12:43	95.722	89.365	82.538	85.996
WG389020-10	CCV	07-FEB-2012 12:50	94.573	89.824	89.954	91.781
WG389020-12	CCB	07-FEB-2012 13:07	95.536	88.602	89.075	92.302
WG389020-15	CCV	07-FEB-2012 15:21	96.004	88.847	88.628	92.205
WG389020-16	CCB	07-FEB-2012 15:28	96.425	88.692	87.483	89.897
WG389020-17	CCV	07-FEB-2012 16:55	98.728	91.222	90.321	93.512
WG389020-18	CCB	07-FEB-2012 17:02	102.48	93.432	90.984	96.369

Acceptance criteria: 30% - 120% Underlined recoveries are out of range
Acceptance criteria for CCVs and CCBs for method SW846-6020: 80% - 120%

INT_STD_ICPMS - Modified 07/28/2010
PDF File ID: 2300657
Report generated: 02/08/2012 09:45

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12020091 **Date:** 12/29/2011
Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Uranium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:
All analytes passed acceptance criteria at the specified concentration.

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2300640
Report generated: 02/08/2012 08:40

2.1.2.3 Raw Data

Instrument Tuning Report

File Name: 06302008.tun
File Path: C:\Elandata\Tuning\06302008.tun

Sample Information

Sample Date/Time: Monday, February 06, 2012 08:41:52

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.026	615	2060	0.636	
Li	7.016	6.979	1587	2060	0.635	
Co	58.933	58.929	14279	1970	0.686	
Ce	139.905	139.879	33991	2020	0.694	
Tl	204.975	204.977	49690	2263	0.698	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	2.482
3.000	2.064
4.000	22.459
5.000	15.749
6.000	4.729
7.000	4.609
8.000	24.164
9.000	4.440
58.000	2.923
59.000	2.225
60.000	9.193
139.000	3.146
140.000	0.929
141.000	7.883
204.000	1.827
205.000	0.840
206.000	1.857

Report Date/Time: Monday, February 06, 2012 09:08:24
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, February 06, 2012 09:05:32
Sample Description:
Method File: C:\Elandata\Method\6020 DAILY.mth
Dataset File: C:\elandata\Dataset\Default\Sample.1047
Tuning File: C:\Elandata\Tuning\06302008.tun
Optimization File: C:\elandata\Optimize\default.dac
Dual Detector Mode: Dual

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

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	55481.0	55480.978	225.795	0.4
	Rh	102.9	317263.7	317263.741	3873.692	1.2
	In	114.9	558857.8	558857.756	8853.660	1.6
	Pb	208.0	187718.0	187718.005	2825.852	1.5
	U	238.1	87.7	87.700	9.318	10.6
⌈>	Ba	137.9	312762.6	312762.629	5135.583	1.6
⌊	Ba++	69.0	5414.1	0.017	0.000	2.3
⌈>	Ce	139.9	392966.7	392966.746	6687.375	1.7
⌊	CeO	155.9	11085.6	0.028	0.001	2.3
	Bkgd	220.0	11.3	11.300	2.564	22.7
	Ar2	79.9	5171919.3	5171919.264	26634.054	0.5

Current Optimization File Data

Current Value	Description
1.00	Nebulizer Gas Flow
7.50	Lens Voltage
1500.00	ICP RF Power
-1750.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
20.00	Discriminator Threshold
-10.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	37	6.8	2819.8
Co	59	37	7.0	89082.9
Rh	103	37	7.5	153239.8
Pb	208	37	10.0	124472.4

Sample ID: Sample
Report Date/Time: Monday, February 06, 2012 09:07:40
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Blank

Sample Date/Time: Monday, February 06, 2012 15:51:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13143.699					ug/L
	Be	9	8.667					ug/L
	Al	27	2783.803					ug/L
>	Sc	45	208582.083					ug/L
	Ti	49	86.676					ug/L
	V	51	2189.556					ug/L
	Cr	52	7430.386					ug/L
	Cr	53	2373.910					ug/L
	Mn	55	441.016					ug/L
	Co	59	94.001					ug/L
	Ni	60	67.001					ug/L
	Cu	65	167.003					ug/L
	Zn	66	155.336					ug/L
>	Ge	72	470487.884					ug/L
	As	75	-161.620					ug/L
	Se	77	89.334					ug/L
	Se	82	5.878					ug/L
	Rb	85	25.667					mg/L
	Y	89	288382.023					ug/L
	Rh	103	8.333					ug/L
	Mo	98	29.530					ug/L
	Ag	107	77.334					ug/L
	Cd	114	3.837					ug/L
>	In	115	419581.780					ug/L
	Sn	118	99.067					ug/L
	Sb	123	25.534					ug/L
	Ba	135	27.000					ug/L
	Ce	140	30.003					ug/L
>	Tb	159	547314.655					ug/L
	Ho	165	3.334					ug/L
	Tl	203	90.668					ug/L
	Tl	205	240.028					ug/L
	Pb	206	267.340					ug/L
	Pb	207	225.339					ug/L
	Pb	208	1062.704					ug/L
	U	238	88.668					ug/L
>	Bi	209	417007.292					ug/L

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 09:23:17
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

	Na	23	20253.438	mg/L
	Mg	24	1887.185	mg/L
	K	39	590786.016	mg/L
	Ca	43	160.018	mg/L
	Fe	54	43147.125	mg/L
	Fe	57	7627.598	mg/L
>	Sc-1	45	208582.083	mg/L
	Cl	35	34522.042	mg/L
	Kr	83	52.334	mg/L
	Br	81	7793.643	mg/L
	P	31	10840.442	mg/L
	S	34	217311.906	mg/L
	Sr	88	93.343	mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72					
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115					
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159					
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209					

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 09:23:17
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 09:23:17
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Monday, February 06, 2012 15:59:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14145.338	0.00				ug/L
	Be	9	10.667	0.00	-0.0187	0.018	98.223	ug/L
	Al	27	3167.277	0.00	0.0943	0.086	90.731	ug/L
>	Sc	45	213111.391	213111.39				ug/L
	Ti	49	90.009	0.00	-0.0280	0.028	100.155	ug/L
	V	51	2250.660	0.00	-0.0168	0.013	74.675	ug/L
	Cr	52	7596.871	0.00	0.0018	0.040	2206.329	ug/L
	Cr	53	2210.515	-0.00	0.2904	0.228	78.408	ug/L
	Mn	55	528.355	0.00	-0.0301	0.002	6.290	ug/L
	Co	59	120.002	0.00	-0.0259	0.002	8.019	ug/L
	Ni	60	73.334	0.00	-0.0086	0.003	36.775	ug/L
	Cu	65	179.004	0.00	0.0081	0.005	61.618	ug/L
	Zn	66	173.004	0.00	-0.0272	0.014	52.951	ug/L
>	Ge	72	480616.689	480616.69				ug/L
	As	75	-170.810	-0.00	-0.0126	0.036	281.290	ug/L
	Se	77	86.667	-0.00	-0.1450	0.074	50.794	ug/L
	Se	82	3.600	-0.00	0.0518	0.049	94.363	ug/L
	Rb	85	35.000	0.00				mg/L
	Y	89	291123.709	2741.69				ug/L
	Rh	103	14.333	6.00				ug/L
	Mo	98	43.640	0.00	-0.0556	0.004	7.088	ug/L
	Ag	107	107.002	0.00	-0.0229	0.004	16.967	ug/L
	Cd	114	8.836	0.00	-0.0027	0.004	143.303	ug/L
>	In	115	428330.590	428330.59				ug/L
	Sn	118	109.067	0.00	-0.0210	0.001	4.135	ug/L
	Sb	123	41.492	0.00	-0.0125	0.001	6.037	ug/L
	Ba	135	35.667	0.00	0.0155	0.011	72.166	ug/L
	Ce	140	20.002	-0.00				ug/L
>	Tb	159	575070.416	575070.42				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	111.335	0.00	-0.0018	0.002	110.608	ug/L
	Tl	205	360.044	0.00	-0.0096	0.003	34.071	ug/L
	Pb	206	284.674	0.00	-0.0206	0.002	9.354	ug/L
	Pb	207	249.340	0.00	-0.0074	0.008	105.270	ug/L
	Pb	208	1147.709	0.00	-0.0094	0.003	36.766	ug/L
	U	238	195.004	0.00	-0.0281	0.001	2.677	ug/L
>	Bi	209	426288.285	426288.28				ug/L

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 09:23:19
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

	Na	23	22158.343	0.01	0.0020	0.000	0.695	mg/L
	Mg	24	1917.081	-0.00	-0.0197	0.000	0.532	mg/L
	K	39	618989.815	0.08	-0.0044	0.004	89.786	mg/L
	Ca	43	203.356	0.00	-0.0234	0.002	9.785	mg/L
	Fe	54	40512.286	-0.02	-0.0095	0.004	45.378	mg/L
	Fe	57	8371.715	0.00	-0.0011	0.001	95.050	mg/L
>	Sc-1	45	213111.391	213111.39				mg/L
	Cl	35	35539.631	1017.59				mg/L
	Kr	83	46.001	-6.33				mg/L
	Br	81	8448.293	654.65				mg/L
	P	31	13659.965	2819.52				mg/L
	S	34	231109.906	13798.00				mg/L
	Sr	88	86.676	-6.67				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72					
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115					
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159					
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209					

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 09:23:19
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Fe	57	Correlation Coefficient not > 0.998

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 09:23:19
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, February 06, 2012 16:06:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 2
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13627.810	0.00				ug/L
	Be	9	141.335	0.00	0.4000	0.118	29.534	ug/L
	Al	27	4668.009	0.01	0.4000	0.308	76.888	ug/L
>	Sc	45	214502.766	214502.77				ug/L
	Ti	49	520.069	0.00	0.8001	0.259	32.403	ug/L
	V	51	5997.669	0.01	0.4000	0.045	11.204	ug/L
	Cr	52	10591.167	0.01	0.4000	0.099	24.768	ug/L
	Cr	53	2270.541	-0.00	0.4000	0.475	118.728	ug/L
	Mn	55	5971.203	0.01	0.4000	0.010	2.558	ug/L
	Co	59	4151.075	0.01	0.4000	0.038	9.518	ug/L
	Ni	60	860.053	0.00	0.4000	0.050	12.575	ug/L
	Cu	65	905.058	0.00	0.4000	0.034	8.401	ug/L
	Zn	66	637.031	0.00	0.4000	0.045	11.265	ug/L
>	Ge	72	474090.218	474090.22				ug/L
	As	75	342.644	0.00	0.4000	0.045	11.163	ug/L
	Se	77	134.668	0.00	0.4000	0.263	65.797	ug/L
	Se	82	40.859	0.00	0.4000	0.052	13.064	ug/L
	Rb	85	48.334	0.00				mg/L
	Y	89	295635.501	7253.48				ug/L
	Rh	103	11.333	3.00				ug/L
	Mo	98	2498.263	0.01	0.7999	0.018	2.218	ug/L
	Ag	107	2505.735	0.01	0.4000	0.021	5.337	ug/L
	Cd	114	536.327	0.00	0.4000	0.059	14.858	ug/L
>	In	115	401797.992	401797.99				ug/L
	Sn	118	2079.460	0.00	0.4000	0.019	4.872	ug/L
	Sb	123	1881.098	0.00	0.4000	0.006	1.510	ug/L
	Ba	135	679.368	0.00	0.4000	0.039	9.641	ug/L
	Ce	140	30.003	-0.00				ug/L
>	Tb	159	554681.876	554681.88				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	2742.480	0.01	0.4000	0.020	4.928	ug/L
	Tl	205	6946.926	0.02	0.4000	0.020	5.096	ug/L
	Pb	206	2549.749	0.01	0.4000	0.022	5.575	ug/L
	Pb	207	2223.319	0.00	0.4001	0.018	4.403	ug/L
	Pb	208	10098.160	0.02	0.4000	0.024	6.101	ug/L
	U	238	14231.308	0.03	0.4000	0.014	3.389	ug/L
>	Bi	209	410157.175	410157.17				ug/L

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 09:23:20
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	202256.990	0.86	0.0400	0.009	21.893	mg/L
Mg	24	176796.706	0.83	0.0400	0.011	27.789	mg/L
K	39	912013.530	1.46	0.0400	0.016	40.227	mg/L
Ca	43	1093.514	0.00	0.0400	0.012	29.900	mg/L
Fe	54	68461.440	0.12	0.0400	0.025	62.080	mg/L
Fe	57	18532.461	0.05	0.0400	0.008	20.939	mg/L
Sc-1	45	214502.766	214502.77				mg/L
Cl	35	31458.603	-3063.44				mg/L
Kr	83	54.667	2.33				mg/L
Br	81	6946.236	-847.41				mg/L
P	31	12015.351	1174.91				mg/L
S	34	214325.885	-2986.02				mg/L
Sr	88	206.690	113.35				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 09:23:20
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Fe	57	Correlation Coefficient not > 0.998

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 09:23:20
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 3

Sample Date/Time: Monday, February 06, 2012 16:14:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 3
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13878.301	0.00				ug/L
	Be	9	15802.980	0.08	51.5538	3.766	7.305	ug/L
	Al	27	254324.620	1.22	49.8817	3.599	7.216	ug/L
>	Sc	45	206189.513	206189.51				ug/L
	Ti	49	53419.346	0.11	98.4423	2.775	2.819	ug/L
	V	51	458731.398	0.94	48.9466	0.267	0.545	ug/L
	Cr	52	401406.494	0.81	48.9358	1.535	3.136	ug/L
	Cr	53	50031.916	0.10	49.3720	3.103	6.285	ug/L
	Mn	55	643847.681	1.33	49.5309	1.588	3.207	ug/L
	Co	59	476772.697	0.98	48.9565	2.156	4.404	ug/L
	Ni	60	98434.145	0.20	49.5598	0.834	1.682	ug/L
	Cu	65	95673.476	0.20	50.0007	0.953	1.906	ug/L
	Zn	66	55418.966	0.11	49.1531	0.619	1.260	ug/L
>	Ge	72	485387.456	485387.46				ug/L
	As	75	64565.062	0.13	50.9588	1.787	3.506	ug/L
	Se	77	4788.709	0.01	50.0286	1.858	3.713	ug/L
	Se	82	5518.803	0.01	49.9004	1.270	2.545	ug/L
	Rb	85	2213.650	0.00				mg/L
	Y	89	309922.555	21540.53				ug/L
	Rh	103	25.334	17.00				ug/L
	Mo	98	304981.841	0.73	101.8029	4.966	4.878	ug/L
	Ag	107	301999.537	0.72	50.8550	1.243	2.443	ug/L
	Cd	114	67868.842	0.16	49.7402	5.134	10.322	ug/L
>	In	115	419182.790	419182.79				ug/L
	Sn	118	249713.145	0.60	50.9297	1.450	2.847	ug/L
	Sb	123	229900.893	0.55	49.3655	2.595	5.257	ug/L
	Ba	135	84659.512	0.15	48.7433	0.464	0.951	ug/L
	Ce	140	110.012	0.00				ug/L
>	Tb	159	572641.763	572641.76				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	334663.153	0.80	50.1522	2.749	5.482	ug/L
	Tl	205	817060.031	1.96	49.7997	2.209	4.437	ug/L
	Pb	206	278713.402	0.67	50.5358	2.534	5.013	ug/L
	Pb	207	240063.883	0.57	48.3886	2.275	4.702	ug/L
	Pb	208	1107807.113	2.65	49.4516	1.620	3.275	ug/L
	U	238	1711385.083	4.10	51.2247	0.781	1.524	ug/L
>	Bi	209	417535.378	417535.38				ug/L

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 09:23:21
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	23299256.352	113.20	5.0327	0.487	9.668	mg/L
Mg	24	14276432.970	69.42	4.9836	0.473	9.484	mg/L
K	39	33632525.812	160.62	5.1455	0.392	7.613	mg/L
Ca	43	69152.632	0.34	5.0187	0.203	4.045	mg/L
Fe	54	2915527.546	13.95	5.1394	0.189	3.671	mg/L
Fe	57	1308762.860	6.32	5.4250	0.477	8.786	mg/L
Sc-1	45	206189.513	206189.51				mg/L
Cl	35	32219.510	-2302.53				mg/L
Kr	83	51.667	-0.67				mg/L
Br	81	7736.259	-57.38				mg/L
P	31	14015.454	3175.01				mg/L
S	34	246891.751	29579.85				mg/L
Sr	88	4868.578	4775.23				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 09:23:21
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Fe	57	Correlation Coefficient not > 0.998

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 09:23:21
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 4

Sample Date/Time: Monday, February 06, 2012 16:22:13
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 4
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11791.677	-0.01				ug/L
	Be	9	30875.110	0.14	96.9049	1.232	1.271	ug/L
	Al	27	528054.648	2.46	100.2356	9.439	9.417	ug/L
>	Sc	45	213997.721	213997.72				ug/L
	Ti	49	106939.128	0.23	203.1029	7.997	3.937	ug/L
	V	51	926554.509	1.96	102.0984	6.997	6.853	ug/L
	Cr	52	806079.038	1.69	102.1198	4.371	4.280	ug/L
	Cr	53	97703.322	0.20	101.2509	1.946	1.922	ug/L
	Mn	55	1274691.222	2.70	100.9344	4.744	4.700	ug/L
	Co	59	965169.510	2.05	102.0787	6.148	6.022	ug/L
	Ni	60	194482.229	0.41	100.8769	3.227	3.199	ug/L
	Cu	65	185762.544	0.39	99.9986	2.738	2.738	ug/L
	Zn	66	111216.202	0.24	101.6869	3.001	2.952	ug/L
>	Ge	72	471724.313	471724.31				ug/L
	As	75	120859.451	0.26	98.0902	4.404	4.490	ug/L
	Se	77	9193.074	0.02	99.9430	6.090	6.094	ug/L
	Se	82	10768.962	0.02	100.1985	0.130	0.130	ug/L
	Rb	85	4294.817	0.01				mg/L
	Y	89	302803.667	14421.64				ug/L
	Rh	103	47.001	38.67				ug/L
	Mo	98	588703.423	1.40	196.4087	20.374	10.373	ug/L
	Ag	107	585555.456	1.39	98.2968	1.936	1.970	ug/L
	Cd	114	137534.308	0.33	100.5175	10.615	10.560	ug/L
>	In	115	420818.489	420818.49				ug/L
	Sn	118	482447.266	1.15	98.1482	4.131	4.209	ug/L
	Sb	123	472411.344	1.13	101.2640	8.025	7.925	ug/L
	Ba	135	177376.831	0.31	102.5034	4.091	3.991	ug/L
	Ce	140	176.686	0.00				ug/L
>	Tb	159	570329.574	570329.57				ug/L
	Ho	165	3.334	0.00				ug/L
	Tl	203	651302.657	1.59	99.6968	5.121	5.136	ug/L
	Tl	205	1611829.988	3.95	100.3989	5.859	5.835	ug/L
	Pb	206	533653.599	1.31	98.9327	6.214	6.281	ug/L
	Pb	207	500639.447	1.23	103.2098	7.553	7.318	ug/L
	Pb	208	2215390.745	5.42	101.0923	4.722	4.671	ug/L
	U	238	3189034.403	7.80	97.5605	2.413	2.474	ug/L
>	Bi	209	408975.350	408975.35				ug/L

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 09:23:23
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	47839114.580	223.50	9.9349	0.438	4.412	mg/L
Mg	24	29839841.369	139.48	10.0327	0.345	3.440	mg/L
K	39	65392057.923	302.92	9.7102	0.312	3.216	mg/L
Ca	43	142014.165	0.66	9.9628	0.393	3.942	mg/L
Fe	54	5695881.779	26.38	9.7223	0.612	6.295	mg/L
Fe	57	2288369.890	10.67	9.1534	0.488	5.330	mg/L
Sc-1	45	213997.721	213997.72				mg/L
Cl	35	31743.018	-2779.02				mg/L
Kr	83	59.334	7.00				mg/L
Br	81	7302.546	-491.10				mg/L
P	31	14154.814	3314.37				mg/L
S	34	235953.407	18641.50				mg/L
Sr	88	9212.700	9119.36				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 09:23:23
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Fe	57	Correlation Coefficient not > 0.998

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 09:23:23
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, February 06, 2012 16:29:49
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 11
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11658.152	-0.01				ug/L
	Be	9	15130.391	0.07	49.2455	0.562	1.141	ug/L
	Al	27	243388.639	1.17	47.5997	1.115	2.342	ug/L
>	Sc	45	206255.468	206255.47				ug/L
	Ti	49	52973.723	0.11	99.6028	7.995	8.027	ug/L
	V	51	458964.819	0.96	49.9786	2.794	5.591	ug/L
	Cr	52	405544.807	0.84	50.4816	2.376	4.706	ug/L
	Cr	53	48602.851	0.10	48.9391	1.040	2.126	ug/L
	Mn	55	627767.421	1.32	49.2497	0.654	1.328	ug/L
	Co	59	476199.104	1.00	49.8664	0.708	1.421	ug/L
	Ni	60	96801.643	0.20	49.7280	0.851	1.711	ug/L
	Cu	65	92635.600	0.19	49.4126	1.980	4.008	ug/L
	Zn	66	55609.534	0.12	50.3364	1.526	3.031	ug/L
>	Ge	72	475780.507	475780.51				ug/L
	As	75	61045.496	0.13	49.1403	0.715	1.455	ug/L
	Se	77	4651.298	0.01	49.5455	0.514	1.037	ug/L
	Se	82	5257.911	0.01	48.5103	0.859	1.771	ug/L
	Rb	85	2088.283	0.00				mg/L
	Y	89	297959.214	9577.19				ug/L
	Rh	103	25.334	17.00				ug/L
	Mo	98	292767.590	0.69	96.3104	2.245	2.331	ug/L
	Ag	107	297640.260	0.70	49.3982	0.496	1.003	ug/L
	Cd	114	68051.170	0.16	49.0376	4.563	9.305	ug/L
>	In	115	425128.976	425128.98				ug/L
	Sn	118	240116.591	0.56	48.2833	2.061	4.269	ug/L
	Sb	123	232619.730	0.55	49.2194	1.181	2.400	ug/L
	Ba	135	85919.214	0.15	49.2585	1.092	2.216	ug/L
	Ce	140	96.677	0.00				ug/L
>	Tb	159	575238.471	575238.47				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	319859.588	0.76	47.6226	0.861	1.807	ug/L
	Tl	205	788462.282	1.88	47.7525	0.979	2.049	ug/L
	Pb	206	260346.422	0.62	46.8990	1.081	2.305	ug/L
	Pb	207	245341.645	0.58	49.1426	1.737	3.536	ug/L
	Pb	208	1098242.826	2.61	48.7232	1.018	2.090	ug/L
	U	238	1715967.175	4.09	51.0808	1.322	2.588	ug/L
>	Bi	209	419916.910	419916.91				ug/L

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 09:23:31
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	22266561.803	107.91	4.7975	0.162	3.367	mg/L
Mg	24	14020027.451	68.00	4.8815	0.189	3.873	mg/L
K	39	32259562.104	153.58	4.9196	0.214	4.343	mg/L
Ca	43	66874.239	0.32	4.8479	0.279	5.745	mg/L
Fe	54	2808742.505	13.42	4.9437	0.160	3.235	mg/L
Fe	57	1283589.023	6.19	5.3118	0.287	5.408	mg/L
Sc-1	45	206255.468	206255.47				mg/L
Cl	35	32548.780	-1973.26				mg/L
Kr	83	58.001	5.67				mg/L
Br	81	7869.722	76.08				mg/L
P	31	12902.091	2061.65				mg/L
S	34	243826.208	26514.30				mg/L
Sr	88	4881.920	4788.58				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9	98.491				
Al	27	95.199				
Sc	45					
Ti	49	99.603				
V	51	99.957				
Cr	52	100.963				
Cr	53					
Mn	55	98.499				
Co	59	99.733				
Ni	60	99.456				
Cu	65	98.825				
Zn	66	100.673				
Ge	72		101.125			
As	75	98.281				
Se	77					
Se	82	97.021				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	98.796				
Cd	114	98.075				
In	115		101.322			
Sn	118					
Sb	123	98.439				
Ba	135	98.517				
Ce	140					
Tb	159		105.102			
Ho	165					
Tl	203	95.245				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.446				
U	238	102.162				
Bi	209		100.698			

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 09:23:31
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	95.950
Mg	24	97.630
K	39	98.391
Ca	43	96.959
Fe	54	98.875
Fe	57	106.236
Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 09:23:31
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, February 06, 2012 16:37:25
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11958.579	-0.01				ug/L
	Be	9	7.333	-0.00	-0.0284	0.010	35.081	ug/L
	Al	27	2500.376	-0.00	-0.0262	0.045	170.873	ug/L
>	Sc	45	210203.272	210203.27				ug/L
	Ti	49	96.677	0.00	-0.0150	0.027	181.277	ug/L
	V	51	2502.863	0.00	0.0109	0.014	124.972	ug/L
	Cr	52	7967.220	0.00	0.0496	0.018	36.763	ug/L
	Cr	53	1777.037	-0.00	-0.1604	0.283	176.676	ug/L
	Mn	55	633.364	0.00	-0.0218	0.001	4.682	ug/L
	Co	59	249.340	0.00	-0.0124	0.003	23.683	ug/L
	Ni	60	99.002	0.00	0.0045	0.002	46.700	ug/L
	Cu	65	211.338	0.00	0.0254	0.006	22.296	ug/L
	Zn	66	194.004	0.00	-0.0079	0.022	283.188	ug/L
>	Ge	72	479761.391	479761.39				ug/L
	As	75	-153.127	0.00	0.0017	0.004	263.257	ug/L
	Se	77	86.667	-0.00	-0.1442	0.120	83.192	ug/L
	Se	82	10.899	0.00	0.1189	0.038	31.804	ug/L
	Rb	85	27.667	0.00				mg/L
	Y	89	302422.193	14040.17				ug/L
	Rh	103	13.000	4.67				ug/L
	Mo	98	175.570	0.00	-0.0134	0.007	49.549	ug/L
	Ag	107	215.338	0.00	-0.0056	0.006	103.061	ug/L
	Cd	114	24.838	0.00	0.0086	0.011	129.714	ug/L
>	In	115	434707.132	434707.13				ug/L
	Sn	118	308.139	0.00	0.0178	0.001	6.014	ug/L
	Sb	123	186.997	0.00	0.0175	0.004	21.577	ug/L
	Ba	135	60.667	0.00	0.0296	0.002	7.535	ug/L
	Ce	140	13.335	-0.00				ug/L
>	Tb	159	578932.818	578932.82				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	200.004	0.00	0.0105	0.002	22.342	ug/L
	Tl	205	413.386	0.00	-0.0071	0.007	104.778	ug/L
	Pb	206	350.678	0.00	-0.0105	0.001	11.152	ug/L
	Pb	207	338.010	0.00	0.0083	0.003	41.915	ug/L
	Pb	208	1521.071	0.00	0.0052	0.002	42.368	ug/L
	U	238	618.029	0.00	-0.0162	0.002	10.608	ug/L
>	Bi	209	437678.792	437678.79				ug/L

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 09:23:32
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	27504.747	0.03	0.0032	0.000	7.307	mg/L
Mg	24	5445.658	0.02	-0.0185	0.000	0.542	mg/L
K	39	653193.008	0.28	0.0020	0.002	117.144	mg/L
Ca	43	233.360	0.00	-0.0210	0.002	9.871	mg/L
Fe	54	47171.041	0.02	0.0031	0.006	183.309	mg/L
Fe	57	9469.660	0.01	0.0038	0.001	29.297	mg/L
Sc-1	45	210203.272	210203.27				mg/L
Cl	35	30780.754	-3741.29				mg/L
Kr	83	50.001	-2.33				mg/L
Br	81	7766.285	-27.36				mg/L
P	31	14793.972	3953.53				mg/L
S	34	237413.028	20101.12				mg/L
Sr	88	133.348	40.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		101.971			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		103.605			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		105.777			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.957			

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 09:23:32
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 09:23:32
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, February 06, 2012 16:45:03
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11791.715	-0.01				ug/L
	Be	9	8.667	0.00	-0.0235	0.021	90.239	ug/L
	Al	27	4251.085	0.01	0.3358	0.051	15.075	ug/L
>	Sc	45	204684.221	204684.22				ug/L
	Ti	49	76.675	-0.00	-0.0469	0.008	16.224	ug/L
	V	51	6218.008	0.01	0.4401	0.029	6.508	ug/L
	Cr	52	13996.553	0.01	0.8750	0.035	3.949	ug/L
	Cr	53	2123.817	-0.00	0.2870	0.202	70.475	ug/L
	Mn	55	7116.113	0.01	0.5041	0.008	1.584	ug/L
	Co	59	4106.386	0.01	0.4051	0.025	6.152	ug/L
	Ni	60	3659.174	0.01	1.8942	0.167	8.837	ug/L
	Cu	65	1671.851	0.00	0.8337	0.050	6.032	ug/L
	Zn	66	7640.244	0.02	6.9628	0.153	2.198	ug/L
>	Ge	72	462288.696	462288.70				ug/L
	As	75	284.541	0.00	0.3575	0.055	15.448	ug/L
	Se	77	136.668	0.00	0.4552	0.168	36.939	ug/L
	Se	82	38.844	0.00	0.3875	0.078	20.001	ug/L
	Rb	85	30.000	0.00				mg/L
	Y	89	291534.110	3152.09				ug/L
	Rh	103	8.000	-0.33				ug/L
	Mo	98	58.307	0.00	-0.0508	0.002	4.200	ug/L
	Ag	107	2640.778	0.01	0.3973	0.010	2.395	ug/L
	Cd	114	296.410	0.00	0.2044	0.034	16.675	ug/L
>	In	115	425878.079	425878.08				ug/L
	Sn	118	200.002	0.00	-0.0026	0.002	63.063	ug/L
	Sb	123	2023.175	0.00	0.4062	0.020	4.822	ug/L
	Ba	135	1404.132	0.00	0.8032	0.049	6.053	ug/L
	Ce	140	23.336	-0.00				ug/L
>	Tb	159	573655.230	573655.23				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	765.043	0.00	0.0929	0.006	6.990	ug/L
	Tl	205	1773.700	0.00	0.0736	0.008	10.618	ug/L
	Pb	206	2400.703	0.00	0.3506	0.012	3.376	ug/L
	Pb	207	2328.682	0.00	0.3982	0.013	3.179	ug/L
	Pb	208	10327.322	0.02	0.3872	0.010	2.646	ug/L
	U	238	13916.103	0.03	0.3700	0.023	6.198	ug/L
>	Bi	209	431108.135	431108.14				ug/L

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 09:23:34
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

	Na	23	26554.936	0.03	0.0031	0.000	11.327	mg/L
	Mg	24	2590.753	0.00	-0.0194	0.001	2.872	mg/L
	K	39	612545.069	0.16	-0.0017	0.002	128.976	mg/L
	Ca	43	233.360	0.00	-0.0206	0.003	16.373	mg/L
	Fe	54	38965.222	-0.02	-0.0094	0.007	69.866	mg/L
	Fe	57	8441.789	0.00	0.0006	0.002	389.913	mg/L
>	Sc-1	45	204684.221	204684.22				mg/L
	Cl	35	29165.619	-5356.42				mg/L
	Kr	83	56.334	4.00				mg/L
	Br	81	7855.050	61.41				mg/L
	P	31	11521.331	680.89				mg/L
	S	34	213538.998	-3772.91				mg/L
	Sr	88	76.675	-16.67				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51	110.024				
	Cr	52	109.377				
	Cr	53					
	Mn	55	100.827				
	Co	59	101.273				
	Ni	60	118.389				
	Cu	65	104.218				
	Zn	66	111.406				
>	Ge	72		98.257			
	As	75	89.371				
	Se	77					
	Se	82	96.885				
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107	99.329				
	Cd	114	102.205				
>	In	115		101.501			
	Sn	118					
	Sb	123	101.544				
	Ba	135	107.087				
	Ce	140					
>	Tb	159		104.813			
	Ho	165					
	Tl	203	116.137				
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208	96.793				
	U	238	92.495				
>	Bi	209		103.381			

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 09:23:34
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 09:23:34
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Monday, February 06, 2012 16:52:42
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 6
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11808.383	-0.00				ug/L
	Be	9	3.333	-0.00	-0.0403	0.004	9.650	ug/L
	Al	27	23321099.533	121.85	4967.9501	441.434	8.886	ug/L
>	Sc	45	191680.494	191680.49				ug/L
	Ti	49	56104.183	0.12	107.7909	7.196	6.676	ug/L
	V	51	2084.930	-0.00	-0.0272	0.064	236.784	ug/L
	Cr	52	8507.761	0.00	0.1499	0.043	28.518	ug/L
	Cr	53	3107.557	0.00	1.3200	0.067	5.111	ug/L
	Mn	55	1299.114	0.00	0.0331	0.004	11.992	ug/L
	Co	59	322.676	0.00	-0.0038	0.001	37.009	ug/L
	Ni	60	977.068	0.00	0.4676	0.063	13.508	ug/L
	Cu	65	487.019	0.00	0.1793	0.027	14.958	ug/L
	Zn	66	582.026	0.00	0.3570	0.031	8.727	ug/L
>	Ge	72	465777.975	465777.98				ug/L
	As	75	-149.121	0.00	0.0010	0.033	3317.651	ug/L
	Se	77	195.336	0.00	1.0922	0.047	4.335	ug/L
	Se	82	1.472	-0.00	0.0331	0.039	116.470	ug/L
	Rb	85	2327.015	0.00				mg/L
	Y	89	288791.410	409.39				ug/L
	Rh	103	23.667	15.33				ug/L
	Mo	98	315874.917	0.78	109.6935	4.965	4.526	ug/L
	Ag	107	136.002	0.00	-0.0168	0.002	10.193	ug/L
	Cd	114	105.396	0.00	0.0717	0.042	58.058	ug/L
>	In	115	402879.906	402879.91				ug/L
	Sn	118	393.743	0.00	0.0408	0.000	1.136	ug/L
	Sb	123	261.788	0.00	0.0373	0.003	7.876	ug/L
	Ba	135	118.669	0.00	0.0681	0.009	13.286	ug/L
	Ce	140	820.122	0.00				ug/L
>	Tb	159	536466.984	536466.98				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	89.001	0.00	-0.0045	0.002	51.945	ug/L
	Tl	205	200.022	-0.00	-0.0187	0.002	9.566	ug/L
	Pb	206	330.343	0.00	-0.0101	0.004	37.133	ug/L
	Pb	207	284.674	0.00	0.0019	0.003	168.308	ug/L
	Pb	208	1353.058	0.00	0.0021	0.001	70.048	ug/L
	U	238	117.669	0.00	-0.0303	0.001	2.277	ug/L
>	Bi	209	408902.359	408902.36				ug/L

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 09:23:35
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	59646717.387	311.39	13.8412	0.851	6.147	mg/L
Mg	24	14774669.946	77.10	5.5370	0.190	3.435	mg/L
K	39	33905423.537	174.18	5.5803	0.292	5.227	mg/L
Ca	43	215695.726	1.13	16.9178	0.775	4.583	mg/L
Fe	54	7455266.971	38.72	14.2744	0.818	5.730	mg/L
Fe	57	3058645.109	15.94	13.6771	0.828	6.056	mg/L
Sc-1	45	191680.494	191680.49				mg/L
Cl	35	2013300.610	1978778.57				mg/L
Kr	83	60.667	8.33				mg/L
Br	81	7459.364	-334.28				mg/L
P	31	1767191.982	1756351.54				mg/L
S	34	401949.189	184637.28				mg/L
Sr	88	740.108	646.76				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.999			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		96.019			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.018			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.056			

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 09:23:35
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 09:23:35
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, February 06, 2012 17:00:21
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 7
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11825.068	-0.00				ug/L
	Be	9	30781.422	0.16	107.2966	8.279	7.716	ug/L
	Al	27	20307740.116	105.40	4297.1455	368.558	8.577	ug/L
>	Sc	45	193288.298	193288.30				ug/L
	Ti	49	52081.242	0.11	100.4679	7.771	7.735	ug/L
	V	51	822227.186	1.77	92.0760	4.738	5.146	ug/L
	Cr	52	733580.904	1.57	94.4985	3.582	3.790	ug/L
	Cr	53	163282.178	0.35	173.6342	10.076	5.803	ug/L
	Mn	55	1186423.760	2.56	95.5465	1.126	1.178	ug/L
	Co	59	848374.463	1.83	91.1671	1.819	1.996	ug/L
	Ni	60	171668.551	0.37	90.5448	6.353	7.016	ug/L
	Cu	65	170319.282	0.37	93.2881	5.147	5.517	ug/L
	Zn	66	103977.491	0.22	96.6749	1.819	1.881	ug/L
>	Ge	72	463833.881	463833.88				ug/L
	As	75	115303.940	0.25	95.1191	1.741	1.830	ug/L
	Se	77	12774.452	0.03	141.5797	3.943	2.785	ug/L
	Se	82	9705.267	0.02	91.8682	2.784	3.031	ug/L
	Rb	85	1939.245	0.00				mg/L
	Y	89	280169.442	-8212.58				ug/L
	Rh	103	59.667	51.33				ug/L
	Mo	98	274080.403	0.72	101.1855	4.082	4.035	ug/L
	Ag	107	536049.452	1.41	99.8934	2.036	2.038	ug/L
	Cd	114	120824.241	0.32	97.7679	2.752	2.815	ug/L
>	In	115	378894.695	378894.70				ug/L
	Sn	118	514.416	0.00	0.0733	0.002	2.634	ug/L
	Sb	123	415095.405	1.10	98.5571	2.176	2.208	ug/L
	Ba	135	154278.625	0.29	97.2218	1.995	2.052	ug/L
	Ce	140	620.085	0.00				ug/L
>	Tb	159	523363.219	523363.22				ug/L
	Ho	165	26.669	0.00				ug/L
	Tl	203	619625.249	1.48	92.4190	2.213	2.395	ug/L
	Tl	205	1550304.706	3.70	94.0707	1.007	1.071	ug/L
	Pb	206	516920.682	1.23	93.3346	1.530	1.640	ug/L
	Pb	207	440787.066	1.05	88.4767	2.428	2.744	ug/L
	Pb	208	2085561.897	4.97	92.7257	1.798	1.939	ug/L
	U	238	3166220.025	7.55	94.4299	0.619	0.656	ug/L
>	Bi	209	419252.761	419252.76				ug/L

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 09:23:36
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	52137305.607	270.24	12.0125	0.645	5.368	mg/L
Mg	24	12826032.091	66.58	4.7785	0.412	8.617	mg/L
K	39	28713586.698	145.97	4.6753	0.187	4.000	mg/L
Ca	43	181399.522	0.94	14.1112	0.446	3.164	mg/L
Fe	54	6585351.469	33.97	12.5220	0.991	7.911	mg/L
Fe	57	2653896.532	13.75	11.8043	1.283	10.869	mg/L
Sc-1	45	193288.298	193288.30				mg/L
Cl	35	78052065.797	78017543.76				mg/L
Kr	83	63.668	11.33				mg/L
Br	81	21502.400	13708.76				mg/L
P	31	1477278.970	1466438.53				mg/L
S	34	341489.818	124177.91				mg/L
Sr	88	643.423	550.08				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	92.076				
Cr	52	94.499				
Cr	53					
Mn	55	95.547				
Co	59	91.167				
Ni	60	90.545				
Cu	65	93.288				
Zn	66	96.675				
Ge	72		98.586			
As	75	95.119				
Se	77					
Se	82	91.868				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	99.893				
Cd	114	97.768				
In	115		90.303			
Sn	118					
Sb	123	98.557				
Ba	135	97.222				
Ce	140					
Tb	159		95.624			
Ho	165					
Tl	203	92.419				
Tl	205					
Pb	206					
Pb	207					
Pb	208	92.726				
U	238	94.430				
Bi	209		100.538			

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 09:23:36
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 09:23:36
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 06, 2012 17:08:00
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11140.791	-0.01				ug/L
	Be	9	14785.778	0.07	49.0410	1.368	2.789	ug/L
	Al	27	249489.477	1.22	49.7312	2.740	5.510	ug/L
>	Sc	45	202448.135	202448.13				ug/L
	Ti	49	52369.547	0.11	99.7347	6.081	6.097	ug/L
	V	51	457280.862	0.97	50.4393	2.269	4.498	ug/L
	Cr	52	394703.633	0.82	49.7418	0.370	0.744	ug/L
	Cr	53	56016.665	0.11	57.4551	1.400	2.436	ug/L
	Mn	55	613188.215	1.30	48.7280	0.679	1.394	ug/L
	Co	59	459944.381	0.98	48.7873	1.138	2.333	ug/L
	Ni	60	95113.498	0.20	49.4927	1.483	2.997	ug/L
	Cu	65	93181.464	0.20	50.3283	0.408	0.810	ug/L
	Zn	66	55226.382	0.12	50.6186	1.085	2.144	ug/L
>	Ge	72	469746.031	469746.03				ug/L
	As	75	60461.684	0.13	49.2939	0.768	1.558	ug/L
	Se	77	4736.679	0.01	51.1459	1.119	2.187	ug/L
	Se	82	5335.655	0.01	49.8582	0.779	1.563	ug/L
	Rb	85	2032.602	0.00				mg/L
	Y	89	284752.580	-3629.44				ug/L
	Rh	103	29.000	20.67				ug/L
	Mo	98	281578.436	0.69	95.8926	1.664	1.735	ug/L
	Ag	107	297180.980	0.72	51.0880	2.044	4.001	ug/L
	Cd	114	63680.609	0.16	47.6071	4.205	8.832	ug/L
>	In	115	410650.003	410650.00				ug/L
	Sn	118	229886.697	0.56	47.8431	1.039	2.172	ug/L
	Sb	123	218380.716	0.53	47.8318	1.247	2.608	ug/L
	Ba	135	82864.114	0.15	49.1759	0.426	0.867	ug/L
	Ce	140	100.011	0.00				ug/L
>	Tb	159	555623.310	555623.31				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	324516.675	0.79	49.2583	2.006	4.072	ug/L
	Tl	205	796637.304	1.93	49.1909	3.758	7.640	ug/L
	Pb	206	257358.016	0.62	47.2617	1.831	3.874	ug/L
	Pb	207	234849.175	0.57	47.9497	1.608	3.353	ug/L
	Pb	208	1067800.104	2.59	48.2850	1.190	2.464	ug/L
	U	238	1689088.063	4.10	51.2473	1.419	2.769	ug/L
>	Bi	209	412032.492	412032.49				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:38
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	21362192.830	105.48	4.6899	0.192	4.102	mg/L
Mg	24	13412840.175	66.26	4.7555	0.237	4.974	mg/L
K	39	32098535.496	155.60	4.9845	0.171	3.427	mg/L
Ca	43	67364.949	0.33	4.9719	0.082	1.654	mg/L
Fe	54	2807340.137	13.69	5.0440	0.475	9.411	mg/L
Fe	57	1215759.829	5.97	5.1237	0.129	2.515	mg/L
Sc-1	45	202448.135	202448.13				mg/L
Cl	35	192774.852	158252.81				mg/L
Kr	83	54.667	2.33				mg/L
Br	81	7687.545	-106.10				mg/L
P	31	11253.029	412.59				mg/L
S	34	228744.348	11432.44				mg/L
Sr	88	4491.659	4398.32				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	100.879				
Cr	52	99.484				
Cr	53					
Mn	55	97.456				
Co	59	97.575				
Ni	60	98.985				
Cu	65	100.657				
Zn	66	101.237				
Ge	72		99.842			
As	75	98.588				
Se	77					
Se	82	99.716				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	102.176				
Cd	114	95.214				
In	115		97.871			
Sn	118					
Sb	123	95.664				
Ba	135	98.352				
Ce	140					
Tb	159		101.518			
Ho	165					
Tl	203	98.517				
Tl	205					
Pb	206					
Pb	207					
Pb	208	96.570				
U	238	102.495				
Bi	209		98.807			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:38
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

	Na	23
	Mg	24
	K	39
	Ca	43
	Fe	54
	Fe	57
>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:38
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 06, 2012 17:15:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12159.024	-0.00				ug/L
	Be	9	9.333	0.00	-0.0218	0.020	92.739	ug/L
	Al	27	7620.169	0.02	1.0099	0.076	7.541	ug/L
>	Sc	45	203919.091	203919.09				ug/L
	Ti	49	126.680	0.00	0.0380	0.021	56.617	ug/L
	V	51	2527.305	0.00	0.0090	0.034	380.033	ug/L
	Cr	52	7857.783	0.00	0.0250	0.057	225.846	ug/L
	Cr	53	5986.097	0.01	4.1664	0.919	22.068	ug/L
	Mn	55	630.030	0.00	-0.0227	0.006	24.328	ug/L
	Co	59	238.339	0.00	-0.0139	0.006	46.257	ug/L
	Ni	60	98.335	0.00	0.0035	0.007	213.778	ug/L
	Cu	65	191.004	0.00	0.0132	0.009	65.575	ug/L
	Zn	66	194.671	0.00	-0.0095	0.009	95.590	ug/L
>	Ge	72	485809.254	485809.25				ug/L
	As	75	-160.734	0.00	-0.0032	0.025	780.996	ug/L
	Se	77	132.001	0.00	0.3370	0.311	92.221	ug/L
	Se	82	10.838	0.00	0.1184	0.056	47.457	ug/L
	Rb	85	34.667	0.00				mg/L
	Y	89	299758.543	11376.52				ug/L
	Rh	103	13.667	5.33				ug/L
	Mo	98	153.012	0.00	-0.0200	0.011	54.224	ug/L
	Ag	107	206.671	0.00	-0.0066	0.007	101.676	ug/L
	Cd	114	22.493	0.00	0.0071	0.001	8.353	ug/L
>	In	115	428775.050	428775.05				ug/L
	Sn	118	241.470	0.00	0.0054	0.004	83.091	ug/L
	Sb	123	267.625	0.00	0.0349	0.003	8.807	ug/L
	Ba	135	59.667	0.00	0.0286	0.010	34.349	ug/L
	Ce	140	33.337	0.00				ug/L
>	Tb	159	586317.726	586317.73				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	408.347	0.00	0.0409	0.004	9.889	ug/L
	Tl	205	926.811	0.00	0.0233	0.005	22.182	ug/L
	Pb	206	371.679	0.00	-0.0062	0.004	58.316	ug/L
	Pb	207	322.009	0.00	0.0059	0.007	116.665	ug/L
	Pb	208	1454.731	0.00	0.0030	0.005	169.269	ug/L
	U	238	624.031	0.00	-0.0159	0.006	37.002	ug/L
>	Bi	209	433194.496	433194.50				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:39
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	29441.849	0.05	0.0038	0.001	16.839	mg/L
Mg	24	4615.121	0.01	-0.0187	0.000	1.694	mg/L
K	39	623978.999	0.23	0.0006	0.005	778.250	mg/L
Ca	43	236.694	0.00	-0.0202	0.003	13.804	mg/L
Fe	54	46185.321	0.02	0.0038	0.001	28.861	mg/L
Fe	57	8878.965	0.01	0.0025	0.001	51.322	mg/L
Sc-1	45	203919.091	203919.09				mg/L
Cl	35	67104.613	32582.57				mg/L
Kr	83	57.001	4.67				mg/L
Br	81	7481.365	-312.28				mg/L
P	31	12896.742	2056.30				mg/L
S	34	219091.364	1779.46				mg/L
Sr	88	93.343	0.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		103.256			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		102.191			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		107.126			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.882			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:39
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Tl	203	CCB IS OUT OF LIMITS (+/-1/2RL)

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:39
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: PBW 60 WG388814-02

Sample Date/Time: Monday, February 06, 2012 17:23:13
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 28
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11758.357	-0.01				ug/L
	Be	9	12.000	0.00	-0.0127	0.008	60.069	ug/L
	Al	27	5318.396	0.01	0.5380	0.163	30.204	ug/L
>	Sc	45	206256.119	206256.12				ug/L
	Ti	49	80.008	-0.00	-0.0426	0.067	157.266	ug/L
	V	51	2469.494	0.00	0.0147	0.020	138.500	ug/L
	Cr	52	7689.290	0.00	0.0414	0.028	67.191	ug/L
	Cr	53	3881.294	0.00	2.1399	0.276	12.892	ug/L
	Mn	55	559.358	0.00	-0.0264	0.004	13.944	ug/L
	Co	59	141.003	0.00	-0.0233	0.004	18.056	ug/L
	Ni	60	108.668	0.00	0.0109	0.002	21.953	ug/L
	Cu	65	171.003	0.00	0.0064	0.004	63.403	ug/L
	Zn	66	597.361	0.00	0.3699	0.011	3.096	ug/L
>	Ge	72	466932.950	466932.95				ug/L
	As	75	-124.159	0.00	0.0221	0.011	48.940	ug/L
	Se	77	104.667	0.00	0.0824	0.174	210.580	ug/L
	Se	82	6.209	0.00	0.0783	0.065	82.538	ug/L
	Rb	85	29.667	0.00				mg/L
	Y	89	289161.862	779.84				ug/L
	Rh	103	6.000	-2.33				ug/L
	Mo	98	188.899	0.00	-0.0063	0.008	120.798	ug/L
	Ag	107	121.335	0.00	-0.0200	0.002	9.426	ug/L
	Cd	114	12.843	0.00	0.0004	0.006	1364.978	ug/L
>	In	115	415173.483	415173.48				ug/L
	Sn	118	154.668	0.00	-0.0109	0.003	24.362	ug/L
	Sb	123	171.745	0.00	0.0160	0.004	25.862	ug/L
	Ba	135	55.334	0.00	0.0274	0.007	24.231	ug/L
	Ce	140	46.671	0.00				ug/L
>	Tb	159	565959.958	565959.96				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	200.338	0.00	0.0109	0.000	4.528	ug/L
	Tl	205	520.069	0.00	-0.0005	0.005	899.768	ug/L
	Pb	206	296.675	0.00	-0.0191	0.005	26.108	ug/L
	Pb	207	258.340	0.00	-0.0063	0.005	78.938	ug/L
	Pb	208	1219.048	0.00	-0.0069	0.004	63.880	ug/L
	U	238	197.005	0.00	-0.0281	0.003	10.796	ug/L
>	Bi	209	431824.644	431824.64				ug/L

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 09:23:40
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23	23602.903	0.02	0.0024	0.001	25.869	mg/L
|	Mg	24	2750.760	0.00	-0.0194	0.000	1.484	mg/L
|	K	39	608528.389	0.12	-0.0031	0.001	30.600	mg/L
|	Ca	43	286.700	0.00	-0.0168	0.004	23.726	mg/L
|	Fe	54	43462.039	0.00	-0.0020	0.006	319.600	mg/L
|	Fe	57	8648.691	0.01	0.0011	0.001	69.528	mg/L
⌊>	Sc-1	45	206256.119	206256.12				mg/L
	Cl	35	46291.122	11769.08				mg/L
	Kr	83	52.667	0.33				mg/L
	Br	81	7788.309	-5.33				mg/L
	P	31	11622.100	781.66				mg/L
	S	34	218598.134	1286.23				mg/L
	Sr	88	196.689	103.35				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		99.244			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		98.949			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		103.407			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		103.553			

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 09:23:40
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 09:23:40
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: LCSW 60 WG388814-03

Sample Date/Time: Monday, February 06, 2012 17:31:00
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 29
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12559.555	-0.00				ug/L
	Be	9	7802.988	0.04	25.0500	0.547	2.184	ug/L
	Al	27	131515.244	0.62	25.1561	1.154	4.587	ug/L
>	Sc	45	208870.261	208870.26				ug/L
	Ti	49	93.343	0.00	-0.0267	0.010	37.871	ug/L
	V	51	229746.998	0.46	23.8706	1.117	4.678	ug/L
	Cr	52	209759.325	0.41	24.5778	1.147	4.668	ug/L
	Cr	53	27143.554	0.05	25.3009	1.063	4.202	ug/L
	Mn	55	312222.266	0.63	23.4761	0.741	3.158	ug/L
	Co	59	238035.374	0.48	23.9037	0.480	2.010	ug/L
	Ni	60	48209.226	0.10	23.7454	0.471	1.983	ug/L
	Cu	65	48250.493	0.10	24.6539	1.605	6.510	ug/L
	Zn	66	27726.848	0.06	23.9895	1.879	7.831	ug/L
>	Ge	72	495674.698	495674.70				ug/L
	As	75	30352.341	0.06	23.5194	0.201	0.857	ug/L
	Se	77	2335.661	0.00	23.3225	1.103	4.730	ug/L
	Se	82	2648.621	0.01	23.4691	1.289	5.492	ug/L
	Rb	85	48.334	0.00				mg/L
	Y	89	306927.137	18545.11				ug/L
	Rh	103	13.000	4.67				ug/L
	Mo	98	82.193	0.00	-0.0434	0.007	15.342	ug/L
	Ag	107	149441.844	0.34	24.2152	0.113	0.467	ug/L
	Cd	114	33610.289	0.08	23.7369	2.091	8.808	ug/L
>	In	115	435124.848	435124.85				ug/L
	Sn	118	113.867	0.00	-0.0204	0.001	6.778	ug/L
	Sb	123	110060.186	0.25	22.7743	1.542	6.772	ug/L
	Ba	135	41867.747	0.07	23.3750	0.346	1.479	ug/L
	Ce	140	40.004	0.00				ug/L
>	Tb	159	590543.435	590543.43				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	165093.582	0.37	23.1497	0.093	0.402	ug/L
	Tl	205	411253.864	0.92	23.4432	0.897	3.825	ug/L
	Pb	206	135285.104	0.30	22.9205	0.663	2.891	ug/L
	Pb	207	117895.786	0.26	22.2120	0.740	3.332	ug/L
	Pb	208	553128.043	1.24	23.0881	0.102	0.442	ug/L
	U	238	839722.987	1.88	23.5366	0.415	1.763	ug/L
>	Bi	209	445683.195	445683.20				ug/L

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 09:23:42
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	25140.406	0.02	0.0027	0.000	2.783	mg/L
Mg	24	1183.537	-0.00	-0.0199	0.000	0.295	mg/L
K	39	621544.290	0.15	-0.0022	0.004	181.368	mg/L
Ca	43	223.359	0.00	-0.0216	0.002	10.274	mg/L
Fe	54	43249.147	0.00	-0.0034	0.005	144.281	mg/L
Fe	57	8531.900	0.00	0.0003	0.004	1223.646	mg/L
Sc-1	45	208870.261	208870.26				mg/L
Cl	35	39433.084	4911.04				mg/L
Kr	83	59.001	6.67				mg/L
Br	81	8260.099	466.46				mg/L
P	31	13647.285	2806.84				mg/L
S	34	238121.304	20809.40				mg/L
Sr	88	213.358	120.02				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		105.353			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		103.704			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		107.898			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		106.877			

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 09:23:42
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 09:23:42
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202005701

Sample Date/Time: Monday, February 06, 2012 17:38:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 30
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13594.438	0.00				ug/L
	Be	9	12.000	0.00	-0.0144	0.021	146.838	ug/L
	Al	27	659257.194	3.10	126.3903	3.330	2.635	ug/L
>	Sc	45	211829.013	211829.01				ug/L
	Ti	49	3951.355	0.01	7.3479	1.202	16.363	ug/L
	V	51	20056.129	0.04	1.9751	0.142	7.180	ug/L
	Cr	52	29725.890	0.05	2.8842	0.093	3.207	ug/L
	Cr	53	7300.593	0.01	5.7832	0.256	4.431	ug/L
	Mn	55	107639.838	0.23	8.5415	0.564	6.599	ug/L
	Co	59	1577.832	0.00	0.1300	0.008	5.819	ug/L
	Ni	60	3191.643	0.01	1.6240	0.032	1.967	ug/L
	Cu	65	6842.210	0.01	3.6357	0.170	4.679	ug/L
	Zn	66	5427.488	0.01	4.8362	0.180	3.731	ug/L
>	Ge	72	467688.777	467688.78				ug/L
	As	75	1073.711	0.00	1.0013	0.064	6.408	ug/L
	Se	77	313.339	0.00	2.3945	0.483	20.161	ug/L
	Se	82	217.841	0.00	2.0608	0.140	6.811	ug/L
	Rb	85	8839.776	0.02				mg/L
	Y	89	300117.450	11735.43				ug/L
	Rh	103	171.337	163.00				ug/L
	Mo	98	2672.213	0.01	0.8418	0.005	0.554	ug/L
	Ag	107	119.335	0.00	-0.0201	0.001	4.647	ug/L
	Cd	114	92.397	0.00	0.0599	0.020	34.120	ug/L
>	In	115	410125.800	410125.80				ug/L
	Sn	118	876.713	0.00	0.1401	0.012	8.505	ug/L
	Sb	123	1060.568	0.00	0.2112	0.023	10.845	ug/L
	Ba	135	32193.401	0.06	18.6335	0.105	0.562	ug/L
	Ce	140	6806.798	0.01				ug/L
>	Tb	159	569583.850	569583.85				ug/L
	Ho	165	116.679	0.00				ug/L
	Tl	203	143.669	0.00	0.0047	0.006	129.787	ug/L
	Tl	205	403.384	0.00	-0.0052	0.009	179.425	ug/L
	Pb	206	3177.972	0.01	0.5376	0.024	4.530	ug/L
	Pb	207	2613.770	0.01	0.4998	0.014	2.813	ug/L
	Pb	208	12447.133	0.03	0.5274	0.016	2.973	ug/L
	U	238	101946.385	0.26	3.1902	0.035	1.094	ug/L
>	Bi	209	395481.795	395481.79				ug/L

Sample ID: L1202005701
Report Date/Time: Tuesday, February 07, 2012 09:23:43
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	S	S	S	S	S	mg/L
Mg	24	16361136.230	77.30	5.5512	0.263	4.735	mg/L
K	39	8076755.644	35.30	1.1254	0.009	0.839	mg/L
Ca	43	199247.991	0.94	14.1359	0.291	2.055	mg/L
Fe	54	163719.293	0.57	0.2057	0.022	10.551	mg/L
Fe	57	55017.117	0.22	0.1882	0.014	7.244	mg/L
Sc-1	45	211829.013	211829.01				mg/L
Cl	35	2713068.892	2678546.85				mg/L
Kr	83	57.334	5.00				mg/L
Br	81	110875.062	103081.42				mg/L
P	31	692112.232	681271.79				mg/L
S	34	1849530.143	1632218.24				mg/L
Sr	88	3346612.947	3346519.60				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.405			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		97.746			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.069			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.838			

Sample ID: L1202005701
Report Date/Time: Tuesday, February 07, 2012 09:23:43
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202005701
Report Date/Time: Tuesday, February 07, 2012 09:23:43
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007505 WG388814-01

Sample Date/Time: Monday, February 06, 2012 17:46:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 31
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12859.938	-0.00				ug/L
	Be	9	8.000	-0.00	-0.0263	0.008	29.243	ug/L
	Al	27	119101.934	0.55	22.3371	1.618	7.242	ug/L
>	Sc	45	212223.597	212223.60				ug/L
	Ti	49	193.355	0.00	0.1551	0.098	63.064	ug/L
	V	51	3126.259	0.00	0.0696	0.013	18.994	ug/L
	Cr	52	13897.390	0.01	0.7486	0.010	1.326	ug/L
	Cr	53	3030.855	0.00	1.0628	0.200	18.804	ug/L
	Mn	55	38434.843	0.08	2.8456	0.118	4.135	ug/L
	Co	59	762.042	0.00	0.0387	0.001	2.941	ug/L
	Ni	60	1593.168	0.00	0.7454	0.052	6.952	ug/L
	Cu	65	573.359	0.00	0.2097	0.047	22.620	ug/L
	Zn	66	3295.353	0.01	2.7102	0.251	9.251	ug/L
>	Ge	72	492859.136	492859.14				ug/L
	As	75	-140.508	0.00	0.0148	0.034	228.297	ug/L
	Se	77	90.667	-0.00	-0.1302	0.233	179.273	ug/L
	Se	82	11.510	0.00	0.1223	0.079	64.949	ug/L
	Rb	85	5036.573	0.01				mg/L
	Y	89	302275.180	13893.16				ug/L
	Rh	103	7.333	-1.00				ug/L
	Mo	98	173.163	0.00	-0.0153	0.002	16.000	ug/L
	Ag	107	91.335	0.00	-0.0261	0.003	9.784	ug/L
	Cd	114	0.901	-0.00	-0.0084	0.003	40.524	ug/L
>	In	115	443157.965	443157.96				ug/L
	Sn	118	364.008	0.00	0.0274	0.008	28.044	ug/L
	Sb	123	183.913	0.00	0.0161	0.002	11.036	ug/L
	Ba	135	9328.312	0.02	5.1651	0.127	2.453	ug/L
	Ce	140	1920.413	0.00				ug/L
>	Tb	159	595260.100	595260.10				ug/L
	Ho	165	30.003	0.00				ug/L
	Tl	203	102.002	0.00	-0.0042	0.000	3.683	ug/L
	Tl	205	260.030	-0.00	-0.0167	0.002	14.343	ug/L
	Pb	206	446.017	0.00	0.0026	0.010	395.573	ug/L
	Pb	207	398.347	0.00	0.0165	0.003	15.773	ug/L
	Pb	208	1824.765	0.00	0.0147	0.008	51.422	ug/L
	U	238	202.338	0.00	-0.0283	0.001	2.148	ug/L
>	Bi	209	458336.398	458336.40				ug/L

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 09:23:44
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2953599.093	13.82	0.6157	0.013	2.085	mg/L
Mg	24	730045.481	3.43	0.2276	0.004	1.559	mg/L
K	39	1889019.285	6.08	0.1882	0.012	6.471	mg/L
Ca	43	4538.366	0.02	0.2837	0.020	7.169	mg/L
Fe	54	95098.344	0.24	0.0860	0.015	17.483	mg/L
Fe	57	14808.017	0.03	0.0254	0.008	33.507	mg/L
Sc-1	45	212223.597	212223.60				mg/L
Cl	35	57427.905	22905.86				mg/L
Kr	83	56.334	4.00				mg/L
Br	81	14037.829	6244.19				mg/L
P	31	22640.767	11800.32				mg/L
S	34	228572.592	11260.69				mg/L
Sr	88	23953.440	23860.10				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		104.755			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		105.619			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		108.760			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		109.911			

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 09:23:44
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 09:23:44
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007508S WG388814-04

Sample Date/Time: Monday, February 06, 2012 17:54:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 32
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14395.772	0.00				ug/L
	Be	9	8310.147	0.04	25.3317	0.513	2.027	ug/L
	Al	27	279537.728	1.26	51.2681	3.739	7.293	ug/L
>	Sc	45	219985.924	219985.92				ug/L
	Ti	49	180.020	0.00	0.1384	0.105	75.922	ug/L
	V	51	233304.933	0.48	25.0710	1.541	6.145	ug/L
	Cr	52	210547.411	0.42	25.5197	0.722	2.831	ug/L
	Cr	53	25899.484	0.05	24.8999	1.031	4.142	ug/L
	Mn	55	351114.415	0.73	27.2837	1.146	4.202	ug/L
	Co	59	238013.783	0.50	24.6891	0.930	3.768	ug/L
	Ni	60	50585.379	0.11	25.7519	1.468	5.702	ug/L
	Cu	65	47801.230	0.10	25.2359	0.996	3.945	ug/L
	Zn	66	28008.630	0.06	25.0290	0.192	0.769	ug/L
>	Ge	72	480107.396	480107.40				ug/L
	As	75	29066.325	0.06	23.2565	0.294	1.265	ug/L
	Se	77	2184.286	0.00	22.4778	0.124	0.552	ug/L
	Se	82	2430.312	0.01	22.2368	0.660	2.967	ug/L
	Rb	85	4852.129	0.01				mg/L
	Y	89	314649.895	26267.87				ug/L
	Rh	103	20.667	12.33				ug/L
	Mo	98	329.832	0.00	0.0415	0.008	20.279	ug/L
	Ag	107	143006.009	0.34	24.3179	0.368	1.515	ug/L
	Cd	114	33128.749	0.08	24.5257	1.734	7.072	ug/L
>	In	115	414732.457	414732.46				ug/L
	Sn	118	191.469	0.00	-0.0033	0.000	6.317	ug/L
	Sb	123	110028.815	0.27	23.8675	1.079	4.521	ug/L
	Ba	135	50582.934	0.09	29.2316	0.581	1.988	ug/L
	Ce	140	1687.008	0.00				ug/L
>	Tb	159	570531.808	570531.81				ug/L
	Ho	165	36.670	0.00				ug/L
	Tl	203	173305.475	0.38	23.9992	0.890	3.710	ug/L
	Tl	205	423083.482	0.94	23.8258	1.222	5.130	ug/L
	Pb	206	143849.534	0.32	24.0733	0.393	1.633	ug/L
	Pb	207	126916.134	0.28	23.6215	0.320	1.356	ug/L
	Pb	208	590201.440	1.31	24.3299	0.138	0.567	ug/L
	U	238	907679.069	2.01	25.1208	0.402	1.602	ug/L
>	Bi	209	451366.136	451366.14				ug/L

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 09:23:46
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2800379.957	12.63	0.5628	0.013	2.396	mg/L
Mg	24	691597.930	3.14	0.2064	0.013	6.241	mg/L
K	39	1819907.719	5.45	0.1680	0.020	11.756	mg/L
Ca	43	4281.529	0.02	0.2554	0.004	1.504	mg/L
Fe	54	93233.803	0.22	0.0767	0.006	8.069	mg/L
Fe	57	14474.241	0.03	0.0217	0.010	44.581	mg/L
Sc-1	45	219985.924	219985.92				mg/L
Cl	35	58593.410	24071.37				mg/L
Kr	83	47.667	-4.67				mg/L
Br	81	12441.288	4647.64				mg/L
P	31	22508.942	11668.50				mg/L
S	34	207191.085	-10120.82				mg/L
Sr	88	22766.698	22673.36				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		102.045			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.844			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.242			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		108.239			

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 09:23:46
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 09:23:46
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007511SD WG388814-05

Sample Date/Time: Monday, February 06, 2012 18:02:11
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 33
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13127.090	-0.00				ug/L
	Be	9	8109.280	0.04	24.4432	0.713	2.915	ug/L
	Al	27	224098.036	0.99	40.5789	7.247	17.858	ug/L
>	Sc	45	222412.360	222412.36				ug/L
	Ti	49	233.360	0.00	0.2498	0.127	50.958	ug/L
	V	51	229825.092	0.48	25.2215	1.001	3.970	ug/L
	Cr	52	210761.577	0.43	26.1198	0.407	1.560	ug/L
	Cr	53	26511.418	0.05	26.1455	0.709	2.711	ug/L
	Mn	55	344941.318	0.73	27.3768	0.236	0.861	ug/L
	Co	59	239347.102	0.51	25.3735	0.895	3.529	ug/L
	Ni	60	50586.966	0.11	26.2998	0.619	2.355	ug/L
	Cu	65	49333.802	0.10	26.6065	0.336	1.263	ug/L
	Zn	66	28607.990	0.06	26.1335	0.063	0.241	ug/L
>	Ge	72	469792.229	469792.23				ug/L
	As	75	28759.671	0.06	23.5101	0.355	1.509	ug/L
	Se	77	2104.933	0.00	22.1260	0.478	2.160	ug/L
	Se	82	2399.627	0.01	22.4484	1.065	4.743	ug/L
	Rb	85	4622.995	0.01				mg/L
	Y	89	289801.633	1419.61				ug/L
	Rh	103	20.334	12.00				ug/L
	Mo	98	141.751	0.00	-0.0230	0.006	25.538	ug/L
	Ag	107	144933.023	0.34	24.2171	0.686	2.834	ug/L
	Cd	114	33629.129	0.08	24.4370	0.770	3.149	ug/L
>	In	115	422093.716	422093.72				ug/L
	Sn	118	250.270	0.00	0.0080	0.003	40.470	ug/L
	Sb	123	109694.644	0.26	23.3631	0.365	1.563	ug/L
	Ba	135	51830.878	0.09	29.3141	0.671	2.289	ug/L
	Ce	140	4975.316	0.01				ug/L
>	Tb	159	583203.328	583203.33				ug/L
	Ho	165	26.669	0.00				ug/L
	Tl	203	173942.213	0.39	24.6770	0.612	2.481	ug/L
	Tl	205	432778.318	0.98	24.9731	1.537	6.156	ug/L
	Pb	206	147638.548	0.33	25.3164	0.473	1.868	ug/L
	Pb	207	126761.236	0.29	24.1700	0.422	1.747	ug/L
	Pb	208	591199.538	1.34	24.9704	0.560	2.243	ug/L
	U	238	905828.986	2.06	25.6850	0.561	2.183	ug/L
>	Bi	209	440617.444	440617.44				ug/L

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 09:23:47
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2661378.781	11.87	0.5291	0.035	6.532	mg/L
Mg	24	673081.681	3.02	0.1978	0.004	2.076	mg/L
K	39	1838417.923	5.43	0.1675	0.006	3.366	mg/L
Ca	43	4408.275	0.02	0.2607	0.014	5.530	mg/L
Fe	54	85567.088	0.18	0.0621	0.005	8.350	mg/L
Fe	57	12564.096	0.02	0.0137	0.004	30.918	mg/L
Sc-1	45	222412.360	222412.36				mg/L
Cl	35	43069.684	8547.64				mg/L
Kr	83	48.667	-3.67				mg/L
Br	81	9703.654	1910.01				mg/L
P	31	24381.732	13541.29				mg/L
S	34	216035.215	-1276.69				mg/L
Sr	88	21733.810	21640.47				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.852			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.599			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		106.557			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		105.662			

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 09:23:47
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 09:23:47
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502

Sample Date/Time: Monday, February 06, 2012 18:09:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 34
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15397.554	0.00				ug/L
	Be	9	14.000	0.00	-0.0109	0.010	96.254	ug/L
	Al	27	284526.704	1.23	50.3831	19.411	38.527	ug/L
>	Sc	45	228149.701	228149.70				ug/L
	Ti	49	320.038	0.00	0.3804	0.114	30.079	ug/L
	V	51	3647.559	0.00	0.1226	0.043	34.726	ug/L
	Cr	52	16600.358	0.02	1.0668	0.112	10.536	ug/L
	Cr	53	2467.279	-0.00	0.4744	0.163	34.368	ug/L
	Mn	55	128380.645	0.26	9.6012	0.358	3.730	ug/L
	Co	59	2473.059	0.00	0.2101	0.012	5.578	ug/L
	Ni	60	2035.269	0.00	0.9573	0.046	4.809	ug/L
	Cu	65	789.045	0.00	0.3178	0.024	7.677	ug/L
	Zn	66	3696.190	0.01	3.0377	0.171	5.615	ug/L
>	Ge	72	496610.211	496610.21				ug/L
	As	75	-119.467	0.00	0.0310	0.032	102.221	ug/L
	Se	77	86.000	-0.00	-0.1824	0.080	44.096	ug/L
	Se	82	12.261	0.00	0.1256	0.113	90.017	ug/L
	Rb	85	4375.860	0.01				mg/L
	Y	89	311139.243	22757.22				ug/L
	Rh	103	11.000	2.67				ug/L
	Mo	98	216.051	0.00	0.0003	0.003	1068.890	ug/L
	Ag	107	100.668	0.00	-0.0241	0.001	5.838	ug/L
	Cd	114	3.679	-0.00	-0.0064	0.003	49.215	ug/L
>	In	115	430627.198	430627.20				ug/L
	Sn	118	857.111	0.00	0.1275	0.007	5.146	ug/L
	Sb	123	288.169	0.00	0.0390	0.009	23.005	ug/L
	Ba	135	11910.964	0.02	6.5556	0.133	2.035	ug/L
	Ce	140	8204.872	0.01				ug/L
>	Tb	159	598617.330	598617.33				ug/L
	Ho	165	120.013	0.00				ug/L
	Tl	203	87.335	-0.00	-0.0064	0.002	34.196	ug/L
	Tl	205	246.695	-0.00	-0.0177	0.003	17.417	ug/L
	Pb	206	615.696	0.00	0.0288	0.002	6.408	ug/L
	Pb	207	544.690	0.00	0.0417	0.004	10.279	ug/L
	Pb	208	2528.512	0.00	0.0415	0.004	10.399	ug/L
	U	238	379.346	0.00	-0.0237	0.000	0.871	ug/L
>	Bi	209	466415.072	466415.07				ug/L

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 09:23:48
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	3969964.825	17.33	0.7720	0.074	9.592	mg/L
Mg	24	491568.604	2.15	0.1352	0.011	8.280	mg/L
K	39	1926784.004	5.62	0.1733	0.011	6.487	mg/L
Ca	43	3207.606	0.01	0.1739	0.008	4.332	mg/L
Fe	54	161365.788	0.50	0.1824	0.075	40.848	mg/L
Fe	57	31060.935	0.10	0.0821	0.004	4.474	mg/L
Sc-1	45	228149.701	228149.70				mg/L
Cl	35	54090.415	19568.37				mg/L
Kr	83	46.667	-5.67				mg/L
Br	81	12050.050	4256.41				mg/L
P	31	20526.284	9685.84				mg/L
S	34	212731.821	-4580.08				mg/L
Sr	88	17633.754	17540.41				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		105.552			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		102.632			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		109.374			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		111.848			

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 09:23:48
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 09:23:48
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502PS WG38887901

Sample Date/Time: Monday, February 06, 2012 18:17:46
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 35
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15030.209	0.00				ug/L
	Be	9	17814.370	0.08	52.7659	2.652	5.026	ug/L
	Al	27	534835.497	2.35	95.8527	15.516	16.188	ug/L
>	Sc	45	226744.138	226744.14				ug/L
	Ti	49	446.723	0.00	0.6116	0.062	10.072	ug/L
	V	51	497453.565	1.00	51.9773	2.397	4.612	ug/L
	Cr	52	442316.315	0.88	52.8564	0.343	0.649	ug/L
	Cr	53	51742.297	0.10	50.0227	2.929	5.855	ug/L
	Mn	55	772491.738	1.56	58.1635	1.375	2.363	ug/L
	Co	59	485262.134	0.98	48.7488	0.756	1.552	ug/L
	Ni	60	104203.937	0.21	51.3574	1.152	2.242	ug/L
	Cu	65	100870.023	0.20	51.6032	1.547	2.998	ug/L
	Zn	66	57864.117	0.12	50.2421	0.633	1.260	ug/L
>	Ge	72	495934.868	495934.87				ug/L
	As	75	61823.498	0.13	47.7580	1.099	2.300	ug/L
	Se	77	4393.825	0.01	44.8030	0.871	1.944	ug/L
	Se	82	5232.685	0.01	46.3166	2.599	5.611	ug/L
	Rb	85	4355.517	0.01				mg/L
	Y	89	326212.700	37830.68				ug/L
	Rh	103	27.667	19.33				ug/L
	Mo	98	264.422	0.00	0.0152	0.008	54.508	ug/L
	Ag	107	322392.887	0.74	52.3577	1.171	2.237	ug/L
	Cd	114	69877.888	0.16	49.3179	1.818	3.686	ug/L
>	In	115	434531.092	434531.09				ug/L
	Sn	118	852.044	0.00	0.1249	0.004	3.209	ug/L
	Sb	123	230573.032	0.53	47.7160	0.662	1.387	ug/L
	Ba	135	100258.435	0.16	53.6696	2.358	4.394	ug/L
	Ce	140	8221.548	0.01				ug/L
>	Tb	159	616279.578	616279.58				ug/L
	Ho	165	103.344	0.00				ug/L
	Tl	203	364468.772	0.77	47.8847	1.131	2.362	ug/L
	Tl	205	910630.246	1.91	48.6682	1.360	2.794	ug/L
	Pb	206	308300.215	0.65	49.0115	0.722	1.472	ug/L
	Pb	207	258314.023	0.54	45.6519	1.446	3.167	ug/L
	Pb	208	1242337.937	2.61	48.6305	0.865	1.780	ug/L
	U	238	1922264.272	4.04	50.4959	1.812	3.589	ug/L
>	Bi	209	475875.388	475875.39				ug/L

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 09:23:50
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	4021304.760	17.65	0.7859	0.028	3.542	mg/L
Mg	24	509396.022	2.24	0.1416	0.005	3.552	mg/L
K	39	1902921.344	5.56	0.1716	0.013	7.301	mg/L
Ca	43	2974.169	0.01	0.1595	0.025	15.722	mg/L
Fe	54	135333.337	0.39	0.1404	0.016	11.706	mg/L
Fe	57	30010.291	0.10	0.0788	0.005	5.827	mg/L
Sc-1	45	226744.138	226744.14				mg/L
Cl	35	54021.890	19499.85				mg/L
Kr	83	43.001	-9.33				mg/L
Br	81	13169.732	5376.09				mg/L
P	31	22885.592	12045.15				mg/L
S	34	219778.777	2466.87				mg/L
Sr	88	18028.000	17934.66				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		105.409			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		103.563			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		112.601			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		114.117			

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 09:23:50
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 09:23:50
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502SDL WG388879-02

Sample Date/Time: Monday, February 06, 2012 18:25:32
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 36
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14379.100	0.01				ug/L
	Be	9	12.000	0.00	-0.0111	0.004	34.696	ug/L
	Al	27	35659.711	0.17	6.8730	1.180	17.171	ug/L
>	Sc	45	198979.321	198979.32				ug/L
	Ti	49	103.344	0.00	0.0071	0.038	534.809	ug/L
	V	51	2202.611	0.00	-0.0109	0.013	123.759	ug/L
	Cr	52	7810.739	0.00	0.0745	0.059	79.719	ug/L
	Cr	53	1226.880	-0.00	-0.6739	0.050	7.434	ug/L
	Mn	55	22638.270	0.05	1.7729	0.092	5.166	ug/L
	Co	59	547.023	0.00	0.0211	0.003	12.998	ug/L
	Ni	60	665.367	0.00	0.3092	0.040	12.979	ug/L
	Cu	65	224.339	0.00	0.0376	0.014	38.034	ug/L
	Zn	66	1290.446	0.00	1.0319	0.046	4.447	ug/L
>	Ge	72	459469.049	459469.05				ug/L
	As	75	-144.648	0.00	0.0024	0.048	1966.972	ug/L
	Se	77	81.334	-0.00	-0.1598	0.147	92.282	ug/L
	Se	82	11.249	0.00	0.1252	0.069	54.945	ug/L
	Rb	85	806.714	0.00				mg/L
	Y	89	276885.845	-11496.18				ug/L
	Rh	103	4.333	-4.00				ug/L
	Mo	98	47.494	0.00	-0.0533	0.004	7.079	ug/L
	Ag	107	95.668	0.00	-0.0237	0.001	3.973	ug/L
	Cd	114	12.397	0.00	0.0004	0.007	1661.356	ug/L
>	In	115	399628.097	399628.10				ug/L
	Sn	118	199.336	0.00	-0.0001	0.002	1836.771	ug/L
	Sb	123	331.420	0.00	0.0534	0.002	4.101	ug/L
	Ba	135	2141.630	0.00	1.3136	0.039	2.962	ug/L
	Ce	140	1396.924	0.00				ug/L
>	Tb	159	535630.110	535630.11				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	79.668	-0.00	-0.0067	0.002	37.211	ug/L
	Tl	205	156.684	-0.00	-0.0220	0.002	6.937	ug/L
	Pb	206	345.677	0.00	-0.0114	0.004	37.384	ug/L
	Pb	207	320.009	0.00	0.0049	0.006	117.669	ug/L
	Pb	208	1423.729	0.00	0.0010	0.002	152.365	ug/L
	U	238	182.337	0.00	-0.0287	0.001	3.397	ug/L
>	Bi	209	437811.357	437811.36				ug/L

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 09:23:51
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	701762.924	3.45	0.1550	0.013	8.425	mg/L
Mg	24	88701.764	0.44	0.0120	0.003	26.669	mg/L
K	39	843918.483	1.43	0.0391	0.012	29.842	mg/L
Ca	43	700.099	0.00	0.0155	0.006	36.593	mg/L
Fe	54	36035.677	-0.02	-0.0126	0.009	67.766	mg/L
Fe	57	10878.183	0.02	0.0124	0.005	36.734	mg/L
Sc-1	45	198979.321	198979.32				mg/L
Cl	35	29505.485	-5016.56				mg/L
Kr	83	48.001	-4.33				mg/L
Br	81	8204.707	411.06				mg/L
P	31	7725.592	-3114.85				mg/L
S	34	190912.455	-26399.45				mg/L
Sr	88	3140.906	3047.56				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.658			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.244			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		97.865			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.989			

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 09:23:51
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 09:23:51
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 06, 2012 18:33:19
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13878.272	0.01				ug/L
	Be	9	17008.008	0.09	57.9482	2.264	3.907	ug/L
	Al	27	248729.885	1.25	50.9326	2.470	4.850	ug/L
>	Sc	45	197155.886	197155.89				ug/L
	Ti	49	51285.886	0.11	94.2842	4.675	4.958	ug/L
	V	51	463468.569	0.95	49.3282	0.759	1.539	ug/L
	Cr	52	398732.927	0.80	48.4933	1.320	2.722	ug/L
	Cr	53	48163.742	0.09	47.3694	2.596	5.479	ug/L
	Mn	55	617341.030	1.27	47.3589	1.319	2.785	ug/L
	Co	59	470940.080	0.97	48.2055	0.222	0.461	ug/L
	Ni	60	95106.458	0.20	47.7566	0.485	1.015	ug/L
	Cu	65	93221.233	0.19	48.6239	2.391	4.917	ug/L
	Zn	66	56886.819	0.12	50.3404	1.378	2.738	ug/L
>	Ge	72	486652.572	486652.57				ug/L
	As	75	60940.558	0.13	47.9774	1.046	2.180	ug/L
	Se	77	4633.289	0.01	48.2270	1.525	3.162	ug/L
	Se	82	5343.368	0.01	48.2117	1.782	3.696	ug/L
	Rb	85	2142.964	0.00				mg/L
	Y	89	298803.538	10421.51				ug/L
	Rh	103	27.667	19.33				ug/L
	Mo	98	292640.969	0.69	96.9415	4.637	4.784	ug/L
	Ag	107	299194.019	0.71	50.0089	1.448	2.896	ug/L
	Cd	114	65865.157	0.16	47.8407	1.400	2.926	ug/L
>	In	115	422195.449	422195.45				ug/L
	Sn	118	236042.154	0.56	47.7872	1.315	2.752	ug/L
	Sb	123	229389.754	0.54	48.8626	0.414	0.848	ug/L
	Ba	135	84362.474	0.15	48.1565	1.441	2.993	ug/L
	Ce	140	70.007	0.00				ug/L
>	Tb	159	577788.136	577788.14				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	338494.212	0.77	48.2611	1.080	2.237	ug/L
	Tl	205	835492.261	1.90	48.4548	1.214	2.506	ug/L
	Pb	206	272158.523	0.62	46.9455	0.767	1.633	ug/L
	Pb	207	246883.720	0.56	47.3424	0.678	1.431	ug/L
	Pb	208	1119437.939	2.55	47.5485	0.358	0.753	ug/L
	U	238	1751510.865	3.99	49.9292	1.156	2.315	ug/L
>	Bi	209	438559.332	438559.33				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:52
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	23091907.067	117.10	5.2060	0.251	4.817	mg/L
Mg	24	13995018.850	71.01	5.0984	0.195	3.824	mg/L
K	39	31562910.148	157.28	5.0383	0.089	1.773	mg/L
Ca	43	66763.485	0.34	5.0603	0.175	3.457	mg/L
Fe	54	2873702.985	14.38	5.2986	0.284	5.359	mg/L
Fe	57	1253217.094	6.32	5.4241	0.184	3.388	mg/L
Sc-1	45	197155.886	197155.89				mg/L
Cl	35	31641.294	-2880.75				mg/L
Kr	83	49.667	-2.67				mg/L
Br	81	8173.354	379.71				mg/L
P	31	13753.611	2913.17				mg/L
S	34	230399.496	13087.59				mg/L
Sr	88	5002.001	4908.66				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	98.656				
Cr	52	96.987				
Cr	53					
Mn	55	94.718				
Co	59	96.411				
Ni	60	95.513				
Cu	65	97.248				
Zn	66	100.681				
Ge	72		103.436			
As	75	95.955				
Se	77					
Se	82	96.423				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	100.018				
Cd	114	95.681				
In	115		100.623			
Sn	118					
Sb	123	97.725				
Ba	135	96.313				
Ce	140					
Tb	159		105.568			
Ho	165					
Tl	203	96.522				
Tl	205					
Pb	206					
Pb	207					
Pb	208	95.097				
U	238	99.858				
Bi	209		105.168			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:52
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:23:52
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 06, 2012 18:40:56
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13344.079	0.00				ug/L
	Be	9	9.333	0.00	-0.0197	0.015	75.789	ug/L
	Al	27	2733.785	0.00	0.0551	0.046	84.325	ug/L
>	Sc	45	196389.748	196389.75				ug/L
	Ti	49	76.675	-0.00	-0.0492	0.024	48.799	ug/L
	V	51	2132.519	-0.00	-0.0247	0.010	42.042	ug/L
	Cr	52	7048.051	-0.00	-0.0484	0.029	60.553	ug/L
	Cr	53	1233.549	-0.00	-0.6994	0.169	24.166	ug/L
	Mn	55	480.686	0.00	-0.0330	0.007	20.937	ug/L
	Co	59	156.336	0.00	-0.0218	0.002	8.471	ug/L
	Ni	60	70.001	0.00	-0.0096	0.001	5.215	ug/L
	Cu	65	176.670	0.00	0.0088	0.008	87.046	ug/L
	Zn	66	225.339	0.00	0.0243	0.013	54.235	ug/L
>	Ge	72	470460.116	470460.12				ug/L
	As	75	-132.800	0.00	0.0161	0.029	182.923	ug/L
	Se	77	70.000	-0.00	-0.3096	0.084	27.222	ug/L
	Se	82	7.551	0.00	0.0901	0.050	55.592	ug/L
	Rb	85	27.334	0.00				mg/L
	Y	89	292951.595	4569.57				ug/L
	Rh	103	13.667	5.33				ug/L
	Mo	98	73.010	0.00	-0.0447	0.003	6.067	ug/L
	Ag	107	134.336	0.00	-0.0172	0.005	31.009	ug/L
	Cd	114	9.481	0.00	-0.0018	0.002	87.976	ug/L
>	In	115	404883.707	404883.71				ug/L
	Sn	118	201.336	0.00	-0.0003	0.001	439.308	ug/L
	Sb	123	260.459	0.00	0.0367	0.003	8.578	ug/L
	Ba	135	40.000	0.00	0.0193	0.002	12.171	ug/L
	Ce	140	20.002	-0.00				ug/L
>	Tb	159	544299.728	544299.73				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	97.335	0.00	-0.0040	0.000	9.212	ug/L
	Tl	205	270.032	0.00	-0.0152	0.005	36.014	ug/L
	Pb	206	302.009	0.00	-0.0182	0.005	27.620	ug/L
	Pb	207	246.006	0.00	-0.0087	0.006	66.706	ug/L
	Pb	208	1190.046	0.00	-0.0082	0.004	53.320	ug/L
	U	238	289.675	0.00	-0.0255	0.002	8.245	ug/L
>	Bi	209	432638.933	432638.93				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:54
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	28287.957	0.05	0.0038	0.001	24.703	mg/L
Mg	24	2150.518	0.00	-0.0195	0.000	1.445	mg/L
K	39	581740.175	0.13	-0.0026	0.004	140.769	mg/L
Ca	43	156.684	0.00	-0.0258	0.003	11.649	mg/L
Fe	54	42963.599	0.01	0.0011	0.006	530.651	mg/L
Fe	57	8875.616	0.01	0.0040	0.003	75.430	mg/L
Sc-1	45	196389.748	196389.75				mg/L
Cl	35	26603.069	-7918.97				mg/L
Kr	83	51.667	-0.67				mg/L
Br	81	7256.500	-537.14				mg/L
P	31	12726.672	1886.23				mg/L
S	34	206852.226	-10459.68				mg/L
Sr	88	66.674	-26.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.994			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		96.497			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.449			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.749			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:54
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:23:54
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007514

Sample Date/Time: Monday, February 06, 2012 18:48:32
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 37
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14112.031	0.00				ug/L
	Be	9	24.000	0.00	0.0218	0.013	60.127	ug/L
	Al	27	5171090.690	23.92	975.2321	100.407	10.296	ug/L
>	Sc	45	217997.486	217997.49				ug/L
	Ti	49	2480.621	0.01	4.5140	0.545	12.078	ug/L
	V	51	12910.334	0.02	1.1640	0.063	5.417	ug/L
	Cr	52	34474.855	0.06	3.4561	0.051	1.471	ug/L
	Cr	53	4174.798	0.00	2.4064	0.230	9.570	ug/L
	Mn	55	880275.758	1.87	69.6845	1.957	2.808	ug/L
	Co	59	13576.204	0.03	1.3966	0.077	5.490	ug/L
	Ni	60	7963.890	0.02	4.0843	0.244	5.975	ug/L
	Cu	65	4262.800	0.01	2.2104	0.093	4.205	ug/L
	Zn	66	21914.666	0.05	19.8909	0.172	0.864	ug/L
>	Ge	72	471774.516	471774.52				ug/L
	As	75	101.420	0.00	0.2059	0.025	12.073	ug/L
	Se	77	95.334	0.00	-0.0328	0.140	425.414	ug/L
	Se	82	-2.200	-0.00	-0.0008	0.083	10113.792	ug/L
	Rb	85	12073.530	0.03				mg/L
	Y	89	301756.819	13374.80				ug/L
	Rh	103	12.000	3.67				ug/L
	Mo	98	793.461	0.00	0.1998	0.011	5.349	ug/L
	Ag	107	105.668	0.00	-0.0225	0.002	9.612	ug/L
	Cd	114	10.601	0.00	-0.0011	0.002	183.260	ug/L
>	In	115	411671.782	411671.78				ug/L
	Sn	118	1114.341	0.00	0.1888	0.006	2.935	ug/L
	Sb	123	547.266	0.00	0.0980	0.022	21.986	ug/L
	Ba	135	21521.979	0.04	12.2552	0.148	1.207	ug/L
	Ce	140	223181.559	0.39				ug/L
>	Tb	159	578994.003	578994.00				ug/L
	Ho	165	943.481	0.00				ug/L
	Tl	203	90.001	-0.00	-0.0055	0.002	31.126	ug/L
	Tl	205	223.359	-0.00	-0.0184	0.003	14.719	ug/L
	Pb	206	15789.785	0.03	2.6010	0.123	4.735	ug/L
	Pb	207	13395.893	0.03	2.4628	0.041	1.682	ug/L
	Pb	208	63052.718	0.14	2.5670	0.050	1.954	ug/L
	U	238	1760.204	0.00	0.0153	0.002	14.937	ug/L
>	Bi	209	447819.610	447819.61				ug/L

Sample ID: L1202007514
Report Date/Time: Tuesday, February 07, 2012 09:23:55
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2833547.108	12.95	0.5773	0.028	4.926	mg/L
Mg	24	1949774.721	9.03	0.6314	0.083	13.167	mg/L
K	39	2289093.872	7.73	0.2410	0.023	9.588	mg/L
Ca	43	5659.170	0.03	0.3543	0.025	6.917	mg/L
Fe	54	1813148.845	8.21	3.0221	0.392	12.987	mg/L
Fe	57	706774.757	3.25	2.7852	0.410	14.733	mg/L
Sc-1	45	217997.486	217997.49				mg/L
Cl	35	48770.516	14248.47				mg/L
Kr	83	61.334	9.00				mg/L
Br	81	10132.156	2338.51				mg/L
P	31	30385.744	19545.30				mg/L
S	34	223035.400	5723.49				mg/L
Sr	88	34036.142	33942.80				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.273			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.115			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		105.788			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		107.389			

Sample ID: L1202007514
Report Date/Time: Tuesday, February 07, 2012 09:23:55
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007514
Report Date/Time: Tuesday, February 07, 2012 09:23:55
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007517

Sample Date/Time: Monday, February 06, 2012 18:56:18
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 38
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13544.349	0.00				ug/L
	Be	9	20.000	0.00	0.0152	0.009	61.147	ug/L
	Al	27	3079681.315	15.44	629.4514	36.543	5.806	ug/L
>	Sc	45	199545.797	199545.80				ug/L
	Ti	49	1130.190	0.00	1.9872	0.248	12.475	ug/L
	V	51	6838.066	0.01	0.5073	0.068	13.365	ug/L
	Cr	52	28877.580	0.05	2.8061	0.101	3.614	ug/L
	Cr	53	3747.884	0.00	2.0251	0.071	3.514	ug/L
	Mn	55	398309.567	0.86	32.0480	0.421	1.315	ug/L
	Co	59	7637.241	0.02	0.7830	0.007	0.832	ug/L
	Ni	60	6112.970	0.01	3.1792	0.078	2.454	ug/L
	Cu	65	3358.710	0.01	1.7550	0.037	2.105	ug/L
	Zn	66	13263.688	0.03	12.1800	0.385	3.164	ug/L
>	Ge	72	463617.164	463617.16				ug/L
	As	75	-31.059	0.00	0.0981	0.042	43.094	ug/L
	Se	77	66.667	-0.00	-0.3361	0.129	38.323	ug/L
	Se	82	15.948	0.00	0.1700	0.150	88.001	ug/L
	Rb	85	7504.453	0.02				mg/L
	Y	89	297866.343	9484.32				ug/L
	Rh	103	10.667	2.33				ug/L
	Mo	98	810.874	0.00	0.2120	0.014	6.765	ug/L
	Ag	107	88.668	0.00	-0.0250	0.002	6.127	ug/L
	Cd	114	2.296	-0.00	-0.0073	0.003	42.608	ug/L
>	In	115	402466.075	402466.08				ug/L
	Sn	118	1659.899	0.00	0.3099	0.009	2.873	ug/L
	Sb	123	160.206	0.00	0.0146	0.002	12.009	ug/L
	Ba	135	10766.397	0.02	6.3837	0.041	0.636	ug/L
	Ce	140	66813.591	0.12				ug/L
>	Tb	159	555697.520	555697.52				ug/L
	Ho	165	296.702	0.00				ug/L
	Tl	203	59.334	-0.00	-0.0095	0.000	1.479	ug/L
	Tl	205	133.348	-0.00	-0.0233	0.002	8.114	ug/L
	Pb	206	3724.870	0.01	0.5794	0.039	6.750	ug/L
	Pb	207	3151.294	0.01	0.5548	0.011	2.063	ug/L
	Pb	208	14787.998	0.03	0.5761	0.021	3.715	ug/L
	U	238	652.032	0.00	-0.0151	0.001	5.361	ug/L
>	Bi	209	434122.051	434122.05				ug/L

Sample ID: L1202007517
Report Date/Time: Tuesday, February 07, 2012 09:23:56
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2482683.779	12.36	0.5508	0.032	5.808	mg/L
Mg	24	1635780.669	8.20	0.5711	0.032	5.525	mg/L
K	39	1842222.442	6.40	0.1985	0.004	1.931	mg/L
Ca	43	6052.803	0.03	0.4191	0.006	1.523	mg/L
Fe	54	988300.278	4.75	1.7475	0.066	3.776	mg/L
Fe	57	365634.850	1.80	1.5390	0.052	3.351	mg/L
Sc-1	45	199545.797	199545.80				mg/L
Cl	35	41413.992	6891.95				mg/L
Kr	83	44.334	-8.00				mg/L
Br	81	9149.032	1355.39				mg/L
P	31	27095.341	16254.90				mg/L
S	34	187037.969	-30273.94				mg/L
Sr	88	39350.193	39256.85				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.540			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.921			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		101.532			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.104			

Sample ID: L1202007517
Report Date/Time: Tuesday, February 07, 2012 09:23:56
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007517
Report Date/Time: Tuesday, February 07, 2012 09:23:56
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007520

Sample Date/Time: Monday, February 06, 2012 19:04:04
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 39
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14696.361	0.01				ug/L
	Be	9	10.000	0.00	-0.0201	0.008	37.314	ug/L
	Al	27	342211.646	1.59	65.0553	7.200	11.068	ug/L
>	Sc	45	213077.090	213077.09				ug/L
	Ti	49	563.409	0.00	0.8754	0.230	26.286	ug/L
	V	51	3014.238	0.00	0.0713	0.025	35.582	ug/L
	Cr	52	12903.114	0.01	0.6959	0.016	2.321	ug/L
	Cr	53	1693.676	-0.00	-0.2194	0.147	67.168	ug/L
	Mn	55	71425.726	0.15	5.5849	0.245	4.384	ug/L
	Co	59	1361.792	0.00	0.1054	0.006	5.615	ug/L
	Ni	60	1263.108	0.00	0.6083	0.014	2.270	ug/L
	Cu	65	484.686	0.00	0.1742	0.009	5.428	ug/L
	Zn	66	3276.677	0.01	2.8171	0.139	4.920	ug/L
>	Ge	72	472229.513	472229.51				ug/L
	As	75	-161.997	-0.00	-0.0077	0.040	513.807	ug/L
	Se	77	75.334	-0.00	-0.2549	0.156	61.331	ug/L
	Se	82	3.220	-0.00	0.0484	0.140	290.272	ug/L
	Rb	85	2097.618	0.00				mg/L
	Y	89	307518.861	19136.84				ug/L
	Rh	103	7.333	-1.00				ug/L
	Mo	98	134.495	0.00	-0.0251	0.001	4.293	ug/L
	Ag	107	87.668	0.00	-0.0259	0.002	5.884	ug/L
	Cd	114	5.404	0.00	-0.0051	0.002	35.546	ug/L
>	In	115	419588.481	419588.48				ug/L
	Sn	118	261.204	0.00	0.0104	0.005	49.677	ug/L
	Sb	123	145.746	0.00	0.0100	0.004	38.662	ug/L
	Ba	135	4610.655	0.01	2.6815	0.072	2.695	ug/L
	Ce	140	8632.004	0.02				ug/L
>	Tb	159	566151.566	566151.57				ug/L
	Ho	165	253.363	0.00				ug/L
	Tl	203	42.667	-0.00	-0.0120	0.000	2.976	ug/L
	Tl	205	126.680	-0.00	-0.0237	0.004	16.993	ug/L
	Pb	206	730.373	0.00	0.0550	0.007	13.295	ug/L
	Pb	207	617.696	0.00	0.0621	0.003	5.323	ug/L
	Pb	208	2883.892	0.00	0.0632	0.002	3.234	ug/L
	U	238	544.023	0.00	-0.0183	0.001	3.403	ug/L
>	Bi	209	438013.569	438013.57				ug/L

Sample ID: L1202007520
Report Date/Time: Tuesday, February 07, 2012 09:23:58
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	3129722.245	14.59	0.6503	0.007	1.012	mg/L
Mg	24	1090375.306	5.11	0.3487	0.009	2.455	mg/L
K	39	1263940.541	3.11	0.0929	0.010	10.970	mg/L
Ca	43	5262.188	0.02	0.3347	0.021	6.313	mg/L
Fe	54	143511.687	0.47	0.1692	0.024	14.350	mg/L
Fe	57	33192.936	0.12	0.0994	0.017	16.987	mg/L
Sc-1	45	213077.090	213077.09				mg/L
Cl	35	43551.527	9029.49				mg/L
Kr	83	51.334	-1.00				mg/L
Br	81	10023.370	2229.73				mg/L
P	31	23463.031	12622.59				mg/L
S	34	204119.346	-13192.56				mg/L
Sr	88	34330.687	34237.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.370			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.002			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		103.442			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		105.037			

Sample ID: L1202007520
Report Date/Time: Tuesday, February 07, 2012 09:23:58
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007520
Report Date/Time: Tuesday, February 07, 2012 09:23:58
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007523

Sample Date/Time: Monday, February 06, 2012 19:11:51
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 40
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14245.596	0.01				ug/L
	Be	9	24.000	0.00	0.0256	0.012	48.559	ug/L
	Al	27	5824853.131	28.00	1141.7414	64.477	5.647	ug/L
>	Sc	45	207980.181	207980.18				ug/L
	Ti	49	1636.991	0.00	3.0370	0.134	4.417	ug/L
	V	51	10786.118	0.02	0.9770	0.077	7.902	ug/L
	Cr	52	76250.017	0.15	9.1829	0.204	2.216	ug/L
	Cr	53	8732.112	0.01	7.5871	0.207	2.728	ug/L
	Mn	55	1139573.177	2.51	93.7721	0.702	0.749	ug/L
	Co	59	17285.749	0.04	1.8604	0.036	1.912	ug/L
	Ni	60	15101.495	0.03	8.0902	0.090	1.110	ug/L
	Cu	65	4465.576	0.01	2.4137	0.105	4.363	ug/L
	Zn	66	18232.791	0.04	17.1692	0.345	2.011	ug/L
>	Ge	72	453980.683	453980.68				ug/L
	As	75	-135.823	0.00	0.0089	0.034	380.774	ug/L
	Se	77	92.001	0.00	-0.0323	0.218	674.709	ug/L
	Se	82	1.232	-0.00	0.0315	0.080	253.781	ug/L
	Rb	85	6068.937	0.01				mg/L
	Y	89	299414.823	11032.80				ug/L
	Rh	103	9.000	0.67				ug/L
	Mo	98	2555.870	0.01	0.8496	0.025	2.960	ug/L
	Ag	107	87.668	0.00	-0.0247	0.002	8.730	ug/L
	Cd	114	24.529	0.00	0.0102	0.010	99.140	ug/L
>	In	115	388870.218	388870.22				ug/L
	Sn	118	999.527	0.00	0.1770	0.002	1.220	ug/L
	Sb	123	142.080	0.00	0.0117	0.004	35.447	ug/L
	Ba	135	24126.819	0.04	14.4898	0.824	5.687	ug/L
	Ce	140	141146.492	0.26				ug/L
>	Tb	159	549341.964	549341.96				ug/L
	Ho	165	616.752	0.00				ug/L
	Tl	203	61.001	-0.00	-0.0092	0.001	8.987	ug/L
	Tl	205	170.019	-0.00	-0.0210	0.001	3.270	ug/L
	Pb	206	4718.383	0.01	0.7642	0.007	0.869	ug/L
	Pb	207	3969.652	0.01	0.7245	0.010	1.400	ug/L
	Pb	208	18626.058	0.04	0.7523	0.003	0.458	ug/L
	U	238	2258.996	0.01	0.0322	0.002	6.400	ug/L
>	Bi	209	427881.771	427881.77				ug/L

Sample ID: L1202007523
Report Date/Time: Tuesday, February 07, 2012 09:23:59
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2795090.682	13.35	0.5948	0.027	4.513	mg/L
Mg	24	2274288.540	10.93	0.7680	0.040	5.174	mg/L
K	39	1484730.258	4.31	0.1313	0.008	6.331	mg/L
Ca	43	4828.548	0.02	0.3119	0.007	2.316	mg/L
Fe	54	1834132.018	8.61	3.1717	0.030	0.946	mg/L
Fe	57	719281.442	3.42	2.9347	0.082	2.786	mg/L
Sc-1	45	207980.181	207980.18				mg/L
Cl	35	42980.632	8458.59				mg/L
Kr	83	50.001	-2.33				mg/L
Br	81	9009.546	1215.90				mg/L
P	31	32113.884	21273.44				mg/L
S	34	184568.147	-32743.76				mg/L
Sr	88	33567.517	33474.17				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.491			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.680			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		100.370			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		102.608			

Sample ID: L1202007523
Report Date/Time: Tuesday, February 07, 2012 09:23:59
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007523
Report Date/Time: Tuesday, February 07, 2012 09:23:59
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007526

Sample Date/Time: Monday, February 06, 2012 19:19:38
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 41
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14930.041	0.01				ug/L
	Be	9	20.000	0.00	0.0125	0.037	292.504	ug/L
	Al	27	3848183.163	18.18	741.3519	29.744	4.012	ug/L
>	Sc	45	211708.288	211708.29				ug/L
	Ti	49	1413.595	0.00	2.4867	0.249	10.028	ug/L
	V	51	8623.372	0.01	0.6887	0.099	14.445	ug/L
	Cr	52	70291.605	0.13	8.0230	0.207	2.574	ug/L
	Cr	53	8411.754	0.01	6.8725	0.398	5.792	ug/L
	Mn	55	723263.350	1.53	57.1491	0.825	1.444	ug/L
	Co	59	13238.306	0.03	1.3585	0.027	1.977	ug/L
	Ni	60	13479.367	0.03	6.9335	0.279	4.029	ug/L
	Cu	65	3905.287	0.01	2.0139	0.013	0.655	ug/L
	Zn	66	19642.990	0.04	17.7830	0.426	2.396	ug/L
>	Ge	72	472562.226	472562.23				ug/L
	As	75	-107.020	0.00	0.0369	0.052	142.152	ug/L
	Se	77	80.667	-0.00	-0.1944	0.188	96.824	ug/L
	Se	82	6.249	0.00	0.0773	0.084	108.399	ug/L
	Rb	85	5350.771	0.01				mg/L
	Y	89	298098.829	9716.81				ug/L
	Rh	103	13.000	4.67				ug/L
	Mo	98	2794.543	0.01	0.8810	0.050	5.697	ug/L
	Ag	107	106.668	0.00	-0.0223	0.002	8.156	ug/L
	Cd	114	18.139	0.00	0.0044	0.007	163.911	ug/L
>	In	115	411368.449	411368.45				ug/L
	Sn	118	519.750	0.00	0.0653	0.003	4.684	ug/L
	Sb	123	357.004	0.00	0.0569	0.007	12.519	ug/L
	Ba	135	19843.800	0.03	11.4583	0.214	1.868	ug/L
	Ce	140	121305.555	0.21				ug/L
>	Tb	159	570879.998	570880.00				ug/L
	Ho	165	550.073	0.00				ug/L
	Tl	203	74.001	-0.00	-0.0074	0.000	2.429	ug/L
	Tl	205	203.356	-0.00	-0.0191	0.001	7.627	ug/L
	Pb	206	3541.121	0.01	0.5504	0.004	0.769	ug/L
	Pb	207	2845.181	0.01	0.4984	0.018	3.552	ug/L
	Pb	208	13673.562	0.03	0.5315	0.012	2.350	ug/L
	U	238	1952.248	0.00	0.0227	0.000	1.210	ug/L
>	Bi	209	431613.738	431613.74				ug/L

Sample ID: L1202007526
Report Date/Time: Tuesday, February 07, 2012 09:24:01
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	3503926.319	16.49	0.7346	0.061	8.315	mg/L
Mg	24	1866827.532	8.82	0.6161	0.034	5.597	mg/L
K	39	1608665.830	4.78	0.1465	0.016	11.075	mg/L
Ca	43	6910.230	0.03	0.4551	0.051	11.164	mg/L
Fe	54	1426888.059	6.55	2.4109	0.210	8.707	mg/L
Fe	57	529868.985	2.47	2.1147	0.034	1.607	mg/L
Sc-1	45	211708.288	211708.29				mg/L
Cl	35	68436.654	33914.61				mg/L
Kr	83	48.001	-4.33				mg/L
Br	81	10363.118	2569.47				mg/L
P	31	28267.221	17426.78				mg/L
S	34	192893.050	-24418.86				mg/L
Sr	88	41869.134	41775.79				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.441			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.042			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.306			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.503			

Sample ID: L1202007526
Report Date/Time: Tuesday, February 07, 2012 09:24:01
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007526
Report Date/Time: Tuesday, February 07, 2012 09:24:01
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007529

Sample Date/Time: Monday, February 06, 2012 19:27:25
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 42
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14879.997	0.01				ug/L
	Be	9	10.000	0.00	-0.0178	0.012	68.578	ug/L
	Al	27	27746.262	0.13	5.2095	0.430	8.255	ug/L
>	Sc	45	197786.707	197786.71				ug/L
	Ti	49	76.675	-0.00	-0.0475	0.026	53.978	ug/L
	V	51	2211.152	0.00	-0.0135	0.019	142.997	ug/L
	Cr	52	8293.542	0.00	0.1226	0.033	26.725	ug/L
	Cr	53	1066.842	-0.00	-0.8622	0.115	13.356	ug/L
	Mn	55	2312.677	0.00	0.1146	0.007	6.076	ug/L
	Co	59	100.668	0.00	-0.0276	0.002	5.669	ug/L
	Ni	60	230.339	0.00	0.0749	0.009	11.745	ug/L
	Cu	65	273.341	0.00	0.0627	0.006	9.291	ug/L
	Zn	66	670.367	0.00	0.4398	0.028	6.454	ug/L
>	Ge	72	465648.342	465648.34				ug/L
	As	75	-174.753	-0.00	-0.0201	0.045	222.256	ug/L
	Se	77	68.667	-0.00	-0.3164	0.062	19.661	ug/L
	Se	82	2.925	-0.00	0.0461	0.102	220.445	ug/L
	Rb	85	84.668	0.00				mg/L
	Y	89	279711.841	-8670.18				ug/L
	Rh	103	9.000	0.67				ug/L
	Mo	98	54.896	0.00	-0.0511	0.001	1.082	ug/L
	Ag	107	92.001	0.00	-0.0247	0.002	9.630	ug/L
	Cd	114	1.656	-0.00	-0.0078	0.002	27.525	ug/L
>	In	115	407203.663	407203.66				ug/L
	Sn	118	119.334	0.00	-0.0177	0.001	4.658	ug/L
	Sb	123	115.787	0.00	0.0044	0.004	88.361	ug/L
	Ba	135	1032.074	0.00	0.6182	0.033	5.308	ug/L
	Ce	140	423.386	0.00				ug/L
>	Tb	159	545926.422	545926.42				ug/L
	Ho	165	6.667	0.00				ug/L
	Tl	203	29.667	-0.00	-0.0138	0.001	8.260	ug/L
	Tl	205	43.338	-0.00	-0.0286	0.002	6.481	ug/L
	Pb	206	299.342	0.00	-0.0193	0.002	8.416	ug/L
	Pb	207	265.007	0.00	-0.0055	0.002	43.382	ug/L
	Pb	208	1214.047	0.00	-0.0077	0.002	20.228	ug/L
	U	238	32.667	-0.00	-0.0329	0.000	0.804	ug/L
>	Bi	209	436422.605	436422.61				ug/L

Sample ID: L1202007529
Report Date/Time: Tuesday, February 07, 2012 09:24:02
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	2125002.623	10.65	0.4750	0.014	2.961	mg/L
Mg	24	10190.585	0.04	-0.0166	0.000	1.088	mg/L
K	39	548981.373	-0.06	-0.0086	0.002	28.564	mg/L
Ca	43	350.042	0.00	-0.0111	0.003	27.889	mg/L
Fe	54	79072.742	0.19	0.0677	0.003	4.864	mg/L
Fe	57	9222.701	0.01	0.0052	0.002	34.196	mg/L
Sc-1	45	197786.707	197786.71				mg/L
Cl	35	36497.761	1975.72				mg/L
Kr	83	47.001	-5.33				mg/L
Br	81	7740.260	-53.38				mg/L
P	31	22195.068	11354.63				mg/L
S	34	188195.312	-29116.59				mg/L
Sr	88	1640.326	1546.98				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.971			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		97.050			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.746			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.656			

Sample ID: L1202007529
Report Date/Time: Tuesday, February 07, 2012 09:24:02
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007529
Report Date/Time: Tuesday, February 07, 2012 09:24:02
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007532

Sample Date/Time: Monday, February 06, 2012 19:35:13
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 43
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15714.810	0.01				ug/L
	Be	9	6.667	-0.00	-0.0299	0.005	17.391	ug/L
	Al	27	9805.812	0.03	1.4328	0.213	14.872	ug/L
>	Sc	45	205884.404	205884.40				ug/L
	Ti	49	93.343	0.00	-0.0231	0.019	82.291	ug/L
	V	51	2464.358	0.00	0.0039	0.012	315.340	ug/L
	Cr	52	9717.435	0.00	0.2572	0.068	26.389	ug/L
	Cr	53	1073.510	-0.00	-0.9003	0.138	15.342	ug/L
	Mn	55	1469.478	0.00	0.0421	0.002	3.718	ug/L
	Co	59	104.668	0.00	-0.0276	0.001	4.790	ug/L
	Ni	60	300.342	0.00	0.1057	0.012	11.041	ug/L
	Cu	65	163.670	-0.00	-0.0007	0.006	825.336	ug/L
	Zn	66	1784.542	0.00	1.4080	0.031	2.168	ug/L
>	Ge	72	484917.930	484917.93				ug/L
	As	75	-134.632	0.00	0.0172	0.022	125.247	ug/L
	Se	77	70.000	-0.00	-0.3347	0.156	46.507	ug/L
	Se	82	5.641	-0.00	0.0712	0.058	80.771	ug/L
	Rb	85	64.334	0.00				mg/L
	Y	89	300590.285	12208.26				ug/L
	Rh	103	10.667	2.33				ug/L
	Mo	98	31.644	0.00	-0.0594	0.003	4.532	ug/L
	Ag	107	77.668	0.00	-0.0276	0.002	5.824	ug/L
	Cd	114	4.138	0.00	-0.0060	0.002	26.100	ug/L
>	In	115	419674.764	419674.76				ug/L
	Sn	118	155.335	0.00	-0.0111	0.001	4.863	ug/L
	Sb	123	105.664	0.00	0.0014	0.002	120.665	ug/L
	Ba	135	155.670	0.00	0.0839	0.012	14.258	ug/L
	Ce	140	140.015	0.00				ug/L
>	Tb	159	577791.528	577791.53				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	30.334	-0.00	-0.0138	0.000	3.277	ug/L
	Tl	205	80.008	-0.00	-0.0265	0.002	6.738	ug/L
	Pb	206	292.341	0.00	-0.0207	0.002	11.939	ug/L
	Pb	207	249.340	0.00	-0.0088	0.005	59.318	ug/L
	Pb	208	1142.709	0.00	-0.0110	0.002	19.606	ug/L
	U	238	27.000	-0.00	-0.0331	0.000	0.827	ug/L
>	Bi	209	438452.288	438452.29				ug/L

Sample ID: L1202007532
Report Date/Time: Tuesday, February 07, 2012 09:24:03
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	50162.456	0.15	0.0082	0.001	11.048	mg/L
Mg	24	19123.839	0.08	-0.0136	0.000	3.524	mg/L
K	39	569823.740	-0.06	-0.0087	0.005	57.585	mg/L
Ca	43	443.390	0.00	-0.0051	0.006	124.728	mg/L
Fe	54	76943.211	0.17	0.0584	0.010	16.391	mg/L
Fe	57	8718.766	0.01	0.0016	0.002	143.417	mg/L
Sc-1	45	205884.404	205884.40				mg/L
Cl	35	28197.651	-6324.39				mg/L
Kr	83	41.334	-11.00				mg/L
Br	81	8007.187	213.54				mg/L
P	31	21500.460	10660.02				mg/L
S	34	196672.218	-20639.69				mg/L
Sr	88	1000.160	906.82				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		103.067			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.022			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		105.568			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		105.143			

Sample ID: L1202007532
Report Date/Time: Tuesday, February 07, 2012 09:24:03
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007532
Report Date/Time: Tuesday, February 07, 2012 09:24:03
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202009101

Sample Date/Time: Monday, February 06, 2012 19:43:01
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 44
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14646.214	0.01				ug/L
	Be	9	6.667	-0.00	-0.0302	0.014	45.488	ug/L
	Al	27	76533.284	0.35	14.3659	0.285	1.981	ug/L
>	Sc	45	209810.655	209810.66				ug/L
	Ti	49	303.369	0.00	0.3793	0.032	8.320	ug/L
	V	51	30512.961	0.06	3.0955	0.051	1.642	ug/L
	Cr	52	22802.390	0.03	1.9551	0.088	4.489	ug/L
	Cr	53	2724.053	0.00	0.8660	0.266	30.703	ug/L
	Mn	55	10156.295	0.02	0.7310	0.033	4.532	ug/L
	Co	59	311.342	0.00	-0.0055	0.002	37.220	ug/L
	Ni	60	1218.435	0.00	0.5836	0.027	4.688	ug/L
	Cu	65	457.350	0.00	0.1590	0.009	5.929	ug/L
	Zn	66	5661.313	0.01	4.9862	0.053	1.071	ug/L
>	Ge	72	473274.001	473274.00				ug/L
	As	75	669.854	0.00	0.6649	0.050	7.515	ug/L
	Se	77	119.334	0.00	0.2243	0.135	60.019	ug/L
	Se	82	70.167	0.00	0.6703	0.104	15.472	ug/L
	Rb	85	4251.460	0.01				mg/L
	Y	89	292694.700	4312.68				ug/L
	Rh	103	51.667	43.33				ug/L
	Mo	98	6129.367	0.02	2.0555	0.044	2.127	ug/L
	Ag	107	98.335	0.00	-0.0234	0.000	2.100	ug/L
	Cd	114	7.965	0.00	-0.0028	0.007	234.465	ug/L
>	In	115	403653.832	403653.83				ug/L
	Sn	118	1511.737	0.00	0.2778	0.011	4.052	ug/L
	Sb	123	231.542	0.00	0.0304	0.002	5.222	ug/L
	Ba	135	13590.209	0.02	7.9049	0.104	1.313	ug/L
	Ce	140	923.478	0.00				ug/L
>	Tb	159	566647.320	566647.32				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	46.334	-0.00	-0.0114	0.001	4.541	ug/L
	Tl	205	126.680	-0.00	-0.0238	0.001	6.233	ug/L
	Pb	206	2093.617	0.00	0.2916	0.007	2.331	ug/L
	Pb	207	1662.516	0.00	0.2636	0.017	6.358	ug/L
	Pb	208	7846.845	0.02	0.2752	0.010	3.660	ug/L
	U	238	11600.525	0.03	0.2981	0.011	3.648	ug/L
>	Bi	209	437109.956	437109.96				ug/L

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 09:24:05
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	45595297.372	217.37	9.6627	0.283	2.930	mg/L
Mg	24	4118507.525	19.63	1.3950	0.030	2.180	mg/L
K	39	5539182.885	23.58	0.7496	0.021	2.841	mg/L
Ca	43	175579.324	0.84	12.5667	0.293	2.334	mg/L
Fe	54	92471.001	0.23	0.0827	0.004	5.252	mg/L
Fe	57	23077.562	0.07	0.0596	0.001	2.408	mg/L
Sc-1	45	209810.655	209810.66				mg/L
Cl	35	132325.069	97803.03				mg/L
Kr	83	57.667	5.33				mg/L
Br	81	22525.082	14731.44				mg/L
P	31	19906.511	9066.07				mg/L
S	34	402219.557	184907.65				mg/L
Sr	88	1141138.919	1141045.58				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.592			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		96.204			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		103.532			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.821			

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 09:24:05
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 09:24:05
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 06, 2012 19:50:49
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14011.836	0.00				ug/L
	Be	9	17207.776	0.08	55.2525	6.375	11.537	ug/L
	Al	27	244685.146	1.16	47.2203	6.200	13.131	ug/L
>	Sc	45	210071.525	210071.52				ug/L
	Ti	49	54416.041	0.11	100.7688	5.995	5.949	ug/L
	V	51	454988.997	0.94	48.8169	4.598	9.418	ug/L
	Cr	52	387241.508	0.79	47.4175	2.061	4.345	ug/L
	Cr	53	46457.181	0.09	45.9293	1.118	2.435	ug/L
	Mn	55	610749.805	1.26	47.1707	1.038	2.201	ug/L
	Co	59	465470.975	0.96	48.0122	2.689	5.600	ug/L
	Ni	60	98217.344	0.20	49.7186	4.372	8.794	ug/L
	Cu	65	94668.972	0.20	49.7528	3.662	7.360	ug/L
	Zn	66	56738.150	0.12	50.5523	0.876	1.733	ug/L
>	Ge	72	483327.181	483327.18				ug/L
	As	75	60322.550	0.13	47.8197	2.218	4.639	ug/L
	Se	77	4434.514	0.01	46.4867	3.037	6.533	ug/L
	Se	82	5125.188	0.01	46.5637	2.336	5.016	ug/L
	Rb	85	2025.600	0.00				mg/L
	Y	89	299905.477	11523.45				ug/L
	Rh	103	25.000	16.67				ug/L
	Mo	98	291995.499	0.71	98.9248	7.907	7.993	ug/L
	Ag	107	285980.128	0.69	48.8075	1.557	3.191	ug/L
	Cd	114	68263.197	0.17	50.6360	5.463	10.789	ug/L
>	In	115	413345.088	413345.09				ug/L
	Sn	118	232371.744	0.56	48.1044	4.221	8.775	ug/L
	Sb	123	221546.437	0.54	48.2574	3.056	6.332	ug/L
	Ba	135	84717.440	0.15	50.1506	2.126	4.239	ug/L
	Ce	140	113.345	0.00				ug/L
>	Tb	159	557552.348	557552.35				ug/L
	Ho	165	6.667	0.00				ug/L
	Tl	203	332529.214	0.78	48.8895	2.815	5.758	ug/L
	Tl	205	811019.659	1.91	48.5049	3.277	6.756	ug/L
	Pb	206	268651.587	0.63	47.7913	3.020	6.318	ug/L
	Pb	207	253579.642	0.60	50.1692	1.893	3.773	ug/L
	Pb	208	1137291.816	2.67	49.8350	1.191	2.390	ug/L
	U	238	1766074.855	4.15	51.9155	3.609	6.952	ug/L
>	Bi	209	425179.774	425179.77				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:06
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	22381518.615	107.03	4.7588	0.656	13.780	mg/L
Mg	24	13877985.456	66.39	4.7648	0.621	13.034	mg/L
K	39	31542569.945	147.72	4.7315	0.309	6.522	mg/L
Ca	43	69411.477	0.33	4.9494	0.273	5.519	mg/L
Fe	54	2777069.844	13.09	4.8244	0.716	14.837	mg/L
Fe	57	1218053.646	5.78	4.9607	0.524	10.558	mg/L
Sc-1	45	210071.525	210071.52				mg/L
Cl	35	27282.595	-7239.45				mg/L
Kr	83	54.667	2.33				mg/L
Br	81	7824.378	30.73				mg/L
P	31	11325.317	484.88				mg/L
S	34	205206.764	-12105.14				mg/L
Sr	88	4671.783	4578.44				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	97.634				
Cr	52	94.835				
Cr	53					
Mn	55	94.341				
Co	59	96.024				
Ni	60	99.437				
Cu	65	99.506				
Zn	66	101.105				
Ge	72		102.729			
As	75	95.639				
Se	77					
Se	82	93.127				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	97.615				
Cd	114	101.272				
In	115		98.514			
Sn	118					
Sb	123	96.515				
Ba	135	100.301				
Ce	140					
Tb	159		101.871			
Ho	165					
Tl	203	97.779				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.670				
U	238	103.831				
Bi	209		101.960			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:06
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:06
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 06, 2012 19:58:26
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
⌈	Li	6	14061.878	0.00				ug/L
|	Be	9	14.667	0.00	-0.0052	0.011	214.380	ug/L
|	Al	27	2817.147	0.00	0.0384	0.082	213.266	ug/L
⌊>	Sc	45	209556.504	209556.50				ug/L
⌈	Ti	49	133.348	0.00	0.0494	0.081	164.385	ug/L
|	V	51	2424.310	0.00	-0.0024	0.020	820.697	ug/L
|	Cr	52	7539.486	-0.00	-0.0206	0.021	99.772	ug/L
|	Cr	53	933.480	-0.00	-1.0525	0.145	13.790	ug/L
|	Mn	55	553.357	0.00	-0.0288	0.001	4.415	ug/L
|	Co	59	166.003	0.00	-0.0214	0.002	8.545	ug/L
|	Ni	60	91.668	0.00	-0.0001	0.002	2683.172	ug/L
|	Cu	65	193.338	0.00	0.0142	0.012	85.388	ug/L
|	Zn	66	243.006	0.00	0.0324	0.014	41.839	ug/L
|>	Ge	72	488316.941	488316.94				ug/L
|	As	75	-101.754	0.00	0.0440	0.005	10.410	ug/L
|	Se	77	69.334	-0.00	-0.3472	0.130	37.399	ug/L
|	Se	82	19.597	0.00	0.1945	0.075	38.351	ug/L
⌊	Rb	85	28.334	0.00				mg/L
	Y	89	291569.174	3187.15				ug/L
	Rh	103	10.000	1.67				ug/L
⌈	Mo	98	108.235	0.00	-0.0323	0.004	13.030	ug/L
|	Ag	107	130.336	0.00	-0.0178	0.002	10.272	ug/L
|	Cd	114	20.958	0.00	0.0069	0.009	128.533	ug/L
|>	In	115	402388.837	402388.84				ug/L
|	Sn	118	230.003	0.00	0.0061	0.005	84.010	ug/L
⌊	Sb	123	230.749	0.00	0.0303	0.007	23.241	ug/L
⌈	Ba	135	36.334	0.00	0.0161	0.001	6.146	ug/L
|	Ce	140	33.337	0.00				ug/L
⌊>	Tb	159	569974.653	569974.65				ug/L
⌈	Ho	165	10.001	0.00				ug/L
|	Tl	203	116.335	0.00	-0.0011	0.003	252.062	ug/L
|	Tl	205	236.694	-0.00	-0.0171	0.001	7.605	ug/L
|	Pb	206	317.676	0.00	-0.0151	0.007	49.652	ug/L
|	Pb	207	292.008	0.00	0.0006	0.005	834.940	ug/L
|	Pb	208	1283.385	0.00	-0.0038	0.003	91.092	ug/L
|	U	238	413.681	0.00	-0.0218	0.002	11.432	ug/L
⌊>	Bi	209	429233.308	429233.31				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:07
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	27728.850	0.04	0.0033	0.000	4.955	mg/L
Mg	24	3611.155	0.01	-0.0191	0.000	0.748	mg/L
K	39	597164.886	0.02	-0.0062	0.004	64.443	mg/L
Ca	43	223.359	0.00	-0.0218	0.003	13.904	mg/L
Fe	54	42782.268	-0.00	-0.0044	0.000	7.776	mg/L
Fe	57	9756.684	0.01	0.0052	0.002	45.798	mg/L
Sc-1	45	209556.504	209556.50				mg/L
Cl	35	26512.125	-8009.92				mg/L
Kr	83	46.334	-6.00				mg/L
Br	81	7654.867	-138.78				mg/L
P	31	10730.246	-110.20				mg/L
S	34	214124.342	-3187.56				mg/L
Sr	88	153.350	60.01				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		103.789			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.902			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.140			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		102.932			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:07
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:07
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: PBW 2A WG388646-03

Sample Date/Time: Monday, February 06, 2012 20:06:02
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 45
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
⌈	Li	6	13978.441	0.00				ug/L
|	Be	9	5.333	-0.00	-0.0346	0.014	39.590	ug/L
|	Al	27	2967.195	0.00	0.0731	0.019	25.481	ug/L
⌊>	Sc	45	206992.890	206992.89				ug/L
⌈	Ti	49	96.677	0.00	-0.0146	0.059	403.618	ug/L
|	V	51	2191.524	-0.00	-0.0229	0.009	37.680	ug/L
|	Cr	52	7067.733	-0.00	-0.0627	0.034	54.234	ug/L
|	Cr	53	850.128	-0.00	-1.1217	0.058	5.150	ug/L
|	Mn	55	480.685	0.00	-0.0337	0.001	2.878	ug/L
|	Co	59	134.336	0.00	-0.0244	0.001	3.300	ug/L
|	Ni	60	142.336	0.00	0.0268	0.009	34.633	ug/L
|	Cu	65	123.002	-0.00	-0.0212	0.011	53.300	ug/L
|	Zn	66	367.345	0.00	0.1481	0.025	16.807	ug/L
|>	Ge	72	479631.532	479631.53				ug/L
|	As	75	-119.529	0.00	0.0284	0.010	36.311	ug/L
|	Se	77	66.667	-0.00	-0.3559	0.212	59.450	ug/L
|	Se	82	4.519	-0.00	0.0605	0.008	12.882	ug/L
⌊	Rb	85	27.000	0.00				mg/L
	Y	89	294460.019	6078.00				ug/L
	Rh	103	8.000	-0.33				ug/L
⌈	Mo	98	86.348	0.00	-0.0404	0.001	3.091	ug/L
|	Ag	107	93.335	0.00	-0.0245	0.000	1.896	ug/L
|	Cd	114	14.829	0.00	0.0022	0.004	194.964	ug/L
|>	In	115	408750.112	408750.11				ug/L
|	Sn	118	158.535	0.00	-0.0096	0.002	24.042	ug/L
⌊	Sb	123	168.288	0.00	0.0159	0.001	8.106	ug/L
⌈	Ba	135	35.334	0.00	0.0157	0.004	28.533	ug/L
|	Ce	140	6.667	-0.00				ug/L
⌊>	Tb	159	562604.839	562604.84				ug/L
⌈	Ho	165	16.668	0.00				ug/L
|	Tl	203	60.334	-0.00	-0.0094	0.002	18.436	ug/L
|	Tl	205	153.350	-0.00	-0.0222	0.002	9.436	ug/L
|	Pb	206	293.341	0.00	-0.0203	0.004	17.807	ug/L
|	Pb	207	276.007	0.00	-0.0035	0.007	205.551	ug/L
|	Pb	208	1201.046	0.00	-0.0083	0.001	16.838	ug/L
|	U	238	212.672	0.00	-0.0278	0.000	1.603	ug/L
⌊>	Bi	209	436704.605	436704.60				ug/L

Sample ID: PBW 2A WG388646-03
Report Date/Time: Tuesday, February 07, 2012 09:24:09
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	25290.861	0.03	0.0028	0.000	4.825	mg/L
Mg	24	2067.131	0.00	-0.0196	0.000	0.161	mg/L
K	39	556573.332	-0.14	-0.0113	0.004	31.316	mg/L
Ca	43	176.686	0.00	-0.0249	0.002	6.786	mg/L
Fe	54	40403.562	-0.01	-0.0078	0.002	23.250	mg/L
Fe	57	8471.818	0.00	0.0003	0.002	552.030	mg/L
Sc-1	45	206992.890	206992.89				mg/L
Cl	35	23598.733	-10923.31				mg/L
Kr	83	55.334	3.00				mg/L
Br	81	6905.533	-888.11				mg/L
P	31	10067.444	-773.00				mg/L
S	34	182959.021	-34352.88				mg/L
Sr	88	126.680	33.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		101.943			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		97.418			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		102.794			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.723			

Sample ID: PBW 2A WG388646-03
Report Date/Time: Tuesday, February 07, 2012 09:24:09
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 2A WG388646-03
Report Date/Time: Tuesday, February 07, 2012 09:24:09
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: LCSW 2A WG388646-04

Sample Date/Time: Monday, February 06, 2012 20:13:51
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 46
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14078.549	0.01				ug/L
	Be	9	8679.854	0.04	29.4830	1.580	5.361	ug/L
	Al	27	122462.598	0.61	24.7649	1.865	7.530	ug/L
>	Sc	45	197633.720	197633.72				ug/L
	Ti	49	86.676	-0.00	-0.0366	0.075	204.138	ug/L
	V	51	213766.072	0.43	22.4555	1.551	6.908	ug/L
	Cr	52	199326.806	0.39	23.5862	1.280	5.425	ug/L
	Cr	53	23833.111	0.04	22.2462	1.160	5.215	ug/L
	Mn	55	298582.717	0.61	22.6962	0.368	1.621	ug/L
	Co	59	225972.419	0.46	22.9439	0.391	1.705	ug/L
	Ni	60	45876.792	0.09	22.8540	0.910	3.983	ug/L
	Cu	65	46070.180	0.09	23.8064	0.847	3.559	ug/L
	Zn	66	28213.014	0.06	24.6946	1.177	4.766	ug/L
>	Ge	72	490194.121	490194.12				ug/L
	As	75	29585.828	0.06	23.1794	0.493	2.128	ug/L
	Se	77	2180.285	0.00	21.9543	0.349	1.588	ug/L
	Se	82	2564.303	0.01	22.9799	0.577	2.509	ug/L
	Rb	85	31.334	0.00				mg/L
	Y	89	294194.630	5812.61				ug/L
	Rh	103	21.000	12.67				ug/L
	Mo	98	75.010	0.00	-0.0449	0.004	9.829	ug/L
	Ag	107	147305.764	0.35	24.7245	0.410	1.658	ug/L
	Cd	114	31757.434	0.08	23.1570	0.677	2.924	ug/L
>	In	115	420149.068	420149.07				ug/L
	Sn	118	139.068	0.00	-0.0144	0.002	12.585	ug/L
	Sb	123	109283.468	0.26	23.4028	1.023	4.372	ug/L
	Ba	135	40655.111	0.07	23.4037	0.761	3.252	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	572634.552	572634.55				ug/L
	Ho	165	6.667	0.00				ug/L
	Tl	203	166251.768	0.38	24.0024	1.995	8.313	ug/L
	Tl	205	413096.784	0.95	24.2542	2.134	8.800	ug/L
	Pb	206	134586.543	0.31	23.4695	1.350	5.753	ug/L
	Pb	207	118173.064	0.27	22.8921	0.679	2.964	ug/L
	Pb	208	542291.736	1.25	23.2725	0.389	1.671	ug/L
	U	238	877873.949	2.03	25.3013	0.629	2.486	ug/L
>	Bi	209	433656.123	433656.12				ug/L

Sample ID: LCSW 2A WG388646-04
Report Date/Time: Tuesday, February 07, 2012 09:24:10
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	21399.628	0.01	0.0022	0.000	16.905	mg/L
Mg	24	1486.949	-0.00	-0.0198	0.000	0.383	mg/L
K	39	585136.814	0.13	-0.0027	0.003	112.102	mg/L
Ca	43	223.359	0.00	-0.0208	0.002	9.240	mg/L
Fe	54	41504.759	0.00	-0.0023	0.001	49.350	mg/L
Fe	57	8772.206	0.01	0.0033	0.006	167.053	mg/L
Sc-1	45	197633.720	197633.72				mg/L
Cl	35	25095.067	-9426.97				mg/L
Kr	83	53.667	1.33				mg/L
Br	81	7413.312	-380.33				mg/L
P	31	10651.511	-188.93				mg/L
S	34	202766.719	-14545.19				mg/L
Sr	88	133.348	40.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		104.188			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.135			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.626			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.992			

Sample ID: LCSW 2A WG388646-04
Report Date/Time: Tuesday, February 07, 2012 09:24:10
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 2A WG388646-04
Report Date/Time: Tuesday, February 07, 2012 09:24:10
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001601 WG388646-01

Sample Date/Time: Monday, February 06, 2012 20:21:38
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 47
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15130.429	0.01				ug/L
	Be	9	12.667	0.00	-0.0121	0.011	94.608	ug/L
	Al	27	95899.752	0.43	17.6098	1.381	7.841	ug/L
>	Sc	45	216173.907	216173.91				ug/L
	Ti	49	896.806	0.00	1.5656	0.350	22.371	ug/L
	V	51	12887.706	0.02	1.2060	0.038	3.192	ug/L
	Cr	52	15161.279	0.02	1.0465	0.013	1.288	ug/L
	Cr	53	2203.846	-0.00	0.3974	0.147	36.933	ug/L
	Mn	55	7740.004	0.02	0.5618	0.026	4.715	ug/L
	Co	59	917.060	0.00	0.0617	0.007	11.593	ug/L
	Ni	60	2981.898	0.01	1.5516	0.158	10.199	ug/L
	Cu	65	633.030	0.00	0.2650	0.005	1.903	ug/L
	Zn	66	4619.994	0.01	4.1825	0.099	2.362	ug/L
>	Ge	72	457531.810	457531.81				ug/L
	As	75	5349.289	0.01	4.5992	0.367	7.981	ug/L
	Se	77	145.335	0.00	0.5709	0.293	51.328	ug/L
	Se	82	1998.555	0.00	19.2224	1.448	7.535	ug/L
	Rb	85	6274.425	0.01				mg/L
	Y	89	289482.805	1100.78				ug/L
	Rh	103	125.002	116.67				ug/L
	Mo	98	1373.401	0.00	0.4332	0.029	6.712	ug/L
	Ag	107	203.338	0.00	-0.0030	0.001	23.749	ug/L
	Cd	114	9.200	0.00	-0.0017	0.006	366.764	ug/L
>	In	115	382241.262	382241.26				ug/L
	Sn	118	319.606	0.00	0.0288	0.003	9.602	ug/L
	Sb	123	413.926	0.00	0.0764	0.021	27.891	ug/L
	Ba	135	43027.227	0.08	26.1190	0.235	0.901	ug/L
	Ce	140	1830.386	0.00				ug/L
>	Tb	159	543153.782	543153.78				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	104.335	0.00	-0.0023	0.001	46.358	ug/L
	Tl	205	236.694	-0.00	-0.0165	0.004	21.386	ug/L
	Pb	206	609.028	0.00	0.0407	0.006	14.913	ug/L
	Pb	207	528.022	0.00	0.0511	0.003	5.419	ug/L
	Pb	208	2418.495	0.00	0.0498	0.005	9.077	ug/L
	U	238	33555.106	0.08	0.9840	0.024	2.465	ug/L
>	Bi	209	412380.950	412380.95				ug/L

Sample ID: L1202001601 WG388646-01
Report Date/Time: Tuesday, February 07, 2012 09:24:11
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	60048896.389	278.08	12.3606	0.569	4.601	mg/L
Mg	24	19795226.196	91.74	6.5918	0.433	6.576	mg/L
K	39	8004664.456	34.22	1.0908	0.020	1.820	mg/L
Ca	43	509223.492	2.36	35.4510	1.254	3.538	mg/L
Fe	54	127975.012	0.39	0.1393	0.022	15.975	mg/L
Fe	57	58316.140	0.23	0.1976	0.023	11.554	mg/L
Sc-1	45	216173.907	216173.91				mg/L
Cl	35	442952.956	408430.91				mg/L
Kr	83	44.001	-8.33				mg/L
Br	81	1245580.130	1237786.49				mg/L
P	31	68527.381	57686.94				mg/L
S	34	767527.084	550215.18				mg/L
Sr	88	2902339.534	2902246.19				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.246			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		91.101			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.240			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.891			

Sample ID: L1202001601 WG388646-01
Report Date/Time: Tuesday, February 07, 2012 09:24:11
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001601 WG388646-01
Report Date/Time: Tuesday, February 07, 2012 09:24:11
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001602S WG388646-05

Sample Date/Time: Monday, February 06, 2012 20:29:24
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 48
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15397.721	0.01				ug/L
	Be	9	8482.318	0.04	27.4481	0.791	2.882	ug/L
	Al	27	182906.874	0.87	35.4146	3.855	10.886	ug/L
>	Sc	45	207263.257	207263.26				ug/L
	Ti	49	763.445	0.00	1.2952	0.083	6.427	ug/L
	V	51	229699.525	0.50	25.8222	1.427	5.525	ug/L
	Cr	52	205995.594	0.43	26.1371	1.001	3.828	ug/L
	Cr	53	25260.792	0.05	25.4576	1.577	6.193	ug/L
	Mn	55	298297.957	0.65	24.2086	0.424	1.750	ug/L
	Co	59	217203.740	0.47	23.5516	0.233	0.988	ug/L
	Ni	60	46761.977	0.10	24.8900	0.951	3.819	ug/L
	Cu	65	45609.941	0.10	25.1804	0.774	3.076	ug/L
	Zn	66	27393.261	0.06	25.6013	0.144	0.561	ug/L
>	Ge	72	459165.305	459165.31				ug/L
	As	75	37786.661	0.08	31.5800	0.565	1.788	ug/L
	Se	77	2119.603	0.00	22.8528	1.563	6.838	ug/L
	Se	82	5657.535	0.01	54.0990	0.904	1.671	ug/L
	Rb	85	5713.016	0.01				mg/L
	Y	89	289832.368	1450.35				ug/L
	Rh	103	143.669	135.34				ug/L
	Mo	98	1339.875	0.00	0.4115	0.033	8.061	ug/L
	Ag	107	130085.723	0.33	23.5048	0.350	1.489	ug/L
	Cd	114	30856.935	0.08	24.2512	0.811	3.344	ug/L
>	In	115	390250.731	390250.73				ug/L
	Sn	118	249.070	0.00	0.0119	0.004	30.213	ug/L
	Sb	123	106095.967	0.27	24.4680	0.903	3.691	ug/L
	Ba	135	82991.916	0.15	48.7921	1.209	2.478	ug/L
	Ce	140	1136.858	0.00				ug/L
>	Tb	159	560897.353	560897.35				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	162492.084	0.37	23.3387	0.269	1.153	ug/L
	Tl	205	401556.708	0.92	23.4520	1.403	5.981	ug/L
	Pb	206	137483.843	0.32	23.8750	0.644	2.699	ug/L
	Pb	207	121415.897	0.28	23.4535	0.461	1.964	ug/L
	Pb	208	562839.654	1.29	24.0824	0.486	2.019	ug/L
	U	238	925934.152	2.13	26.5831	0.248	0.933	ug/L
>	Bi	209	435060.233	435060.23				ug/L

Sample ID: L1202001602S WG388646-05
Report Date/Time: Tuesday, February 07, 2012 09:24:13
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	61607922.325	297.20	13.2108	0.245	1.854	mg/L
Mg	24	20035881.930	96.65	6.9460	0.086	1.244	mg/L
K	39	7742466.525	34.52	1.1006	0.029	2.644	mg/L
Ca	43	497715.340	2.40	36.1320	0.663	1.836	mg/L
Fe	54	122059.535	0.38	0.1373	0.017	12.253	mg/L
Fe	57	59656.939	0.25	0.2120	0.022	10.391	mg/L
Sc-1	45	207263.257	207263.26				mg/L
Cl	35	478797.497	444275.46				mg/L
Kr	83	55.334	3.00				mg/L
Br	81	1891341.609	1883547.97				mg/L
P	31	69876.613	59036.17				mg/L
S	34	780299.700	562987.79				mg/L
Sr	88	2967342.484	2967249.14				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.593			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.009			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		102.482			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.329			

Sample ID: L1202001602S WG388646-05
Report Date/Time: Tuesday, February 07, 2012 09:24:13
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001602S WG388646-05
Report Date/Time: Tuesday, February 07, 2012 09:24:13
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001603SD WG388646-06

Sample Date/Time: Monday, February 06, 2012 20:37:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 49
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14195.428	0.01				ug/L
	Be	9	8197.376	0.04	26.3570	0.574	2.177	ug/L
	Al	27	163900.764	0.77	31.5409	1.191	3.777	ug/L
>	Sc	45	208498.506	208498.51				ug/L
	Ti	49	750.109	0.00	1.2756	0.059	4.635	ug/L
	V	51	225800.925	0.49	25.4674	1.610	6.322	ug/L
	Cr	52	196741.925	0.41	24.9918	0.210	0.839	ug/L
	Cr	53	24157.483	0.05	24.3482	1.726	7.089	ug/L
	Mn	55	291362.780	0.64	23.7511	0.561	2.363	ug/L
	Co	59	214469.924	0.47	23.3719	1.327	5.678	ug/L
	Ni	60	46201.382	0.10	24.6856	1.346	5.454	ug/L
	Cu	65	43788.076	0.10	24.2556	1.091	4.497	ug/L
	Zn	66	26600.735	0.06	24.9571	0.991	3.970	ug/L
>	Ge	72	457646.811	457646.81				ug/L
	As	75	35807.999	0.08	30.0306	0.604	2.011	ug/L
	Se	77	2064.256	0.00	22.2895	0.545	2.447	ug/L
	Se	82	5082.546	0.01	48.8072	2.164	4.433	ug/L
	Rb	85	5753.377	0.01				mg/L
	Y	89	291386.932	3004.91				ug/L
	Rh	103	150.670	142.34				ug/L
	Mo	98	1391.550	0.00	0.4327	0.010	2.260	ug/L
	Ag	107	128771.908	0.33	23.4283	0.418	1.785	ug/L
	Cd	114	30931.187	0.08	24.4920	0.727	2.969	ug/L
>	In	115	387576.893	387576.89				ug/L
	Sn	118	202.269	0.00	0.0019	0.004	191.067	ug/L
	Sb	123	103409.274	0.27	23.9862	0.195	0.814	ug/L
	Ba	135	80158.461	0.15	48.6961	1.900	3.902	ug/L
	Ce	140	846.795	0.00				ug/L
>	Tb	159	542194.079	542194.08				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	155255.798	0.36	22.6679	0.275	1.215	ug/L
	Tl	205	387126.339	0.90	22.9943	0.641	2.788	ug/L
	Pb	206	135604.751	0.32	23.9441	0.996	4.161	ug/L
	Pb	207	118088.629	0.28	23.1803	0.630	2.719	ug/L
	Pb	208	552623.765	1.29	24.0279	0.658	2.739	ug/L
	U	238	918095.981	2.15	26.8002	0.469	1.751	ug/L
>	Bi	209	428143.516	428143.52				ug/L

Sample ID: L1202001603SD WG388646-06
Report Date/Time: Tuesday, February 07, 2012 09:24:14
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	57485199.356	275.47	12.2448	0.749	6.116	mg/L
Mg	24	19084746.784	91.50	6.5752	0.326	4.960	mg/L
K	39	7499655.351	33.16	1.0568	0.021	1.969	mg/L
Ca	43	484819.294	2.32	34.9349	1.278	3.657	mg/L
Fe	54	117902.375	0.36	0.1293	0.018	14.198	mg/L
Fe	57	55772.140	0.23	0.1948	0.008	4.012	mg/L
Sc-1	45	208498.506	208498.51				mg/L
Cl	35	466829.718	432307.68				mg/L
Kr	83	48.334	-4.00				mg/L
Br	81	1738934.832	1731141.19				mg/L
P	31	65223.874	54383.43				mg/L
S	34	731777.565	514465.66				mg/L
Sr	88	2847012.347	2846919.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.271			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.372			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.064			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		102.671			

Sample ID: L1202001603SD WG388646-06
Report Date/Time: Tuesday, February 07, 2012 09:24:14
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001603SD WG388646-06
Report Date/Time: Tuesday, February 07, 2012 09:24:14
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001604

Sample Date/Time: Monday, February 06, 2012 20:44:56
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 50
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14879.969	0.01				ug/L
	Be	9	79.334	0.00	0.2044	0.018	8.606	ug/L
	Al	27	188082.412	0.89	36.4568	1.770	4.854	ug/L
>	Sc	45	207745.157	207745.16				ug/L
	Ti	49	686.764	0.00	1.1563	0.104	8.953	ug/L
	V	51	15443.841	0.03	1.5082	0.044	2.947	ug/L
	Cr	52	14570.541	0.02	0.9823	0.054	5.481	ug/L
	Cr	53	2387.248	0.00	0.6150	0.162	26.354	ug/L
	Mn	55	409267.876	0.90	33.6044	1.057	3.147	ug/L
	Co	59	1667.851	0.00	0.1445	0.003	1.998	ug/L
	Ni	60	6728.116	0.01	3.5777	0.154	4.291	ug/L
	Cu	65	3710.530	0.01	1.9890	0.056	2.836	ug/L
	Zn	66	121082.982	0.27	115.0181	5.505	4.786	ug/L
>	Ge	72	454642.399	454642.40				ug/L
	As	75	4196.423	0.01	3.6534	0.137	3.758	ug/L
	Se	77	151.335	0.00	0.6400	0.152	23.791	ug/L
	Se	82	1520.093	0.00	14.7021	0.460	3.131	ug/L
	Rb	85	7523.804	0.02				mg/L
	Y	89	6073536.616	5785154.59				ug/L
	Rh	103	77.001	68.67				ug/L
	Mo	98	2701.808	0.01	0.9044	0.024	2.665	ug/L
	Ag	107	642.698	0.00	0.0764	0.007	9.782	ug/L
	Cd	114	-146.591	-0.00	-0.1252	0.066	52.404	ug/L
>	In	115	388125.009	388125.01				ug/L
	Sn	118	117378.529	0.30	25.8373	0.932	3.607	ug/L
	Sb	123	1314.112	0.00	0.2838	0.017	6.006	ug/L
	Ba	135	35883.218	0.07	21.8797	0.636	2.907	ug/L
	Ce	140	2357.237	0.00				ug/L
>	Tb	159	540546.319	540546.32				ug/L
	Ho	165	53.339	0.00				ug/L
	Tl	203	1883.899	0.00	0.2597	0.005	1.853	ug/L
	Tl	205	4655.102	0.01	0.2484	0.018	7.444	ug/L
	Pb	206	3631.494	0.01	0.5782	0.027	4.726	ug/L
	Pb	207	3222.989	0.01	0.5842	0.038	6.488	ug/L
	Pb	208	14847.061	0.03	0.5942	0.033	5.553	ug/L
	U	238	8397.653	0.02	0.2138	0.005	2.564	ug/L
>	Bi	209	424101.953	424101.95				ug/L

Sample ID: L1202001604
Report Date/Time: Tuesday, February 07, 2012 09:24:16
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	44430686.364	214.01	9.5130	0.309	3.245	mg/L
Mg	24	10043880.346	48.46	3.4732	0.272	7.827	mg/L
K	39	6250083.577	27.29	0.8686	0.044	5.009	mg/L
Ca	43	265813.283	1.28	19.2371	0.203	1.055	mg/L
Fe	54	124868.441	0.39	0.1418	0.004	3.165	mg/L
Fe	57	44043.926	0.18	0.1476	0.014	9.267	mg/L
Sc-1	45	207745.157	207745.16				mg/L
Cl	35	335758.791	301236.75				mg/L
Kr	83	46.334	-6.00				mg/L
Br	81	899534.324	891740.68				mg/L
P	31	40256.346	29415.90				mg/L
S	34	468063.018	250751.11				mg/L
Sr	88	1689426.487	1689333.14				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		96.632			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.503			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.763			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		101.701			

Sample ID: L1202001604
Report Date/Time: Tuesday, February 07, 2012 09:24:16
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

Sample ID: L1202001604
Report Date/Time: Tuesday, February 07, 2012 09:24:16
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001604PS WG388710-01

Sample Date/Time: Monday, February 06, 2012 20:52:43
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 51
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13861.520	0.00				ug/L
	Be	9	17057.481	0.08	53.2568	3.580	6.723	ug/L
	Al	27	300182.150	1.38	56.4084	2.595	4.601	ug/L
>	Sc	45	215073.603	215073.60				ug/L
	Ti	49	546.739	0.00	0.8701	0.140	16.069	ug/L
	V	51	475814.552	1.03	53.5527	3.057	5.708	ug/L
	Cr	52	407364.343	0.87	52.4328	0.933	1.779	ug/L
	Cr	53	48234.030	0.10	50.2543	1.036	2.062	ug/L
	Mn	55	617435.476	1.34	50.0765	0.771	1.540	ug/L
	Co	59	462826.944	1.01	50.0840	0.972	1.940	ug/L
	Ni	60	95859.722	0.21	50.9058	1.496	2.939	ug/L
	Cu	65	92555.655	0.20	51.0201	0.972	1.906	ug/L
	Zn	66	52884.825	0.11	49.4721	0.503	1.016	ug/L
>	Ge	72	460279.251	460279.25				ug/L
	As	75	63810.025	0.14	53.1006	1.042	1.963	ug/L
	Se	77	4133.692	0.01	45.4270	0.389	0.856	ug/L
	Se	82	6805.450	0.01	64.8869	1.549	2.387	ug/L
	Rb	85	8231.816	0.02				mg/L
	Y	89	295196.696	6814.67				ug/L
	Rh	103	120.335	112.00				ug/L
	Mo	98	2096.664	0.01	0.6598	0.026	3.944	ug/L
	Ag	107	265066.024	0.66	46.5756	3.259	6.998	ug/L
	Cd	114	64202.364	0.16	48.9560	1.923	3.927	ug/L
>	In	115	402104.411	402104.41				ug/L
	Sn	118	286.805	0.00	0.0183	0.007	38.439	ug/L
	Sb	123	215253.172	0.54	48.1747	1.948	4.044	ug/L
	Ba	135	121395.571	0.22	71.9597	0.854	1.187	ug/L
	Ce	140	620.085	0.00				ug/L
>	Tb	159	556403.742	556403.74				ug/L
	Ho	165	6.667	0.00				ug/L
	Tl	203	337984.146	0.79	49.4399	1.448	2.928	ug/L
	Tl	205	833379.304	1.95	49.5876	2.758	5.562	ug/L
	Pb	206	289455.115	0.68	51.2466	2.134	4.164	ug/L
	Pb	207	247883.528	0.58	48.7979	2.605	5.338	ug/L
	Pb	208	1144317.036	2.68	49.8890	1.715	3.438	ug/L
	U	238	1881391.073	4.40	55.0095	0.221	0.401	ug/L
>	Bi	209	427543.921	427543.92				ug/L

Sample ID: L1202001604PS WG388710-01
Report Date/Time: Tuesday, February 07, 2012 09:24:17
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	50817413.132	236.22	10.5002	0.693	6.601	mg/L
Mg	24	11625447.786	54.05	3.8761	0.148	3.816	mg/L
K	39	6405945.681	26.95	0.8576	0.039	4.565	mg/L
Ca	43	312182.583	1.45	21.8213	1.235	5.658	mg/L
Fe	54	129854.785	0.40	0.1429	0.002	1.602	mg/L
Fe	57	46571.596	0.18	0.1510	0.012	8.244	mg/L
Sc-1	45	215073.603	215073.60				mg/L
Cl	35	383179.398	348657.36				mg/L
Kr	83	50.667	-1.67				mg/L
Br	81	1341690.642	1333897.00				mg/L
P	31	51861.107	41020.66				mg/L
S	34	527570.726	310258.82				mg/L
Sr	88	1924772.930	1924679.59				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.830			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.835			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		101.661			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		102.527			

Sample ID: L1202001604PS WG388710-01
Report Date/Time: Tuesday, February 07, 2012 09:24:17
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001604PS WG388710-01
Report Date/Time: Tuesday, February 07, 2012 09:24:17
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001604SDL WG388710-02

Sample Date/Time: Monday, February 06, 2012 21:00:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 52
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13427.522	0.00				ug/L
	Be	9	11.333	0.00	-0.0155	0.009	58.056	ug/L
	Al	27	13995.180	0.05	2.2207	0.276	12.432	ug/L
>	Sc	45	208647.523	208647.52				ug/L
	Ti	49	116.679	0.00	0.0176	0.027	154.237	ug/L
	V	51	4321.923	0.00	0.1980	0.025	12.527	ug/L
	Cr	52	8126.375	0.00	0.0469	0.012	26.243	ug/L
	Cr	53	1033.501	-0.00	-0.9569	0.084	8.734	ug/L
	Mn	55	1415.134	0.00	0.0367	0.003	8.621	ug/L
	Co	59	239.006	0.00	-0.0140	0.001	9.088	ug/L
	Ni	60	706.370	0.00	0.3063	0.017	5.523	ug/L
	Cu	65	196.671	0.00	0.0152	0.004	27.573	ug/L
	Zn	66	1453.475	0.00	1.0971	0.034	3.106	ug/L
>	Ge	72	490677.912	490677.91				ug/L
	As	75	769.935	0.00	0.7231	0.052	7.256	ug/L
	Se	77	91.334	-0.00	-0.1151	0.107	93.145	ug/L
	Se	82	333.258	0.00	2.9994	0.065	2.155	ug/L
	Rb	85	1521.821	0.00				mg/L
	Y	89	293280.976	4898.95				ug/L
	Rh	103	24.000	15.67				ug/L
	Mo	98	346.951	0.00	0.0495	0.004	7.275	ug/L
	Ag	107	359.345	0.00	0.0220	0.007	33.513	ug/L
	Cd	114	18.235	0.00	0.0047	0.008	172.338	ug/L
>	In	115	406523.425	406523.42				ug/L
	Sn	118	100.667	0.00	-0.0216	0.002	10.957	ug/L
	Sb	123	355.878	0.00	0.0576	0.003	5.334	ug/L
	Ba	135	7061.730	0.01	4.2169	0.159	3.762	ug/L
	Ce	140	100.011	0.00				ug/L
>	Tb	159	551651.298	551651.30				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	139.003	0.00	0.0020	0.002	103.036	ug/L
	Tl	205	256.696	0.00	-0.0160	0.003	17.193	ug/L
	Pb	206	324.010	0.00	-0.0145	0.003	22.153	ug/L
	Pb	207	316.676	0.00	0.0050	0.004	74.537	ug/L
	Pb	208	1361.057	0.00	-0.0009	0.003	376.746	ug/L
	U	238	1550.827	0.00	0.0110	0.001	8.981	ug/L
>	Bi	209	432553.879	432553.88				ug/L

Sample ID: L1202001604SDL WG388710-02
Report Date/Time: Tuesday, February 07, 2012 09:24:18
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	9081054.335	43.43	1.9320	0.015	0.778	mg/L
Mg	24	2118897.194	10.14	0.7114	0.012	1.722	mg/L
K	39	1870570.598	6.13	0.1899	0.003	1.819	mg/L
Ca	43	55825.306	0.27	3.9923	0.077	1.932	mg/L
Fe	54	34124.724	-0.04	-0.0194	0.002	10.472	mg/L
Fe	57	13682.605	0.03	0.0214	0.001	5.969	mg/L
Sc-1	45	208647.523	208647.52				mg/L
Cl	35	91072.468	56550.43				mg/L
Kr	83	48.334	-4.00				mg/L
Br	81	197127.764	189334.12				mg/L
P	31	12465.362	1624.92				mg/L
S	34	272999.180	55687.27				mg/L
Sr	88	356281.405	356188.06				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		104.291			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		96.888			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		100.792			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		103.728			

Sample ID: L1202001604SDL WG388710-02
Report Date/Time: Tuesday, February 07, 2012 09:24:18
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001604SDL WG388710-02
Report Date/Time: Tuesday, February 07, 2012 09:24:18
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 06, 2012 21:08:17
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12292.393	0.00				ug/L
	Be	9	16340.015	0.08	56.5132	4.173	7.384	ug/L
	Al	27	250610.219	1.28	52.1992	6.339	12.143	ug/L
>	Sc	45	194566.082	194566.08				ug/L
	Ti	49	50645.327	0.11	96.3986	2.064	2.141	ug/L
	V	51	438311.491	0.93	48.3277	0.641	1.326	ug/L
	Cr	52	386938.282	0.81	48.7603	0.984	2.018	ug/L
	Cr	53	46286.242	0.09	47.1501	1.876	3.979	ug/L
	Mn	55	598292.437	1.27	47.5929	3.002	6.308	ug/L
	Co	59	447731.634	0.95	47.5107	1.333	2.806	ug/L
	Ni	60	92183.489	0.20	47.9691	0.584	1.217	ug/L
	Cu	65	90202.003	0.19	48.7439	1.631	3.346	ug/L
	Zn	66	54701.178	0.12	50.1722	1.578	3.145	ug/L
>	Ge	72	469636.495	469636.50				ug/L
	As	75	58965.337	0.13	48.1083	1.626	3.379	ug/L
	Se	77	4401.829	0.01	47.4733	1.738	3.661	ug/L
	Se	82	5189.961	0.01	48.5337	1.441	2.968	ug/L
	Rb	85	1959.917	0.00				mg/L
	Y	89	285290.804	-3091.22				ug/L
	Rh	103	29.667	21.33				ug/L
	Mo	98	277418.383	0.69	96.5820	0.461	0.477	ug/L
	Ag	107	279314.956	0.70	49.0786	0.318	0.647	ug/L
	Cd	114	65194.463	0.16	49.7685	1.690	3.397	ug/L
>	In	115	401612.399	401612.40				ug/L
	Sn	118	228969.642	0.57	48.7220	1.049	2.152	ug/L
	Sb	123	218967.785	0.55	49.0348	0.667	1.361	ug/L
	Ba	135	81787.362	0.15	50.5479	1.797	3.555	ug/L
	Ce	140	86.676	0.00				ug/L
>	Tb	159	533752.818	533752.82				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	319142.368	0.78	48.7462	0.230	0.472	ug/L
	Tl	205	782899.474	1.91	48.6564	1.756	3.609	ug/L
	Pb	206	256915.152	0.63	47.5153	2.065	4.345	ug/L
	Pb	207	235048.117	0.57	48.3083	0.826	1.709	ug/L
	Pb	208	1063770.119	2.60	48.4262	0.674	1.392	ug/L
	U	238	1683822.452	4.11	51.4374	1.548	3.009	ug/L
>	Bi	209	409317.718	409317.72				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:20
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	22166429.519	114.02	5.0691	0.388	7.659	mg/L
Mg	24	14042880.561	72.27	5.1892	0.350	6.744	mg/L
K	39	30973044.258	156.40	5.0101	0.063	1.264	mg/L
Ca	43	66071.144	0.34	5.0795	0.163	3.209	mg/L
Fe	54	2647751.786	13.44	4.9526	0.409	8.257	mg/L
Fe	57	1214453.898	6.22	5.3363	0.346	6.475	mg/L
Sc-1	45	194566.082	194566.08				mg/L
Cl	35	28940.166	-5581.88				mg/L
Kr	83	46.334	-6.00				mg/L
Br	81	15558.567	7764.92				mg/L
P	31	12144.179	1303.74				mg/L
S	34	225753.686	8441.78				mg/L
Sr	88	4718.482	4625.14				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	96.655				
Cr	52	97.521				
Cr	53					
Mn	55	95.186				
Co	59	95.021				
Ni	60	95.938				
Cu	65	97.488				
Zn	66	100.344				
Ge	72		99.819			
As	75	96.217				
Se	77					
Se	82	97.067				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	98.157				
Cd	114	99.537				
In	115		95.717			
Sn	118					
Sb	123	98.070				
Ba	135	101.096				
Ce	140					
Tb	159		97.522			
Ho	165					
Tl	203	97.492				
Tl	205					
Pb	206					
Pb	207					
Pb	208	96.852				
U	238	102.875				
Bi	209		98.156			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:20
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:20
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 06, 2012 21:15:54
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13360.711	-0.00				ug/L
	Be	9	10.000	0.00	-0.0200	0.015	74.157	ug/L
	Al	27	2483.713	-0.00	-0.0422	0.071	168.060	ug/L
>	Sc	45	214602.940	214602.94				ug/L
	Ti	49	106.678	0.00	0.0042	0.041	963.768	ug/L
	V	51	2258.018	0.00	-0.0156	0.006	40.634	ug/L
	Cr	52	7526.474	-0.00	-0.0051	0.028	550.987	ug/L
	Cr	53	826.791	-0.00	-1.1471	0.124	10.783	ug/L
	Mn	55	585.026	0.00	-0.0256	0.001	3.154	ug/L
	Co	59	216.005	0.00	-0.0159	0.004	23.195	ug/L
	Ni	60	83.668	0.00	-0.0033	0.004	131.806	ug/L
	Cu	65	196.338	0.00	0.0175	0.004	24.759	ug/L
	Zn	66	254.340	0.00	0.0465	0.047	101.182	ug/L
>	Ge	72	479411.601	479411.60				ug/L
	As	75	-145.546	0.00	0.0076	0.006	81.069	ug/L
	Se	77	74.667	-0.00	-0.2726	0.202	74.012	ug/L
	Se	82	10.600	0.00	0.1164	0.017	14.836	ug/L
	Rb	85	28.334	0.00				mg/L
	Y	89	297006.086	8624.06				ug/L
	Rh	103	11.000	2.67				ug/L
	Mo	98	122.609	0.00	-0.0290	0.010	35.453	ug/L
	Ag	107	185.671	0.00	-0.0094	0.003	36.909	ug/L
	Cd	114	16.945	0.00	0.0034	0.010	309.677	ug/L
>	In	115	419717.066	419717.07				ug/L
	Sn	118	254.137	0.00	0.0090	0.004	45.855	ug/L
	Sb	123	298.211	0.00	0.0427	0.004	8.204	ug/L
	Ba	135	51.001	0.00	0.0247	0.005	21.324	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	567164.502	567164.50				ug/L
	Ho	165	6.667	0.00				ug/L
	Tl	203	124.669	0.00	0.0004	0.001	379.301	ug/L
	Tl	205	306.703	0.00	-0.0126	0.006	47.054	ug/L
	Pb	206	326.010	0.00	-0.0127	0.007	53.170	ug/L
	Pb	207	303.342	0.00	0.0038	0.003	75.229	ug/L
	Pb	208	1343.389	0.00	-0.0003	0.004	1599.747	ug/L
	U	238	511.688	0.00	-0.0187	0.003	15.147	ug/L
>	Bi	209	422709.271	422709.27				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:21
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	28678.852	0.04	0.0033	0.001	15.324	mg/L
Mg	24	4611.756	0.01	-0.0188	0.000	1.163	mg/L
K	39	623710.571	0.08	-0.0042	0.006	135.891	mg/L
Ca	43	150.016	-0.00	-0.0272	0.003	10.087	mg/L
Fe	54	43425.989	-0.00	-0.0049	0.006	118.266	mg/L
Fe	57	8518.539	0.00	-0.0007	0.002	222.119	mg/L
Sc-1	45	214602.940	214602.94				mg/L
Cl	35	27031.773	-7490.27				mg/L
Kr	83	46.001	-6.33				mg/L
Br	81	12196.255	4402.61				mg/L
P	31	13075.595	2235.15				mg/L
S	34	233371.704	16059.80				mg/L
Sr	88	236.694	143.35				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		101.897			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		100.032			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		103.627			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		101.367			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:21
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:21
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001605

Sample Date/Time: Monday, February 06, 2012 21:23:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 53
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14896.747	0.00				ug/L
	Be	9	12.667	0.00	-0.0139	0.013	93.462	ug/L
	Al	27	934623.622	4.12	168.2039	8.100	4.816	ug/L
>	Sc	45	225813.584	225813.58				ug/L
	Ti	49	2420.597	0.00	4.4008	0.464	10.544	ug/L
	V	51	15651.556	0.03	1.4690	0.049	3.324	ug/L
	Cr	52	16090.041	0.02	1.1089	0.137	12.316	ug/L
	Cr	53	2287.209	-0.00	0.4144	0.068	16.501	ug/L
	Mn	55	77665.729	0.16	6.0884	0.146	2.402	ug/L
	Co	59	1641.845	0.00	0.1354	0.002	1.837	ug/L
	Ni	60	3231.994	0.01	1.6303	0.081	4.994	ug/L
	Cu	65	785.712	0.00	0.3368	0.028	8.387	ug/L
	Zn	66	21381.966	0.05	19.4199	0.241	1.243	ug/L
>	Ge	72	471278.343	471278.34				ug/L
	As	75	6364.497	0.01	5.2828	0.165	3.124	ug/L
	Se	77	150.668	0.00	0.5802	0.288	49.613	ug/L
	Se	82	2374.911	0.01	22.1329	0.616	2.782	ug/L
	Rb	85	12438.400	0.03				mg/L
	Y	89	289305.733	923.71				ug/L
	Rh	103	111.002	102.67				ug/L
	Mo	98	1385.732	0.00	0.3826	0.021	5.493	ug/L
	Ag	107	269.007	0.00	0.0037	0.002	58.086	ug/L
	Cd	114	16.483	0.00	0.0028	0.005	174.154	ug/L
>	In	115	428875.572	428875.57				ug/L
	Sn	118	2631.749	0.01	0.4823	0.015	3.128	ug/L
	Sb	123	325.919	0.00	0.0472	0.001	2.326	ug/L
	Ba	135	33782.434	0.06	19.4600	0.869	4.467	ug/L
	Ce	140	12276.935	0.02				ug/L
>	Tb	159	572838.742	572838.74				ug/L
	Ho	165	153.350	0.00				ug/L
	Tl	203	149.670	0.00	0.0034	0.002	49.377	ug/L
	Tl	205	346.709	0.00	-0.0110	0.002	18.779	ug/L
	Pb	206	2129.293	0.00	0.2978	0.008	2.696	ug/L
	Pb	207	1752.202	0.00	0.2808	0.019	6.877	ug/L
	Pb	208	8595.209	0.02	0.3072	0.014	4.479	ug/L
	U	238	16859.227	0.04	0.4485	0.022	4.795	ug/L
>	Bi	209	437323.890	437323.89				ug/L

Sample ID: L1202001605
Report Date/Time: Tuesday, February 07, 2012 09:24:22
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	63185582.037	280.20	12.4550	0.580	4.659	mg/L
Mg	24	16404344.038	72.69	5.2194	0.105	2.019	mg/L
K	39	7618597.867	31.02	0.9882	0.074	7.482	mg/L
Ca	43	427856.904	1.90	28.5690	1.996	6.985	mg/L
Fe	54	216571.964	0.75	0.2748	0.017	6.321	mg/L
Fe	57	95588.171	0.39	0.3304	0.037	11.161	mg/L
Sc-1	45	225813.584	225813.58				mg/L
Cl	35	442201.943	407679.90				mg/L
Kr	83	53.667	1.33				mg/L
Br	81	1357659.059	1349865.42				mg/L
P	31	41132.530	30292.09				mg/L
S	34	700279.528	482967.62				mg/L
Sr	88	2306143.640	2306050.30				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.168			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		102.215			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		104.664			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		104.872			

Sample ID: L1202001605
Report Date/Time: Tuesday, February 07, 2012 09:24:22
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001605
Report Date/Time: Tuesday, February 07, 2012 09:24:22
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001606

Sample Date/Time: Monday, February 06, 2012 21:31:17
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 54
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13644.509	0.00				ug/L
	Be	9	9.333	0.00	-0.0219	0.020	92.692	ug/L
	Al	27	219769.194	1.01	41.2786	2.550	6.179	ug/L
>	Sc	45	214584.118	214584.12				ug/L
	Ti	49	1200.207	0.00	2.1474	0.206	9.583	ug/L
	V	51	14437.636	0.03	1.3770	0.036	2.646	ug/L
	Cr	52	13496.059	0.01	0.8219	0.064	7.797	ug/L
	Cr	53	2097.146	-0.00	0.2709	0.404	148.987	ug/L
	Mn	55	19829.770	0.04	1.5441	0.051	3.332	ug/L
	Co	59	933.062	0.00	0.0630	0.003	4.587	ug/L
	Ni	60	2597.098	0.01	1.3381	0.043	3.178	ug/L
	Cu	65	565.025	0.00	0.2262	0.012	5.177	ug/L
	Zn	66	10161.963	0.02	9.3853	0.281	2.992	ug/L
>	Ge	72	459029.480	459029.48				ug/L
	As	75	6313.500	0.01	5.3786	0.178	3.306	ug/L
	Se	77	154.668	0.00	0.6634	0.261	39.323	ug/L
	Se	82	2351.576	0.01	22.5009	0.665	2.953	ug/L
	Rb	85	10157.288	0.02				mg/L
	Y	89	281404.226	-6977.80				ug/L
	Rh	103	110.669	102.34				ug/L
	Mo	98	1333.723	0.00	0.4024	0.017	4.140	ug/L
	Ag	107	146.003	0.00	-0.0145	0.001	4.265	ug/L
	Cd	114	10.052	0.00	-0.0012	0.005	444.013	ug/L
>	In	115	395117.759	395117.76				ug/L
	Sn	118	886.981	0.00	0.1492	0.003	2.055	ug/L
	Sb	123	193.333	0.00	0.0228	0.002	8.174	ug/L
	Ba	135	36968.220	0.07	22.3842	2.238	10.000	ug/L
	Ce	140	2567.320	0.00				ug/L
>	Tb	159	544128.505	544128.51				ug/L
	Ho	165	40.004	0.00				ug/L
	Tl	203	108.668	0.00	-0.0017	0.001	65.186	ug/L
	Tl	205	213.358	-0.00	-0.0181	0.003	15.574	ug/L
	Pb	206	831.383	0.00	0.0803	0.009	10.722	ug/L
	Pb	207	733.706	0.00	0.0919	0.003	3.185	ug/L
	Pb	208	3314.957	0.01	0.0891	0.004	4.920	ug/L
	U	238	16188.209	0.04	0.4530	0.001	0.263	ug/L
>	Bi	209	415892.896	415892.90				ug/L

Sample ID: L1202001606
Report Date/Time: Tuesday, February 07, 2012 09:24:24
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	63573785.706	296.70	13.1885	0.604	4.579	mg/L
Mg	24	16155825.659	75.43	5.4168	0.295	5.448	mg/L
K	39	7523994.735	32.30	1.0293	0.060	5.785	mg/L
Ca	43	420057.976	1.96	29.5477	2.717	9.196	mg/L
Fe	54	135522.754	0.43	0.1535	0.011	6.888	mg/L
Fe	57	55715.171	0.22	0.1889	0.026	13.642	mg/L
Sc-1	45	214584.118	214584.12				mg/L
Cl	35	435190.392	400668.35				mg/L
Kr	83	53.001	0.67				mg/L
Br	81	1473464.592	1465670.95				mg/L
P	31	40873.919	30033.48				mg/L
S	34	674179.521	456867.62				mg/L
Sr	88	2328612.193	2328518.85				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.565			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		94.169			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		99.418			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.733			

Sample ID: L1202001606
Report Date/Time: Tuesday, February 07, 2012 09:24:24
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001606
Report Date/Time: Tuesday, February 07, 2012 09:24:24
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202001607

Sample Date/Time: Monday, February 06, 2012 21:39:05
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 55
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15180.493	0.01				ug/L
	Be	9	5.333	-0.00	-0.0354	0.004	11.877	ug/L
	Al	27	82945.243	0.37	14.9590	0.532	3.558	ug/L
>	Sc	45	218515.104	218515.10				ug/L
	Ti	49	540.072	0.00	0.8619	0.074	8.544	ug/L
	V	51	18032.816	0.03	1.7897	0.077	4.327	ug/L
	Cr	52	19143.178	0.03	1.5703	0.086	5.486	ug/L
	Cr	53	2517.303	0.00	0.7335	0.355	48.404	ug/L
	Mn	55	5217.021	0.01	0.3547	0.015	4.230	ug/L
	Co	59	430.015	0.00	0.0085	0.002	17.738	ug/L
	Ni	60	1320.785	0.00	0.6596	0.019	2.846	ug/L
	Cu	65	450.350	0.00	0.1635	0.004	2.292	ug/L
	Zn	66	2823.507	0.01	2.4831	0.048	1.943	ug/L
>	Ge	72	457772.882	457772.88				ug/L
	As	75	1285.989	0.00	1.1974	0.122	10.151	ug/L
	Se	77	158.001	0.00	0.7080	0.091	12.827	ug/L
	Se	82	484.593	0.00	4.6673	0.445	9.533	ug/L
	Rb	85	7534.480	0.02				mg/L
	Y	89	284830.848	-3551.18				ug/L
	Rh	103	76.334	68.00				ug/L
	Mo	98	3502.598	0.01	1.1936	0.051	4.311	ug/L
	Ag	107	76.668	0.00	-0.0267	0.002	7.639	ug/L
	Cd	114	13.606	0.00	0.0016	0.009	570.454	ug/L
>	In	115	388160.736	388160.74				ug/L
	Sn	118	176.002	0.00	-0.0040	0.001	22.285	ug/L
	Sb	123	183.251	0.00	0.0213	0.001	6.771	ug/L
	Ba	135	69586.333	0.13	42.6884	0.765	1.792	ug/L
	Ce	140	1366.915	0.00				ug/L
>	Tb	159	537695.536	537695.54				ug/L
	Ho	165	30.003	0.00				ug/L
	Tl	203	64.334	-0.00	-0.0084	0.000	2.692	ug/L
	Tl	205	153.350	-0.00	-0.0217	0.003	11.940	ug/L
	Pb	206	402.680	0.00	0.0022	0.001	47.197	ug/L
	Pb	207	335.343	0.00	0.0113	0.003	24.562	ug/L
	Pb	208	1608.411	0.00	0.0126	0.000	3.705	ug/L
	U	238	5253.376	0.01	0.1243	0.002	1.293	ug/L
>	Bi	209	415345.192	415345.19				ug/L

Sample ID: L1202001607
Report Date/Time: Tuesday, February 07, 2012 09:24:25
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	41826616.150	191.49	8.5123	0.290	3.402	mg/L
Mg	24	8482496.146	38.83	2.7791	0.088	3.167	mg/L
K	39	6082912.533	25.00	0.7950	0.011	1.437	mg/L
Ca	43	227938.208	1.04	15.6867	0.544	3.465	mg/L
Fe	54	107451.578	0.28	0.1014	0.006	6.108	mg/L
Fe	57	33906.086	0.12	0.0981	0.009	8.959	mg/L
Sc-1	45	218515.104	218515.10				mg/L
Cl	35	267932.072	233410.03				mg/L
Kr	83	49.334	-3.00				mg/L
Br	81	286743.170	278949.53				mg/L
P	31	40228.901	29388.46				mg/L
S	34	404432.231	187120.32				mg/L
Sr	88	1652655.604	1652562.26				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.297			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		92.511			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.242			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.601			

Sample ID: L1202001607
Report Date/Time: Tuesday, February 07, 2012 09:24:25
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202001607
Report Date/Time: Tuesday, February 07, 2012 09:24:25
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004602

Sample Date/Time: Monday, February 06, 2012 21:46:53
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 56
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14763.235	0.00				ug/L
	Be	9	4.000	-0.00	-0.0396	0.011	26.991	ug/L
	Al	27	12075.565	0.04	1.7419	0.338	19.393	ug/L
>	Sc	45	218154.102	218154.10				ug/L
	Ti	49	356.710	0.00	0.4981	0.182	36.584	ug/L
	V	51	5188.879	0.01	0.3303	0.015	4.671	ug/L
	Cr	52	14844.733	0.02	1.0042	0.048	4.780	ug/L
	Cr	53	1840.389	-0.00	0.0061	0.269	4397.843	ug/L
	Mn	55	620305.381	1.36	50.6241	0.388	0.767	ug/L
	Co	59	1281.112	0.00	0.1012	0.004	3.840	ug/L
	Ni	60	7138.135	0.02	3.7709	0.144	3.818	ug/L
	Cu	65	131089.241	0.29	72.6961	2.199	3.025	ug/L
	Zn	66	21508.987	0.05	20.1350	0.243	1.205	ug/L
>	Ge	72	457382.661	457382.66				ug/L
	As	75	1497.488	0.00	1.3743	0.017	1.227	ug/L
	Se	77	113.334	0.00	0.2079	0.168	80.944	ug/L
	Se	82	180.185	0.00	1.7471	0.061	3.501	ug/L
	Rb	85	5189.007	0.01				mg/L
	Y	89	287327.442	-1054.58				ug/L
	Rh	103	132.002	123.67				ug/L
	Mo	98	1879.322	0.00	0.5858	0.022	3.783	ug/L
	Ag	107	95.335	0.00	-0.0238	0.001	5.842	ug/L
	Cd	114	-3.250	-0.00	-0.0116	0.005	42.775	ug/L
>	In	115	401064.846	401064.85				ug/L
	Sn	118	5907.296	0.01	1.2167	0.035	2.855	ug/L
	Sb	123	225.374	0.00	0.0295	0.006	19.317	ug/L
	Ba	135	124149.408	0.22	73.3189	3.169	4.322	ug/L
	Ce	140	106.678	0.00				ug/L
>	Tb	159	559318.221	559318.22				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	69.334	-0.00	-0.0076	0.001	16.969	ug/L
	Tl	205	140.015	-0.00	-0.0225	0.002	6.875	ug/L
	Pb	206	23475.312	0.06	4.2338	0.085	2.019	ug/L
	Pb	207	19569.230	0.05	3.9282	0.075	1.906	ug/L
	Pb	208	92064.844	0.22	4.0949	0.040	0.982	ug/L
	U	238	14931.226	0.04	0.4178	0.008	1.859	ug/L
>	Bi	209	413496.199	413496.20				ug/L

Sample ID: L1202004602
Report Date/Time: Tuesday, February 07, 2012 09:24:26
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	86218482.146	394.53	17.5363	1.791	10.213	mg/L
Mg	24	17780870.343	81.43	5.8492	0.355	6.077	mg/L
K	39	8952311.340	38.19	1.2181	0.027	2.186	mg/L
Ca	43	624851.420	2.86	43.0821	1.630	3.783	mg/L
Fe	54	146552.221	0.46	0.1679	0.004	2.285	mg/L
Fe	57	69321.133	0.28	0.2379	0.008	3.261	mg/L
Sc-1	45	218154.102	218154.10				mg/L
Cl	35	301621.780	267099.74				mg/L
Kr	83	56.001	3.67				mg/L
Br	81	103266.542	95472.90				mg/L
P	31	21955.357	11114.91				mg/L
S	34	463605.134	246293.23				mg/L
Sr	88	2536543.709	2536450.37				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.215			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		95.587			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		102.193			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		99.158			

Sample ID: L1202004602
Report Date/Time: Tuesday, February 07, 2012 09:24:26
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004602
Report Date/Time: Tuesday, February 07, 2012 09:24:26
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004604

Sample Date/Time: Monday, February 06, 2012 21:54:41
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 57
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13694.659	-0.00				ug/L
	Be	9	6.667	-0.00	-0.0312	0.013	42.129	ug/L
	Al	27	14696.318	0.05	2.2282	0.235	10.564	ug/L
>	Sc	45	218939.993	218939.99				ug/L
	Ti	49	343.375	0.00	0.4633	0.030	6.403	ug/L
	V	51	5091.488	0.01	0.3064	0.030	9.888	ug/L
	Cr	52	14328.451	0.01	0.8979	0.031	3.485	ug/L
	Cr	53	1847.058	-0.00	-0.0331	0.270	813.950	ug/L
	Mn	55	622977.903	1.33	49.7741	1.101	2.212	ug/L
	Co	59	1349.456	0.00	0.1057	0.012	11.112	ug/L
	Ni	60	4048.361	0.01	2.0749	0.187	8.997	ug/L
	Cu	65	776.044	0.00	0.3356	0.009	2.825	ug/L
	Zn	66	2100.620	0.00	1.7608	0.146	8.296	ug/L
>	Ge	72	467264.458	467264.46				ug/L
	As	75	1663.630	0.00	1.4841	0.024	1.614	ug/L
	Se	77	133.334	0.00	0.3967	0.115	28.914	ug/L
	Se	82	239.207	0.00	2.2653	0.069	3.039	ug/L
	Rb	85	5234.363	0.01				mg/L
	Y	89	286860.432	-1521.59				ug/L
	Rh	103	138.669	130.34				ug/L
	Mo	98	1908.105	0.00	0.5759	0.005	0.843	ug/L
	Ag	107	94.668	0.00	-0.0244	0.003	10.462	ug/L
	Cd	114	-0.613	-0.00	-0.0095	0.004	46.104	ug/L
>	In	115	413362.809	413362.81				ug/L
	Sn	118	3585.705	0.01	0.6990	0.012	1.717	ug/L
	Sb	123	177.372	0.00	0.0174	0.001	4.151	ug/L
	Ba	135	122602.814	0.21	70.2535	0.864	1.229	ug/L
	Ce	140	110.012	0.00				ug/L
>	Tb	159	575397.584	575397.58				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	63.334	-0.00	-0.0086	0.002	19.224	ug/L
	Tl	205	136.681	-0.00	-0.0228	0.001	3.431	ug/L
	Pb	206	798.713	0.00	0.0734	0.009	12.873	ug/L
	Pb	207	679.034	0.00	0.0800	0.007	9.163	ug/L
	Pb	208	3207.944	0.01	0.0833	0.006	7.424	ug/L
	U	238	14918.496	0.04	0.4118	0.012	2.923	ug/L
>	Bi	209	418866.716	418866.72				ug/L

Sample ID: L1202004604
Report Date/Time: Tuesday, February 07, 2012 09:24:28
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	85864440.400	392.27	17.4359	0.519	2.978	mg/L
Mg	24	18059100.214	82.51	5.9268	0.148	2.504	mg/L
K	39	8846213.874	37.58	1.1986	0.034	2.830	mg/L
Ca	43	615816.925	2.81	42.3241	0.309	0.729	mg/L
Fe	54	146990.537	0.46	0.1679	0.011	6.327	mg/L
Fe	57	70199.025	0.28	0.2404	0.017	6.918	mg/L
Sc-1	45	218939.993	218939.99				mg/L
Cl	35	342935.105	308413.06				mg/L
Kr	83	53.667	1.33				mg/L
Br	81	143385.739	135592.10				mg/L
P	31	23607.418	12766.98				mg/L
S	34	482741.658	265429.75				mg/L
Sr	88	2485437.493	2485344.15				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.315			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.518			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		105.131			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		100.446			

Sample ID: L1202004604
Report Date/Time: Tuesday, February 07, 2012 09:24:28
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004604
Report Date/Time: Tuesday, February 07, 2012 09:24:28
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004605

Sample Date/Time: Monday, February 06, 2012 22:02:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 58
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11658.216	-0.01				ug/L
	Be	9	8.000	-0.00	-0.0272	0.007	27.252	ug/L
	Al	27	28281.321	0.12	4.7568	0.331	6.956	ug/L
>	Sc	45	219254.104	219254.10				ug/L
	Ti	49	453.391	0.00	0.6685	0.103	15.369	ug/L
	V	51	5303.119	0.01	0.3252	0.009	2.674	ug/L
	Cr	52	13722.095	0.01	0.8049	0.050	6.233	ug/L
	Cr	53	1920.414	-0.00	0.0270	0.199	739.496	ug/L
	Mn	55	5311.079	0.01	0.3501	0.005	1.303	ug/L
	Co	59	847.719	0.00	0.0512	0.012	23.411	ug/L
	Ni	60	3693.189	0.01	1.8705	0.011	0.602	ug/L
	Cu	65	525.355	0.00	0.1967	0.013	6.356	ug/L
	Zn	66	3246.665	0.01	2.7943	0.069	2.471	ug/L
>	Ge	72	471329.741	471329.74				ug/L
	As	75	1293.916	0.00	1.1716	0.045	3.879	ug/L
	Se	77	137.334	0.00	0.4279	0.248	57.928	ug/L
	Se	82	244.144	0.00	2.2890	0.256	11.188	ug/L
	Rb	85	5377.790	0.01				mg/L
	Y	89	289996.653	1614.63				ug/L
	Rh	103	130.002	121.67				ug/L
	Mo	98	1986.344	0.00	0.6050	0.010	1.611	ug/L
	Ag	107	85.668	0.00	-0.0260	0.003	11.871	ug/L
	Cd	114	8.332	0.00	-0.0029	0.003	105.132	ug/L
>	In	115	411755.021	411755.02				ug/L
	Sn	118	834.575	0.00	0.1305	0.005	4.069	ug/L
	Sb	123	276.793	0.00	0.0392	0.005	11.533	ug/L
	Ba	135	129602.347	0.23	76.6825	3.067	3.999	ug/L
	Ce	140	216.692	0.00				ug/L
>	Tb	159	557355.877	557355.88				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	79.335	-0.00	-0.0059	0.001	15.096	ug/L
	Tl	205	173.352	-0.00	-0.0204	0.001	5.329	ug/L
	Pb	206	716.705	0.00	0.0615	0.002	3.849	ug/L
	Pb	207	615.696	0.00	0.0700	0.003	4.881	ug/L
	Pb	208	2861.556	0.00	0.0708	0.001	1.336	ug/L
	U	238	13920.763	0.03	0.3918	0.008	2.135	ug/L
>	Bi	209	409140.596	409140.60				ug/L

Sample ID: L1202004605
Report Date/Time: Tuesday, February 07, 2012 09:24:29
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	89080319.597	406.69	18.0768	0.731	4.041	mg/L
Mg	24	18700701.872	85.37	6.1333	0.240	3.917	mg/L
K	39	9089501.772	38.67	1.2336	0.039	3.165	mg/L
Ca	43	607828.642	2.78	41.7702	1.556	3.724	mg/L
Fe	54	92372.002	0.22	0.0760	0.010	13.243	mg/L
Fe	57	47348.903	0.18	0.1509	0.008	5.511	mg/L
Sc-1	45	219254.104	219254.10				mg/L
Cl	35	313824.966	279302.92				mg/L
Kr	83	61.001	8.67				mg/L
Br	81	142131.179	134337.54				mg/L
P	31	26085.188	15244.75				mg/L
S	34	484921.470	267609.56				mg/L
Sr	88	2593624.222	2593530.88				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.179			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		98.135			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		101.835			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.114			

Sample ID: L1202004605
Report Date/Time: Tuesday, February 07, 2012 09:24:29
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004605
Report Date/Time: Tuesday, February 07, 2012 09:24:29
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004607

Sample Date/Time: Monday, February 06, 2012 22:10:17
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 59
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
⌈	Li	6	14379.158	-0.00				ug/L
|	Be	9	8.000	-0.00	-0.0300	0.005	15.982	ug/L
|	Al	27	18855.163	0.06	2.6234	0.490	18.690	ug/L
⌊>	Sc	45	244349.905	244349.91				ug/L
⌈	Ti	49	436.722	0.00	0.5807	0.210	36.195	ug/L
|	V	51	5801.024	0.01	0.3379	0.063	18.509	ug/L
|	Cr	52	18124.208	0.02	1.2122	0.098	8.120	ug/L
|	Cr	53	2483.952	-0.00	0.4427	0.042	9.587	ug/L
|	Mn	55	1030818.516	2.04	76.2047	2.921	3.833	ug/L
|	Co	59	1697.190	0.00	0.1291	0.005	3.611	ug/L
|	Ni	60	4597.648	0.01	2.1801	0.099	4.561	ug/L
|	Cu	65	960.065	0.00	0.3963	0.022	5.677	ug/L
|	Zn	66	2185.642	0.00	1.6864	0.062	3.686	ug/L
|>	Ge	72	505643.599	505643.60				ug/L
|	As	75	2245.685	0.00	1.8213	0.036	1.978	ug/L
|	Se	77	123.334	0.00	0.1846	0.057	30.868	ug/L
|	Se	82	300.549	0.00	2.6275	0.058	2.199	ug/L
⌊	Rb	85	5795.407	0.01				mg/L
	Y	89	317642.967	29260.94				ug/L
	Rh	103	167.670	159.34				ug/L
⌈	Mo	98	2074.845	0.00	0.5640	0.021	3.674	ug/L
|	Ag	107	89.001	0.00	-0.0269	0.001	5.434	ug/L
|	Cd	114	-1.926	-0.00	-0.0103	0.005	53.322	ug/L
|>	In	115	458175.100	458175.10				ug/L
|	Sn	118	4471.200	0.01	0.7919	0.005	0.615	ug/L
⌊	Sb	123	198.664	0.00	0.0178	0.002	8.865	ug/L
⌈	Ba	135	135165.929	0.22	72.9830	1.719	2.356	ug/L
|	Ce	140	160.018	0.00				ug/L
⌊>	Tb	159	610744.488	610744.49				ug/L
⌈	Ho	165	16.668	0.00				ug/L
|	Tl	203	75.334	-0.00	-0.0073	0.002	26.266	ug/L
|	Tl	205	150.016	-0.00	-0.0224	0.002	9.107	ug/L
|	Pb	206	938.062	0.00	0.0918	0.010	11.127	ug/L
|	Pb	207	844.385	0.00	0.1064	0.009	8.725	ug/L
|	Pb	208	3726.693	0.01	0.0997	0.006	6.452	ug/L
|	U	238	16888.286	0.04	0.4500	0.016	3.511	ug/L
⌊>	Bi	209	436624.783	436624.78				ug/L

Sample ID: L1202004607
Report Date/Time: Tuesday, February 07, 2012 09:24:31
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23	100111515.065	409.68	18.2098	0.504	2.770	mg/L
|	Mg	24	20308919.026	83.11	5.9702	0.178	2.979	mg/L
|	K	39	10474383.568	40.06	1.2781	0.044	3.462	mg/L
|	Ca	43	728313.208	2.98	44.8391	0.395	0.881	mg/L
|	Fe	54	235771.827	0.76	0.2760	0.005	1.946	mg/L
|	Fe	57	104597.395	0.39	0.3332	0.029	8.574	mg/L
⌊>	Sc-1	45	244349.905	244349.91				mg/L
	Cl	35	351433.356	316911.31				mg/L
	Kr	83	53.001	0.67				mg/L
	Br	81	159918.422	152124.78				mg/L
	P	31	28558.629	17718.19				mg/L
	S	34	546804.572	329492.67				mg/L
	Sr	88	2887631.074	2887537.73				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		107.472			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		109.198			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		111.589			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		104.704			

Sample ID: L1202004607
Report Date/Time: Tuesday, February 07, 2012 09:24:31
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004607
Report Date/Time: Tuesday, February 07, 2012 09:24:31
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004608

Sample Date/Time: Monday, February 06, 2012 22:18:03
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 60
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13861.578	-0.01				ug/L
	Be	9	9.333	-0.00	-0.0269	0.009	34.645	ug/L
	Al	27	17885.972	0.06	2.3546	0.202	8.598	ug/L
>	Sc	45	254226.700	254226.70				ug/L
	Ti	49	343.375	0.00	0.3904	0.043	11.084	ug/L
	V	51	44205.985	0.08	4.1204	0.031	0.750	ug/L
	Cr	52	12556.912	0.01	0.4898	0.010	2.040	ug/L
	Cr	53	1687.007	-0.00	-0.4054	0.104	25.576	ug/L
	Mn	55	5437.494	0.01	0.3158	0.004	1.150	ug/L
	Co	59	920.727	0.00	0.0491	0.006	11.738	ug/L
	Ni	60	3790.900	0.01	1.7193	0.017	0.970	ug/L
	Cu	65	994.069	0.00	0.3944	0.005	1.298	ug/L
	Zn	66	2932.545	0.01	2.2296	0.026	1.175	ug/L
>	Ge	72	525294.086	525294.09				ug/L
	As	75	871.814	0.00	0.7581	0.047	6.261	ug/L
	Se	77	167.335	0.00	0.5704	0.145	25.469	ug/L
	Se	82	298.202	0.00	2.5111	0.095	3.794	ug/L
	Rb	85	3396.393	0.01				mg/L
	Y	89	326754.631	38372.61				ug/L
	Rh	103	81.001	72.67				ug/L
	Mo	98	688.419	0.00	0.1394	0.016	11.425	ug/L
	Ag	107	81.001	-0.00	-0.0282	0.001	4.470	ug/L
	Cd	114	5.793	0.00	-0.0052	0.001	16.098	ug/L
>	In	115	460498.702	460498.70				ug/L
	Sn	118	276.005	0.00	0.0085	0.004	42.370	ug/L
	Sb	123	160.332	0.00	0.0101	0.002	22.712	ug/L
	Ba	135	83480.021	0.13	43.9078	1.409	3.208	ug/L
	Ce	140	103.344	0.00				ug/L
>	Tb	159	627053.805	627053.80				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	82.001	-0.00	-0.0069	0.001	9.167	ug/L
	Tl	205	163.351	-0.00	-0.0221	0.002	10.289	ug/L
	Pb	206	313.676	0.00	-0.0196	0.004	22.098	ug/L
	Pb	207	275.007	0.00	-0.0064	0.004	58.168	ug/L
	Pb	208	1295.387	0.00	-0.0072	0.002	29.392	ug/L
	U	238	12094.895	0.03	0.2946	0.007	2.296	ug/L
>	Bi	209	460634.044	460634.04				ug/L

Sample ID: L1202004608
Report Date/Time: Tuesday, February 07, 2012 09:24:32
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	99788529.612	393.11	17.4734	0.862	4.933	mg/L
Mg	24	9607956.672	37.83	2.7069	0.100	3.689	mg/L
K	39	8384772.001	30.17	0.9608	0.018	1.851	mg/L
Ca	43	747946.447	2.94	44.2557	0.332	0.750	mg/L
Fe	54	91410.512	0.15	0.0531	0.007	13.691	mg/L
Fe	57	54573.670	0.18	0.1496	0.007	4.609	mg/L
Sc-1	45	254226.700	254226.70				mg/L
Cl	35	270074.755	235552.71				mg/L
Kr	83	54.667	2.33				mg/L
Br	81	127563.246	119769.60				mg/L
P	31	30641.137	19800.70				mg/L
S	34	495876.142	278564.24				mg/L
Sr	88	1410417.325	1410323.98				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		111.649			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		109.752			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		114.569			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		110.462			

Sample ID: L1202004608
Report Date/Time: Tuesday, February 07, 2012 09:24:32
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004608
Report Date/Time: Tuesday, February 07, 2012 09:24:32
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202004609

Sample Date/Time: Monday, February 06, 2012 22:25:50
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 61
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12993.458	-0.01				ug/L
	Be	9	8.667	-0.00	-0.0280	0.013	45.954	ug/L
	Al	27	61661.121	0.24	9.7970	1.073	10.950	ug/L
>	Sc	45	244925.428	244925.43				ug/L
	Ti	49	333.374	0.00	0.3882	0.115	29.637	ug/L
	V	51	44591.929	0.08	4.2786	0.096	2.237	ug/L
	Cr	52	11266.394	0.01	0.3765	0.026	6.855	ug/L
	Cr	53	1707.012	-0.00	-0.3417	0.096	28.062	ug/L
	Mn	55	7432.055	0.01	0.4720	0.011	2.415	ug/L
	Co	59	949.730	0.00	0.0543	0.005	9.692	ug/L
	Ni	60	3555.130	0.01	1.6540	0.109	6.581	ug/L
	Cu	65	654.366	0.00	0.2386	0.021	8.850	ug/L
	Zn	66	937.729	0.00	0.6095	0.031	5.106	ug/L
>	Ge	72	511420.279	511420.28				ug/L
	As	75	850.265	0.00	0.7589	0.055	7.296	ug/L
	Se	77	192.669	0.00	0.8720	0.201	23.083	ug/L
	Se	82	285.888	0.00	2.4722	0.116	4.690	ug/L
	Rb	85	3551.126	0.01				mg/L
	Y	89	320959.398	32577.37				ug/L
	Rh	103	74.334	66.00				ug/L
	Mo	98	669.157	0.00	0.1339	0.016	11.991	ug/L
	Ag	107	74.334	-0.00	-0.0292	0.001	3.556	ug/L
	Cd	114	5.763	0.00	-0.0052	0.004	75.305	ug/L
>	In	115	459360.666	459360.67				ug/L
	Sn	118	220.403	0.00	-0.0017	0.003	170.446	ug/L
	Sb	123	158.287	0.00	0.0098	0.003	27.355	ug/L
	Ba	135	83443.916	0.13	44.3963	0.378	0.852	ug/L
	Ce	140	426.720	0.00				ug/L
>	Tb	159	619716.411	619716.41				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	75.334	-0.00	-0.0075	0.002	22.677	ug/L
	Tl	205	220.025	-0.00	-0.0185	0.005	26.132	ug/L
	Pb	206	468.351	0.00	0.0087	0.006	73.277	ug/L
	Pb	207	413.348	0.00	0.0217	0.003	13.180	ug/L
	Pb	208	1931.109	0.00	0.0215	0.003	14.987	ug/L
	U	238	11745.725	0.03	0.2969	0.009	2.938	ug/L
>	Bi	209	444232.895	444232.89				ug/L

Sample ID: L1202004609
Report Date/Time: Tuesday, February 07, 2012 09:24:33
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	98471742.765	403.11	17.9179	1.098	6.127	mg/L
Mg	24	9323456.280	38.25	2.7370	0.297	10.836	mg/L
K	39	8298564.500	31.07	0.9899	0.019	1.962	mg/L
Ca	43	706735.706	2.89	43.4458	1.021	2.351	mg/L
Fe	54	100718.005	0.21	0.0724	0.012	16.033	mg/L
Fe	57	56500.018	0.19	0.1639	0.016	9.604	mg/L
Sc-1	45	244925.428	244925.43				mg/L
Cl	35	386154.447	351632.41				mg/L
Kr	83	52.334	-0.00				mg/L
Br	81	130129.200	122335.56				mg/L
P	31	27909.465	17069.02				mg/L
S	34	477593.712	260281.81				mg/L
Sr	88	1390625.148	1390531.81				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		108.700			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		109.481			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		113.229			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		106.529			

Sample ID: L1202004609
Report Date/Time: Tuesday, February 07, 2012 09:24:33
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202004609
Report Date/Time: Tuesday, February 07, 2012 09:24:33
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 06, 2012 22:33:37
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11758.310	-0.01				ug/L
	Be	9	17076.816	0.07	48.0663	1.845	3.839	ug/L
	Al	27	302770.866	1.26	51.2253	0.364	0.711	ug/L
>	Sc	45	238620.148	238620.15				ug/L
	Ti	49	63074.225	0.12	105.9140	3.291	3.107	ug/L
	V	51	530852.094	0.99	51.6319	0.593	1.149	ug/L
	Cr	52	462031.127	0.85	51.3830	0.247	0.480	ug/L
	Cr	53	54285.209	0.10	48.8181	2.233	4.575	ug/L
	Mn	55	713766.198	1.34	50.0250	1.133	2.265	ug/L
	Co	59	520875.592	0.98	48.7210	1.113	2.285	ug/L
	Ni	60	107700.349	0.20	49.4169	0.698	1.412	ug/L
	Cu	65	104745.287	0.20	49.8978	0.518	1.037	ug/L
	Zn	66	62688.197	0.12	50.6807	0.219	0.431	ug/L
>	Ge	72	532610.946	532610.95				ug/L
	As	75	69312.409	0.13	49.8440	0.304	0.609	ug/L
	Se	77	5174.275	0.01	49.2250	2.109	4.285	ug/L
	Se	82	6080.502	0.01	50.1186	0.517	1.031	ug/L
	Rb	85	2412.040	0.00				mg/L
	Y	89	337964.308	49582.28				ug/L
	Rh	103	26.667	18.33				ug/L
	Mo	98	331241.727	0.69	96.9239	3.596	3.711	ug/L
	Ag	107	344268.433	0.72	50.8329	1.856	3.650	ug/L
	Cd	114	76739.021	0.16	49.1719	2.441	4.964	ug/L
>	In	115	478144.233	478144.23				ug/L
	Sn	118	267991.161	0.56	47.8976	0.568	1.185	ug/L
	Sb	123	252426.131	0.53	47.4935	1.270	2.675	ug/L
	Ba	135	98916.378	0.15	50.6605	0.253	0.499	ug/L
	Ce	140	130.014	0.00				ug/L
>	Tb	159	643841.260	643841.26				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	362573.850	0.77	47.9152	0.478	0.997	ug/L
	Tl	205	895880.648	1.89	48.1670	0.454	0.942	ug/L
	Pb	206	299726.659	0.63	47.9283	0.260	0.541	ug/L
	Pb	207	271121.851	0.57	48.2104	0.770	1.597	ug/L
	Pb	208	1228987.781	2.60	48.4005	0.323	0.668	ug/L
	U	238	1955098.796	4.13	51.6698	0.969	1.876	ug/L
>	Bi	209	473069.240	473069.24				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:35
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

Na	23	27972403.598	117.19	5.2101	0.135	2.588	mg/L
Mg	24	16670375.786	69.91	5.0189	0.213	4.243	mg/L
K	39	38419253.607	158.24	5.0689	0.101	1.992	mg/L
Ca	43	82043.427	0.34	5.1429	0.162	3.154	mg/L
Fe	54	3232502.315	13.35	4.9194	0.216	4.386	mg/L
Fe	57	1430276.150	5.96	5.1159	0.305	5.961	mg/L
Sc-1	45	238620.148	238620.15				mg/L
Cl	35	35740.502	1218.46				mg/L
Kr	83	55.667	3.33				mg/L
Br	81	18682.930	10889.29				mg/L
P	31	16410.242	5569.80				mg/L
S	34	290985.578	73673.67				mg/L
Sr	88	5812.609	5719.27				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	103.264				
Cr	52	102.766				
Cr	53					
Mn	55	100.050				
Co	59	97.442				
Ni	60	98.834				
Cu	65	99.796				
Zn	66	101.361				
Ge	72		113.204			
As	75	99.688				
Se	77					
Se	82	100.237				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	101.666				
Cd	114	98.344				
In	115		113.957			
Sn	118					
Sb	123	94.987				
Ba	135	101.321				
Ce	140					
Tb	159		117.636			
Ho	165					
Tl	203	95.830				
Tl	205					
Pb	206					
Pb	207					
Pb	208	96.801				
U	238	103.340				
Bi	209		113.444			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:35
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 09:24:35
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 06, 2012 22:41:14
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12910.031	-0.01				ug/L
	Be	9	8.667	-0.00	-0.0267	0.017	63.193	ug/L
	Al	27	3150.599	0.00	0.0478	0.094	197.158	ug/L
>	Sc	45	231603.995	231603.99				ug/L
	Ti	49	156.684	0.00	0.0660	0.078	117.803	ug/L
	V	51	2801.011	0.00	0.0106	0.020	191.906	ug/L
	Cr	52	8866.473	0.00	0.0429	0.030	69.851	ug/L
	Cr	53	773.447	-0.00	-1.2890	0.050	3.842	ug/L
	Mn	55	732.706	0.00	-0.0202	0.002	12.257	ug/L
	Co	59	233.339	0.00	-0.0167	0.003	18.514	ug/L
	Ni	60	104.002	0.00	0.0013	0.003	253.848	ug/L
	Cu	65	229.672	0.00	0.0220	0.005	22.835	ug/L
	Zn	66	247.006	0.00	0.0158	0.008	50.293	ug/L
>	Ge	72	537426.200	537426.20				ug/L
	As	75	-160.392	0.00	0.0096	0.042	436.095	ug/L
	Se	77	76.000	-0.00	-0.3474	0.121	34.894	ug/L
	Se	82	12.829	0.00	0.1240	0.031	24.917	ug/L
	Rb	85	28.667	-0.00				mg/L
	Y	89	333883.590	45501.57				ug/L
	Rh	103	12.667	4.33				ug/L
	Mo	98	155.350	0.00	-0.0242	0.004	15.748	ug/L
	Ag	107	202.005	0.00	-0.0106	0.005	45.263	ug/L
	Cd	114	23.989	0.00	0.0064	0.009	138.216	ug/L
>	In	115	474581.830	474581.83				ug/L
	Sn	118	288.138	0.00	0.0091	0.003	36.869	ug/L
	Sb	123	268.706	0.00	0.0297	0.006	21.270	ug/L
	Ba	135	76.001	0.00	0.0345	0.011	30.784	ug/L
	Ce	140	26.669	-0.00				ug/L
>	Tb	159	633348.761	633348.76				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	164.003	0.00	0.0037	0.002	41.834	ug/L
	Tl	205	393.382	0.00	-0.0099	0.006	60.763	ug/L
	Pb	206	357.011	0.00	-0.0139	0.003	20.257	ug/L
	Pb	207	339.010	0.00	0.0038	0.002	44.863	ug/L
	Pb	208	1524.404	0.00	0.0007	0.003	521.274	ug/L
	U	238	621.697	0.00	-0.0173	0.004	22.700	ug/L
>	Bi	209	471939.664	471939.66				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:36
Page 1

Approved: February 08, 2012

Approved: February 08, 2012

	Na	23	53109.268	0.13	0.0077	0.002	27.148	mg/L
	Mg	24	7500.916	0.02	-0.0180	0.001	4.049	mg/L
	K	39	735758.223	0.35	0.0045	0.006	124.920	mg/L
	Ca	43	316.705	0.00	-0.0168	0.007	43.816	mg/L
	Fe	54	53212.809	0.02	0.0053	0.007	130.738	mg/L
	Fe	57	10093.793	0.01	0.0027	0.003	116.160	mg/L
>	Sc-1	45	231603.995	231603.99				mg/L
	Cl	35	33235.490	-1286.55				mg/L
	Kr	83	58.001	5.67				mg/L
	Br	81	15905.845	8112.20				mg/L
	P	31	14556.801	3716.36				mg/L
	S	34	304078.158	86766.25				mg/L
	Sr	88	406.718	313.37				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72		114.227			
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115		113.108			
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159		115.719			
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209		113.173			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:36
Page 2

Approved: February 08, 2012

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 09:24:36
Page 3

Approved: February 08, 2012

Approved: February 08, 2012

Instrument Tuning Report

File Name: 06302008.tun
File Path: C:\elandata\Tuning\06302008.tun

Sample Information

Sample Date/Time: Tuesday, February 07, 2012 11:12:42

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	2.976	606	2060	0.672	
Li	7.016	7.029	1589	2060	0.659	
Co	58.933	58.928	14277	1970	0.695	
Ce	139.905	139.929	33996	2020	0.692	
Tl	204.975	204.976	49690	2263	0.702	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	1.438
3.000	1.415
4.000	14.428
5.000	30.138
6.000	3.989
7.000	4.195
8.000	13.092
9.000	1.108
58.000	3.119
59.000	1.246
60.000	1.968
139.000	2.728
140.000	0.771
141.000	7.371
204.000	2.022
205.000	1.669
206.000	1.613

Report Date/Time: Tuesday, February 07, 2012 11:13:53
Page 1

Approved: February 08, 2012

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, February 07, 2012 11:16:12
Sample Description:
Method File: C:\Elandata\Method\6020 DAILY.mth
Dataset File: C:\elandata\Dataset\020612\Sample.107
Tuning File: C:\elandata\Tuning\06302008.tun
Optimization File: C:\elandata\Optimize\default.dac
Dual Detector Mode: Dual

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

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24.0	66404.7	66404.733	394.581	0.6
	Rh	102.9	387922.7	387922.730	2838.707	0.7
	In	114.9	801471.7	801471.709	12721.313	1.6
	Pb	208.0	211556.4	211556.412	3303.428	1.6
	U	238.1	37.0	37.000	8.055	21.8
⌈>	Ba	137.9	372359.1	372359.102	1475.354	0.4
⌊	Ba++	69.0	6542.6	0.018	0.000	0.9
⌈>	Ce	139.9	462966.5	462966.471	4688.432	1.0
⌊	CeO	155.9	12538.0	0.027	0.001	2.2
	Bkgd	220.0	8.5	8.500	1.000	11.8
	Ar2	79.9	6259761.0	6259761.048	35027.950	0.6

Current Optimization File Data

Current Value	Description
1.00	Nebulizer Gas Flow
7.50	Lens Voltage
1500.00	ICP RF Power
-1750.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
20.00	Discriminator Threshold
-10.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	37	6.8	2819.8
Co	59	37	7.0	89082.9
Rh	103	37	7.5	153239.8
Pb	208	37	10.0	124472.4

Sample ID: Sample
Report Date/Time: Tuesday, February 07, 2012 11:18:20
Page 1

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 07, 2012 11:34:45
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12425.978					ug/L
	Be	9	4.000					ug/L
	Al	27	2567.075					ug/L
>	Sc	45	241999.624					ug/L
	Ti	49	130.014					ug/L
	V	51	2941.659					ug/L
	Cr	52	9089.380					ug/L
	Cr	53	693.433					ug/L
	Mn	55	356.345					ug/L
	Co	59	82.335					ug/L
	Ni	60	33.334					ug/L
	Cu	65	115.002					ug/L
	Zn	66	116.335					ug/L
>	Ge	72	581102.334					ug/L
	As	75	-190.106					ug/L
	Se	77	97.334					ug/L
	Se	82	12.887					ug/L
	Rb	85	25.334					mg/L
	Y	89	366837.849					ug/L
	Rh	103	22.667					ug/L
	Mo	98	12.530					ug/L
	Ag	107	105.335					ug/L
	Cd	114	4.298					ug/L
>	In	115	530863.386					ug/L
	Sn	118	74.000					ug/L
	Sb	123	17.287					ug/L
	Ba	135	28.000					ug/L
	Ce	140	220.025					ug/L
>	Tb	159	674210.437					ug/L
	Ho	165	10.001					ug/L
	Tl	203	23.334					ug/L
	Tl	205	43.338					ug/L
	Pb	206	271.340					ug/L
	Pb	207	250.673					ug/L
	Pb	208	1085.705					ug/L
	U	238	13.333					ug/L
>	Bi	209	474365.304					ug/L

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 11:36:57
Page 1

Approved: February 08, 2012

Na	23	21519.935		mg/L
Mg	24	450.067		mg/L
K	39	772944.521		mg/L
Ca	43	213.357		mg/L
Fe	54	48581.219		mg/L
Fe	57	8872.279		mg/L
Sc-1	45	241999.624		mg/L
Cl	35	32885.431		mg/L
Kr	83	51.334		mg/L
Br	81	8982.188		mg/L
P	31	13646.014		mg/L
S	34	284848.790		mg/L
Sr	88	86.676		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 11:36:57
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Tuesday, February 07, 2012 11:36:57
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, February 07, 2012 11:42:21
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12676.313	0.00				ug/L
	Be	9	6.667	0.00				ug/L
	Al	27	2400.353	-0.00				ug/L
>	Sc	45	234420.981	234420.98				ug/L
	Ti	49	110.012	-0.00				ug/L
	V	51	2856.854	0.00				ug/L
	Cr	52	8855.792	0.00				ug/L
	Cr	53	586.746	-0.00				ug/L
	Mn	55	320.676	-0.00				ug/L
	Co	59	75.334	-0.00				ug/L
	Ni	60	36.000	0.00				ug/L
	Cu	65	105.002	-0.00				ug/L
	Zn	66	96.002	-0.00				ug/L
>	Ge	72	542094.275	542094.27				ug/L
	As	75	-195.726	-0.00				ug/L
	Se	77	67.334	-0.00				ug/L
	Se	82	7.478	-0.00				ug/L
	Rb	85	27.334	0.00				mg/L
	Y	89	346666.609	-20171.24				ug/L
	Rh	103	15.334	-7.33				ug/L
	Mo	98	12.826	0.00				ug/L
	Ag	107	87.335	-0.00				ug/L
	Cd	114	3.920	-0.00				ug/L
>	In	115	484277.795	484277.79				ug/L
	Sn	118	62.134	-0.00				ug/L
	Sb	123	12.368	-0.00				ug/L
	Ba	135	21.000	-0.00				ug/L
	Ce	140	196.689	-0.00				ug/L
>	Tb	159	634214.710	634214.71				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	19.000	-0.00				ug/L
	Tl	205	16.668	-0.00				ug/L
	Pb	206	257.673	0.00				ug/L
	Pb	207	205.338	-0.00				ug/L
	Pb	208	1019.369	-0.00				ug/L
	U	238	16.000	0.00				ug/L
>	Bi	209	449497.910	449497.91				ug/L

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 11:44:33
Page 1

Approved: February 08, 2012

Na	23	23348.805	0.01		mg/L
Mg	24	156.684	-0.00		mg/L
K	39	755637.780	0.03		mg/L
Ca	43	190.021	-0.00		mg/L
Fe	54	45795.017	-0.01		mg/L
Fe	57	8932.362	0.00		mg/L
Sc-1	45	234420.981	234420.98		mg/L
Cl	35	32169.309	-716.12		mg/L
Kr	83	60.001	8.67		mg/L
Br	81	8708.552	-273.64		mg/L
P	31	13112.317	-533.70		mg/L
S	34	261888.501	-22960.29		mg/L
Sr	88	83.342	-3.33		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 11:44:33
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 1
Report Date/Time: Tuesday, February 07, 2012 11:44:33
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 07, 2012 11:49:57
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 2
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12976.765	0.00				ug/L
	Be	9	122.668	0.00				ug/L
	Al	27	4617.952	0.01				ug/L
>	Sc	45	241928.205	241928.20				ug/L
	Ti	49	593.414	0.00				ug/L
	V	51	7324.037	0.01				ug/L
	Cr	52	12939.836	0.01				ug/L
	Cr	53	1196.872	0.00				ug/L
	Mn	55	6207.373	0.01				ug/L
	Co	59	4341.175	0.01				ug/L
	Ni	60	911.392	0.00				ug/L
	Cu	65	999.070	0.00				ug/L
	Zn	66	605.695	0.00				ug/L
>	Ge	72	551976.034	551976.03				ug/L
	As	75	363.015	0.00				ug/L
	Se	77	128.668	0.00				ug/L
	Se	82	43.786	0.00				ug/L
	Rb	85	44.334	0.00				mg/L
	Y	89	351331.553	-15506.30				ug/L
	Rh	103	22.334	-0.33				ug/L
	Mo	98	2926.516	0.01				ug/L
	Ag	107	2998.903	0.01				ug/L
	Cd	114	639.998	0.00				ug/L
>	In	115	500891.377	500891.38				ug/L
	Sn	118	2443.958	0.00				ug/L
	Sb	123	2088.940	0.00				ug/L
	Ba	135	804.714	0.00				ug/L
	Ce	140	170.019	-0.00				ug/L
>	Tb	159	632202.184	632202.18				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	2910.537	0.01				ug/L
	Tl	205	7437.394	0.02				ug/L
	Pb	206	2633.109	0.01				ug/L
	Pb	207	2282.335	0.00				ug/L
	Pb	208	10892.647	0.02				ug/L
	U	238	14663.711	0.03				ug/L
>	Bi	209	458659.876	458659.88				ug/L

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 11:52:09
Page 1

Approved: February 08, 2012

Na	23	254982.228	0.96		mg/L
Mg	24	156875.449	0.65		mg/L
K	39	1135808.043	1.50		mg/L
Ca	43	923.477	0.00		mg/L
Fe	54	73003.873	0.10		mg/L
Fe	57	21356.134	0.05		mg/L
Sc-1	45	241928.205	241928.20		mg/L
Cl	35	32159.282	-726.15		mg/L
Kr	83	63.001	11.67		mg/L
Br	81	8803.326	-178.86		mg/L
P	31	12754.460	-891.55		mg/L
S	34	276692.695	-8156.09		mg/L
Sr	88	140.015	53.34		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 11:52:09
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 2
Report Date/Time: Tuesday, February 07, 2012 11:52:09
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 3

Sample Date/Time: Tuesday, February 07, 2012 11:57:33
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 3
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12025.369	-0.00				ug/L
	Be	9	15577.212	0.07	50.0000	1.725	3.450	ug/L
	Al	27	303815.365	1.27	50.0000	3.751	7.502	ug/L
>	Sc	45	237865.735	237865.73				ug/L
	Ti	49	60128.858	0.11	100.0000	2.224	2.224	ug/L
	V	51	520081.133	0.97	50.0000	0.750	1.500	ug/L
	Cr	52	463045.197	0.86	50.0000	1.351	2.702	ug/L
	Cr	53	52966.559	0.10	50.0000	1.982	3.965	ug/L
	Mn	55	703011.723	1.32	50.0000	0.756	1.512	ug/L
	Co	59	512915.113	0.97	50.0000	0.404	0.807	ug/L
	Ni	60	107841.052	0.20	50.0000	1.638	3.275	ug/L
	Cu	65	104335.289	0.20	50.0000	0.487	0.974	ug/L
	Zn	66	61464.137	0.12	50.0000	0.432	0.865	ug/L
>	Ge	72	530983.228	530983.23				ug/L
	As	75	70224.838	0.13	50.0000	0.014	0.029	ug/L
	Se	77	5091.555	0.01	50.0000	0.382	0.763	ug/L
	Se	82	6006.071	0.01	50.0000	1.091	2.182	ug/L
	Rb	85	2314.345	0.00				mg/L
	Y	89	335739.332	-31098.52				ug/L
	Rh	103	44.334	21.67				ug/L
	Mo	98	323275.933	0.66	100.0000	4.203	4.203	ug/L
	Ag	107	350229.748	0.71	50.0000	1.571	3.142	ug/L
	Cd	114	79054.907	0.16	50.0000	2.746	5.492	ug/L
>	In	115	490809.207	490809.21				ug/L
	Sn	118	273230.655	0.56	50.0000	1.362	2.723	ug/L
	Sb	123	253239.640	0.52	50.0000	0.669	1.339	ug/L
	Ba	135	95712.139	0.15	50.0000	0.625	1.250	ug/L
	Ce	140	273.365	0.00				ug/L
>	Tb	159	633711.041	633711.04				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	343864.311	0.77	50.0000	1.347	2.694	ug/L
	Tl	205	841063.475	1.89	50.0000	2.167	4.334	ug/L
	Pb	206	279713.253	0.63	50.0000	1.266	2.533	ug/L
	Pb	207	248142.349	0.56	50.0000	1.346	2.693	ug/L
	Pb	208	1153821.353	2.58	50.0000	1.661	3.323	ug/L
	U	238	1697447.128	3.80	50.0000	1.072	2.144	ug/L
>	Bi	209	446342.160	446342.16				ug/L

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 11:59:46
Page 1

Approved: February 08, 2012

Na	23	27158728.707	114.19	5.0000	0.226	4.524	mg/L
Mg	24	17040206.153	71.67	5.0000	0.127	2.544	mg/L
K	39	38028254.178	156.61	5.0000	0.315	6.293	mg/L
Ca	43	79290.449	0.33	5.0000	0.291	5.828	mg/L
Fe	54	3172561.885	13.15	5.0000	0.213	4.264	mg/L
Fe	57	1372081.352	5.74	5.0000	0.162	3.242	mg/L
Sc-1	45	237865.735	237865.73				mg/L
Cl	35	31556.975	-1328.46				mg/L
Kr	83	61.001	9.67				mg/L
Br	81	8282.115	-700.07				mg/L
P	31	12390.569	-1255.44				mg/L
S	34	271802.437	-13046.35				mg/L
Sr	88	5302.220	5215.54				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 11:59:46
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 3
Report Date/Time: Tuesday, February 07, 2012 11:59:46
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: Standard 4

Sample Date/Time: Tuesday, February 07, 2012 12:05:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 4
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11524.630	-0.00				ug/L
	Be	9	30764.038	0.14	101.8609	6.824	6.699	ug/L
	Al	27	586310.021	2.58	100.8325	4.406	4.369	ug/L
>	Sc	45	226542.570	226542.57				ug/L
	Ti	49	118461.167	0.22	199.0288	3.325	1.671	ug/L
	V	51	1041809.511	1.97	100.4473	2.136	2.127	ug/L
	Cr	52	918951.192	1.72	100.3023	1.051	1.048	ug/L
	Cr	53	108304.185	0.20	101.6720	3.600	3.541	ug/L
	Mn	55	1368776.655	2.59	98.9035	1.590	1.607	ug/L
	Co	59	1017667.551	1.92	99.8267	1.802	1.805	ug/L
	Ni	60	213439.944	0.40	99.7114	2.218	2.225	ug/L
	Cu	65	203370.133	0.38	98.9947	3.206	3.239	ug/L
	Zn	66	120028.581	0.23	99.0699	0.686	0.693	ug/L
>	Ge	72	528659.362	528659.36				ug/L
	As	75	140931.979	0.27	100.3449	4.114	4.099	ug/L
	Se	77	10255.641	0.02	100.9966	1.288	1.275	ug/L
	Se	82	12368.510	0.02	101.6450	0.627	0.617	ug/L
	Rb	85	4836.453	0.01				mg/L
	Y	89	342894.200	-23943.65				ug/L
	Rh	103	64.668	42.00				ug/L
	Mo	98	693277.039	1.43	208.5149	2.540	1.218	ug/L
	Ag	107	690454.808	1.43	100.0600	1.243	1.242	ug/L
	Cd	114	163960.110	0.34	102.5682	3.260	3.179	ug/L
>	In	115	483151.445	483151.45				ug/L
	Sn	118	561898.076	1.16	102.1753	0.953	0.933	ug/L
	Sb	123	505938.929	1.05	100.7288	0.841	0.835	ug/L
	Ba	135	190771.653	0.30	99.9772	1.054	1.054	ug/L
	Ce	140	423.387	0.00				ug/L
>	Tb	159	631928.960	631928.96				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	683031.220	1.56	100.5972	1.578	1.568	ug/L
	Tl	205	1692978.230	3.87	101.2751	6.036	5.960	ug/L
	Pb	206	559321.149	1.28	100.9630	2.526	2.502	ug/L
	Pb	207	498645.584	1.14	101.2068	3.145	3.107	ug/L
	Pb	208	2315516.333	5.29	101.1482	3.004	2.970	ug/L
	U	238	3245746.884	7.41	98.7105	1.979	2.004	ug/L
>	Bi	209	437956.332	437956.33				ug/L

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 12:07:23
Page 1

Approved: February 08, 2012

Na	23	55214984.298	244.38	10.3385	0.982	9.503	mg/L
Mg	24	34397272.607	152.01	10.2952	0.428	4.153	mg/L
K	39	76337885.231	334.31	10.3284	0.519	5.020	mg/L
Ca	43	155144.464	0.68	10.1453	0.597	5.883	mg/L
Fe	54	6046025.093	26.53	10.0428	0.496	4.944	mg/L
Fe	57	2475680.159	10.92	9.7591	0.949	9.727	mg/L
Sc-1	45	226542.570	226542.57				mg/L
Cl	35	33177.926	292.50				mg/L
Kr	83	63.001	11.67				mg/L
Br	81	8381.552	-600.64				mg/L
P	31	14428.514	782.50				mg/L
S	34	287735.945	2887.16				mg/L
Sr	88	11429.020	11342.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115					
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209					

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 12:07:23
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 4
Report Date/Time: Tuesday, February 07, 2012 12:07:23
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 07, 2012 12:12:47
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 11
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11858.434	-0.00				ug/L
	Be	9	15411.576	0.06	46.4527	2.362	5.086	ug/L
	Al	27	287740.321	1.15	44.8398	1.915	4.272	ug/L
>	Sc	45	248958.158	248958.16				ug/L
	Ti	49	60709.815	0.11	99.9166	2.167	2.169	ug/L
	V	51	518676.861	0.96	48.8973	2.040	4.172	ug/L
	Cr	52	460573.703	0.84	48.8119	1.024	2.097	ug/L
	Cr	53	53509.953	0.10	48.9198	1.490	3.047	ug/L
	Mn	55	696950.495	1.29	49.3808	2.697	5.463	ug/L
	Co	59	514583.796	0.95	49.5007	0.845	1.708	ug/L
	Ni	60	105432.835	0.20	48.2842	0.787	1.630	ug/L
	Cu	65	101373.796	0.19	48.3357	1.377	2.850	ug/L
	Zn	66	59554.654	0.11	48.1645	1.016	2.109	ug/L
>	Ge	72	539118.024	539118.02				ug/L
	As	75	68445.433	0.13	47.8401	0.310	0.647	ug/L
	Se	77	5048.196	0.01	48.3323	2.020	4.179	ug/L
	Se	82	5905.678	0.01	47.6197	0.609	1.280	ug/L
	Rb	85	2398.369	0.00				mg/L
	Y	89	348899.575	-17938.27				ug/L
	Rh	103	33.667	11.00				ug/L
	Mo	98	332691.177	0.66	96.3470	2.198	2.281	ug/L
	Ag	107	342235.566	0.68	47.7528	1.320	2.763	ug/L
	Cd	114	80359.373	0.16	48.4364	2.250	4.644	ug/L
>	In	115	501781.878	501781.88				ug/L
	Sn	118	275231.912	0.55	48.1920	1.282	2.659	ug/L
	Sb	123	252920.897	0.50	48.5004	1.385	2.855	ug/L
	Ba	135	95258.011	0.15	48.2060	1.026	2.129	ug/L
	Ce	140	166.685	-0.00				ug/L
>	Tb	159	654469.080	654469.08				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	343665.111	0.76	48.8698	1.366	2.795	ug/L
	Tl	205	854256.843	1.88	49.2906	0.689	1.398	ug/L
	Pb	206	286890.205	0.63	49.9619	1.048	2.098	ug/L
	Pb	207	248771.078	0.55	48.7186	1.366	2.804	ug/L
	Pb	208	1151625.796	2.54	48.5299	0.830	1.711	ug/L
	U	238	1747127.812	3.85	51.2755	0.561	1.094	ug/L
>	Bi	209	453665.483	453665.48				ug/L

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 12:14:59
Page 1

Approved: February 08, 2012

Na	23	26854377.030	108.00	4.5685	0.224	4.896	mg/L
Mg	24	16213567.204	65.26	4.4179	0.209	4.736	mg/L
K	39	38677455.040	152.50	4.7081	0.268	5.701	mg/L
Ca	43	81716.909	0.33	4.8625	0.346	7.108	mg/L
Fe	54	3166936.969	12.55	4.7539	0.312	6.554	mg/L
Fe	57	1381907.632	5.53	4.9367	0.333	6.745	mg/L
Sc-1	45	248958.158	248958.16				mg/L
Cl	35	30374.633	-2510.80				mg/L
Kr	83	59.334	8.00				mg/L
Br	81	8045.216	-936.97				mg/L
P	31	12474.002	-1172.01				mg/L
S	34	253482.811	-31365.98				mg/L
Sr	88	5605.779	5519.10				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9	92.905				
Al	27	89.680				
Sc	45					
Ti	49	99.917				
V	51	97.795				
Cr	52	97.624				
Cr	53					
Mn	55	98.762				
Co	59	99.001				
Ni	60	96.568				
Cu	65	96.671				
Zn	66	96.329				
Ge	72		92.775			
As	75	95.680				
Se	77					
Se	82	95.239				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	95.506				
Cd	114	96.873				
In	115		94.522			
Sn	118					
Sb	123	97.001				
Ba	135	96.412				
Ce	140					
Tb	159		97.072			
Ho	165					
Tl	203	97.740				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.060				
U	238	102.551				
Bi	209		95.636			

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 12:14:59
Page 2

Approved: February 08, 2012

⌈	Na	23	91.369
|	Mg	24	88.357
|	K	39	94.162
|	Ca	43	97.250
|	Fe	54	95.077
|	Fe	57	98.735
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 1
Report Date/Time: Tuesday, February 07, 2012 12:14:59
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, February 07, 2012 12:20:23
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	11991.965	0.00				ug/L
	Be	9	5.333	0.00	0.0371	0.009	23.241	ug/L
	Al	27	2016.913	-0.00	-0.0046	0.068	1485.807	ug/L
>	Sc	45	234446.020	234446.02				ug/L
	Ti	49	93.343	-0.00	0.0012	0.046	3851.962	ug/L
	V	51	2671.124	-0.00	-0.0200	0.020	99.993	ug/L
	Cr	52	8657.582	0.00	-0.0137	0.021	154.029	ug/L
	Cr	53	800.119	0.00	0.0716	0.066	92.109	ug/L
	Mn	55	431.016	0.00	0.0014	0.006	434.793	ug/L
	Co	59	141.336	0.00	0.0060	0.006	91.625	ug/L
	Ni	60	41.001	0.00	0.0113	0.006	52.206	ug/L
	Cu	65	125.669	0.00	-0.0049	0.010	201.436	ug/L
	Zn	66	94.335	-0.00	-0.0011	0.011	1016.835	ug/L
>	Ge	72	529639.924	529639.92				ug/L
	As	75	-145.711	0.00	0.0500	0.040	79.703	ug/L
	Se	77	81.334	-0.00	-0.0147	0.077	527.373	ug/L
	Se	82	4.186	-0.00	0.0916	0.118	128.989	ug/L
	Rb	85	26.000	0.00				mg/L
	Y	89	341002.355	-25835.49				ug/L
	Rh	103	14.000	-8.67				ug/L
	Mo	98	109.974	0.00	-0.0170	0.008	47.272	ug/L
	Ag	107	153.003	0.00	0.0022	0.007	295.914	ug/L
	Cd	114	17.548	0.00	0.0249	0.003	10.773	ug/L
>	In	115	494006.141	494006.14				ug/L
	Sn	118	217.069	0.00	0.0098	0.002	25.123	ug/L
	Sb	123	645.232	0.00	0.1245	0.006	5.195	ug/L
	Ba	135	31.667	0.00	-0.0053	0.001	16.106	ug/L
	Ce	140	76.675	-0.00				ug/L
>	Tb	159	642054.394	642054.39				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	75.668	0.00	0.0014	0.006	438.214	ug/L
	Tl	205	163.352	0.00	-0.0154	0.006	41.663	ug/L
	Pb	206	313.676	0.00	0.0010	0.004	392.651	ug/L
	Pb	207	268.674	0.00	0.0106	0.005	50.363	ug/L
	Pb	208	1268.718	0.00	-0.0007	0.003	514.573	ug/L
	U	238	265.341	0.00	-0.0184	0.004	24.105	ug/L
>	Bi	209	450656.403	450656.40				ug/L

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 12:22:35
Page 1

Approved: February 08, 2012

Na	23	23780.380	0.01	-0.0003	0.001	353.529	mg/L
Mg	24	2420.701	0.01	-0.0032	0.001	16.139	mg/L
K	39	732406.836	-0.05	-0.0079	0.009	117.667	mg/L
Ca	43	156.684	-0.00	-0.0066	0.001	21.519	mg/L
Fe	54	51155.597	0.02	0.0091	0.010	107.261	mg/L
Fe	57	9960.284	0.01	-0.0006	0.004	724.578	mg/L
Sc-1	45	234446.020	234446.02				mg/L
Cl	35	29858.088	-3027.34				mg/L
Kr	83	55.334	4.00				mg/L
Br	81	8433.599	-548.59				mg/L
P	31	14018.472	372.46				mg/L
S	34	260136.421	-24712.37				mg/L
Sr	88	93.343	6.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		91.144			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		93.057			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.231			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.002			

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 12:22:35
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 2
Report Date/Time: Tuesday, February 07, 2012 12:22:35
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 07, 2012 12:28:01
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 9
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12893.349	0.00				ug/L
	Be	9	8.667	0.00	0.0476	0.005	10.048	ug/L
	Al	27	4050.995	0.01	0.3119	0.057	18.251	ug/L
>	Sc	45	240028.829	240028.83				ug/L
	Ti	49	123.347	0.00	0.0486	0.028	56.944	ug/L
	V	51	6939.109	0.01	0.3835	0.005	1.247	ug/L
	Cr	52	15895.976	0.01	0.7613	0.007	0.860	ug/L
	Cr	53	1500.286	0.00	0.7135	0.077	10.735	ug/L
	Mn	55	7555.835	0.01	0.5087	0.009	1.681	ug/L
	Co	59	4409.877	0.01	0.4188	0.006	1.474	ug/L
	Ni	60	3609.818	0.01	1.6549	0.012	0.714	ug/L
	Cu	65	1845.223	0.00	0.8202	0.040	4.916	ug/L
	Zn	66	8040.958	0.01	6.4724	0.129	1.994	ug/L
>	Ge	72	536033.254	536033.25				ug/L
	As	75	435.547	0.00	0.4577	0.019	4.066	ug/L
	Se	77	125.334	0.00	0.4062	0.151	37.084	ug/L
	Se	82	66.546	0.00	0.5943	0.044	7.480	ug/L
	Rb	85	27.000	0.00				mg/L
	Y	89	342568.471	-24269.38				ug/L
	Rh	103	8.333	-14.33				ug/L
	Mo	98	58.197	0.00	-0.0320	0.001	4.114	ug/L
	Ag	107	2987.232	0.01	0.4120	0.017	4.246	ug/L
	Cd	114	323.226	0.00	0.2157	0.013	6.005	ug/L
>	In	115	484973.663	484973.66				ug/L
	Sn	118	162.402	0.00	0.0006	0.001	134.980	ug/L
	Sb	123	2360.351	0.00	0.4672	0.024	5.201	ug/L
	Ba	135	1439.805	0.00	0.7146	0.023	3.229	ug/L
	Ce	140	76.675	-0.00				ug/L
>	Tb	159	648012.347	648012.35				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	628.030	0.00	0.0779	0.003	4.321	ug/L
	Tl	205	1563.637	0.00	0.0634	0.007	10.287	ug/L
	Pb	206	2562.086	0.00	0.3824	0.002	0.649	ug/L
	Pb	207	2411.707	0.00	0.4195	0.006	1.547	ug/L
	Pb	208	10769.536	0.02	0.3894	0.009	2.254	ug/L
	U	238	14882.428	0.03	0.4011	0.009	2.208	ug/L
>	Bi	209	464116.116	464116.12				ug/L

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 12:30:15
Page 1

Approved: February 08, 2012

Na	23	18482.470	-0.01	-0.0013	0.000	18.151	mg/L
Mg	24	973.502	0.00	-0.0037	0.000	4.585	mg/L
K	39	730616.685	-0.15	-0.0109	0.004	33.373	mg/L
Ca	43	170.019	-0.00	-0.0061	0.002	26.735	mg/L
Fe	54	47997.000	-0.00	0.0017	0.008	453.115	mg/L
Fe	57	9112.567	0.00	-0.0049	0.003	67.113	mg/L
Sc-1	45	240028.829	240028.83				mg/L
Cl	35	30206.012	-2679.42				mg/L
Kr	83	52.334	1.00				mg/L
Br	81	8715.890	-266.30				mg/L
P	31	12161.610	-1484.40				mg/L
S	34	261501.298	-23347.49				mg/L
Sr	88	130.014	43.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	95.870				
Cr	52	95.163				
Cr	53					
Mn	55	101.742				
Co	59	104.710				
Ni	60	103.430				
Cu	65	102.527				
Zn	66	103.559				
Ge	72		92.244			
As	75	114.431				
Se	77					
Se	82	148.574				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	102.998				
Cd	114	107.838				
In	115		91.356			
Sn	118					
Sb	123	116.790				
Ba	135	95.279				
Ce	140					
Tb	159		96.114			
Ho	165					
Tl	203	97.390				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.343				
U	238	100.274				
Bi	209		97.839			

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 12:30:15
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Se	82	LLICV IS OUT OF LIMITS (+/-20%)

Sample ID: QC Std 3
Report Date/Time: Tuesday, February 07, 2012 12:30:15
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, February 07, 2012 12:35:40
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 6
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12375.915	0.01				ug/L
	Be	9	6.000	0.00	0.0414	0.007	16.571	ug/L
	Al	27	24660163.142	115.59	4512.7663	86.237	1.911	ug/L
>	Sc	45	213364.096	213364.10				ug/L
	Ti	49	59723.027	0.12	105.2742	7.426	7.054	ug/L
	V	51	2224.564	-0.00	-0.0521	0.022	41.980	ug/L
	Cr	52	9195.164	0.00	0.0975	0.038	39.361	ug/L
	Cr	53	2443.939	0.00	1.7406	0.277	15.922	ug/L
	Mn	55	1136.422	0.00	0.0564	0.001	1.524	ug/L
	Co	59	305.342	0.00	0.0236	0.003	12.862	ug/L
	Ni	60	1015.739	0.00	0.4900	0.008	1.550	ug/L
	Cu	65	478.685	0.00	0.1785	0.008	4.472	ug/L
	Zn	66	560.691	0.00	0.4073	0.033	8.120	ug/L
>	Ge	72	503694.666	503694.67				ug/L
	As	75	-160.270	0.00	0.0333	0.035	104.727	ug/L
	Se	77	183.335	0.00	1.0898	0.284	26.024	ug/L
	Se	82	-3.846	-0.00	0.0227	0.040	175.137	ug/L
	Rb	85	2394.035	0.00				mg/L
	Y	89	309068.237	-57769.61				ug/L
	Rh	103	21.000	-1.67				ug/L
	Mo	98	331050.514	0.73	106.5599	2.675	2.510	ug/L
	Ag	107	120.669	0.00	-0.0008	0.002	211.668	ug/L
	Cd	114	196.696	0.00	0.1458	0.023	16.048	ug/L
>	In	115	451411.487	451411.49				ug/L
	Sn	118	353.608	0.00	0.0400	0.004	9.023	ug/L
	Sb	123	357.249	0.00	0.0749	0.000	0.625	ug/L
	Ba	135	93.668	0.00	0.0322	0.014	43.715	ug/L
	Ce	140	850.128	0.00				ug/L
>	Tb	159	576563.141	576563.14				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	48.001	0.00	-0.0021	0.001	49.592	ug/L
	Tl	205	100.011	0.00	-0.0186	0.002	9.591	ug/L
	Pb	206	341.677	0.00	0.0097	0.004	38.719	ug/L
	Pb	207	273.007	0.00	0.0149	0.003	17.986	ug/L
	Pb	208	1325.055	0.00	0.0054	0.002	31.249	ug/L
	U	238	41.334	0.00	-0.0249	0.000	0.834	ug/L
>	Bi	209	423600.768	423600.77				ug/L

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 12:37:54
Page 1

Approved: February 08, 2012

⌈	Na	23	64257024.164	301.17	12.7408	0.467	3.662	mg/L
|	Mg	24	16470073.162	77.20	5.2268	0.145	2.777	mg/L
|	K	39	36260325.981	166.75	5.1485	0.072	1.408	mg/L
|	Ca	43	223859.447	1.05	15.5319	0.226	1.458	mg/L
|	Fe	54	7668131.389	35.74	13.5299	0.169	1.251	mg/L
|	Fe	57	3004998.361	14.05	12.5523	0.423	3.369	mg/L
⌊>	Sc-1	45	213364.096	213364.10				mg/L
	Cl	35	2120761.663	2087876.23				mg/L
	Kr	83	59.001	7.67				mg/L
	Br	81	7991.163	-991.02				mg/L
	P	31	1866638.161	1852992.15				mg/L
	S	34	404253.040	119404.25				mg/L
	Sr	88	713.435	626.76				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		86.679			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		85.033			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		85.517			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		89.298			

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 12:37:54
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Cd	114	ICSA IS OUT OF LIMITS (+/-RL)

Sample ID: QC Std 4
Report Date/Time: Tuesday, February 07, 2012 12:37:54
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 07, 2012 12:43:20
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 7
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14379.216	0.01				ug/L
	Be	9	34870.830	0.16	120.1131	3.786	3.152	ug/L
	Al	27	23881715.788	109.80	4286.7397	219.690	5.125	ug/L
>	Sc	45	217418.222	217418.22				ug/L
	Ti	49	63087.675	0.12	107.8216	3.747	3.475	ug/L
	V	51	980744.887	1.88	96.2220	0.128	0.133	ug/L
	Cr	52	841688.587	1.60	93.4396	2.519	2.696	ug/L
	Cr	53	186114.823	0.36	178.4064	5.467	3.065	ug/L
	Mn	55	1297724.294	2.50	95.4510	0.747	0.783	ug/L
	Co	59	953259.679	1.84	95.1881	1.206	1.267	ug/L
	Ni	60	196805.226	0.38	93.5548	1.498	1.601	ug/L
	Cu	65	191946.804	0.37	95.0695	1.320	1.389	ug/L
	Zn	66	119087.589	0.23	100.0508	0.556	0.556	ug/L
>	Ge	72	519302.032	519302.03				ug/L
	As	75	132979.095	0.26	96.3172	1.911	1.985	ug/L
	Se	77	14509.290	0.03	145.7862	0.874	0.600	ug/L
	Se	82	11362.961	0.02	95.0370	2.373	2.497	ug/L
	Rb	85	2243.991	0.00				mg/L
	Y	89	309611.209	-57226.64				ug/L
	Rh	103	67.001	44.33				ug/L
	Mo	98	324108.473	0.74	107.4648	1.460	1.359	ug/L
	Ag	107	644288.051	1.47	102.9704	2.720	2.641	ug/L
	Cd	114	139067.773	0.32	95.9483	2.456	2.560	ug/L
>	In	115	438163.366	438163.37				ug/L
	Sn	118	614.823	0.00	0.0944	0.006	6.638	ug/L
	Sb	123	483359.360	1.10	106.1202	1.262	1.190	ug/L
	Ba	135	173984.483	0.30	99.3765	1.373	1.382	ug/L
	Ce	140	796.785	0.00				ug/L
>	Tb	159	579793.253	579793.25				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	662446.810	1.46	94.1318	1.991	2.115	ug/L
	Tl	205	1675210.959	3.69	96.6522	2.178	2.253	ug/L
	Pb	206	573117.829	1.26	99.7808	1.198	1.201	ug/L
	Pb	207	497116.518	1.10	97.3435	2.962	3.043	ug/L
	Pb	208	2315689.938	5.10	97.5790	2.224	2.279	ug/L
	U	238	3459102.705	7.62	101.4646	0.900	0.887	ug/L
>	Bi	209	454071.391	454071.39				ug/L

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 12:45:33
Page 1

Approved: February 08, 2012

Na	23	62090847.689	285.51	12.0782	0.248	2.051	mg/L
Mg	24	15441746.851	71.02	4.8080	0.065	1.351	mg/L
K	39	32375291.054	145.78	4.5003	0.106	2.350	mg/L
Ca	43	207047.916	0.95	14.0917	0.300	2.128	mg/L
Fe	54	7397514.458	33.84	12.8106	0.436	3.403	mg/L
Fe	57	2986021.718	13.71	12.2466	0.408	3.328	mg/L
Sc-1	45	217418.222	217418.22				mg/L
Cl	35	89669217.027	89636331.60				mg/L
Kr	83	77.668	26.33				mg/L
Br	81	23887.569	14905.38				mg/L
P	31	1755665.226	1742019.21				mg/L
S	34	397698.073	112849.28				mg/L
Sr	88	740.108	653.43				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	96.222				
Cr	52	93.440				
Cr	53					
Mn	55	95.451				
Co	59	95.188				
Ni	60	93.555				
Cu	65	95.070				
Zn	66	100.051				
Ge	72		89.365			
As	75	96.317				
Se	77					
Se	82	95.037				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	102.970				
Cd	114	95.948				
In	115		82.538			
Sn	118					
Sb	123	106.120				
Ba	135	99.376				
Ce	140					
Tb	159		85.996			
Ho	165					
Tl	203	94.132				
Tl	205					
Pb	206					
Pb	207					
Pb	208	97.579				
U	238	101.465				
Bi	209		95.722			

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 12:45:33
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 5
Report Date/Time: Tuesday, February 07, 2012 12:45:33
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 07, 2012 12:50:58
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12776.468	0.00				ug/L
	Be	9	16404.146	0.07	53.7279	1.981	3.686	ug/L
	Al	27	299783.996	1.30	50.8470	3.753	7.381	ug/L
>	Sc	45	228593.293	228593.29				ug/L
	Ti	49	56912.720	0.11	96.7913	2.769	2.861	ug/L
	V	51	507942.085	0.97	49.4627	0.988	1.998	ug/L
	Cr	52	444222.368	0.84	48.6295	1.080	2.221	ug/L
	Cr	53	63480.543	0.12	60.1340	2.536	4.218	ug/L
	Mn	55	680938.217	1.30	49.8200	1.598	3.208	ug/L
	Co	59	499893.135	0.96	49.6514	1.180	2.377	ug/L
	Ni	60	100688.024	0.19	47.6210	0.313	0.658	ug/L
	Cu	65	100522.400	0.19	49.4926	1.029	2.079	ug/L
	Zn	66	59734.094	0.11	49.8884	0.432	0.866	ug/L
>	Ge	72	521969.711	521969.71				ug/L
	As	75	66483.827	0.13	47.9856	0.402	0.837	ug/L
	Se	77	5178.942	0.01	51.2849	1.963	3.827	ug/L
	Se	82	5714.525	0.01	47.6105	1.347	2.828	ug/L
	Rb	85	2336.351	0.00				mg/L
	Y	89	325588.065	-41249.78				ug/L
	Rh	103	30.000	7.33				ug/L
	Mo	98	320987.167	0.67	97.6881	3.243	3.320	ug/L
	Ag	107	331826.617	0.69	48.6506	0.734	1.509	ug/L
	Cd	114	77714.894	0.16	49.2195	2.569	5.220	ug/L
>	In	115	477533.965	477533.96				ug/L
	Sn	118	260963.203	0.55	48.0055	0.737	1.536	ug/L
	Sb	123	240881.107	0.50	48.5214	0.833	1.717	ug/L
	Ba	135	89744.650	0.15	48.0273	0.968	2.015	ug/L
	Ce	140	126.680	-0.00				ug/L
>	Tb	159	618798.388	618798.39				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	338765.620	0.76	48.7085	1.205	2.475	ug/L
	Tl	205	850722.241	1.90	49.6451	0.950	1.914	ug/L
	Pb	206	286127.602	0.64	50.3712	0.493	0.978	ug/L
	Pb	207	252736.216	0.56	50.0383	0.705	1.409	ug/L
	Pb	208	1170561.435	2.61	49.8754	0.490	0.982	ug/L
	U	238	1813543.724	4.04	53.8229	0.345	0.641	ug/L
>	Bi	209	448622.986	448622.99				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 12:53:11
Page 1

Approved: February 08, 2012

Na	23	26570211.944	116.14	4.9128	0.051	1.032	mg/L
Mg	24	16530819.417	72.32	4.8963	0.243	4.955	mg/L
K	39	35341613.533	151.37	4.6732	0.128	2.741	mg/L
Ca	43	75215.510	0.33	4.8588	0.038	0.789	mg/L
Fe	54	3105086.757	13.38	5.0664	0.088	1.736	mg/L
Fe	57	1367592.147	5.94	5.3072	0.212	3.991	mg/L
Sc-1	45	228593.293	228593.29				mg/L
Cl	35	231955.975	199070.54				mg/L
Kr	83	61.334	10.00				mg/L
Br	81	8028.533	-953.66				mg/L
P	31	12654.337	-991.68				mg/L
S	34	238599.766	-46249.02				mg/L
Sr	88	5288.873	5202.20				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	98.925				
Cr	52	97.259				
Cr	53					
Mn	55	99.640				
Co	59	99.303				
Ni	60	95.242				
Cu	65	98.985				
Zn	66	99.777				
Ge	72		89.824			
As	75	95.971				
Se	77					
Se	82	95.221				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	97.301				
Cd	114	98.439				
In	115		89.954			
Sn	118					
Sb	123	97.043				
Ba	135	96.055				
Ce	140					
Tb	159		91.781			
Ho	165					
Tl	203	97.417				
Tl	205					
Pb	206					
Pb	207					
Pb	208	99.751				
U	238	107.646				
Bi	209		94.573			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 12:53:11
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 12:53:11
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 07, 2012 12:58:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12108.821	0.01				ug/L
	Be	9	8.667	0.00	0.0500	0.016	31.479	ug/L
	Al	27	5751.986	0.02	0.7024	0.075	10.632	ug/L
>	Sc	45	214856.632	214856.63				ug/L
	Ti	49	153.350	0.00	0.1120	0.055	49.431	ug/L
	V	51	3030.049	0.00	0.0274	0.032	116.342	ug/L
	Cr	52	8413.998	0.00	0.0018	0.042	2365.393	ug/L
	Cr	53	6423.127	0.01	5.6456	0.385	6.828	ug/L
	Mn	55	414.348	0.00	0.0016	0.005	344.535	ug/L
	Co	59	155.670	0.00	0.0081	0.004	52.958	ug/L
	Ni	60	42.001	0.00	0.0125	0.006	47.414	ug/L
	Cu	65	113.002	0.00	-0.0085	0.009	104.895	ug/L
	Zn	66	80.335	-0.00	-0.0098	0.004	44.430	ug/L
>	Ge	72	506703.273	506703.27				ug/L
	As	75	-174.624	-0.00	0.0234	0.027	114.831	ug/L
	Se	77	156.001	0.00	0.7951	0.177	22.318	ug/L
	Se	82	-0.203	-0.00	0.0555	0.154	277.572	ug/L
	Rb	85	27.000	0.00				mg/L
	Y	89	315551.307	-51286.54				ug/L
	Rh	103	7.000	-15.67				ug/L
	Mo	98	97.166	0.00	-0.0187	0.003	13.848	ug/L
	Ag	107	161.670	0.00	0.0051	0.004	86.291	ug/L
	Cd	114	15.387	0.00	0.0243	0.003	14.168	ug/L
>	In	115	460406.395	460406.39				ug/L
	Sn	118	167.335	0.00	0.0031	0.003	104.713	ug/L
	Sb	123	453.257	0.00	0.0935	0.008	8.699	ug/L
	Ba	135	42.001	0.00	0.0020	0.005	255.295	ug/L
	Ce	140	66.674	-0.00				ug/L
>	Tb	159	588096.010	588096.01				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	383.680	0.00	0.0468	0.016	34.514	ug/L
	Tl	205	916.811	0.00	0.0297	0.014	45.992	ug/L
	Pb	206	303.675	0.00	0.0005	0.004	852.688	ug/L
	Pb	207	260.673	0.00	0.0102	0.004	35.079	ug/L
	Pb	208	1185.378	0.00	-0.0030	0.004	116.923	ug/L
	U	238	284.675	0.00	-0.0176	0.004	22.279	ug/L
>	Bi	209	440443.362	440443.36				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:00:47
Page 1

Approved: February 08, 2012

Na	23	25903.488	0.03	0.0005	0.001	148.736	mg/L
Mg	24	2300.589	0.01	-0.0032	0.000	9.787	mg/L
K	39	676104.913	-0.04	-0.0077	0.005	71.554	mg/L
Ca	43	180.020	-0.00	-0.0041	0.002	45.842	mg/L
Fe	54	48278.378	0.02	0.0110	0.005	45.276	mg/L
Fe	57	9606.502	0.01	0.0012	0.003	279.524	mg/L
Sc-1	45	214856.632	214856.63				mg/L
Cl	35	79072.180	46186.75				mg/L
Kr	83	61.668	10.33				mg/L
Br	81	8057.894	-924.29				mg/L
P	31	12376.750	-1269.26				mg/L
S	34	243803.144	-41045.65				mg/L
Sr	88	86.676	-0.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.197			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.728			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.227			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.849			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:00:47
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Tl	203	CCB IS OUT OF LIMITS (+/-1/2RL)

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:00:47
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 07, 2012 13:07:57
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12192.297	0.00				ug/L
	Be	9	11.333	0.00	0.0564	0.007	12.196	ug/L
	Al	27	3950.954	0.01	0.3109	0.118	37.801	ug/L
>	Sc	45	235343.932	235343.93				ug/L
	Ti	49	113.346	-0.00	0.0399	0.124	311.432	ug/L
	V	51	2341.126	-0.00	-0.0455	0.031	67.134	ug/L
	Cr	52	8390.308	0.00	-0.0166	0.037	222.574	ug/L
	Cr	53	3727.880	0.01	2.9340	0.425	14.501	ug/L
	Mn	55	348.344	0.00	-0.0039	0.003	85.234	ug/L
	Co	59	107.002	0.00	0.0029	0.003	97.909	ug/L
	Ni	60	38.000	0.00	0.0103	0.004	37.933	ug/L
	Cu	65	110.002	0.00	-0.0111	0.008	70.749	ug/L
	Zn	66	76.001	-0.00	-0.0146	0.003	22.875	ug/L
>	Ge	72	514865.464	514865.46				ug/L
	As	75	-165.927	0.00	0.0311	0.077	249.142	ug/L
	Se	77	105.334	0.00	0.2509	0.185	73.736	ug/L
	Se	82	-2.432	-0.00	0.0343	0.111	322.722	ug/L
	Rb	85	29.334	0.00				mg/L
	Y	89	336288.014	-30549.84				ug/L
	Rh	103	11.667	-11.00				ug/L
	Mo	98	52.233	0.00	-0.0333	0.002	5.772	ug/L
	Ag	107	99.335	0.00	-0.0048	0.001	26.596	ug/L
	Cd	114	0.105	-0.00	0.0143	0.003	22.024	ug/L
>	In	115	472866.041	472866.04				ug/L
	Sn	118	112.934	0.00	-0.0079	0.001	7.670	ug/L
	Sb	123	200.832	0.00	0.0397	0.001	3.700	ug/L
	Ba	135	25.334	-0.00	-0.0081	0.005	59.307	ug/L
	Ce	140	43.338	-0.00				ug/L
>	Tb	159	622310.027	622310.03				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	216.005	0.00	0.0214	0.002	8.927	ug/L
	Tl	205	436.722	0.00	0.0005	0.002	341.694	ug/L
	Pb	206	277.674	0.00	-0.0056	0.005	83.712	ug/L
	Pb	207	236.672	-0.00	0.0040	0.004	96.450	ug/L
	Pb	208	1110.040	0.00	-0.0076	0.001	19.668	ug/L
	U	238	144.336	0.00	-0.0219	0.001	2.992	ug/L
>	Bi	209	453189.518	453189.52				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:10:09
Page 1

Approved: February 08, 2012

Na	23	20550.719	-0.00	-0.0009	0.000	20.013	mg/L
Mg	24	1220.219	0.00	-0.0036	0.000	3.606	mg/L
K	39	670821.253	-0.34	-0.0170	0.002	11.806	mg/L
Ca	43	146.683	-0.00	-0.0073	0.003	46.947	mg/L
Fe	54	47229.465	-0.00	0.0017	0.002	89.507	mg/L
Fe	57	9025.798	0.00	-0.0046	0.002	47.530	mg/L
Sc-1	45	235343.932	235343.93				mg/L
Cl	35	50075.348	17189.92				mg/L
Kr	83	49.667	-1.67				mg/L
Br	81	7849.697	-1132.49				mg/L
P	31	12768.461	-877.55				mg/L
S	34	248607.511	-36241.28				mg/L
Sr	88	103.344	16.67				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.602			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.075			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.302			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.536			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:10:09
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 13:10:09
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: PBS 63 WG388918-02

Sample Date/Time: Tuesday, February 07, 2012 13:17:07
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 14
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12793.170	0.01				ug/L
	Be	9	6.000	0.00	0.0412	0.001	1.316	ug/L
	Al	27	4167.723	0.01	0.4082	0.113	27.757	ug/L
>	Sc	45	216083.586	216083.59				ug/L
	Ti	49	106.678	-0.00	0.0292	0.072	247.690	ug/L
	V	51	2672.824	0.00	-0.0113	0.013	113.457	ug/L
	Cr	52	8071.989	0.00	-0.0476	0.032	67.019	ug/L
	Cr	53	2680.701	0.00	1.9354	0.283	14.648	ug/L
	Mn	55	2390.700	0.00	0.1487	0.007	4.951	ug/L
	Co	59	108.668	0.00	0.0031	0.001	43.519	ug/L
	Ni	60	61.668	0.00	0.0218	0.006	27.968	ug/L
	Cu	65	126.669	0.00	-0.0024	0.011	443.818	ug/L
	Zn	66	1956.916	0.00	1.5896	0.015	0.972	ug/L
>	Ge	72	512122.467	512122.47				ug/L
	As	75	-161.118	0.00	0.0348	0.021	60.715	ug/L
	Se	77	116.001	0.00	0.3651	0.152	41.556	ug/L
	Se	82	2.559	-0.00	0.0769	0.066	85.623	ug/L
	Rb	85	32.667	0.00				mg/L
	Y	89	314226.266	-52611.58				ug/L
	Rh	103	9.000	-13.67				ug/L
	Mo	98	129.313	0.00	-0.0088	0.001	13.624	ug/L
	Ag	107	84.001	-0.00	-0.0068	0.003	38.869	ug/L
	Cd	114	2.933	-0.00	0.0161	0.002	13.279	ug/L
>	In	115	463409.918	463409.92				ug/L
	Sn	118	148.001	0.00	-0.0008	0.002	218.045	ug/L
	Sb	123	104.368	0.00	0.0205	0.002	9.927	ug/L
	Ba	135	25.334	0.00	-0.0077	0.001	9.452	ug/L
	Ce	140	23.336	-0.00				ug/L
>	Tb	159	604237.728	604237.73				ug/L
	Ho	165	0.000	-0.00				ug/L
	Tl	203	106.002	0.00	0.0065	0.001	11.817	ug/L
	Tl	205	220.025	0.00	-0.0113	0.002	22.039	ug/L
	Pb	206	273.341	0.00	-0.0036	0.006	154.604	ug/L
	Pb	207	236.339	0.00	0.0066	0.007	101.998	ug/L
	Pb	208	1086.372	0.00	-0.0061	0.004	63.355	ug/L
	U	238	34.334	0.00	-0.0251	0.001	2.401	ug/L
>	Bi	209	430000.523	430000.52				ug/L

Sample ID: PBS 63 WG388918-02
Report Date/Time: Tuesday, February 07, 2012 13:19:19
Page 1

Approved: February 08, 2012

Na	23	22419.040	0.01	-0.0002	0.000	126.540	mg/L
Mg	24	770.113	0.00	-0.0037	0.000	0.902	mg/L
K	39	641897.307	-0.22	-0.0133	0.003	21.538	mg/L
Ca	43	256.696	0.00	0.0011	0.003	299.944	mg/L
Fe	54	44754.488	0.01	0.0042	0.001	17.764	mg/L
Fe	57	8368.370	0.00	-0.0043	0.001	15.083	mg/L
Sc-1	45	216083.586	216083.59				mg/L
Cl	35	39682.930	6797.50				mg/L
Kr	83	50.667	-0.67				mg/L
Br	81	7927.117	-1055.07				mg/L
P	31	12535.081	-1110.93				mg/L
S	34	227031.848	-57816.94				mg/L
Sr	88	126.681	40.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.129			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.294			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		89.622			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.648			

Sample ID: PBS 63 WG388918-02
Report Date/Time: Tuesday, February 07, 2012 13:19:19
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBS 63 WG388918-02
Report Date/Time: Tuesday, February 07, 2012 13:19:19
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: LCSS 63 WG388918-03

Sample Date/Time: Tuesday, February 07, 2012 13:24:54
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 15
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12809.870	0.01				ug/L
	Be	9	7863.710	0.04	28.4138	0.369	1.299	ug/L
	Al	27	125997.593	0.60	23.3836	1.293	5.532	ug/L
>	Sc	45	207280.109	207280.11				ug/L
	Ti	49	113.346	0.00	0.0503	0.129	256.424	ug/L
	V	51	221421.759	0.45	22.7325	0.364	1.602	ug/L
	Cr	52	200561.949	0.39	22.7987	0.449	1.967	ug/L
	Cr	53	26036.547	0.05	25.7834	0.973	3.775	ug/L
	Mn	55	303071.048	0.62	23.5198	0.522	2.218	ug/L
	Co	59	228434.571	0.46	24.0961	0.956	3.967	ug/L
	Ni	60	47961.453	0.10	24.0767	0.459	1.908	ug/L
	Cu	65	47812.675	0.10	24.9538	0.334	1.338	ug/L
	Zn	66	28296.995	0.06	25.0424	1.075	4.293	ug/L
>	Ge	72	491839.151	491839.15				ug/L
	As	75	30733.157	0.06	23.6389	0.884	3.740	ug/L
	Se	77	2316.989	0.00	23.9018	0.554	2.319	ug/L
	Se	82	2643.369	0.01	23.3983	0.763	3.263	ug/L
	Rb	85	26.667	0.00				mg/L
	Y	89	308674.179	-58163.67				ug/L
	Rh	103	18.667	-4.00				ug/L
	Mo	98	124.048	0.00	-0.0086	0.004	44.573	ug/L
	Ag	107	149725.236	0.34	23.6856	0.611	2.581	ug/L
	Cd	114	34093.550	0.08	23.3097	0.507	2.174	ug/L
>	In	115	442282.417	442282.42				ug/L
	Sn	118	133.468	0.00	-0.0023	0.002	93.772	ug/L
	Sb	123	109022.960	0.25	23.7098	0.709	2.989	ug/L
	Ba	135	40668.066	0.07	22.8076	0.385	1.690	ug/L
	Ce	140	20.002	-0.00				ug/L
>	Tb	159	590153.938	590153.94				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	157897.750	0.36	23.4624	0.209	0.890	ug/L
	Tl	205	383357.096	0.88	23.1223	0.298	1.290	ug/L
	Pb	206	130896.562	0.30	23.8052	0.235	0.988	ug/L
	Pb	207	113775.302	0.26	23.2702	0.118	0.507	ug/L
	Pb	208	530336.979	1.22	23.3374	0.175	0.748	ug/L
	U	238	835004.345	1.93	25.6182	0.617	2.410	ug/L
>	Bi	209	433821.669	433821.67				ug/L

Sample ID: LCSS 63 WG388918-03
Report Date/Time: Tuesday, February 07, 2012 13:27:06
Page 1

Approved: February 08, 2012

	Na	23	19427.914	0.00	-0.0006	0.000	17.341	mg/L
	Mg	24	676.762	0.00	-0.0037	0.000	0.375	mg/L
	K	39	652729.635	-0.04	-0.0078	0.003	38.193	mg/L
	Ca	43	230.026	0.00	-0.0001	0.002	1342.257	mg/L
	Fe	54	40715.613	-0.00	0.0002	0.002	1278.038	mg/L
	Fe	57	8104.789	0.00	-0.0039	0.005	124.543	mg/L
>	Sc-1	45	207280.109	207280.11				mg/L
	Cl	35	35269.878	2384.45				mg/L
	Kr	83	49.001	-2.33				mg/L
	Br	81	7500.709	-1481.48				mg/L
	P	31	11322.369	-2323.65				mg/L
	S	34	222851.905	-61996.89				mg/L
	Sr	88	70.007	-16.67				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
	Be	9					
	Al	27					
>	Sc	45					
	Ti	49					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	65					
	Zn	66					
>	Ge	72		84.639			
	As	75					
	Se	77					
	Se	82					
	Rb	85					
	Y	89					
	Rh	103					
	Mo	98					
	Ag	107					
	Cd	114					
>	In	115		83.314			
	Sn	118					
	Sb	123					
	Ba	135					
	Ce	140					
>	Tb	159		87.533			
	Ho	165					
	Tl	203					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
	U	238					
>	Bi	209		91.453			

Sample ID: LCSS 63 WG388918-03
Report Date/Time: Tuesday, February 07, 2012 13:27:06
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSS 63 WG388918-03
Report Date/Time: Tuesday, February 07, 2012 13:27:06
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013505 WG388918-01

Sample Date/Time: Tuesday, February 07, 2012 13:32:41
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 16
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13978.430	0.01				ug/L
	Be	9	77.334	0.00	0.2838	0.048	16.916	ug/L
	Al	27	18721570.599	85.33	3331.4251	176.740	5.305	ug/L
>	Sc	45	219405.205	219405.21				ug/L
	Ti	49	1807.098	0.00	3.1615	2.097	66.317	ug/L
	V	51	58625.831	0.12	5.9564	0.358	6.015	ug/L
	Cr	52	77844.620	0.15	8.4768	0.298	3.512	ug/L
	Cr	53	10110.498	0.02	9.8322	0.647	6.581	ug/L
	Mn	55	3341570.731	6.96	265.7899	7.384	2.778	ug/L
	Co	59	71186.331	0.15	7.6765	0.438	5.703	ug/L
	Ni	60	39856.379	0.08	20.4793	0.820	4.003	ug/L
	Cu	65	12602.671	0.03	6.6864	0.248	3.708	ug/L
	Zn	66	35153.121	0.07	31.8816	0.855	2.682	ug/L
>	Ge	72	480089.950	480089.95				ug/L
	As	75	2882.449	0.01	2.4072	0.091	3.787	ug/L
	Se	77	110.667	0.00	0.3872	0.062	15.967	ug/L
	Se	82	18.476	0.00	0.2236	0.064	28.595	ug/L
	Rb	85	82596.354	0.17				mg/L
	Y	89	339543.862	-27293.99				ug/L
	Rh	103	29.667	7.00				ug/L
	Mo	98	238.499	0.00	0.0303	0.010	33.382	ug/L
	Ag	107	239.339	0.00	0.0190	0.003	13.373	ug/L
	Cd	114	19.346	0.00	0.0276	0.004	14.645	ug/L
>	In	115	434972.901	434972.90				ug/L
	Sn	118	67.067	0.00	-0.0153	0.001	6.949	ug/L
	Sb	123	211.702	0.00	0.0456	0.006	14.113	ug/L
	Ba	135	8093.681	0.01	4.7024	0.053	1.126	ug/L
	Ce	140	203406.521	0.36				ug/L
>	Tb	159	567393.537	567393.54				ug/L
	Ho	165	3587.813	0.01				ug/L
	Tl	203	315.676	0.00	0.0387	0.001	2.850	ug/L
	Tl	205	773.447	0.00	0.0231	0.004	19.005	ug/L
	Pb	206	26250.248	0.06	4.8449	0.106	2.192	ug/L
	Pb	207	22098.852	0.05	4.5947	0.182	3.964	ug/L
	Pb	208	104230.340	0.24	4.6525	0.150	3.234	ug/L
	U	238	6254.751	0.01	0.1703	0.010	5.639	ug/L
>	Bi	209	423722.865	423722.87				ug/L

Sample ID: L1202013505 WG388918-01
Report Date/Time: Tuesday, February 07, 2012 13:34:54
Page 1

Approved: February 08, 2012

Na	23	535249.890	2.35	0.0987	0.004	3.874	mg/L
Mg	24	10464938.500	47.73	3.2302	0.114	3.536	mg/L
K	39	6245644.949	25.27	0.7748	0.014	1.772	mg/L
Ca	43	378467.834	1.72	25.5228	1.197	4.691	mg/L
Fe	54	5923772.654	26.82	10.1534	0.722	7.111	mg/L
Fe	57	2367389.203	10.74	9.5979	0.367	3.823	mg/L
Sc-1	45	219405.205	219405.21				mg/L
Cl	35	34500.635	1615.20				mg/L
Kr	83	60.334	9.00				mg/L
Br	81	8426.926	-555.26				mg/L
P	31	64762.153	51116.14				mg/L
S	34	326718.818	41870.03				mg/L
Sr	88	466753.596	466666.92				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		82.617			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		81.937			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		84.157			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.324			

Sample ID: L1202013505 WG388918-01
Report Date/Time: Tuesday, February 07, 2012 13:34:54
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1202013505 WG388918-01
Report Date/Time: Tuesday, February 07, 2012 13:34:54
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013505S WG388918-04

Sample Date/Time: Tuesday, February 07, 2012 13:40:28
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 17
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	15080.343	0.02				ug/L
	Be	9	1941.560	0.01	6.8543	0.468	6.832	ug/L
	Al	27	19763913.370	92.96	3629.2017	69.721	1.921	ug/L
>	Sc	45	212682.456	212682.46				ug/L
	Ti	49	926.814	0.00	1.5648	0.501	31.997	ug/L
	V	51	103955.318	0.21	10.8512	0.181	1.669	ug/L
	Cr	52	122726.733	0.24	14.0144	0.164	1.171	ug/L
	Cr	53	15425.825	0.03	15.4617	0.484	3.129	ug/L
	Mn	55	2892075.726	6.06	231.4684	4.109	1.775	ug/L
	Co	59	120369.461	0.25	13.0738	0.112	0.858	ug/L
	Ni	60	49765.007	0.10	25.7400	0.163	0.632	ug/L
	Cu	65	22431.047	0.05	12.0339	0.317	2.637	ug/L
	Zn	66	31148.445	0.07	28.4188	0.402	1.415	ug/L
>	Ge	72	477213.253	477213.25				ug/L
	As	75	9641.875	0.02	7.7415	0.051	0.653	ug/L
	Se	77	596.688	0.00	5.7398	0.040	0.701	ug/L
	Se	82	600.122	0.00	5.5172	0.155	2.810	ug/L
	Rb	85	84657.072	0.18				mg/L
	Y	89	344085.001	-22752.85				ug/L
	Rh	103	27.667	5.00				ug/L
	Mo	98	217.462	0.00	0.0239	0.010	42.442	ug/L
	Ag	107	33210.724	0.08	5.3768	0.015	0.280	ug/L
	Cd	114	8238.782	0.02	5.7919	0.713	12.315	ug/L
>	In	115	431017.710	431017.71				ug/L
	Sn	118	73.600	0.00	-0.0138	0.001	6.366	ug/L
	Sb	123	886.334	0.00	0.1966	0.008	4.167	ug/L
	Ba	135	16749.318	0.03	10.1705	0.136	1.341	ug/L
	Ce	140	190667.878	0.35				ug/L
>	Tb	159	544422.911	544422.91				ug/L
	Ho	165	3320.996	0.01				ug/L
	Tl	203	34355.733	0.08	5.3031	0.248	4.671	ug/L
	Tl	205	85522.487	0.20	5.3457	0.328	6.128	ug/L
	Pb	206	54181.576	0.13	10.2178	0.483	4.726	ug/L
	Pb	207	46296.140	0.11	9.8216	0.402	4.089	ug/L
	Pb	208	218103.385	0.52	9.9485	0.451	4.537	ug/L
	U	238	189688.756	0.45	6.0291	0.236	3.921	ug/L
>	Bi	209	417313.813	417313.81				ug/L

Sample ID: L1202013505S WG388918-04
Report Date/Time: Tuesday, February 07, 2012 13:42:41
Page 1

Approved: February 08, 2012

⌈	Na	23	491559.424	2.22	0.0932	0.003	2.842	mg/L
|	Mg	24	10948091.673	51.48	3.4844	0.041	1.177	mg/L
|	K	39	5962573.033	24.86	0.7622	0.033	4.348	mg/L
|	Ca	43	315487.637	1.48	21.9545	0.486	2.214	mg/L
|	Fe	54	5486803.144	25.60	9.6922	0.226	2.334	mg/L
|	Fe	57	2326772.528	10.91	9.7495	0.334	3.424	mg/L
⌊>	Sc-1	45	212682.456	212682.46				mg/L
	Cl	35	30894.501	-1990.93				mg/L
	Kr	83	66.334	15.00				mg/L
	Br	81	8047.888	-934.30				mg/L
	P	31	58669.650	45023.64				mg/L
	S	34	295916.137	11067.35				mg/L
	Sr	88	432646.639	432559.96				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		82.122			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		81.192			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		80.750			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		87.973			

Sample ID: L1202013505S WG388918-04
Report Date/Time: Tuesday, February 07, 2012 13:42:41
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1202013505S WG388918-04
Report Date/Time: Tuesday, February 07, 2012 13:42:41
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013505SD WG388918-05

Sample Date/Time: Tuesday, February 07, 2012 13:48:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 18
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12960.121	0.01				ug/L
	Be	9	2065.589	0.01	7.1871	0.164	2.279	ug/L
	Al	27	21216662.060	98.34	3839.5281	123.466	3.216	ug/L
>	Sc	45	215740.531	215740.53				ug/L
	Ti	49	813.455	0.00	1.3383	0.261	19.494	ug/L
	V	51	109198.821	0.22	11.2445	0.441	3.917	ug/L
	Cr	52	126047.766	0.24	14.1977	0.729	5.135	ug/L
	Cr	53	15753.167	0.03	15.5728	1.117	7.173	ug/L
	Mn	55	2878159.640	5.94	226.9747	15.858	6.986	ug/L
	Co	59	127422.509	0.26	13.6381	0.711	5.217	ug/L
	Ni	60	52889.431	0.11	26.9598	1.070	3.967	ug/L
	Cu	65	25906.491	0.05	13.7043	0.245	1.786	ug/L
	Zn	66	427137.377	0.88	385.0892	8.689	2.256	ug/L
>	Ge	72	484132.314	484132.31				ug/L
	As	75	10587.869	0.02	8.3640	0.359	4.296	ug/L
	Se	77	668.027	0.00	6.4170	0.345	5.383	ug/L
	Se	82	657.475	0.00	5.9534	0.194	3.264	ug/L
	Rb	85	88992.080	0.18				mg/L
	Y	89	347282.446	-19555.40				ug/L
	Rh	103	27.667	5.00				ug/L
	Mo	98	263.166	0.00	0.0417	0.012	28.573	ug/L
	Ag	107	36384.732	0.09	6.0449	0.370	6.124	ug/L
	Cd	114	8521.747	0.02	6.1396	0.273	4.449	ug/L
>	In	115	420448.758	420448.76				ug/L
	Sn	118	68.534	0.00	-0.0145	0.001	6.601	ug/L
	Sb	123	848.870	0.00	0.1930	0.005	2.778	ug/L
	Ba	135	18715.537	0.03	11.2576	0.477	4.237	ug/L
	Ce	140	206062.432	0.37				ug/L
>	Tb	159	549722.120	549722.12				ug/L
	Ho	165	3734.546	0.01				ug/L
	Tl	203	37287.680	0.09	5.5956	0.141	2.525	ug/L
	Tl	205	93879.342	0.22	5.7061	0.250	4.381	ug/L
	Pb	206	61789.678	0.14	11.3308	0.489	4.312	ug/L
	Pb	207	54728.915	0.13	11.2934	0.680	6.024	ug/L
	Pb	208	252961.338	0.59	11.2241	0.433	3.859	ug/L
	U	238	210185.093	0.49	6.4979	0.227	3.499	ug/L
>	Bi	209	429002.742	429002.74				ug/L

Sample ID: L1202013505SD WG388918-05
Report Date/Time: Tuesday, February 07, 2012 13:50:29
Page 1

Approved: February 08, 2012

Na	23	526511.128	2.35	0.0987	0.002	2.490	mg/L
Mg	24	11397711.933	52.82	3.5752	0.050	1.389	mg/L
K	39	6317763.664	26.10	0.8003	0.025	3.128	mg/L
Ca	43	322447.160	1.49	22.1356	0.730	3.300	mg/L
Fe	54	5762002.037	26.51	10.0362	0.524	5.219	mg/L
Fe	57	2380494.285	11.00	9.8265	0.912	9.279	mg/L
Sc-1	45	215740.531	215740.53				mg/L
Cl	35	30279.590	-2605.84				mg/L
Kr	83	64.668	13.33				mg/L
Br	81	7618.818	-1363.37				mg/L
P	31	66033.711	52387.70				mg/L
S	34	308300.172	23451.38				mg/L
Sr	88	454259.076	454172.40				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		83.313			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		79.201			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		81.536			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.437			

Sample ID: L1202013505SD WG388918-05
Report Date/Time: Tuesday, February 07, 2012 13:50:29
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

Sample ID: L1202013505SD WG388918-05
Report Date/Time: Tuesday, February 07, 2012 13:50:29
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1201079520

Sample Date/Time: Tuesday, February 07, 2012 13:56:04
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 19
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13410.819	0.01				ug/L
	Be	9	38.667	0.00	0.1584	0.042	26.595	ug/L
	Al	27	4771047.597	22.41	875.1015	7.961	0.910	ug/L
>	Sc	45	212842.950	212842.95				ug/L
	Ti	49	9663.283	0.02	17.8972	2.332	13.030	ug/L
	V	51	32098.951	0.06	3.1685	0.219	6.902	ug/L
	Cr	52	37041.208	0.06	3.5671	0.180	5.056	ug/L
	Cr	53	5145.438	0.01	4.7174	0.312	6.624	ug/L
	Mn	55	230189.507	0.48	18.4500	1.176	6.375	ug/L
	Co	59	7724.999	0.02	0.8341	0.066	7.887	ug/L
	Ni	60	5018.562	0.01	2.5954	0.136	5.257	ug/L
	Cu	65	4668.355	0.01	2.4582	0.119	4.821	ug/L
	Zn	66	8058.313	0.02	7.3142	0.421	5.753	ug/L
>	Ge	72	476218.487	476218.49				ug/L
	As	75	1046.236	0.00	0.9785	0.061	6.258	ug/L
	Se	77	112.001	0.00	0.4131	0.057	13.892	ug/L
	Se	82	16.479	0.00	0.2058	0.048	23.364	ug/L
	Rb	85	6307.457	0.01				mg/L
	Y	89	335979.054	-30858.80				ug/L
	Rh	103	7.000	-15.67				ug/L
	Mo	98	438.879	0.00	0.0989	0.005	5.156	ug/L
	Ag	107	123.002	0.00	0.0005	0.003	498.936	ug/L
	Cd	114	120.791	0.00	0.0991	0.008	7.691	ug/L
>	In	115	430340.004	430340.00				ug/L
	Sn	118	101.734	0.00	-0.0081	0.002	26.944	ug/L
	Sb	123	63.950	0.00	0.0131	0.001	10.703	ug/L
	Ba	135	11981.070	0.02	7.1537	0.324	4.532	ug/L
	Ce	140	174538.334	0.32				ug/L
>	Tb	159	553147.113	553147.11				ug/L
	Ho	165	2390.584	0.01				ug/L
	Tl	203	173.337	0.00	0.0170	0.000	2.119	ug/L
	Tl	205	460.059	0.00	0.0037	0.001	38.219	ug/L
	Pb	206	7227.217	0.02	1.2965	0.099	7.630	ug/L
	Pb	207	5650.647	0.01	1.1444	0.090	7.894	ug/L
	Pb	208	27351.260	0.06	1.1821	0.076	6.388	ug/L
	U	238	10156.304	0.02	0.2935	0.019	6.582	ug/L
>	Bi	209	423136.377	423136.38				ug/L

Sample ID: L1201079520
Report Date/Time: Tuesday, February 07, 2012 13:58:17
Page 1

Approved: February 08, 2012

Na	23	103864.770	0.40	0.0161	0.001	5.673	mg/L
Mg	24	986174.670	4.63	0.3099	0.006	1.806	mg/L
K	39	1035822.766	1.68	0.0457	0.007	16.310	mg/L
Ca	43	19057.078	0.09	1.3102	0.020	1.557	mg/L
Fe	54	1313335.894	5.98	2.2635	0.070	3.073	mg/L
Fe	57	517129.611	2.40	2.1353	0.067	3.130	mg/L
Sc-1	45	212842.950	212842.95				mg/L
Cl	35	29977.208	-2908.22				mg/L
Kr	83	60.001	8.67				mg/L
Br	81	7747.603	-1234.59				mg/L
P	31	66872.919	53226.91				mg/L
S	34	211361.313	-73487.48				mg/L
Sr	88	39534.297	39447.62				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		81.951			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		81.064			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		82.044			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		89.201			

Sample ID: L1201079520
Report Date/Time: Tuesday, February 07, 2012 13:58:17
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201079520
Report Date/Time: Tuesday, February 07, 2012 13:58:17
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1201079521

Sample Date/Time: Tuesday, February 07, 2012 14:03:52
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 20
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12993.462	0.01				ug/L
	Be	9	29.333	0.00	0.1239	0.024	19.602	ug/L
	Al	27	6244348.104	29.46	1150.1802	65.529	5.697	ug/L
>	Sc	45	211996.351	211996.35				ug/L
	Ti	49	9029.127	0.02	16.2158	0.554	3.414	ug/L
	V	51	37171.927	0.07	3.5967	0.071	1.979	ug/L
	Cr	52	29382.020	0.04	2.5262	0.104	4.130	ug/L
	Cr	53	3968.013	0.01	3.3591	0.341	10.141	ug/L
	Mn	55	520605.636	1.06	40.5485	0.958	2.362	ug/L
	Co	59	9478.819	0.02	0.9950	0.023	2.323	ug/L
	Ni	60	5204.347	0.01	2.6130	0.131	5.021	ug/L
	Cu	65	3046.587	0.01	1.5335	0.026	1.700	ug/L
	Zn	66	9531.878	0.02	8.4117	0.080	0.948	ug/L
>	Ge	72	490179.720	490179.72				ug/L
	As	75	1111.781	0.00	1.0045	0.014	1.392	ug/L
	Se	77	98.667	0.00	0.2344	0.083	35.430	ug/L
	Se	82	16.858	0.00	0.2046	0.147	71.633	ug/L
	Rb	85	8662.922	0.02				mg/L
	Y	89	340942.373	-25895.48				ug/L
	Rh	103	9.667	-13.00				ug/L
	Mo	98	741.940	0.00	0.1989	0.005	2.751	ug/L
	Ag	107	111.002	0.00	-0.0016	0.002	130.992	ug/L
	Cd	114	43.607	0.00	0.0445	0.004	9.135	ug/L
>	In	115	434337.864	434337.86				ug/L
	Sn	118	94.267	0.00	-0.0098	0.002	17.998	ug/L
	Sb	123	51.786	0.00	0.0103	0.002	22.037	ug/L
	Ba	135	15359.634	0.03	8.9464	0.207	2.316	ug/L
	Ce	140	177178.031	0.31				ug/L
>	Tb	159	567349.904	567349.90				ug/L
	Ho	165	2610.671	0.01				ug/L
	Tl	203	177.337	0.00	0.0173	0.002	12.657	ug/L
	Tl	205	430.054	0.00	0.0015	0.003	168.529	ug/L
	Pb	206	10236.724	0.02	1.8331	0.076	4.138	ug/L
	Pb	207	8328.910	0.02	1.6836	0.042	2.490	ug/L
	Pb	208	39693.599	0.09	1.7161	0.050	2.908	ug/L
	U	238	9044.331	0.02	0.2547	0.011	4.191	ug/L
>	Bi	209	429034.593	429034.59				ug/L

Sample ID: L1201079521
Report Date/Time: Tuesday, February 07, 2012 14:06:06
Page 1

Approved: February 08, 2012

Na	23	75451.167	0.27	0.0105	0.001	6.877	mg/L
Mg	24	1714320.632	8.09	0.5443	0.040	7.373	mg/L
K	39	1042538.504	1.72	0.0469	0.004	7.608	mg/L
Ca	43	24244.315	0.11	1.6783	0.048	2.843	mg/L
Fe	54	1844349.483	8.50	3.2205	0.188	5.822	mg/L
Fe	57	727942.260	3.40	3.0324	0.189	6.246	mg/L
Sc-1	45	211996.351	211996.35				mg/L
Cl	35	28096.653	-4788.78				mg/L
Kr	83	54.667	3.33				mg/L
Br	81	7933.778	-1048.41				mg/L
P	31	68361.252	54715.24				mg/L
S	34	210145.008	-74703.78				mg/L
Sr	88	34554.943	34468.27				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.353			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		81.817			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		84.150			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.444			

Sample ID: L1201079521
Report Date/Time: Tuesday, February 07, 2012 14:06:06
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201079521
Report Date/Time: Tuesday, February 07, 2012 14:06:06
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1201079521PS WG388946-01

Sample Date/Time: Tuesday, February 07, 2012 14:11:41
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 21
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12960.099	0.01				ug/L
	Be	9	18515.241	0.09	66.8733	1.728	2.585	ug/L
	Al	27	6340172.527	30.59	1194.2827	16.472	1.379	ug/L
>	Sc	45	207229.674	207229.67				ug/L
	Ti	49	9196.017	0.02	16.7181	1.427	8.538	ug/L
	V	51	556055.283	1.14	58.3955	1.454	2.491	ug/L
	Cr	52	483140.105	0.98	57.1517	0.368	0.643	ug/L
	Cr	53	57785.735	0.12	58.9436	2.690	4.563	ug/L
	Mn	55	1232269.703	2.55	97.2508	3.773	3.880	ug/L
	Co	59	534591.434	1.10	57.2471	1.912	3.340	ug/L
	Ni	60	114607.816	0.24	58.4222	3.505	5.999	ug/L
	Cu	65	110068.251	0.23	58.4408	2.950	5.047	ug/L
	Zn	66	74865.449	0.15	67.4204	0.747	1.108	ug/L
>	Ge	72	484264.548	484264.55				ug/L
	As	75	71342.769	0.15	55.5046	2.256	4.065	ug/L
	Se	77	5285.676	0.01	56.5034	2.733	4.836	ug/L
	Se	82	6405.762	0.01	57.4922	3.291	5.725	ug/L
	Rb	85	9144.112	0.02				mg/L
	Y	89	349150.920	-17686.93				ug/L
	Rh	103	29.334	6.67				ug/L
	Mo	98	759.426	0.00	0.2026	0.011	5.542	ug/L
	Ag	107	346791.322	0.79	55.4566	1.176	2.121	ug/L
	Cd	114	80457.406	0.18	55.5088	3.245	5.846	ug/L
>	In	115	437611.726	437611.73				ug/L
	Sn	118	179.202	0.00	0.0071	0.004	55.658	ug/L
	Sb	123	258060.172	0.59	56.7212	2.327	4.102	ug/L
	Ba	135	108478.521	0.19	62.5764	3.903	6.238	ug/L
	Ce	140	177204.712	0.31				ug/L
>	Tb	159	574020.104	574020.10				ug/L
	Ho	165	2650.688	0.01				ug/L
	Tl	203	366432.522	0.85	54.6117	3.871	7.088	ug/L
	Tl	205	896213.532	2.07	54.2117	3.424	6.317	ug/L
	Pb	206	314284.195	0.73	57.3799	3.891	6.782	ug/L
	Pb	207	274377.690	0.63	56.3100	3.016	5.356	ug/L
	Pb	208	1272123.695	2.94	56.1930	3.405	6.060	ug/L
	U	238	1836367.957	4.24	56.4788	2.172	3.846	ug/L
>	Bi	209	433116.996	433117.00				ug/L

Sample ID: L1201079521PS WG388946-01
Report Date/Time: Tuesday, February 07, 2012 14:13:54
Page 1

Approved: February 08, 2012

Na	23	83529.041	0.31	0.0125	0.001	5.155	mg/L
Mg	24	1731985.710	8.36	0.5625	0.019	3.301	mg/L
K	39	1034289.317	1.80	0.0492	0.001	2.643	mg/L
Ca	43	25568.524	0.12	1.8116	0.123	6.779	mg/L
Fe	54	1821181.403	8.59	3.2544	0.126	3.876	mg/L
Fe	57	742657.337	3.55	3.1645	0.052	1.632	mg/L
Sc-1	45	207229.674	207229.67				mg/L
Cl	35	27004.351	-5881.08				mg/L
Kr	83	55.001	3.67				mg/L
Br	81	8071.912	-910.28				mg/L
P	31	68395.995	54749.98				mg/L
S	34	204571.679	-80277.11				mg/L
Sr	88	36034.736	35948.06				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		83.336			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.434			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		85.140			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		91.305			

Sample ID: L1201079521PS WG388946-01
Report Date/Time: Tuesday, February 07, 2012 14:13:54
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201079521PS WG388946-01
Report Date/Time: Tuesday, February 07, 2012 14:13:54
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1201079521SDL WG388946-02

Sample Date/Time: Tuesday, February 07, 2012 14:19:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 22
Method File: C:\elandata\Method\6020a.mth
Sample Description: 25

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13060.237	0.01				ug/L
	Be	9	15.333	0.00	0.0761	0.027	35.396	ug/L
	Al	27	996026.196	4.78	186.6454	3.986	2.136	ug/L
>	Sc	45	207930.323	207930.32				ug/L
	Ti	49	1276.893	0.00	2.1649	0.236	10.902	ug/L
	V	51	7487.914	0.01	0.5046	0.006	1.137	ug/L
	Cr	52	10511.064	0.01	0.2862	0.015	5.409	ug/L
	Cr	53	1440.269	0.00	0.7877	0.089	11.251	ug/L
	Mn	55	76270.947	0.16	5.9308	0.121	2.041	ug/L
	Co	59	1516.153	0.00	0.1529	0.003	1.848	ug/L
	Ni	60	869.721	0.00	0.4313	0.001	0.289	ug/L
	Cu	65	538.356	0.00	0.2173	0.012	5.415	ug/L
	Zn	66	3649.503	0.01	3.1808	0.146	4.601	ug/L
>	Ge	72	488895.034	488895.03				ug/L
	As	75	2.162	0.00	0.1544	0.026	16.525	ug/L
	Se	77	94.667	0.00	0.1947	0.064	33.082	ug/L
	Se	82	-5.539	-0.00	0.0067	0.093	1384.959	ug/L
	Rb	85	1288.113	0.00				mg/L
	Y	89	303306.315	-63531.53				ug/L
	Rh	103	11.667	-11.00				ug/L
	Mo	98	105.938	0.00	-0.0147	0.003	18.717	ug/L
	Ag	107	120.335	0.00	-0.0005	0.002	368.350	ug/L
	Cd	114	24.894	0.00	0.0311	0.005	16.039	ug/L
>	In	115	443806.920	443806.92				ug/L
	Sn	118	58.400	-0.00	-0.0173	0.001	2.992	ug/L
	Sb	123	366.422	0.00	0.0782	0.008	10.735	ug/L
	Ba	135	2203.313	0.00	1.2487	0.025	1.995	ug/L
	Ce	140	25829.252	0.04				ug/L
>	Tb	159	574694.378	574694.38				ug/L
	Ho	165	433.388	0.00				ug/L
	Tl	203	112.335	0.00	0.0075	0.000	2.908	ug/L
	Tl	205	256.697	0.00	-0.0092	0.005	57.060	ug/L
	Pb	206	1784.542	0.00	0.2749	0.019	6.742	ug/L
	Pb	207	1459.142	0.00	0.2598	0.011	4.267	ug/L
	Pb	208	7069.268	0.01	0.2607	0.011	4.410	ug/L
	U	238	1685.187	0.00	0.0261	0.001	3.065	ug/L
>	Bi	209	429408.300	429408.30				ug/L

Sample ID: L1201079521SDL WG388946-02
Report Date/Time: Tuesday, February 07, 2012 14:21:43
Page 1

Approved: February 08, 2012

Na	23	28153.637	0.05	0.0011	0.000	14.162	mg/L
Mg	24	251178.563	1.21	0.0779	0.001	1.413	mg/L
K	39	658012.470	-0.03	-0.0072	0.005	66.964	mg/L
Ca	43	3711.201	0.02	0.2485	0.029	11.554	mg/L
Fe	54	281641.110	1.15	0.4388	0.017	3.916	mg/L
Fe	57	112873.950	0.51	0.4465	0.008	1.760	mg/L
Sc-1	45	207930.323	207930.32				mg/L
Cl	35	26116.219	-6769.21				mg/L
Kr	83	62.001	10.67				mg/L
Br	81	8382.885	-599.30				mg/L
P	31	14276.972	630.96				mg/L
S	34	201546.700	-83302.09				mg/L
Sr	88	5028.689	4942.01				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.132			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		83.601			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		85.240			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		90.523			

Sample ID: L1201079521SDL WG388946-02
Report Date/Time: Tuesday, February 07, 2012 14:21:43
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201079521SDL WG388946-02
Report Date/Time: Tuesday, February 07, 2012 14:21:43
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 07, 2012 14:27:18
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13093.628	0.00				ug/L
	Be	9	16875.076	0.07	53.7649	2.239	4.164	ug/L
	Al	27	290683.575	1.22	47.8791	2.328	4.862	ug/L
>	Sc	45	235227.807	235227.81				ug/L
	Ti	49	61280.736	0.12	105.5886	4.167	3.946	ug/L
	V	51	515273.482	1.00	50.8309	0.719	1.415	ug/L
	Cr	52	459238.909	0.88	50.9689	1.305	2.560	ug/L
	Cr	53	53248.267	0.10	50.9623	0.865	1.697	ug/L
	Mn	55	680995.021	1.32	50.4916	2.021	4.002	ug/L
	Co	59	501436.581	0.97	50.4752	0.004	0.009	ug/L
	Ni	60	106083.755	0.21	50.8373	0.241	0.474	ug/L
	Cu	65	100458.263	0.19	50.1260	0.126	0.251	ug/L
	Zn	66	58833.540	0.11	49.7938	0.444	0.892	ug/L
>	Ge	72	515140.914	515140.91				ug/L
	As	75	65847.460	0.13	48.1727	1.249	2.592	ug/L
	Se	77	5040.858	0.01	50.5384	1.350	2.671	ug/L
	Se	82	5901.381	0.01	49.8013	0.896	1.800	ug/L
	Rb	85	2275.667	0.00				mg/L
	Y	89	329640.047	-37197.80				ug/L
	Rh	103	24.000	1.33				ug/L
	Mo	98	322925.786	0.69	99.9823	3.221	3.222	ug/L
	Ag	107	330906.138	0.70	49.3657	1.420	2.877	ug/L
	Cd	114	74429.654	0.16	47.9236	1.547	3.227	ug/L
>	In	115	469340.377	469340.38				ug/L
	Sn	118	261215.991	0.56	48.8859	0.466	0.953	ug/L
	Sb	123	238004.881	0.51	48.7829	0.739	1.514	ug/L
	Ba	135	89344.334	0.15	49.4797	0.689	1.393	ug/L
	Ce	140	300.036	0.00				ug/L
>	Tb	159	597910.503	597910.50				ug/L
	Ho	165	6.667	-0.00				ug/L
	Tl	203	344755.794	0.76	48.8691	0.182	0.372	ug/L
	Tl	205	852354.298	1.87	49.0522	1.346	2.745	ug/L
	Pb	206	289968.508	0.64	50.3517	0.386	0.766	ug/L
	Pb	207	250141.196	0.55	48.8353	1.061	2.172	ug/L
	Pb	208	1168649.907	2.57	49.1004	0.436	0.888	ug/L
	U	238	1895123.458	4.17	55.4663	0.902	1.625	ug/L
>	Bi	209	454899.817	454899.82				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 14:29:31
Page 1

Approved: February 08, 2012

Na	23	25894737.560	110.10	4.6574	0.218	4.682	mg/L
Mg	24	16008671.068	68.07	4.6082	0.164	3.554	mg/L
K	39	36906136.760	154.01	4.7546	0.331	6.971	mg/L
Ca	43	81051.007	0.34	5.1026	0.472	9.244	mg/L
Fe	54	3058985.603	12.83	4.8575	0.356	7.331	mg/L
Fe	57	1401239.797	5.93	5.2984	0.415	7.834	mg/L
Sc-1	45	235227.807	235227.81				mg/L
Cl	35	30765.356	-2120.08				mg/L
Kr	83	54.334	3.00				mg/L
Br	81	9042.912	60.72				mg/L
P	31	14827.213	1181.20				mg/L
S	34	249249.424	-35599.37				mg/L
Sr	88	5018.680	4932.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	101.662				
Cr	52	101.938				
Cr	53					
Mn	55	100.983				
Co	59	100.950				
Ni	60	101.675				
Cu	65	100.252				
Zn	66	99.588				
Ge	72		88.649			
As	75	96.345				
Se	77					
Se	82	99.603				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	98.731				
Cd	114	95.847				
In	115		88.411			
Sn	118					
Sb	123	97.566				
Ba	135	98.959				
Ce	140					
Tb	159		88.683			
Ho	165					
Tl	203	97.738				
Tl	205					
Pb	206					
Pb	207					
Pb	208	98.201				
U	238	110.933				
Bi	209		95.897			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 14:29:31
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 14:29:31
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 07, 2012 14:34:55
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13377.406	0.00				ug/L
	Be	9	10.000	0.00	0.0524	0.020	38.631	ug/L
	Al	27	4751.358	0.01	0.4332	0.071	16.487	ug/L
>	Sc	45	238847.758	238847.76				ug/L
	Ti	49	63.340	-0.00	-0.0496	0.081	164.078	ug/L
	V	51	2805.744	0.00	-0.0050	0.006	115.751	ug/L
	Cr	52	8812.079	0.00	0.0108	0.015	136.744	ug/L
	Cr	53	1076.845	0.00	0.3433	0.197	57.488	ug/L
	Mn	55	432.016	0.00	0.0016	0.003	189.962	ug/L
	Co	59	126.336	0.00	0.0046	0.001	32.681	ug/L
	Ni	60	44.667	0.00	0.0130	0.005	35.845	ug/L
	Cu	65	110.002	0.00	-0.0122	0.001	6.832	ug/L
	Zn	66	71.001	-0.00	-0.0199	0.006	30.679	ug/L
>	Ge	72	525535.078	525535.08				ug/L
	As	75	-162.058	0.00	0.0369	0.032	86.946	ug/L
	Se	77	98.667	0.00	0.1661	0.129	77.615	ug/L
	Se	82	11.516	-0.00	0.1511	0.067	44.516	ug/L
	Rb	85	23.334	0.00				mg/L
	Y	89	331085.348	-35752.50				ug/L
	Rh	103	7.667	-15.00				ug/L
	Mo	98	86.421	0.00	-0.0231	0.003	11.612	ug/L
	Ag	107	134.669	0.00	0.0003	0.005	1761.800	ug/L
	Cd	114	8.551	0.00	0.0196	0.005	24.700	ug/L
>	In	115	477213.322	477213.32				ug/L
	Sn	118	172.935	0.00	0.0030	0.005	168.969	ug/L
	Sb	123	561.477	0.00	0.1120	0.001	0.483	ug/L
	Ba	135	37.667	0.00	-0.0016	0.002	121.891	ug/L
	Ce	140	183.354	-0.00				ug/L
>	Tb	159	622931.352	622931.35				ug/L
	Ho	165	20.002	0.00				ug/L
	Tl	203	99.335	0.00	0.0043	0.005	125.835	ug/L
	Tl	205	266.698	0.00	-0.0098	0.003	34.240	ug/L
	Pb	206	313.009	0.00	-0.0008	0.002	266.365	ug/L
	Pb	207	261.007	0.00	0.0074	0.002	32.876	ug/L
	Pb	208	1218.714	0.00	-0.0044	0.001	16.601	ug/L
	U	238	232.006	0.00	-0.0195	0.001	7.615	ug/L
>	Bi	209	465549.213	465549.21				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 14:37:07
Page 1

Approved: February 08, 2012

Na	23	21439.914	0.00	-0.0008	0.001	70.439	mg/L
Mg	24	2023.794	0.01	-0.0033	0.000	5.500	mg/L
K	39	614995.728	-0.61	-0.0254	0.005	19.066	mg/L
Ca	43	136.682	-0.00	-0.0082	0.002	22.535	mg/L
Fe	54	49091.884	0.01	0.0037	0.002	63.128	mg/L
Fe	57	10180.580	0.01	-0.0007	0.003	437.221	mg/L
Sc-1	45	238847.758	238847.76				mg/L
Cl	35	27419.705	-5465.73				mg/L
Kr	83	55.667	4.33				mg/L
Br	81	9825.123	842.94				mg/L
P	31	13809.519	163.50				mg/L
S	34	230155.092	-54693.70				mg/L
Sr	88	66.674	-20.00				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.438			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		89.894			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		92.394			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.141			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 14:37:07
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 14:37:07
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1201079522

Sample Date/Time: Tuesday, February 07, 2012 14:42:31
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 23
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14145.341	0.01				ug/L
	Be	9	26.000	0.00	0.1005	0.024	23.530	ug/L
	Al	27	5627919.676	23.17	904.6012	30.880	3.414	ug/L
>	Sc	45	242773.645	242773.64				ug/L
	Ti	49	8518.570	0.02	14.3867	1.577	10.964	ug/L
	V	51	35394.838	0.06	3.1973	0.206	6.440	ug/L
	Cr	52	24648.986	0.03	1.7922	0.047	2.634	ug/L
	Cr	53	2837.436	0.00	2.0401	0.270	13.244	ug/L
	Mn	55	489768.931	0.94	35.9215	1.065	2.965	ug/L
	Co	59	12878.081	0.02	1.2754	0.060	4.666	ug/L
	Ni	60	6702.095	0.01	3.1710	0.082	2.596	ug/L
	Cu	65	3891.281	0.01	1.8582	0.063	3.412	ug/L
	Zn	66	7521.135	0.01	6.2303	0.128	2.060	ug/L
>	Ge	72	520601.610	520601.61				ug/L
	As	75	1071.526	0.00	0.9264	0.070	7.589	ug/L
	Se	77	112.001	0.00	0.3083	0.135	43.832	ug/L
	Se	82	14.806	0.00	0.1799	0.101	55.918	ug/L
	Rb	85	8520.105	0.02				mg/L
	Y	89	355817.256	-11020.59				ug/L
	Rh	103	8.667	-14.00				ug/L
	Mo	98	967.372	0.00	0.2505	0.007	2.635	ug/L
	Ag	107	135.669	0.00	0.0008	0.002	229.856	ug/L
	Cd	114	55.185	0.00	0.0498	0.009	18.639	ug/L
>	In	115	468938.866	468938.87				ug/L
	Sn	118	132.801	0.00	-0.0040	0.001	20.140	ug/L
	Sb	123	194.708	0.00	0.0388	0.003	8.726	ug/L
	Ba	135	12839.350	0.02	6.9539	0.137	1.977	ug/L
	Ce	140	158234.226	0.26				ug/L
>	Tb	159	609645.575	609645.58				ug/L
	Ho	165	2340.563	0.01				ug/L
	Tl	203	199.671	0.00	0.0191	0.002	8.843	ug/L
	Tl	205	456.725	0.00	0.0017	0.002	100.199	ug/L
	Pb	206	10137.265	0.02	1.7182	0.061	3.526	ug/L
	Pb	207	8373.623	0.02	1.6029	0.034	2.096	ug/L
	Pb	208	39557.979	0.09	1.6189	0.047	2.926	ug/L
	U	238	11216.322	0.02	0.3042	0.010	3.133	ug/L
>	Bi	209	452496.028	452496.03				ug/L

Sample ID: L1201079522
Report Date/Time: Tuesday, February 07, 2012 14:44:42
Page 1

Approved: February 08, 2012

Na	23	142353.267	0.50	0.0202	0.001	3.521	mg/L
Mg	24	3591328.356	14.80	0.9991	0.025	2.516	mg/L
K	39	972619.167	0.82	0.0189	0.007	34.738	mg/L
Ca	43	124719.914	0.51	7.5964	0.020	0.263	mg/L
Fe	54	1467379.441	5.85	2.2173	0.126	5.705	mg/L
Fe	57	565915.776	2.30	2.0493	0.155	7.553	mg/L
Sc-1	45	242773.645	242773.64				mg/L
Cl	35	31391.699	-1493.73				mg/L
Kr	83	60.667	9.33				mg/L
Br	81	9145.018	162.83				mg/L
P	31	56547.380	42901.37				mg/L
S	34	239703.554	-45145.24				mg/L
Sr	88	94761.915	94675.24				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.589			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		88.335			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.424			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.390			

Sample ID: L1201079522
Report Date/Time: Tuesday, February 07, 2012 14:44:42
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1201079522
Report Date/Time: Tuesday, February 07, 2012 14:44:42
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013501

Sample Date/Time: Tuesday, February 07, 2012 14:50:16
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 24
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13394.158	0.01				ug/L
	Be	9	120.668	0.00	0.4044	0.046	11.464	ug/L
	Al	27	20212396.888	86.51	3377.3568	359.365	10.640	ug/L
>	Sc	45	234946.238	234946.24				ug/L
	Ti	49	3154.249	0.01	5.1947	0.528	10.174	ug/L
	V	51	109918.252	0.20	10.4364	0.263	2.521	ug/L
	Cr	52	78201.750	0.13	7.7249	0.255	3.304	ug/L
	Cr	53	9239.381	0.02	8.1246	0.464	5.716	ug/L
	Mn	55	709089.468	1.35	51.6491	1.059	2.050	ug/L
	Co	59	58105.908	0.11	5.7416	0.239	4.164	ug/L
	Ni	60	26428.456	0.05	12.4403	0.420	3.378	ug/L
	Cu	65	5418.482	0.01	2.5943	0.069	2.669	ug/L
	Zn	66	29171.931	0.06	24.2185	0.390	1.610	ug/L
>	Ge	72	524317.113	524317.11				ug/L
	As	75	2680.664	0.01	2.0743	0.171	8.258	ug/L
	Se	77	122.001	0.00	0.4000	0.209	52.191	ug/L
	Se	82	36.218	0.00	0.3558	0.125	35.215	ug/L
	Rb	85	55768.371	0.11				mg/L
	Y	89	413293.033	46455.18				ug/L
	Rh	103	14.333	-8.33				ug/L
	Mo	98	954.370	0.00	0.2561	0.009	3.526	ug/L
	Ag	107	245.673	0.00	0.0184	0.002	11.940	ug/L
	Cd	114	43.913	0.00	0.0435	0.008	19.300	ug/L
>	In	115	453923.826	453923.83				ug/L
	Sn	118	86.534	0.00	-0.0121	0.001	5.033	ug/L
	Sb	123	108.617	0.00	0.0219	0.003	15.208	ug/L
	Ba	135	26945.105	0.04	14.8767	0.558	3.753	ug/L
	Ce	140	321087.788	0.54				ug/L
>	Tb	159	599355.072	599355.07				ug/L
	Ho	165	5345.585	0.01				ug/L
	Tl	203	237.339	0.00	0.0249	0.003	10.090	ug/L
	Tl	205	520.069	0.00	0.0058	0.007	120.019	ug/L
	Pb	206	24523.613	0.05	4.2945	0.099	2.295	ug/L
	Pb	207	20474.333	0.05	4.0380	0.084	2.073	ug/L
	Pb	208	96808.792	0.21	4.0987	0.101	2.464	ug/L
	U	238	9296.612	0.02	0.2514	0.002	0.621	ug/L
>	Bi	209	446066.687	446066.69				ug/L

Sample ID: L1202013501
Report Date/Time: Tuesday, February 07, 2012 14:52:28
Page 1

Approved: February 08, 2012

Na	23	566662.783	2.33	0.0979	0.009	9.071	mg/L
Mg	24	3740107.691	15.98	1.0789	0.079	7.332	mg/L
K	39	2002956.284	5.36	0.1593	0.017	10.619	mg/L
Ca	43	29284.288	0.12	1.8383	0.147	8.017	mg/L
Fe	54	5954663.685	25.29	9.5737	1.047	10.936	mg/L
Fe	57	2442266.740	10.41	9.2979	0.832	8.952	mg/L
Sc-1	45	234946.238	234946.24				mg/L
Cl	35	26214.529	-6670.90				mg/L
Kr	83	51.667	0.33				mg/L
Br	81	9927.924	945.74				mg/L
P	31	66064.947	52418.93				mg/L
S	34	226018.032	-58830.76				mg/L
Sr	88	131785.978	131699.30				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		90.228			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		85.507			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.897			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.034			

Sample ID: L1202013501
Report Date/Time: Tuesday, February 07, 2012 14:52:28
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202013501
Report Date/Time: Tuesday, February 07, 2012 14:52:28
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013502

Sample Date/Time: Tuesday, February 07, 2012 14:58:02
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 25
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13728.021	0.01				ug/L
	Be	9	91.334	0.00	0.3218	0.063	19.537	ug/L
	Al	27	14749143.918	65.03	2538.9611	181.171	7.136	ug/L
>	Sc	45	227122.480	227122.48				ug/L
	Ti	49	3644.495	0.01	6.1280	0.103	1.687	ug/L
	V	51	110971.861	0.21	10.7244	0.151	1.406	ug/L
	Cr	52	63097.743	0.11	6.1660	0.184	2.989	ug/L
	Cr	53	7374.002	0.01	6.4643	0.287	4.435	ug/L
	Mn	55	484802.377	0.94	35.9055	1.922	5.354	ug/L
	Co	59	24566.172	0.05	2.4639	0.152	6.167	ug/L
	Ni	60	11758.100	0.02	5.6242	0.364	6.473	ug/L
	Cu	65	3954.983	0.01	1.9086	0.167	8.727	ug/L
	Zn	66	16674.520	0.03	14.0473	0.558	3.969	ug/L
>	Ge	72	515362.419	515362.42				ug/L
	As	75	1081.611	0.00	0.9409	0.033	3.539	ug/L
	Se	77	119.334	0.00	0.3932	0.120	30.412	ug/L
	Se	82	17.142	0.00	0.2001	0.058	28.926	ug/L
	Rb	85	30375.969	0.06				mg/L
	Y	89	405404.672	38566.82				ug/L
	Rh	103	12.333	-10.33				ug/L
	Mo	98	826.579	0.00	0.2122	0.008	3.868	ug/L
	Ag	107	216.005	0.00	0.0134	0.001	7.970	ug/L
	Cd	114	38.140	0.00	0.0392	0.006	16.563	ug/L
>	In	115	459179.170	459179.17				ug/L
	Sn	118	81.067	0.00	-0.0133	0.001	3.982	ug/L
	Sb	123	78.700	0.00	0.0153	0.002	10.247	ug/L
	Ba	135	18263.564	0.03	10.2568	0.788	7.684	ug/L
	Ce	140	326845.220	0.56				ug/L
>	Tb	159	588927.270	588927.27				ug/L
	Ho	165	5889.343	0.01				ug/L
	Tl	203	191.337	0.00	0.0183	0.002	11.797	ug/L
	Tl	205	486.730	0.00	0.0038	0.004	102.720	ug/L
	Pb	206	15538.371	0.03	2.6967	0.206	7.623	ug/L
	Pb	207	12822.358	0.03	2.5098	0.167	6.653	ug/L
	Pb	208	59776.302	0.13	2.5067	0.154	6.158	ug/L
	U	238	12292.198	0.03	0.3405	0.013	3.718	ug/L
>	Bi	209	446372.058	446372.06				ug/L

Sample ID: L1202013502
Report Date/Time: Tuesday, February 07, 2012 15:00:14
Page 1

Approved: February 08, 2012

Na	23	900182.100	3.88	0.1633	0.010	6.343	mg/L
Mg	24	1974400.234	8.70	0.5857	0.035	6.027	mg/L
K	39	1343846.410	2.73	0.0780	0.009	11.011	mg/L
Ca	43	17650.460	0.08	1.1367	0.083	7.258	mg/L
Fe	54	3541506.435	15.43	5.8406	0.602	10.314	mg/L
Fe	57	1543264.092	6.77	6.0482	0.562	9.296	mg/L
Sc-1	45	227122.480	227122.48				mg/L
Cl	35	24894.468	-7990.96				mg/L
Kr	83	60.334	9.00				mg/L
Br	81	8593.108	-389.08				mg/L
P	31	94844.876	81198.86				mg/L
S	34	214023.627	-70825.16				mg/L
Sr	88	80135.199	80048.52				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.687			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.497			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.351			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.099			

Sample ID: L1202013502
Report Date/Time: Tuesday, February 07, 2012 15:00:14
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202013502
Report Date/Time: Tuesday, February 07, 2012 15:00:14
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013503

Sample Date/Time: Tuesday, February 07, 2012 15:05:48
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 26
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12926.689	0.00				ug/L
	Be	9	88.000	0.00	0.2979	0.013	4.261	ug/L
	Al	27	22497557.212	94.69	3696.8870	388.050	10.497	ug/L
>	Sc	45	237679.602	237679.60				ug/L
	Ti	49	753.444	0.00	1.1549	0.348	30.115	ug/L
	V	51	69166.994	0.13	6.6379	0.677	10.193	ug/L
	Cr	52	87942.910	0.16	9.0591	0.814	8.988	ug/L
	Cr	53	10617.888	0.02	9.6986	1.316	13.571	ug/L
	Mn	55	3044223.726	5.96	227.5438	13.951	6.131	ug/L
	Co	59	78642.244	0.15	7.9728	0.653	8.191	ug/L
	Ni	60	45035.967	0.09	21.7504	1.793	8.245	ug/L
	Cu	65	12156.679	0.02	6.0564	0.468	7.731	ug/L
	Zn	66	36608.525	0.07	31.1995	2.334	7.481	ug/L
>	Ge	72	511188.150	511188.15				ug/L
	As	75	4400.306	0.01	3.3865	0.190	5.598	ug/L
	Se	77	137.334	0.00	0.5880	0.198	33.655	ug/L
	Se	82	14.134	0.00	0.1757	0.222	126.370	ug/L
	Rb	85	78335.208	0.15				mg/L
	Y	89	368083.497	1245.65				ug/L
	Rh	103	22.334	-0.33				ug/L
	Mo	98	252.646	0.00	0.0300	0.006	19.053	ug/L
	Ag	107	192.337	0.00	0.0096	0.001	10.071	ug/L
	Cd	114	25.099	0.00	0.0306	0.005	15.531	ug/L
>	In	115	462814.191	462814.19				ug/L
	Sn	118	65.600	0.00	-0.0164	0.001	3.491	ug/L
	Sb	123	75.281	0.00	0.0145	0.001	10.168	ug/L
	Ba	135	11872.966	0.02	6.5774	0.543	8.251	ug/L
	Ce	140	229055.150	0.38				ug/L
>	Tb	159	595312.764	595312.76				ug/L
	Ho	165	3671.178	0.01				ug/L
	Tl	203	204.005	0.00	0.0198	0.002	11.781	ug/L
	Tl	205	463.393	0.00	0.0021	0.005	222.530	ug/L
	Pb	206	17855.358	0.04	3.0757	0.159	5.163	ug/L
	Pb	207	14673.125	0.03	2.8480	0.195	6.859	ug/L
	Pb	208	69950.770	0.15	2.9121	0.181	6.215	ug/L
	U	238	6542.652	0.01	0.1669	0.016	9.535	ug/L
>	Bi	209	450766.716	450766.72				ug/L

Sample ID: L1202013503
Report Date/Time: Tuesday, February 07, 2012 15:08:01
Page 1

Approved: February 08, 2012

Na	23	359714.824	1.42	0.0594	0.004	6.232	mg/L
Mg	24	12014898.776	50.56	3.4217	0.207	6.037	mg/L
K	39	5226183.477	18.81	0.5750	0.046	7.927	mg/L
Ca	43	324885.276	1.37	20.2349	1.438	7.108	mg/L
Fe	54	6768367.754	28.35	10.7340	1.171	10.909	mg/L
Fe	57	2687056.357	11.28	10.0752	0.541	5.368	mg/L
Sc-1	45	237679.602	237679.60				mg/L
Cl	35	27911.347	-4974.08				mg/L
Kr	83	61.334	10.00				mg/L
Br	81	9532.125	549.94				mg/L
P	31	59615.529	45969.52				mg/L
S	34	255147.587	-29701.20				mg/L
Sr	88	393721.795	393635.12				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.969			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.181			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.298			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.025			

Sample ID: L1202013503
Report Date/Time: Tuesday, February 07, 2012 15:08:01
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1202013503
Report Date/Time: Tuesday, February 07, 2012 15:08:01
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202013504

Sample Date/Time: Tuesday, February 07, 2012 15:13:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 27
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13995.131	0.01				ug/L
	Be	9	69.334	0.00	0.2522	0.032	12.776	ug/L
	Al	27	21053130.117	93.94	3667.6427	302.373	8.244	ug/L
>	Sc	45	224004.231	224004.23				ug/L
	Ti	49	860.133	0.00	1.3787	0.439	31.823	ug/L
	V	51	61834.692	0.12	6.0734	0.466	7.671	ug/L
	Cr	52	83967.374	0.15	8.8670	0.730	8.228	ug/L
	Cr	53	9709.965	0.02	9.0653	0.416	4.589	ug/L
	Mn	55	2171666.437	4.36	166.7589	14.224	8.529	ug/L
	Co	59	70981.150	0.14	7.3932	0.681	9.213	ug/L
	Ni	60	42879.147	0.09	21.2760	2.187	10.280	ug/L
	Cu	65	10079.897	0.02	5.1494	0.525	10.186	ug/L
	Zn	66	32443.154	0.07	28.3981	1.813	6.385	ug/L
>	Ge	72	497615.763	497615.76				ug/L
	As	75	3170.405	0.01	2.5466	0.272	10.698	ug/L
	Se	77	96.001	0.00	0.1908	0.009	4.707	ug/L
	Se	82	21.870	0.00	0.2470	0.108	43.767	ug/L
	Rb	85	81046.539	0.16				mg/L
	Y	89	349316.535	-17521.31				ug/L
	Rh	103	22.667	-0.00				ug/L
	Mo	98	182.054	0.00	0.0090	0.004	46.277	ug/L
	Ag	107	198.671	0.00	0.0112	0.002	17.666	ug/L
	Cd	114	9.252	0.00	0.0204	0.001	3.490	ug/L
>	In	115	453483.671	453483.67				ug/L
	Sn	118	57.600	-0.00	-0.0177	0.001	4.564	ug/L
	Sb	123	52.238	0.00	0.0099	0.002	16.552	ug/L
	Ba	135	7036.060	0.01	3.9524	0.434	10.974	ug/L
	Ce	140	169211.861	0.29				ug/L
>	Tb	159	586744.287	586744.29				ug/L
	Ho	165	2930.810	0.01				ug/L
	Tl	203	194.338	0.00	0.0190	0.002	8.261	ug/L
	Tl	205	560.075	0.00	0.0084	0.001	16.351	ug/L
	Pb	206	15106.879	0.03	2.6491	0.210	7.927	ug/L
	Pb	207	12725.863	0.03	2.5178	0.191	7.571	ug/L
	Pb	208	60324.136	0.13	2.5577	0.196	7.675	ug/L
	U	238	5552.911	0.01	0.1412	0.012	8.811	ug/L
>	Bi	209	442051.612	442051.61				ug/L

Sample ID: L1202013504
Report Date/Time: Tuesday, February 07, 2012 15:15:47
Page 1

Approved: February 08, 2012

⌈	Na	23	783712.741	3.41	0.1434	0.008	5.298	mg/L
|	Mg	24	11104954.178	49.56	3.3538	0.231	6.886	mg/L
|	K	39	5296050.966	20.44	0.6256	0.030	4.781	mg/L
|	Ca	43	276050.952	1.23	18.2391	1.377	7.548	mg/L
|	Fe	54	5738492.887	25.41	9.6191	0.829	8.619	mg/L
|	Fe	57	2311246.184	10.28	9.1810	0.702	7.646	mg/L
⌊>	Sc-1	45	224004.231	224004.23				mg/L
	Cl	35	26676.638	-6208.79				mg/L
	Kr	83	53.334	2.00				mg/L
	Br	81	8979.504	-2.68				mg/L
	P	31	48644.606	34998.59				mg/L
	S	34	317941.324	33092.53				mg/L
	Sr	88	375123.338	375036.66				mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	6					
|	Be	9					
|	Al	27					
⌊>	Sc	45					
⌈	Ti	49					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	65					
|	Zn	66					
|>	Ge	72		85.633			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Rb	85					
	Y	89					
	Rh	103					
⌈	Mo	98					
|	Ag	107					
|	Cd	114					
|>	In	115		85.424			
|	Sn	118					
⌊	Sb	123					
⌈	Ba	135					
|	Ce	140					
⌊>	Tb	159		87.027			
⌈	Ho	165					
|	Tl	203					
|	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
|	U	238					
⌊>	Bi	209		93.188			

Sample ID: L1202013504
Report Date/Time: Tuesday, February 07, 2012 15:15:47
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1202013504
Report Date/Time: Tuesday, February 07, 2012 15:15:47
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 07, 2012 15:21:22
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12375.900	0.00				ug/L
	Be	9	17000.657	0.07	54.9112	2.420	4.407	ug/L
	Al	27	314565.007	1.35	52.6393	3.077	5.846	ug/L
>	Sc	45	232109.199	232109.20				ug/L
	Ti	49	59967.648	0.12	103.0710	1.507	1.462	ug/L
	V	51	526254.293	1.01	51.8069	0.530	1.023	ug/L
	Cr	52	461179.258	0.88	51.0739	0.287	0.561	ug/L
	Cr	53	53365.694	0.10	50.9596	0.895	1.756	ug/L
	Mn	55	714161.104	1.38	52.8212	0.643	1.218	ug/L
	Co	59	521174.566	1.01	52.3418	0.600	1.146	ug/L
	Ni	60	109117.687	0.21	52.1718	0.635	1.216	ug/L
	Cu	65	105461.264	0.20	52.5094	0.817	1.556	ug/L
	Zn	66	59364.043	0.11	50.1239	0.944	1.883	ug/L
>	Ge	72	516294.459	516294.46				ug/L
	As	75	66180.997	0.13	48.2955	1.127	2.333	ug/L
	Se	77	5013.508	0.01	50.1411	1.328	2.649	ug/L
	Se	82	5988.501	0.01	50.4134	0.484	0.961	ug/L
	Rb	85	2371.028	0.00				mg/L
	Y	89	329290.098	-37547.75				ug/L
	Rh	103	24.000	1.33				ug/L
	Mo	98	318488.794	0.68	98.3737	2.368	2.407	ug/L
	Ag	107	328442.961	0.70	48.8881	1.224	2.503	ug/L
	Cd	114	74050.389	0.16	47.6019	2.048	4.303	ug/L
>	In	115	470491.438	470491.44				ug/L
	Sn	118	265308.462	0.56	49.5620	2.119	4.275	ug/L
	Sb	123	232009.527	0.49	47.4692	2.246	4.731	ug/L
	Ba	135	90408.468	0.15	48.1607	0.712	1.479	ug/L
	Ce	140	533.404	0.00				ug/L
>	Tb	159	621657.045	621657.04				ug/L
	Ho	165	10.001	0.00				ug/L
	Tl	203	359551.896	0.79	50.9155	0.926	1.820	ug/L
	Tl	205	874318.294	1.92	50.2544	0.523	1.041	ug/L
	Pb	206	297853.044	0.65	51.6690	1.728	3.345	ug/L
	Pb	207	263674.366	0.58	51.4213	0.323	0.627	ug/L
	Pb	208	1197497.556	2.63	50.2603	0.555	1.104	ug/L
	U	238	1901792.999	4.18	55.5964	1.090	1.961	ug/L
>	Bi	209	455409.471	455409.47				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 15:23:35
Page 1

Approved: February 08, 2012

Na	23	27338855.210	117.92	4.9880	0.311	6.225	mg/L
Mg	24	16558375.681	71.44	4.8367	0.277	5.735	mg/L
K	39	36933257.423	156.13	4.8203	0.212	4.392	mg/L
Ca	43	77220.745	0.33	4.9230	0.348	7.077	mg/L
Fe	54	3197431.352	13.58	5.1429	0.170	3.301	mg/L
Fe	57	1415189.767	6.07	5.4173	0.214	3.956	mg/L
Sc-1	45	232109.199	232109.20				mg/L
Cl	35	29400.497	-3484.93				mg/L
Kr	83	47.334	-4.00				mg/L
Br	81	9682.294	700.11				mg/L
P	31	16988.148	3342.13				mg/L
S	34	258993.039	-25855.75				mg/L
Sr	88	5148.775	5062.10				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	103.614				
Cr	52	102.148				
Cr	53					
Mn	55	105.642				
Co	59	104.684				
Ni	60	104.344				
Cu	65	105.019				
Zn	66	100.248				
Ge	72		88.847			
As	75	96.591				
Se	77					
Se	82	100.827				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	97.776				
Cd	114	95.204				
In	115		88.628			
Sn	118					
Sb	123	94.938				
Ba	135	96.321				
Ce	140					
Tb	159		92.205			
Ho	165					
Tl	203	101.831				
Tl	205					
Pb	206					
Pb	207					
Pb	208	100.521				
U	238	111.193				
Bi	209		96.004			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 15:23:35
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 15:23:35
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 07, 2012 15:28:59
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12726.393	0.00				ug/L
	Be	9	5.333	0.00	0.0377	0.004	10.926	ug/L
	Al	27	8737.926	0.03	1.1309	0.203	17.980	ug/L
>	Sc	45	232664.855	232664.85				ug/L
	Ti	49	73.341	-0.00	-0.0295	0.028	95.153	ug/L
	V	51	2708.701	0.00	-0.0094	0.005	52.552	ug/L
	Cr	52	8544.798	0.00	-0.0004	0.005	1175.399	ug/L
	Cr	53	853.463	0.00	0.1441	0.128	89.028	ug/L
	Mn	55	465.018	0.00	0.0047	0.004	91.524	ug/L
	Co	59	121.335	0.00	0.0043	0.002	39.844	ug/L
	Ni	60	39.000	0.00	0.0107	0.002	21.610	ug/L
	Cu	65	100.668	-0.00	-0.0158	0.001	4.009	ug/L
	Zn	66	84.001	-0.00	-0.0078	0.004	56.406	ug/L
>	Ge	72	515393.283	515393.28				ug/L
	As	75	-176.651	-0.00	0.0239	0.014	58.811	ug/L
	Se	77	88.667	0.00	0.0810	0.038	47.096	ug/L
	Se	82	10.887	-0.00	0.1472	0.072	48.976	ug/L
	Rb	85	34.667	0.00				mg/L
	Y	89	331806.120	-35031.73				ug/L
	Rh	103	10.667	-12.00				ug/L
	Mo	98	84.823	0.00	-0.0228	0.001	6.458	ug/L
	Ag	107	115.669	0.00	-0.0021	0.003	121.118	ug/L
	Cd	114	10.766	0.00	0.0212	0.002	8.240	ug/L
>	In	115	464417.128	464417.13				ug/L
	Sn	118	153.201	0.00	0.0002	0.002	1004.674	ug/L
	Sb	123	475.303	0.00	0.0975	0.014	14.512	ug/L
	Ba	135	35.000	0.00	-0.0025	0.002	73.892	ug/L
	Ce	140	270.031	0.00				ug/L
>	Tb	159	606092.800	606092.80				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	74.668	0.00	0.0011	0.003	270.244	ug/L
	Tl	205	213.358	0.00	-0.0125	0.003	24.161	ug/L
	Pb	206	287.341	0.00	-0.0044	0.002	54.351	ug/L
	Pb	207	274.007	0.00	0.0108	0.006	52.685	ug/L
	Pb	208	1217.048	0.00	-0.0036	0.003	80.599	ug/L
	U	238	243.006	0.00	-0.0191	0.001	4.610	ug/L
>	Bi	209	457408.040	457408.04				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 15:31:11
Page 1

Approved: February 08, 2012

Na	23	19458.062	-0.00	-0.0010	0.000	48.314	mg/L
Mg	24	2217.193	0.01	-0.0033	0.000	5.828	mg/L
K	39	614365.309	-0.54	-0.0232	0.007	30.049	mg/L
Ca	43	123.347	-0.00	-0.0087	0.003	30.822	mg/L
Fe	54	53778.865	0.03	0.0137	0.008	61.969	mg/L
Fe	57	10100.493	0.01	0.0001	0.005	8877.110	mg/L
Sc-1	45	232664.855	232664.85				mg/L
Cl	35	27240.465	-5644.97				mg/L
Kr	83	51.334	0.00				mg/L
Br	81	9763.722	781.53				mg/L
P	31	14313.768	667.75				mg/L
S	34	246963.599	-37885.19				mg/L
Sr	88	110.012	23.34				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.692			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.483			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		89.897			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		96.425			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 15:31:11
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 15:31:11
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: PBW 60 WG388814-02

Sample Date/Time: Tuesday, February 07, 2012 15:36:35
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 28
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14011.807	0.01				ug/L
	Be	9	8.667	0.00	0.0490	0.021	43.136	ug/L
	Al	27	8704.552	0.03	1.1498	0.101	8.785	ug/L
>	Sc	45	227480.673	227480.67				ug/L
	Ti	49	90.010	-0.00	-0.0029	0.091	3115.602	ug/L
	V	51	2777.235	0.00	-0.0070	0.008	114.012	ug/L
	Cr	52	8982.597	0.00	0.0331	0.027	82.201	ug/L
	Cr	53	773.447	0.00	0.0541	0.062	114.930	ug/L
	Mn	55	774.377	0.00	0.0267	0.003	10.113	ug/L
	Co	59	160.003	0.00	0.0079	0.002	28.335	ug/L
	Ni	60	127.336	0.00	0.0521	0.005	8.690	ug/L
	Cu	65	166.670	0.00	0.0158	0.005	29.739	ug/L
	Zn	66	676.368	0.00	0.4849	0.001	0.251	ug/L
>	Ge	72	523713.710	523713.71				ug/L
	As	75	-191.838	-0.00	0.0151	0.023	151.171	ug/L
	Se	77	94.001	0.00	0.1196	0.197	164.924	ug/L
	Se	82	7.533	-0.00	0.1182	0.055	46.258	ug/L
	Rb	85	46.334	0.00				mg/L
	Y	89	336111.042	-30726.81				ug/L
	Rh	103	9.000	-13.67				ug/L
	Mo	98	225.827	0.00	0.0178	0.006	36.554	ug/L
	Ag	107	137.336	0.00	0.0001	0.002	1185.779	ug/L
	Cd	114	22.144	0.00	0.0278	0.007	23.429	ug/L
>	In	115	488967.243	488967.24				ug/L
	Sn	118	197.602	0.00	0.0067	0.003	49.047	ug/L
	Sb	123	305.626	0.00	0.0589	0.002	3.752	ug/L
	Ba	135	76.668	0.00	0.0190	0.002	12.783	ug/L
	Ce	140	193.355	-0.00				ug/L
>	Tb	159	624827.681	624827.68				ug/L
	Ho	165	30.003	0.00				ug/L
	Tl	203	86.335	0.00	0.0024	0.001	54.649	ug/L
	Tl	205	223.359	0.00	-0.0125	0.003	22.902	ug/L
	Pb	206	352.344	0.00	0.0047	0.003	74.298	ug/L
	Pb	207	292.675	0.00	0.0124	0.003	24.812	ug/L
	Pb	208	1372.391	0.00	0.0009	0.003	383.297	ug/L
	U	238	282.674	0.00	-0.0182	0.001	5.925	ug/L
>	Bi	209	474663.976	474663.98				ug/L

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 15:38:48
Page 1

Approved: February 08, 2012

Na	23	25588.514	0.02	0.0002	0.000	96.507	mg/L
Mg	24	4468.326	0.02	-0.0026	0.000	6.069	mg/L
K	39	614381.581	-0.49	-0.0216	0.001	5.362	mg/L
Ca	43	400.050	0.00	0.0095	0.002	24.699	mg/L
Fe	54	53364.119	0.03	0.0145	0.003	21.949	mg/L
Fe	57	10290.717	0.01	0.0015	0.002	118.865	mg/L
> Sc-1	45	227480.673	227480.67				mg/L
Cl	35	28736.136	-4149.30				mg/L
Kr	83	53.667	2.33				mg/L
Br	81	9851.157	868.97				mg/L
P	31	16453.732	2807.72				mg/L
S	34	243993.328	-40855.46				mg/L
Sr	88	243.361	156.69				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		90.124			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
> In	115		92.108			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
> Tb	159		92.675			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
> Bi	209		100.063			

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 15:38:48
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 60 WG388814-02
Report Date/Time: Tuesday, February 07, 2012 15:38:48
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: LCSW 60 WG388814-03

Sample Date/Time: Tuesday, February 07, 2012 15:44:22
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 29
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	12609.539	0.00				ug/L
	Be	9	8315.481	0.04	26.9526	1.168	4.333	ug/L
	Al	27	144390.625	0.62	24.0798	1.893	7.861	ug/L
>	Sc	45	231425.282	231425.28				ug/L
	Ti	49	110.012	-0.00	0.0307	0.027	86.726	ug/L
	V	51	252530.067	0.48	24.4142	0.501	2.052	ug/L
	Cr	52	227884.694	0.42	24.4363	0.292	1.193	ug/L
	Cr	53	27183.676	0.05	25.3054	0.604	2.388	ug/L
	Mn	55	341827.404	0.65	24.9744	0.980	3.925	ug/L
	Co	59	257374.434	0.49	25.5314	0.540	2.113	ug/L
	Ni	60	52472.919	0.10	24.7920	0.765	3.085	ug/L
	Cu	65	52008.314	0.10	25.5607	0.851	3.329	ug/L
	Zn	66	29242.518	0.06	24.3570	0.223	0.917	ug/L
>	Ge	72	522614.253	522614.25				ug/L
	As	75	32522.124	0.06	23.5359	0.618	2.628	ug/L
	Se	77	2619.079	0.00	25.4818	0.957	3.756	ug/L
	Se	82	2860.458	0.01	23.8325	1.072	4.497	ug/L
	Rb	85	49.334	0.00				mg/L
	Y	89	328811.289	-38026.56				ug/L
	Rh	103	22.000	-0.67				ug/L
	Mo	98	69.640	0.00	-0.0279	0.003	10.923	ug/L
	Ag	107	165963.871	0.35	24.6532	0.353	1.431	ug/L
	Cd	114	36920.319	0.08	23.6944	0.318	1.344	ug/L
>	In	115	471102.250	471102.25				ug/L
	Sn	118	113.867	0.00	-0.0076	0.002	20.842	ug/L
	Sb	123	116452.845	0.25	23.7790	0.638	2.685	ug/L
	Ba	135	43876.655	0.07	23.7025	0.165	0.698	ug/L
	Ce	140	196.689	-0.00				ug/L
>	Tb	159	612612.629	612612.63				ug/L
	Ho	165	3.334	-0.00				ug/L
	Tl	203	173412.303	0.38	24.6710	0.722	2.927	ug/L
	Tl	205	435317.023	0.96	25.1387	1.067	4.244	ug/L
	Pb	206	145634.168	0.32	25.3545	0.557	2.195	ug/L
	Pb	207	126906.320	0.28	24.8444	0.294	1.183	ug/L
	Pb	208	589620.348	1.30	24.8318	0.164	0.660	ug/L
	U	238	914038.952	2.02	26.8322	0.154	0.573	ug/L
>	Bi	209	453319.978	453319.98				ug/L

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 15:46:35
Page 1

Approved: February 08, 2012

Na	23	25421.266	0.02	0.0001	0.000	410.363	mg/L
Mg	24	743.441	0.00	-0.0037	0.000	1.082	mg/L
K	39	614598.986	-0.53	-0.0229	0.004	15.649	mg/L
Ca	43	173.352	-0.00	-0.0054	0.002	29.513	mg/L
Fe	54	48181.758	0.01	0.0047	0.005	114.274	mg/L
Fe	57	9266.092	0.00	-0.0030	0.004	126.311	mg/L
Sc-1	45	231425.282	231425.28				mg/L
Cl	35	26364.309	-6521.12				mg/L
Kr	83	47.334	-4.00				mg/L
Br	81	10035.377	1053.19				mg/L
P	31	14388.497	742.48				mg/L
S	34	225188.295	-59660.49				mg/L
Sr	88	256.698	170.02				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		89.935			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		88.743			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.864			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		95.563			

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 15:46:35
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 60 WG388814-03
Report Date/Time: Tuesday, February 07, 2012 15:46:35
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202009101

Sample Date/Time: Tuesday, February 07, 2012 15:52:10
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 30
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13711.271	0.01				ug/L
	Be	9	6.000	0.00	0.0399	0.023	58.595	ug/L
	Al	27	94788.232	0.40	15.7362	1.285	8.167	ug/L
>	Sc	45	230134.477	230134.48				ug/L
	Ti	49	330.040	0.00	0.4344	0.190	43.787	ug/L
	V	51	31909.391	0.06	3.0245	0.101	3.356	ug/L
	Cr	52	24367.162	0.03	1.9085	0.045	2.384	ug/L
	Cr	53	2924.144	0.00	2.2760	0.371	16.310	ug/L
	Mn	55	11006.380	0.02	0.8220	0.034	4.165	ug/L
	Co	59	377.679	0.00	0.0318	0.001	1.910	ug/L
	Ni	60	1403.132	0.00	0.6936	0.042	6.127	ug/L
	Cu	65	515.354	0.00	0.2026	0.017	8.174	ug/L
	Zn	66	5885.136	0.01	5.1255	0.087	1.700	ug/L
>	Ge	72	493891.309	493891.31				ug/L
	As	75	695.958	0.00	0.6815	0.035	5.201	ug/L
	Se	77	146.001	0.00	0.7273	0.253	34.760	ug/L
	Se	82	78.219	0.00	0.7428	0.021	2.794	ug/L
	Rb	85	4638.672	0.01				mg/L
	Y	89	321625.256	-45212.59				ug/L
	Rh	103	66.001	43.33				ug/L
	Mo	98	6601.283	0.01	2.1077	0.092	4.368	ug/L
	Ag	107	127.002	0.00	0.0004	0.001	185.245	ug/L
	Cd	114	27.520	0.00	0.0328	0.005	15.512	ug/L
>	In	115	445194.945	445194.95				ug/L
	Sn	118	1647.763	0.00	0.2966	0.012	3.982	ug/L
	Sb	123	587.269	0.00	0.1260	0.025	19.976	ug/L
	Ba	135	14127.113	0.02	7.8117	0.168	2.154	ug/L
	Ce	140	1863.730	0.00				ug/L
>	Tb	159	597544.749	597544.75				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	64.001	0.00	-0.0002	0.001	736.521	ug/L
	Tl	205	143.349	0.00	-0.0165	0.004	25.879	ug/L
	Pb	206	2041.270	0.00	0.3053	0.004	1.322	ug/L
	Pb	207	1663.849	0.00	0.2868	0.005	1.598	ug/L
	Pb	208	7969.253	0.02	0.2850	0.005	1.842	ug/L
	U	238	12190.032	0.03	0.3355	0.012	3.627	ug/L
>	Bi	209	449206.290	449206.29				ug/L

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 15:54:22
Page 1

Approved: February 08, 2012

Na	23	51943203.773	225.64	9.5453	0.246	2.576	mg/L
Mg	24	4650125.772	20.21	1.3652	0.042	3.095	mg/L
K	39	6182107.381	23.67	0.7253	0.009	1.206	mg/L
Ca	43	185197.586	0.80	11.9081	0.257	2.154	mg/L
Fe	54	106860.818	0.26	0.1016	0.011	10.856	mg/L
Fe	57	27274.041	0.08	0.0670	0.006	8.801	mg/L
Sc-1	45	230134.477	230134.48				mg/L
Cl	35	139015.270	106129.84				mg/L
Kr	83	51.667	0.33				mg/L
Br	81	22747.011	13764.82				mg/L
P	31	25005.715	11359.70				mg/L
S	34	447831.722	162982.93				mg/L
Sr	88	1238818.861	1238732.19				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.992			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		83.862			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.629			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.696			

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 15:54:22
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202009101
Report Date/Time: Tuesday, February 07, 2012 15:54:22
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007505 WG388814-01

Sample Date/Time: Tuesday, February 07, 2012 15:59:57
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 31
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13344.011	0.01				ug/L
	Be	9	8.667	0.00	0.0497	0.002	3.846	ug/L
	Al	27	74842.345	0.33	12.9071	2.729	21.143	ug/L
>	Sc	45	221223.072	221223.07				ug/L
	Ti	49	103.344	-0.00	0.0315	0.058	183.781	ug/L
	V	51	2809.241	0.00	0.0144	0.016	110.934	ug/L
	Cr	52	12756.886	0.01	0.5474	0.058	10.615	ug/L
	Cr	53	1223.546	0.00	0.5611	0.066	11.812	ug/L
	Mn	55	39097.588	0.08	3.0128	0.136	4.529	ug/L
	Co	59	820.382	0.00	0.0787	0.004	4.466	ug/L
	Ni	60	1484.814	0.00	0.7391	0.058	7.835	ug/L
	Cu	65	543.356	0.00	0.2187	0.008	3.687	ug/L
	Zn	66	3400.395	0.01	2.9436	0.056	1.901	ug/L
>	Ge	72	491297.997	491298.00				ug/L
	As	75	-181.868	-0.00	0.0134	0.020	145.426	ug/L
	Se	77	111.334	0.00	0.3714	0.244	65.619	ug/L
	Se	82	3.223	-0.00	0.0835	0.071	84.924	ug/L
	Rb	85	5143.305	0.01				mg/L
	Y	89	319148.575	-47689.27				ug/L
	Rh	103	9.667	-13.00				ug/L
	Mo	98	165.085	0.00	0.0056	0.005	88.300	ug/L
	Ag	107	80.001	-0.00	-0.0066	0.003	40.717	ug/L
	Cd	114	5.352	0.00	0.0179	0.002	10.346	ug/L
>	In	115	435972.925	435972.93				ug/L
	Sn	118	406.810	0.00	0.0531	0.003	4.958	ug/L
	Sb	123	220.788	0.00	0.0475	0.003	6.328	ug/L
	Ba	135	9274.919	0.02	5.2623	0.182	3.451	ug/L
	Ce	140	2150.493	0.00				ug/L
>	Tb	159	581693.599	581693.60				ug/L
	Ho	165	33.337	0.00				ug/L
	Tl	203	45.667	0.00	-0.0026	0.001	45.851	ug/L
	Tl	205	96.677	0.00	-0.0190	0.002	10.603	ug/L
	Pb	206	419.015	0.00	0.0217	0.003	14.682	ug/L
	Pb	207	347.677	0.00	0.0283	0.001	2.502	ug/L
	Pb	208	1646.415	0.00	0.0175	0.005	28.483	ug/L
	U	238	203.005	0.00	-0.0200	0.000	1.815	ug/L
>	Bi	209	437389.280	437389.28				ug/L

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 16:02:10
Page 1

Approved: February 08, 2012

Na	23	3176427.999	14.28	0.6033	0.020	3.372	mg/L
Mg	24	769056.875	3.48	0.2319	0.012	5.306	mg/L
K	39	1904944.458	5.43	0.1615	0.010	6.029	mg/L
Ca	43	4675.121	0.02	0.2961	0.012	3.996	mg/L
Fe	54	115954.576	0.32	0.1247	0.012	9.532	mg/L
Fe	57	19768.822	0.05	0.0410	0.005	11.372	mg/L
Sc-1	45	221223.072	221223.07				mg/L
Cl	35	43742.514	10857.08				mg/L
Kr	83	51.001	-0.33				mg/L
Br	81	11688.860	2706.67				mg/L
P	31	24881.102	11235.09				mg/L
S	34	217619.495	-67229.29				mg/L
Sr	88	24859.558	24772.88				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		84.546			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.125			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		86.278			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		92.205			

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 16:02:10
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007505 WG388814-01
Report Date/Time: Tuesday, February 07, 2012 16:02:10
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007508S WG388814-04

Sample Date/Time: Tuesday, February 07, 2012 16:16:21
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 32
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14228.886	0.01				ug/L
	Be	9	8491.659	0.04	26.9316	1.241	4.607	ug/L
	Al	27	269083.606	1.13	44.1692	12.805	28.992	ug/L
>	Sc	45	236550.878	236550.88				ug/L
	Ti	49	113.345	0.00	0.0434	0.065	150.389	ug/L
	V	51	253910.813	0.50	25.3027	0.023	0.089	ug/L
	Cr	52	230617.034	0.44	25.5377	0.921	3.607	ug/L
	Cr	53	27280.641	0.05	26.1991	0.499	1.904	ug/L
	Mn	55	391274.039	0.77	29.4759	1.864	6.325	ug/L
	Co	59	255439.300	0.50	26.1203	0.477	1.824	ug/L
	Ni	60	55113.232	0.11	26.8280	0.462	1.721	ug/L
	Cu	65	52572.851	0.10	26.6247	0.754	2.832	ug/L
	Zn	66	30032.664	0.06	25.7949	1.057	4.097	ug/L
>	Ge	72	507183.562	507183.56				ug/L
	As	75	30772.350	0.06	22.9534	0.753	3.281	ug/L
	Se	77	2296.316	0.00	22.9511	0.879	3.830	ug/L
	Se	82	2538.346	0.00	21.7874	0.445	2.042	ug/L
	Rb	85	5346.437	0.01				mg/L
	Y	89	326700.164	-40137.69				ug/L
	Rh	103	20.000	-2.67				ug/L
	Mo	98	377.761	0.00	0.0707	0.011	15.649	ug/L
	Ag	107	157419.605	0.34	24.0922	0.199	0.824	ug/L
	Cd	114	34671.974	0.08	22.9315	1.412	6.157	ug/L
>	In	115	457229.612	457229.61				ug/L
	Sn	118	223.203	0.00	0.0140	0.002	12.296	ug/L
	Sb	123	113043.778	0.25	23.7826	0.614	2.580	ug/L
	Ba	135	53592.328	0.09	29.2074	0.576	1.973	ug/L
	Ce	140	1897.073	0.00				ug/L
>	Tb	159	607526.789	607526.79				ug/L
	Ho	165	36.670	0.00				ug/L
	Tl	203	177515.788	0.39	25.0744	0.619	2.470	ug/L
	Tl	205	434468.879	0.95	24.9058	0.292	1.172	ug/L
	Pb	206	149590.746	0.33	25.8621	0.293	1.131	ug/L
	Pb	207	131414.120	0.29	25.5510	0.296	1.158	ug/L
	Pb	208	607584.951	1.33	25.4176	0.302	1.187	ug/L
	U	238	960489.945	2.10	28.0023	0.657	2.346	ug/L
>	Bi	209	456406.253	456406.25				ug/L

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 16:18:34
Page 1

Approved: February 08, 2012

Na	23	3223716.058	13.56	0.5728	0.022	3.905	mg/L
Mg	24	794277.089	3.36	0.2240	0.012	5.526	mg/L
K	39	1888393.446	4.81	0.1422	0.014	9.796	mg/L
Ca	43	4898.602	0.02	0.2905	0.021	7.393	mg/L
Fe	54	102483.004	0.23	0.0902	0.012	13.259	mg/L
Fe	57	13572.409	0.02	0.0125	0.004	35.812	mg/L
Sc-1	45	236550.878	236550.88				mg/L
Cl	35	46835.304	13949.87				mg/L
Kr	83	47.667	-3.67				mg/L
Br	81	11949.911	2967.72				mg/L
P	31	28630.741	14984.73				mg/L
S	34	216823.973	-68024.82				mg/L
Sr	88	25969.717	25883.04				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		87.280			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		86.129			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.109			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		96.214			

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 16:18:34
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007508S WG388814-04
Report Date/Time: Tuesday, February 07, 2012 16:18:34
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007511SD WG388814-05

Sample Date/Time: Tuesday, February 07, 2012 16:24:09
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 33
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14045.161	0.01				ug/L
	Be	9	8240.075	0.04	28.4446	1.227	4.313	ug/L
	Al	27	219677.394	1.00	39.2222	2.795	7.125	ug/L
>	Sc	45	217163.684	217163.68				ug/L
	Ti	49	143.349	0.00	0.1079	0.065	60.304	ug/L
	V	51	243015.572	0.50	25.4473	0.623	2.447	ug/L
	Cr	52	224065.680	0.45	26.0681	0.204	0.782	ug/L
	Cr	53	25581.784	0.05	25.8031	1.252	4.853	ug/L
	Mn	55	364325.378	0.75	28.8012	0.601	2.088	ug/L
	Co	59	248059.739	0.51	26.6383	0.187	0.702	ug/L
	Ni	60	51839.610	0.11	26.5108	0.784	2.957	ug/L
	Cu	65	50381.346	0.10	26.7946	0.350	1.306	ug/L
	Zn	66	28811.025	0.06	25.9772	0.443	1.705	ug/L
>	Ge	72	482814.635	482814.63				ug/L
	As	75	28909.715	0.06	22.6434	0.270	1.192	ug/L
	Se	77	2084.928	0.00	21.8453	1.314	6.016	ug/L
	Se	82	2410.628	0.00	21.7325	0.404	1.859	ug/L
	Rb	85	4889.149	0.01				mg/L
	Y	89	314308.743	-52529.11				ug/L
	Rh	103	18.667	-4.00				ug/L
	Mo	98	154.012	0.00	0.0019	0.002	97.957	ug/L
	Ag	107	151396.851	0.35	24.2550	0.367	1.512	ug/L
	Cd	114	33437.810	0.08	23.1459	0.557	2.408	ug/L
>	In	115	436802.899	436802.90				ug/L
	Sn	118	266.004	0.00	0.0247	0.002	9.630	ug/L
	Sb	123	109823.260	0.25	24.1843	0.556	2.297	ug/L
	Ba	135	50482.637	0.09	28.3644	0.369	1.302	ug/L
	Ce	140	5318.897	0.01				ug/L
>	Tb	159	589106.946	589106.95				ug/L
	Ho	165	43.338	0.00				ug/L
	Tl	203	172322.026	0.39	25.0377	0.689	2.751	ug/L
	Tl	205	432657.427	0.97	25.5062	0.114	0.448	ug/L
	Pb	206	146041.031	0.33	25.9677	0.331	1.273	ug/L
	Pb	207	128967.623	0.29	25.7877	0.289	1.121	ug/L
	Pb	208	597344.329	1.34	25.6972	0.236	0.917	ug/L
	U	238	921918.223	2.08	27.6430	0.444	1.607	ug/L
>	Bi	209	443840.116	443840.12				ug/L

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 16:26:22
Page 1

Approved: February 08, 2012

Na	23	2959082.470	13.56	0.5730	0.040	6.919	mg/L
Mg	24	746409.052	3.44	0.2293	0.016	6.788	mg/L
K	39	1783367.480	5.03	0.1490	0.008	5.387	mg/L
Ca	43	4404.947	0.02	0.2834	0.019	6.877	mg/L
Fe	54	95841.495	0.24	0.0931	0.008	8.140	mg/L
Fe	57	13081.613	0.02	0.0149	0.003	20.369	mg/L
Sc-1	45	217163.684	217163.68				mg/L
Cl	35	35081.080	2195.65				mg/L
Kr	83	49.001	-2.33				mg/L
Br	81	10307.050	1324.86				mg/L
P	31	23468.201	9822.19				mg/L
S	34	213854.538	-70994.25				mg/L
Sr	88	24023.651	23936.97				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		83.086			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		82.282			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		87.377			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		93.565			

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 16:26:22
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007511SD WG388814-05
Report Date/Time: Tuesday, February 07, 2012 16:26:22
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502

Sample Date/Time: Tuesday, February 07, 2012 16:31:58
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 34
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14295.655	0.01				ug/L
	Be	9	16.667	0.00	0.0728	0.001	0.782	ug/L
	Al	27	259687.051	1.08	42.0982	4.643	11.030	ug/L
>	Sc	45	237992.810	237992.81				ug/L
	Ti	49	256.696	0.00	0.2855	0.076	26.599	ug/L
	V	51	3251.190	0.00	0.0437	0.012	26.399	ug/L
	Cr	52	15943.063	0.02	0.8324	0.018	2.145	ug/L
	Cr	53	1546.965	0.00	0.8128	0.031	3.785	ug/L
	Mn	55	137908.564	0.27	10.1749	0.230	2.258	ug/L
	Co	59	2680.792	0.01	0.2612	0.013	4.963	ug/L
	Ni	60	2078.947	0.00	0.9859	0.026	2.603	ug/L
	Cu	65	738.374	0.00	0.3018	0.027	8.835	ug/L
	Zn	66	4157.078	0.01	3.4367	0.109	3.159	ug/L
>	Ge	72	516406.877	516406.88				ug/L
	As	75	-149.538	0.00	0.0436	0.043	98.893	ug/L
	Se	77	101.334	0.00	0.2075	0.091	44.047	ug/L
	Se	82	19.644	0.00	0.2205	0.068	30.926	ug/L
	Rb	85	4682.363	0.01				mg/L
	Y	89	329720.706	-37117.14				ug/L
	Rh	103	8.667	-14.00				ug/L
	Mo	98	243.832	0.00	0.0273	0.008	27.868	ug/L
	Ag	107	109.335	0.00	-0.0030	0.002	74.593	ug/L
	Cd	114	17.562	0.00	0.0257	0.001	5.177	ug/L
>	In	115	462192.795	462192.79				ug/L
	Sn	118	968.456	0.00	0.1553	0.002	1.391	ug/L
	Sb	123	363.049	0.00	0.0744	0.013	16.988	ug/L
	Ba	135	12410.029	0.02	6.6161	0.115	1.733	ug/L
	Ce	140	8862.267	0.01				ug/L
>	Tb	159	619358.427	619358.43				ug/L
	Ho	165	106.678	0.00				ug/L
	Tl	203	91.001	0.00	0.0032	0.002	48.633	ug/L
	Tl	205	203.356	0.00	-0.0133	0.003	21.772	ug/L
	Pb	206	663.366	0.00	0.0583	0.004	6.369	ug/L
	Pb	207	594.027	0.00	0.0706	0.001	2.011	ug/L
	Pb	208	2701.867	0.00	0.0563	0.003	5.048	ug/L
	U	238	464.351	0.00	-0.0129	0.001	5.134	ug/L
>	Bi	209	466992.774	466992.77				ug/L

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 16:34:11
Page 1

Approved: February 08, 2012

Na	23	4327694.506	18.14	0.7666	0.044	5.717	mg/L
Mg	24	556516.848	2.34	0.1551	0.015	9.442	mg/L
K	39	2017152.256	5.31	0.1576	0.018	11.662	mg/L
Ca	43	3274.305	0.01	0.1883	0.023	12.412	mg/L
Fe	54	155780.075	0.46	0.1741	0.013	7.374	mg/L
Fe	57	32148.473	0.10	0.0823	0.011	13.472	mg/L
Sc-1	45	237992.810	237992.81				mg/L
Cl	35	50461.661	17576.23				mg/L
Kr	83	41.001	-10.33				mg/L
Br	81	13942.998	4960.81				mg/L
P	31	30301.748	16655.73				mg/L
S	34	236697.403	-48151.39				mg/L
Sr	88	18395.472	18308.80				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		88.867			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		87.064			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		91.864			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		98.446			

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 16:34:11
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502
Report Date/Time: Tuesday, February 07, 2012 16:34:11
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502PS WG38887901

Sample Date/Time: Tuesday, February 07, 2012 16:39:45
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 35
Method File: C:\elandata\Method\6020a.mth
Sample Description: 1

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	14829.860	0.02				ug/L
	Be	9	18268.674	0.08	62.0944	2.567	4.133	ug/L
	Al	27	492612.606	2.23	86.9463	2.688	3.091	ug/L
>	Sc	45	220499.346	220499.35				ug/L
	Ti	49	363.378	0.00	0.4925	0.067	13.516	ug/L
	V	51	509475.300	1.02	51.9694	1.225	2.356	ug/L
	Cr	52	461354.410	0.91	52.9849	1.228	2.318	ug/L
	Cr	53	53966.312	0.11	53.4235	0.767	1.436	ug/L
	Mn	55	827233.364	1.66	63.4032	1.876	2.959	ug/L
	Co	59	516832.658	1.04	53.7752	0.851	1.583	ug/L
	Ni	60	107978.364	0.22	53.4865	1.124	2.101	ug/L
	Cu	65	105781.862	0.21	54.5583	1.113	2.040	ug/L
	Zn	66	58137.726	0.12	50.8670	0.514	1.011	ug/L
>	Ge	72	498296.748	498296.75				ug/L
	As	75	62526.604	0.13	47.2806	0.178	0.376	ug/L
	Se	77	4437.183	0.01	45.8916	1.191	2.596	ug/L
	Se	82	5121.855	0.01	44.6948	0.989	2.213	ug/L
	Rb	85	4652.012	0.01				mg/L
	Y	89	324160.729	-42677.12				ug/L
	Rh	103	30.000	7.33				ug/L
	Mo	98	290.163	0.00	0.0451	0.008	18.645	ug/L
	Ag	107	327344.307	0.73	51.2988	0.894	1.742	ug/L
	Cd	114	72492.530	0.16	49.0872	1.822	3.712	ug/L
>	In	115	446705.806	446705.81				ug/L
	Sn	118	889.114	0.00	0.1460	0.003	2.027	ug/L
	Sb	123	230541.010	0.52	49.6468	0.797	1.606	ug/L
	Ba	135	102431.465	0.17	55.8515	0.622	1.114	ug/L
	Ce	140	8311.643	0.01				ug/L
>	Tb	159	607317.326	607317.33				ug/L
	Ho	165	126.680	0.00				ug/L
	Tl	203	371010.761	0.83	53.6346	1.457	2.716	ug/L
	Tl	205	918236.477	2.06	53.8811	0.838	1.556	ug/L
	Pb	206	309712.097	0.69	54.8476	1.268	2.312	ug/L
	Pb	207	270260.900	0.61	53.8163	1.605	2.982	ug/L
	Pb	208	1252785.485	2.81	53.6927	1.786	3.326	ug/L
	U	238	1947586.548	4.37	58.1554	3.001	5.161	ug/L
>	Bi	209	446252.689	446252.69				ug/L

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 16:41:57
Page 1

Approved: February 08, 2012

Na	23	4375249.455	19.77	0.8355	0.024	2.921	mg/L
Mg	24	561142.391	2.55	0.1686	0.005	2.857	mg/L
K	39	1918707.428	5.52	0.1642	0.012	7.262	mg/L
Ca	43	3147.578	0.01	0.1955	0.023	11.793	mg/L
Fe	54	140519.312	0.44	0.1675	0.018	10.979	mg/L
Fe	57	29752.673	0.10	0.0818	0.004	5.272	mg/L
Sc-1	45	220499.346	220499.35				mg/L
Cl	35	47269.068	14383.64				mg/L
Kr	83	54.001	2.67				mg/L
Br	81	12729.069	3746.88				mg/L
P	31	28692.002	15045.99				mg/L
S	34	209326.000	-75522.79				mg/L
Sr	88	18913.337	18826.66				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		85.750			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		84.147			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		90.078			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		94.074			

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 16:41:57
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502PS WG38887901
Report Date/Time: Tuesday, February 07, 2012 16:41:57
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: L1202007502SDL WG388879-02

Sample Date/Time: Tuesday, February 07, 2012 16:47:30
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 36
Method File: C:\elandata\Method\6020a.mth
Sample Description: 5

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13360.873	0.01				ug/L
	Be	9	9.333	0.00	0.0521	0.021	40.722	ug/L
	Al	27	54845.353	0.25	9.6349	4.004	41.562	ug/L
>	Sc	45	216566.861	216566.86				ug/L
	Ti	49	100.011	-0.00	0.0203	0.034	169.899	ug/L
	V	51	2742.657	0.00	0.0003	0.011	3288.820	ug/L
	Cr	52	9480.820	0.00	0.1310	0.042	31.816	ug/L
	Cr	53	823.456	0.00	0.1328	0.017	12.524	ug/L
	Mn	55	27385.534	0.05	2.0484	0.049	2.382	ug/L
	Co	59	575.026	0.00	0.0514	0.003	5.152	ug/L
	Ni	60	535.689	0.00	0.2549	0.021	8.424	ug/L
	Cu	65	250.673	0.00	0.0620	0.002	3.737	ug/L
	Zn	66	1147.090	0.00	0.9156	0.034	3.699	ug/L
>	Ge	72	503573.105	503573.10				ug/L
	As	75	-156.640	0.00	0.0358	0.018	51.481	ug/L
	Se	77	96.667	0.00	0.1861	0.052	28.141	ug/L
	Se	82	20.305	0.00	0.2308	0.029	12.632	ug/L
	Rb	85	970.400	0.00				mg/L
	Y	89	326862.823	-39975.03				ug/L
	Rh	103	8.667	-14.00				ug/L
	Mo	98	100.084	0.00	-0.0167	0.002	11.432	ug/L
	Ag	107	118.335	0.00	-0.0009	0.004	449.297	ug/L
	Cd	114	11.323	0.00	0.0219	0.003	13.458	ug/L
>	In	115	444866.578	444866.58				ug/L
	Sn	118	268.404	0.00	0.0242	0.000	1.753	ug/L
	Sb	123	427.882	0.00	0.0913	0.008	9.037	ug/L
	Ba	135	2472.058	0.00	1.3511	0.058	4.277	ug/L
	Ce	140	1680.338	0.00				ug/L
>	Tb	159	596815.816	596815.82				ug/L
	Ho	165	23.336	0.00				ug/L
	Tl	203	80.335	0.00	0.0019	0.001	35.000	ug/L
	Tl	205	220.025	0.00	-0.0123	0.002	19.939	ug/L
	Pb	206	395.347	0.00	0.0139	0.002	17.029	ug/L
	Pb	207	358.011	0.00	0.0267	0.003	10.119	ug/L
	Pb	208	1612.077	0.00	0.0125	0.002	18.013	ug/L
	U	238	302.675	0.00	-0.0174	0.002	9.553	ug/L
>	Bi	209	460439.257	460439.26				ug/L

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 16:49:42
Page 1

Approved: February 08, 2012

Na	23	823512.174	3.72	0.1567	0.013	8.182	mg/L
Mg	24	101663.496	0.47	0.0279	0.002	7.458	mg/L
K	39	943159.185	1.17	0.0297	0.005	15.911	mg/L
Ca	43	800.118	0.00	0.0383	0.004	10.465	mg/L
Fe	54	61974.215	0.09	0.0346	0.013	36.508	mg/L
Fe	57	13058.207	0.02	0.0152	0.005	33.868	mg/L
Sc-1	45	216566.861	216566.86				mg/L
Cl	35	29704.183	-3181.25				mg/L
Kr	83	41.667	-9.67				mg/L
Br	81	10270.326	1288.14				mg/L
P	31	14590.805	944.79				mg/L
S	34	225133.118	-59715.67				mg/L
Sr	88	3871.287	3784.61				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		86.658			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		83.801			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		88.521			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		97.064			

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 16:49:42
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1202007502SDL WG388879-02
Report Date/Time: Tuesday, February 07, 2012 16:49:42
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 07, 2012 16:55:17
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 5
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13961.855	0.01				ug/L
	Be	9	17821.039	0.08	58.5965	2.757	4.705	ug/L
	Al	27	289006.382	1.26	49.1725	3.034	6.170	ug/L
>	Sc	45	228138.531	228138.53				ug/L
	Ti	49	61169.839	0.12	102.4857	4.860	4.742	ug/L
	V	51	521229.029	0.98	49.9621	0.439	0.878	ug/L
	Cr	52	459631.314	0.85	49.5658	1.745	3.521	ug/L
	Cr	53	54986.512	0.10	51.1640	2.332	4.558	ug/L
	Mn	55	683557.760	1.29	49.2544	0.957	1.943	ug/L
	Co	59	528519.835	1.00	51.7010	0.490	0.949	ug/L
	Ni	60	106780.507	0.20	49.7198	0.560	1.126	ug/L
	Cu	65	103747.470	0.20	50.2895	0.948	1.886	ug/L
	Zn	66	61984.065	0.12	50.9818	0.158	0.309	ug/L
>	Ge	72	530092.608	530092.61				ug/L
	As	75	68176.500	0.13	48.4446	1.372	2.831	ug/L
	Se	77	5091.555	0.01	49.6032	1.098	2.213	ug/L
	Se	82	5978.740	0.01	49.0225	2.762	5.633	ug/L
	Rb	85	2350.688	0.00				mg/L
	Y	89	330786.978	-36050.87				ug/L
	Rh	103	27.000	4.33				ug/L
	Mo	98	331404.736	0.69	100.4395	1.283	1.278	ug/L
	Ag	107	346299.176	0.72	50.5715	0.622	1.229	ug/L
	Cd	114	80679.859	0.17	50.8478	2.454	4.826	ug/L
>	In	115	479483.137	479483.14				ug/L
	Sn	118	271939.425	0.57	49.8310	1.186	2.380	ug/L
	Sb	123	242828.304	0.51	48.7350	0.979	2.009	ug/L
	Ba	135	92072.820	0.15	48.3548	0.526	1.087	ug/L
	Ce	140	93.343	-0.00				ug/L
>	Tb	159	630467.478	630467.48				ug/L
	Ho	165	16.668	0.00				ug/L
	Tl	203	366787.346	0.78	50.5025	0.202	0.400	ug/L
	Tl	205	907465.657	1.94	50.7257	1.110	2.188	ug/L
	Pb	206	304212.224	0.65	51.3195	1.676	3.267	ug/L
	Pb	207	264108.898	0.56	50.0878	0.890	1.776	ug/L
	Pb	208	1240639.458	2.65	50.6353	1.175	2.321	ug/L
	U	238	1942696.501	4.15	55.2390	2.175	3.937	ug/L
>	Bi	209	468329.170	468329.17				ug/L

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 16:57:30
Page 1

Approved: February 08, 2012

Na	23	26907172.729	117.94	4.9891	0.094	1.892	mg/L
Mg	24	16715728.076	73.32	4.9639	0.084	1.685	mg/L
K	39	34995825.084	150.40	4.6429	0.150	3.234	mg/L
Ca	43	76157.795	0.33	4.9348	0.148	2.990	mg/L
Fe	54	3072671.721	13.29	5.0330	0.259	5.139	mg/L
Fe	57	1426994.742	6.23	5.5598	0.171	3.074	mg/L
Sc-1	45	228138.531	228138.53				mg/L
Cl	35	27045.833	-5839.60				mg/L
Kr	83	59.001	7.67				mg/L
Br	81	10590.091	1607.90				mg/L
P	31	15566.009	1920.00				mg/L
S	34	260769.899	-24078.89				mg/L
Sr	88	5252.181	5165.50				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51	99.924				
Cr	52	99.132				
Cr	53					
Mn	55	98.509				
Co	59	103.402				
Ni	60	99.440				
Cu	65	100.579				
Zn	66	101.964				
Ge	72		91.222			
As	75	96.889				
Se	77					
Se	82	98.045				
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107	101.143				
Cd	114	101.696				
In	115		90.321			
Sn	118					
Sb	123	97.470				
Ba	135	96.710				
Ce	140					
Tb	159		93.512			
Ho	165					
Tl	203	101.005				
Tl	205					
Pb	206					
Pb	207					
Pb	208	101.271				
U	238	110.478				
Bi	209		98.728			

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 16:57:30
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV IS OUT OF LIMITS (+/-10% OR %RSD>20)

Sample ID: QC Std 6
Report Date/Time: Tuesday, February 07, 2012 16:57:30
Page 3

Approved: February 08, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 07, 2012 17:02:54
Number of Replicates: 3
Aliquot Volume (mL):
Diluted To Volume (mL):
Autosampler Position: 1
Method File: C:\elandata\Method\6020a.mth
Sample Description:

User ID: JYH
Cumulative Autodilution Factor: 1
ELAN-ICP 200.8\6020 External Calibration

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
	Li	6	13878.248	0.01				ug/L
	Be	9	10.000	0.00	0.0548	0.005	9.863	ug/L
	Al	27	3334.003	0.00	0.2563	0.061	23.723	ug/L
>	Sc	45	216910.881	216910.88				ug/L
	Ti	49	90.010	-0.00	-0.0088	0.033	372.331	ug/L
	V	51	2968.620	0.00	0.0014	0.002	130.214	ug/L
	Cr	52	9279.924	0.00	0.0295	0.006	21.521	ug/L
	Cr	53	693.432	0.00	-0.0460	0.106	231.061	ug/L
	Mn	55	554.691	0.00	0.0093	0.002	21.064	ug/L
	Co	59	225.672	0.00	0.0137	0.002	17.018	ug/L
	Ni	60	64.001	0.00	0.0212	0.002	9.158	ug/L
	Cu	65	143.336	0.00	0.0019	0.004	240.769	ug/L
	Zn	66	91.668	-0.00	-0.0053	0.009	169.525	ug/L
>	Ge	72	542935.004	542935.00				ug/L
	As	75	-196.525	-0.00	0.0168	0.023	140.183	ug/L
	Se	77	86.000	-0.00	0.0094	0.219	2316.209	ug/L
	Se	82	0.870	-0.00	0.0625	0.052	82.690	ug/L
	Rb	85	28.000	0.00				mg/L
	Y	89	339254.935	-27582.91				ug/L
	Rh	103	7.000	-15.67				ug/L
	Mo	98	141.382	0.00	-0.0069	0.012	170.092	ug/L
	Ag	107	201.004	0.00	0.0097	0.003	28.048	ug/L
	Cd	114	25.451	0.00	0.0301	0.005	16.655	ug/L
>	In	115	483001.632	483001.63				ug/L
	Sn	118	224.936	0.00	0.0121	0.002	17.240	ug/L
	Sb	123	583.061	0.00	0.1152	0.017	14.380	ug/L
	Ba	135	50.667	0.00	0.0043	0.006	132.510	ug/L
	Ce	140	33.337	-0.00				ug/L
>	Tb	159	649731.299	649731.30				ug/L
	Ho	165	13.335	0.00				ug/L
	Tl	203	146.336	0.00	0.0100	0.002	18.110	ug/L
	Tl	205	410.051	0.00	-0.0027	0.002	59.572	ug/L
	Pb	206	370.679	0.00	0.0062	0.004	58.486	ug/L
	Pb	207	324.343	0.00	0.0169	0.004	26.066	ug/L
	Pb	208	1557.075	0.00	0.0068	0.003	40.432	ug/L
	U	238	623.030	0.00	-0.0091	0.002	23.275	ug/L
>	Bi	209	486127.492	486127.49				ug/L

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 17:05:06
Page 1

Approved: February 08, 2012

Na	23	23722.873	0.02	0.0001	0.000	817.521	mg/L
Mg	24	4745.186	0.02	-0.0024	0.000	11.421	mg/L
K	39	640119.887	-0.24	-0.0138	0.003	20.533	mg/L
Ca	43	160.018	-0.00	-0.0054	0.005	86.636	mg/L
Fe	54	52493.506	0.04	0.0174	0.001	4.311	mg/L
Fe	57	11849.630	0.02	0.0099	0.001	11.818	mg/L
Sc-1	45	216910.881	216910.88				mg/L
Cl	35	28311.344	-4574.09				mg/L
Kr	83	53.334	2.00				mg/L
Br	81	10364.442	1382.25				mg/L
P	31	14137.338	491.32				mg/L
S	34	263567.206	-21281.58				mg/L
Sr	88	100.011	13.33				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc	45					
Ti	49					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		93.432			
As	75					
Se	77					
Se	82					
Rb	85					
Y	89					
Rh	103					
Mo	98					
Ag	107					
Cd	114					
In	115		90.984			
Sn	118					
Sb	123					
Ba	135					
Ce	140					
Tb	159		96.369			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
U	238					
Bi	209		102.480			

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 17:05:06
Page 2

Approved: February 08, 2012

⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Tuesday, February 07, 2012 17:05:06
Page 3

Approved: February 08, 2012

2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Login Number: L12020091
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470

Analysis: SW-846 7470

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG389023 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 41932
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL23-0212-1	**Prep Method:**	7470A	**Prep Date:**	02/07/2012 09:31
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/08/2012 11:40
Workgroup #:	WG389023	**Analyst:**	PDM	**Run Date:**	02/08/2012 12:22
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	HY.020812.122254
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL23-0212-1	**Prep Method:**	7470A	**Prep Date:**	02/07/2012 09:31
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/08/2012 08:28
Workgroup #:	WG389023	**Analyst:**	PDM	**Run Date:**	02/08/2012 09:13
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	HY.020812.091318
Sample Tag:	01	**Units:**	mg/L		

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and five standards.

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Ws} \times D$$

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

TCLP Non-Volatile

Analyst(s): RWC
Date: 02-06-12
Filter Lot #: 4614781
Microbac SOP: TCLP01 Rev #: 09

Analyst / Date		Analyst / Date	
RWC 020612		RWC 020712	
Time On	Temp On °C	Time Off	Temp Off °C
1430	23	0700	23

Agitator Speed 30 ± 2 rpm ☑

Jug #	Sample #	Tests	Method	Fluid #	Matrix *	% Solid	Pretest pH Initial	Pretest pH Final	Int. Wt. (g)	Fluid Vol. (mL)	Final extract pH
D	02-0064-01	ME	1311	F2-286	S	100	14	13	25.04	500	13
|	02-0067-01	|	|	F1-854	|	1	9	2	100.07	2000	5
|	02-0079-02	|	|	|	|	46	10	4.01	60.32	1206	7
1	02-0080-02	(SPK)	|	|	|	100	7	2	100.01	2000	5
G-8	020081-01	SV	|	|	|	|	9	2	100.03	|	5
D	02-0082-02	1	|	|	1	|	8	4.11	100.02	|	7
G-15	02-0085-01	(SV SPK)	|	|	S/S	|	8	2	100.02	|	7
G20	02-0135-06	ME | PEST HERB	|	|	1	1	8	3	100.02	|	7
N/A	FBLK(1)	| 1 1 1	|	1	N/A	N/A	N/A	N/A	N/A	|	N/A
1	FBLK(2)	1	1	F2-286	1	1	1	1	1	1	1

RWC 020612

*Matrix Code: (S = solid, sand, soil or sludge) (P = paint) (O = organic) (W = water or aqueous waste)
D = Disposable plastic jug
TCLP Pretest weight will be 5.0 g (± 0.1) unless otherwise noted.
Temperature shall be maintained at 23° ± 2 for 18 ± 2 hours unless otherwise noted.

Comments:

Peer Review By:

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG388937
Analyst: REK
Spike Analyst: REK
Method: 7470A
Run Date: 02/07/2012 09:31
Hotblock Start Temp: 95.7 @ 08:55
Hotblock End Temp: 94.8 @ 10:55

SOP: ME404 Revison 13
Spike Solution: STD49955
Spike Witness: VC
H2SO4 Lot #: COA15776
HNO3 Lot #: COA15925
Digestion Tubes Lot #: COA15940
KMnO4 1:1 Lot #: RGT16964
K2S2O8 1:1 Lot #: RGT16987
Mercury Water ICV Lot #: STD49957
HG H2O STDS 10PPM Lot #: STD49963

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG388937-02	BLANK	1	40 mL	40 mL		
2	WG388895-01	FBLK1	17	4 mL	40 mL		
3	WG388895-02	FBLK2	17	4 mL	40 mL		
4	WG388937-03	LCS	1	40 mL	40 mL	4 mL	
5	L12010798-01	SAMP	1	40 mL	40 mL		02/10/12
6	L12020064-01	SAMP	17	4 mL	40 mL		02/09/12
7	L12020067-01	SAMP	17	4 mL	40 mL		02/09/12
8	L12020079-02	SAMP	17	4 mL	40 mL		02/08/12
9	L12020081-01	SAMP	17	4 mL	40 mL		02/13/12
10	L12020082-02	SAMP	17	4 mL	40 mL		02/09/12
11	WG388937-01	REF	1	40 mL	40 mL		
12	L12020091-01	SAMP	1	40 mL	40 mL		02/14/12
13	L12020135-06	SAMP	17	4 mL	40 mL		02/14/12
14	L12020146-01	SAMP	1	40 mL	40 mL		02/17/12
15	WG388937-04	MS	1	36 mL	40 mL	4 mL	
16	WG388937-05	MSD	1	36 mL	40 mL	4 mL	

Analyst: [signature]

Reviewer: [signature]

HB_DIG - Modified 09/30/2009
PDF ID: 2300430
Report generated: 02/07/2012 11:49

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA
Dataset: 020812B.PRN
Analyst1: PDM
Analyst2: N/A
Method: 7470
SOP: ME404
Rev: 13
Maintenance Log ID: 40556

Calibration Std: STD49963
ICV Std: STD49957
Post Spike: STD49963
ICSA: N/A
ICSAB: N/A
Int. Std:
CCV:
LLCCV:

Workgroups: 389023

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.020812.112925	WG389074-01	Calibration Point		1		02/08/12 11:29
2	HY.020812.113149	WG389074-02	Calibration Point		1		02/08/12 11:31
3	HY.020812.113433	WG389074-03	Calibration Point		1		02/08/12 11:34
4	HY.020812.113636	WG389074-04	Calibration Point		1		02/08/12 11:36
5	HY.020812.113818	WG389074-05	Calibration Point		1		02/08/12 11:38
6	HY.020812.114002	WG389074-06	Calibration Point		1		02/08/12 11:40
7	HY.020812.114448	WG389074-07	Initial Calibration Verification		1		02/08/12 11:44
8	HY.020812.114630	WG389074-08	Initial Calib Blank		1		02/08/12 11:46
9	HY.020812.114825	WG389074-09	CCV		1		02/08/12 11:48
10	HY.020812.115009	WG389074-10	CCB		1		02/08/12 11:50
11	HY.020812.115753	WG388937-02	Method/Prep Blank	40/40	1		02/08/12 11:57
12	HY.020812.115946	WG388937-03	Laboratory Control S	40/40	1		02/08/12 11:59
13	HY.020812.120128	WG388895-01	TCLP Fluid Blank 1		1		02/08/12 12:01
14	HY.020812.120321	WG388895-02	TCLP Fluid Blank 2		1		02/08/12 12:03
15	HY.020812.120502	L12010798-01	MPL22-0112-1	40/40	1		02/08/12 12:05
16	HY.020812.120644	WG389023-01	Post Digestion Spike		1	L12010798-01	02/08/12 12:06
17	HY.020812.120826	L12020064-01	NOVELIS BLUE	4/40	1		02/08/12 12:08
18	HY.020812.121008	WG389023-02	Post Digestion Spike		1	L12020064-01	02/08/12 12:10
19	HY.020812.121212	L12020067-01	PRECISION RIG 823	4/40	1		02/08/12 12:12
20	HY.020812.121405	L12020079-02	GRENADIER	4/40	1		02/08/12 12:14
21	HY.020812.121548	WG389074-11	CCV		1		02/08/12 12:15
22	HY.020812.121730	WG389074-12	CCB		1		02/08/12 12:17
23	HY.020812.121917	L12020081-01	SANDBLAST WASTE DRUM	4/40	1		02/08/12 12:19
24	HY.020812.122110	L12020082-02	HALL DRILLING	4/40	1		02/08/12 12:21
25	HY.020812.122254	WG388937-01	Reference Sample	40/40	1	L12020091-01	02/08/12 12:22
26	HY.020812.122438	WG388937-04	Matrix Spike	36/40	1	L12020091-01	02/08/12 12:24
27	HY.020812.122622	WG388937-05	Matrix Spike Duplica	36/40	1	L12020091-01	02/08/12 12:26
28	HY.020812.122819	L12020135-06	1109-116D-001	4/40	1		02/08/12 12:28
29	HY.020812.123052	L12020146-01	MPL24-0212-1	40/40	1		02/08/12 12:30
30	HY.020812.123255	WG389074-13	CCV		1		02/08/12 12:32
31	HY.020812.123439	WG389074-14	CCB		1		02/08/12 12:34

Page: 1 Approved: February 08, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 08-FEB-2012
Analyst: PDM
Analyst: NA
Method: 7470
Instrument: HYDRA
Curve Workgroup: 389074
Runlog ID: 45043
Analytical Workgroups: 389023

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	X
Client Forms	X
Level X	
Level 3	
Level 4	0798, 0091, 0135, 0146
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	MMB
Comments	

Primary Reviewer: 08-FEB-2012 Kym H. Rhoden

Secondary Reviewer: 08-FEB-2012 Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-08-2012 14:49:07

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A

AAB#: WG389023

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12					02/07/12	4.9	28		02/08/12	5.9	28	
MPL23-0212-1	01	02/02/12					02/07/12	4.9	28		02/08/12	6	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2301908
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: HY.020812.115753
Prep Date: 02/07/12 09:31
Analyzed Date: 02/08/12 11:57
Analyst: PDM

Work Group: WG389023
Blank Sample ID: WG388937-02
Instrument ID: HYDRA
Method: 7470A

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388937-03	HY.020812.084932	02/08/12 08:49	01
MPL23-0212-1	L12020091-01	HY.020812.091318	02/08/12 09:13	01
LCS	WG388937-03	HY.020812.115946	02/08/12 11:59	02
MPL23-0212-1	L12020091-01	HY.020812.122254	02/08/12 12:22	02

Report Name: BLANK_SUMMARY
PDF File ID: 2301909
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/07/12 09:31 Sample ID: WG388937-02
Instrument ID: HYDRA Run Date: 02/08/12 11:57 Prep Method: 7470A
File ID: HY.020812.115753 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG389023 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-08-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2301910
08-FEB-2012 13:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG388937-03
Instrument ID: HYDRA Run Time: 11:59 Prep Method: 7470A
File ID: HY.020812.115946 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG389023 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49955 Cal ID: HYDRA-08-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00428	107	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2301911
Report generated: 02/08/2012 13:42

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L12020091 Cal ID: HYDRA- Worknum: WG389023
Instrument ID: HYDRA Contract #: Method: 7470A
Parent ID: WG388937-01 File ID: HY.020812.122254 Dil: 1 Matrix: WATER
Sample ID: WG388937-04 MS File ID: HY.020812.122438 Dil: 1 Units: mg/L
Sample ID: WG388937-05 MSD File ID: HY.020812.122622 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00473	107	0.00444	0.00480	108	1.40	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2301912
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12020091 **Worknum:** WG389023
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG389023-01 **File ID:** HY.020812.120644 **Dil:** 1 **Units:** ug/L
Sample ID: L12010798-01 **File ID:** HY.020812.120502 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	1.02		0	U	1	102.0	85 - 115	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2301907
Report generated: 02/08/2012 13:42

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12020091
Analytical Method: 7470A
ICAL Worknum: WG389074

Workgroup (AAB#): WG389023
Instrument ID: HYDRA
Initial Calibration Date: 02/08/2012 11:40

Analyte	WG389074-01		WG389074-02		WG389074-03		WG389074-04		WG389074-05		WG389074-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	-83	0.200	378	1.00	3104	2.00	6146	5.00	15433	10.0	32503

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2301913
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12020091
Analytical Method: 7470A
ICAL Worknum: WG389074

Workgroup (AAB#): WG389023
Instrument ID: HYDRA
Initial Calibration Date: 02/08/2012 11:40

Analyte	R	Q
Mercury	0.9995	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2301913
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12020091
Instrument ID: HYDRA
File ID: HY.020812.114630
Workgroup (AAB#): WG389023
Matrix: WATER

Run Date: 02/08/2012
Run Time: 11:46
Analyst: PDM
Cal ID: HYDRA - 08-FEB-12

Sample ID: WG389074-08
Method: 7470A
Units: ug/L

Analytes	MDL	RDL	Concentration	Qualifier
MERCURY	.1	.2	.1	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 2301915
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG389074-10

Instrument ID: HYDRA Run Time: 11:50 Method: 7470A

File ID: HY.020812.115009 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG389023 Cal ID: HYDRA - 08-FEB-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301917
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389074-12
Instrument ID: HYDRA
Run Time: 12:17
Method: 7470A
File ID: HY.020812.121730
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG389023
Cal ID: HYDRA - 08-FEB-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301917
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG389074-14

Instrument ID: HYDRA Run Time: 12:34 Method: 7470A

File ID: HY.020812.123439 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG389023 Cal ID: HYDRA - 08-FEB-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2301917
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG389074-07
Instrument ID: HYDRA Run Time: 11:44 Method: 7470A
File ID: HY.020812.114448 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG389023 Cal ID: HYDRA - 08-FEB-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.14	107	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2301914
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389074-09
Instrument ID: HYDRA
Run Time: 11:48
Method: 7470A
File ID: HY.020812.114825
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG389023
Cal ID: HYDRA - 08-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00210	mg/L	105	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301916
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389074-11
Instrument ID: HYDRA
Run Time: 12:15
Method: 7470A
File ID: HY.020812.121548
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG389023
Cal ID: HYDRA - 08-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00205	mg/L	103	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301916
Report generated 02/08/2012 13:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389074-13
Instrument ID: HYDRA
Run Time: 12:32
Method: 7470A
File ID: HY.020812.123255
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG389023
Cal ID: HYDRA - 08-FEB-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00207	mg/L	104	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2301916
Report generated 02/08/2012 13:42

2.1.3.3 Raw Data

Protocol: standard

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Standard: 1 Rep: 1 Seq: 1 11:15:57 08 Feb 12 HG

Hg .000 ppb -65

*** Standard: 2 Rep: 1 Seq: 2 11:18:00 08 Feb 12 HG

Hg .200 ppb -8

*** Standard: 1 Rep: 1 Seq: 3 11:21:05 08 Feb 12 HG

Hg .000 ppb 385

*** Standard: 2 Rep: 1 Seq: 4 11:22:57 08 Feb 12 HG

Hg .200 ppb 563

*** Standard: 3 Rep: 1 Seq: 5 11:24:40 08 Feb 12 HG

Hg 1.00 ppb 2652

*** Standard: 1 Rep: 1 Seq: 6 11:29:25 08 Feb 12 HG

Hg .000 ppb -83

*** Standard: 2 Rep: 1 Seq: 7 11:31:49 08 Feb 12 HG

Hg .200 ppb 378

*** Standard: 3 Rep: 1 Seq: 8 11:34:33 08 Feb 12 HG

Hg 1.00 ppb 3104

*** Standard: 4 Rep: 1 Seq: 9 11:36:36 08 Feb 12 HG

Hg 2.00 ppb 6146

*** Standard: 5 Rep: 1 Seq: 10 11:38:18 08 Feb 12 HG

Hg 5.00 ppb 15433

*** Standard: 6 Rep: 1 Seq: 11 11:40:02 08 Feb 12 HG

Hg 10.0 ppb 32503

*** Check Standard: 2 Ck2ICV Seq: 12 11:44:48 08 Feb 12 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		107.	2.14	2.00	ppb	.000

Approved: February 08, 2012

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Check Standard: 3  Ck3ICB       Seq:  13      11:46:30 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          26.8     .054    .200   ppb        .000

*** Check Standard: 4  Ck4CCV       Seq:  14      11:48:25 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          105.     2.10    2.00   ppb        .000

*** Check Standard: 5  Ck5CCB       Seq:  15      11:50:09 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          32.1     .064    .200   ppb        .000

*** Sample ID: WG38893702            Seq:  16     11:57:53 08 Feb 12   HG
                           PBW 7R
Hg    .018    ppb       .000      .018

===============================================================================
*** Sample ID: WG38893703            Seq:  17     11:59:46 08 Feb 12   HG
                           LCSW 7R
Hg    4.28    ppb       .000      4.28
                                                                             =
===============================================================================
*** Sample ID: WG38889501            Seq:  18     12:01:28 08 Feb 12   HG
                           TCLP BLANK
Hg    .079    ppb       .000      .079
                                                                             =
===============================================================================
*** Sample ID: WG38889502            Seq:  19     12:03:21 08 Feb 12   HG
                           TCLP BLANK
Hg    .108    ppb       .000      .108
                                                                             =
===============================================================================
*** Sample ID: 1201079801            Seq:  20     12:05:02 08 Feb 12   HG

Hg    .091    ppb       .000      .091
                                                                             =
===============================================================================
*** Sample ID: WG38902301            Seq:  21     12:06:44 08 Feb 12   HG
                           1201079801PS.9
Hg    1.02    ppb       .000      1.02
                                                                             =
===============================================================================
*** Sample ID: 1202006401            Seq:  22     12:08:26 08 Feb 12   HG

Hg    .217    ppb       .000      .217
                                                                             =
===============================================================================
```

Approved: February 08, 2012

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG38902302            Seq:  23     12:10:08 08 Feb 12   HG
                            1202006401PS.9
Hg    1.25    ppb       .000      1.25
                                                                                =
================================================================================
*** Sample ID: 1202006701            Seq:  24     12:12:12 08 Feb 12   HG

Hg    .090    ppb       .000      .090
                                                                                =
================================================================================
*** Sample ID: 1220200790            Seq:  25     12:14:05 08 Feb 12   HG

Hg    .084    ppb       .000      .084
                                                                                =
*** Check Standard: 4  Ck4CCV        Seq:  26     12:15:48 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     2.05    2.00   ppb        .000
                                                                                =
*** Check Standard: 5  Ck5CCB        Seq:  27     12:17:30 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          45.0     .090    .200   ppb        .000
                                                                                =
*** Sample ID: 1202008101            Seq:  28     12:19:17 08 Feb 12   HG

Hg    .068    ppb       .000      .068
                                                                                =
================================================================================
*** Sample ID: 1202008202            Seq:  29     12:21:10 08 Feb 12   HG

Hg    .089    ppb       .000      .089
                                                                                =
================================================================================
*** Sample ID: 1202009101            Seq:  30     12:22:54 08 Feb 12   HG
                            WG38893701
Hg   -.003    ppb       .000     -.003
                                                                                =
================================================================================
*** Sample ID: WG38893704            Seq:  31     12:24:38 08 Feb 12   HG
                            1202009101S
Hg    4.26    ppb       .000      4.26
                                                                                =
================================================================================
*** Sample ID: WG38893705            Seq:  32     12:26:22 08 Feb 12   HG
                            1202009101SD
Hg    4.32    ppb       .000      4.32
                                                                                =
================================================================================
```

Approved: February 08, 2012

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: 1202013506            Seq:  33     12:28:19 08 Feb 12   HG

Hg    .145    ppb       .000      .145
                                                                          =
===============================================================================
*** Sample ID: 1202014601            Seq:  34     12:30:52 08 Feb 12   HG

Hg    .162    ppb       .000      .162
                                                                          =
*** Check Standard: 4  Ck4CCV       Seq:  35      12:32:55 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     2.07    2.00   ppb        .000
                                                                          =
*** Check Standard: 5  Ck5CCB       Seq:  36      12:34:39 08 Feb 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          28.2     .056    .200   ppb        .000
                                                                          =
```

Approved: February 08, 2012

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L12020091
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis SW-846 9056/300.0

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

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

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

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

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

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

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

Narrative ID: 41974
Approved By: Mike Cochran

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	MPL23-0212-1	**Prep Method:**	300.0	**Prep Date:**	02/09/2012 01:50
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG389105	**Analyst:**	JBK	**Run Date:**	02/09/2012 07:58
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	I20209120758.54
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	12.4		0.200	0.100
Fluoride	16984-48-8	0.287		0.200	0.100
Sulfate	14808-79-8	48.6		1.00	0.500

2.2.1.2 QC Summary Data

Example Calculations - Ion Chromatography

A. Methods 9056/300.0 (Quadratic with Offset)

1. Retrieve Curve Data from the ICAL Curve

c2 = the value of curve constant
c1= the curve slope
c0 = the curve offset

2. Obtain the area, y , from the instrument raw data

3. Calculate the concentration of the analyte, f(y), where:

$$f(y) = \frac{1}{2 * c_2} * \left(- c_1 \pm \sqrt{c_1^2 - 4 * c_2 * (c_0 - y)}\right)$$

Example Calculation:

Value of constant, c2, (curve):	0.0003
Value of curve constant, c1, (slope):	0.0869
Value of curve constant, c0, (offset):	-0.0103
Area of target analyte, y, (uS*min):	2.993
Calculated concentration, f(y), (mg/L):	31.1998864
or:	-40.1161215 *
Dilution factor (D):	1.00
Concentration of analyte in sample (mg/L):	31.200

* There are two possible solutions, but only one is valid.

B. Method 314.0 - Perchlorate (Linear)

Retrieve Curve Data from Linear Plot

c1 = the curve slope

Obtain the area, y , from the quantitation report

Calculate the concentration of the analyte, f(y), where:

f (y) = y / c1

Example Calculation:

Value of c1, slope:	0.0034
Area of target analyte, y:	0.083
Calculated concentration:	24.4117647
Dilution Factor:	1
Concentration in sample:	24.4117647

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC2 Dataset: 122111 ICAL IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 12

Maintenance Log ID: Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG385452
Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: STD48131

Comments: Linear regression ICAL for IC2.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21221111140.01	COLUMN RINSE	1	1		12/21/11 11:40
2	I21221111158.02	COLUMN RINSE	1	1		12/21/11 11:58
3	I21221111217.03	WG385452-01 STD \#6	1	1		12/21/11 12:17
4	I21221111235.04	WG385452-02 STD \#5	1	1		12/21/11 12:35
5	I21221111254.05	WG385452-03 STD \#4	1	1		12/21/11 12:54
6	I21221111312.06	WG385452-04 STD \#3	1	1		12/21/11 13:12
7	I21221111331.07	WG385452-05 STD \#2	1	1		12/21/11 13:31
8	I21221111349.08	WG385452-06 STD \#1	1	1		12/21/11 13:49
9	I21221111407.09	WG385452-07 ALT STD	1	1		12/21/11 14:07
10	I21221111426.10	LCR Test Level \#6	1	1		12/21/11 14:26
11	I21221111444.11	LCR Test Level \#2	1	1		12/21/11 14:44
12	I21221111503.12	LCR Test Level \#0	1	1		12/21/11 15:03
13	I21221111521.13	ANION CCV	1	1		12/21/11 15:21
14	I21221111539.14	ANION CCB	1	1		12/21/11 15:39
15	I21221111558.15	END	1	1		12/21/11 15:58

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 09-JAN-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC2 Dataset: 020812 IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC1 Rev: 12

Maintenance Log ID: 40573 Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG389104 WG389105
Internal STD: NA Surrogate STD: NA Calibration STD NA
CCV STD: STD43577 8.0ML/100ML LCS STD: STD43577 8.0ML/100ML MS/MSD STD: STD43577 0.8ML/10ML

Comments: L12020221-10, 11, 12, 17; L12020182-03; L12020145-14, 15, 16, 17, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33; L12020146-01 were all analyzed at dilutions only due to target analyte concentrations greater than the ICAL.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20208121542.01	ELUENT	1	1		02/08/12 15:42
2	I20208121600.02	DI WATER	1	1		02/08/12 16:00
3	I20208121619.03	WG389159-01 ANION CCV	1	1		02/08/12 16:19
4	I20208121637.04	WG389159-02 ANION CCB	1	1		02/08/12 16:37
5	I20208121655.05	WG389104-01 ANION BLANK	1	1		02/08/12 16:55
6	I20208121714.06	WG389104-02 ANION LCS	1	1		02/08/12 17:14
7	I20208121732.07	L12020221-01 (F,CL,NO3,SO4)	1	1		02/08/12 17:32
8	I20208121751.08	L12020221-02 (F,CL,NO3,SO4)	1	1		02/08/12 17:51
9	I20208121809.09	L12020221-03 (F,CL,NO3,SO4)	1	1		02/08/12 18:09
10	I20208121827.10	L12020221-04 (F,CL,NO3,SO4)	1	1		02/08/12 18:27
11	I20208121846.11	L12020221-05 (F,CL,NO3,SO4)	1	1		02/08/12 18:46
12	I20208121904.12	L12020221-06 (F,CL,NO3,SO4)	1	1		02/08/12 19:04
13	I20208121923.13	L12020221-07 (F,CL,NO3,SO4)	1	1		02/08/12 19:23
14	I20208121941.14	L12020221-08 (F,CL,NO3,SO4)	1	1		02/08/12 19:41
15	I20208122000.15	WG389159-03 ANION CCV	1	1		02/08/12 20:00
16	I20208122018.16	WG389159-04 ANION CCB	1	1		02/08/12 20:18
17	I20208122036.17	L12020221-09 (F,CL,NO3,SO4)	1	1		02/08/12 20:36
18	I20208122055.18	L12020221-10 1/4 (F,CL,NO3,SO4)	1	4		02/08/12 20:55
19	I20208122113.19	L12020221-11 1/10 (F,CL,NO3,SO4)	1	10		02/08/12 21:13
20	I20208122132.20	L12020221-12 1/10 (F,CL,NO3,SO4)	1	10		02/08/12 21:32
21	I20208122150.21	L12020221-13 (F,CL,NO3,SO4)	1	1		02/08/12 21:50
22	I20208122208.22	L12020221-16 (F,CL,NO3,SO4)	1	1		02/08/12 22:08
23	I20208122227.23	L12020221-17 1/5 (F,CL,NO3,SO4)	1	5		02/08/12 22:27
24	I20208122245.24	L12020182-01 (CL,SO4)	2	1		02/08/12 22:45
25	I20208122304.25	L12020182-03 1/10 (CL,SO4)	2	10		02/08/12 23:04
26	I20208122322.26	DI WATER	1	1		02/08/12 23:22
27	I20208122341.27	WG389159-05 ANION CCV	1	1		02/08/12 23:41
28	I20208122359.28	WG389159-06 ANION CCB	1	1		02/08/12 23:59
29	I20209120017.29	L12020145-14 1/5 RS (CL,SO4)	1	5		02/09/12 00:17
30	I20209120036.30	WG389104-04 1/5 DUP 145-14	1	5		02/09/12 00:36
31	I20209120054.31	L12020145-16 1/5 MS	1	5		02/09/12 00:54
32	I20209120113.32	L12020145-17 1/5 SD	1	5		02/09/12 01:13
33	I20209120131.33	L12020145-15 1/5 (CL,SO4)	1	5		02/09/12 01:31

Page: 1 Approved: 09-FEB-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC2 Dataset: 020812 IC2.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC1 Rev: 12

Maintenance Log ID: 40573 Syringe Filter Lot#: 00126569

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG389104 WG389105
Internal STD: NA Surrogate STD: NA NA
CCV STD: STD43577 8.0ML/100ML LCS STD: STD43577 8.0ML/100ML STD43577 0.8ML/10ML

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I20209120149.34	WG389105-01 ANION BLANK	1	1		02/09/12 01:49
35	I20209120208.35	WG389105-02 ANION LCS	1	1		02/09/12 02:08
36	I20209120226.36	L12020145-19 (CL,SO4)	1	1		02/09/12 02:26
37	I20209120245.37	L12020145-20 (CL,SO4)	1	1		02/09/12 02:45
38	I20209120303.38	L12020145-21 1/10 (CL,SO4)	1	10		02/09/12 03:03
39	I20209120321.39	WG389159-07 ANION CCV	1	1		02/09/12 03:21
40	I20209120340.40	WG389159-08 ANION CCB	1	1		02/09/12 03:40
41	I20209120358.41	L12020145-22 1/10 (CL,SO4)	1	10		02/09/12 03:58
42	I20209120417.42	L12020145-23 1/10 (CL,SO4)	1	10		02/09/12 04:17
43	I20209120435.43	L12020145-24 1/3 (CL,SO4)	1	3		02/09/12 04:35
44	I20209120454.44	L12020145-25 1/10 (CL,SO4)	1	10		02/09/12 04:54
45	I20209120512.45	L12020145-27 (CL,SO4)	1	1		02/09/12 05:12
46	I20209120530.46	L12020145-28 1/2 (CL,SO4)	1	2		02/09/12 05:30
47	I20209120549.47	L12020145-29 1/10 (CL,SO4)	1	10		02/09/12 05:49
48	I20209120607.48	L12020145-30 1/10 (CL,SO4)	1	10		02/09/12 06:07
49	I20209120626.49	L12020145-31 1/15 (CL,SO4)	1	15		02/09/12 06:26
50	I20209120644.50	L12020145-32 1/10 (CL,SO4)	1	10		02/09/12 06:44
51	I20209120703.51	WG389159-09 ANION CCV	1	1		02/09/12 07:03
52	I20209120721.52	WG389159-10 ANION CCB	1	1		02/09/12 07:21
53	I20209120739.53	L12020145-33 1/10 (CL,SO4)	1	10		02/09/12 07:39
54	I20209120758.54	L12020091-01 (F,CL,SO4)	1	1		02/09/12 07:58
55	I20209120816.55	WG389105-04 DUP 091-01	1	1		02/09/12 08:16
56	I20209120835.56	WG389105-05 MS 091-01	1	1		02/09/12 08:35
57	I20209120853.57	WG389105-06 MSD 091-01	1	1		02/09/12 08:53
58	I20209120912.58	L12020146-01 1/2 (F,CL,SO4)	1	2		02/09/12 09:12
59	I20209120930.59	WG389105-08 1/2 DUP 146-01	1	2		02/09/12 09:30
60	I20209120949.60	DI WATER	1	1		02/09/12 09:49
61	I20209121007.61	WG389159-11 ANION CCV	1	1		02/09/12 10:07
62	I20209121025.62	WG389159-12 ANION CCB	1	1		02/09/12 10:25
63	I20209121044.63	END	1	1		02/09/12 10:44

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 2 Approved: 09-FEB-12

Microbac Laboratories Inc.

Data Checklist

Date: 21-DEC-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC2
Curve Workgroup: NA
Runlog ID: 44440
Analytical Workgroups: WG3854752

ANALYTICAL	
System Performance Check	X
Eluent check (IC)/system pressure (HPLC)	X
Initial Calibration	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Continuing calibration blank (CCB) (IC)	X
Blanks	NA
TCL hits	NA
LCS/LCSD (Laboratory Control Sample)	ALT STD
Recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	NA
TCL hits	NA
Calculations & correct factors	NA
Compounds above calibration range	NA
Reruns	NA
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
28-DEC-2011

Secondary Reviewer:
09-JAN-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JAN-09-2012 16:53:16

Microbac Laboratories Inc.

Data Checklist

Date: 08-FEB-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC2
Curve Workgroup: NA
Runlog ID: 45055
Analytical Workgroups: WG389104 (01-221, 182) WG389105 (01-145, 091, 146)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
09-FEB-2012

Secondary Reviewer:
09-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-09-2012 13:50:27

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG389105

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12					02/09/12	6.6	28		02/09/12	.3	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2303215
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: I20209120149.34
Prep Date: 02/09/12 01:50
Analyzed Date: 02/09/12 01:49
Analyst: JBK

Work Group: WG389105
Blank Sample ID: WG389105-01
Instrument ID: IC2
Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG389105-02	I20209120208.35	02/09/12 02:08	01
MPL23-0212-1	L12020091-01	I20209120758.54	02/09/12 07:58	01
DUP	WG389105-04	I20209120816.55	02/09/12 08:16	01
DUP	WG389105-08	I20209120930.59	02/09/12 09:30	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2303216
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/09/12 01:50 Sample ID: WG389105-01
Instrument ID: IC2 Run Date: 02/09/12 01:49 Prep Method: 300.0
File ID: I20209120149.34 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG389105 Matrix: Water Units: mg/L
Contract #: Cal ID: IC2-21-DEC-11

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U
Fluoride	0.100	0.200	0.100	1	U
Sulfate	0.500	1.00	0.500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2303217
09-FEB-2012 14:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/09/2012 Sample ID: WG389105-02
Instrument ID: IC2 Run Time: 02:08 Prep Method: 300.0
File ID: I20209120208.35 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG389105 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48131 Cal ID: IC2-21-DEC-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	8.00	7.49	93.6	90 - 110	
Fluoride	8.00	7.65	95.6	90 - 110	
Sulfate	40.0	37.8	94.5	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2303218
Report generated: 02/09/2012 14:17

Microbac Laboratories Inc.

DUPLICATE (DUP)

Sample Ref: L12020091-01 Cal ID: IC2 - Worknum: WG389105

Instrument ID: IC2 Method: 9056

Sample ID: WG389105-03 File ID: I20209120758.54 Dil: 1 Matrix: WATER

Duplicate ID: WG389105-04 File ID: I20209120816.55 Dil: 1 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	12.4	12.5	0.927	20	
Fluoride	0.287	0.285	0.699	20	
Sulfate	48.6	48.8	0.415	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_DUP_DRYWT - Modified 03/06/2008

PDF File ID: 2303534

Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L12020091 Cal ID: IC2 - Worknum: WG389105
Instrument ID: IC2 Contract #: Method: 300.0
Parent ID: WG389105-03 File ID: I20209120758.54 Dil: 1 Matrix: WATER
Sample ID: WG389105-05 MS File ID: I20209120835.56 Dil: 1 Units: mg/L
Sample ID: WG389105-06 MSD File ID: I20209120853.57 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Chloride	12.4	8.00	19.6	91.1	8.00	19.8	93.1	0.816	90 - 110	20	
Fluoride	0.287	8.00	7.48	89.9	8.00	8.30	100	10.4	90 - 110	20	*
Sulfate	48.6	40.0	90.3	104	40.0	90.2	104	0.192	90 - 110	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2303533
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12020091
Analytical Method: 300.0
ICAL Workgroup: WG385452

Instrument ID: IC2
Initial Calibration Date: 21-DEC-11 13:49
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		6.902	7.72	0.99700	
Fluoride		5.106	10.9	0.99800	
Sulfate		9.060	11.1	0.99700	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2303219
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12020091

Analytical Method: 300.0

Instrument ID: IC2

Initial Calibration Date: 21-DEC-11 13:49

Column ID: F

Analyte	WG385452-01			WG385452-02			WG385452-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	3.84300000	6.245	12.0	1.80700000	6.641	8.00	1.19900000	6.672
Fluoride	24.0	5.38100000	4.460	12.0	2.54100000	4.723	8.00	1.68200000	4.756
Sulfate	120	15.6190000	7.683	60.0	7.06400000	8.494	40.0	4.62700000	8.645

INT_CAL - Modified 03/06/2008
PDF File ID: 2303219
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12020091

Analytical Method: 300.0

Instrument ID: IC2

Initial Calibration Date: 21-DEC-11 13:49

Column ID: F

Analyte	WG385452-04			WG385452-05			WG385452-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	4.00	0.585000000	6.838	1.00	0.127000000	7.874	0.200	0.0280000000	7.143
Fluoride	4.00	0.765000000	5.229	1.00	0.185000000	5.405	0.200	0.0330000000	6.061
Sulfate	20.0	2.14500000	9.324	5.00	0.516000000	9.690	1.00	0.0950000000	10.53

INT_CAL - Modified 03/06/2008
PDF File ID: 2303219
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12020091 Run Date: 12/21/2011 Sample ID: WG385452-07
Instrument ID: IC2 Run Time: 14:07 Method: 300.0
File ID: I21221111407.09 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG385452 Cal ID: IC2 - 21-DEC-11

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	7.85	mg/L	6.88	1.80	10	
Fluoride		8.00	7.84	mg/L	4.94	2.10	10	
Sulfate		40.0	38.1	mg/L	9.05	4.80	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2303220
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389159-06
Instrument ID: IC2
Run Time: 23:59
Method: 300.0
File ID: I20208122359.28
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2303222
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-08
Instrument ID: IC2
Run Time: 03:40
Method: 300.0
File ID: I20209120340.40
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2303222
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-10
Instrument ID: IC2
Run Time: 07:21
Method: 300.0
File ID: I20209120721.52
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2303222
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-12
Instrument ID: IC2
Run Time: 10:25
Method: 300.0
File ID: I20209121025.62
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 2303222
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/08/2012
Sample ID: WG389159-05
Instrument ID: IC2
Run Time: 23:41
Method: 300.0
File ID: I20208122341.27
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.55	mg/L	7.16	5.60	10	
Fluoride		8.00	7.72	mg/L	5.01	3.51	10	
Sulfate		40.0	37.9	mg/L	9.10	5.30	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2303221
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-07
Instrument ID: IC2
Run Time: 03:21
Method: 300.0
File ID: I20209120321.39
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.57	mg/L	7.15	5.44	10	
Fluoride		8.00	7.74	mg/L	5.00	3.28	10	
Sulfate		40.0	37.8	mg/L	9.11	5.38	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2303221
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-09
Instrument ID: IC2
Run Time: 07:03
Method: 300.0
File ID: I20209120703.51
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.54	mg/L	7.17	5.71	10	
Fluoride		8.00	7.65	mg/L	5.06	4.36	10	
Sulfate		40.0	37.8	mg/L	9.12	5.44	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2303221
Report generated 02/09/2012 14:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12020091
Run Date: 02/09/2012
Sample ID: WG389159-11
Instrument ID: IC2
Run Time: 10:07
Method: 300.0
File ID: I20209121007.61
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG389105
Cal ID: IC2 - 21-DEC-11
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.44	mg/L	7.27	7.04	10	
Fluoride		8.00	7.59	mg/L	5.10	5.09	10	
Sulfate		40.0	37.8	mg/L	9.13	5.58	10	

* Exceeds %D Criteria

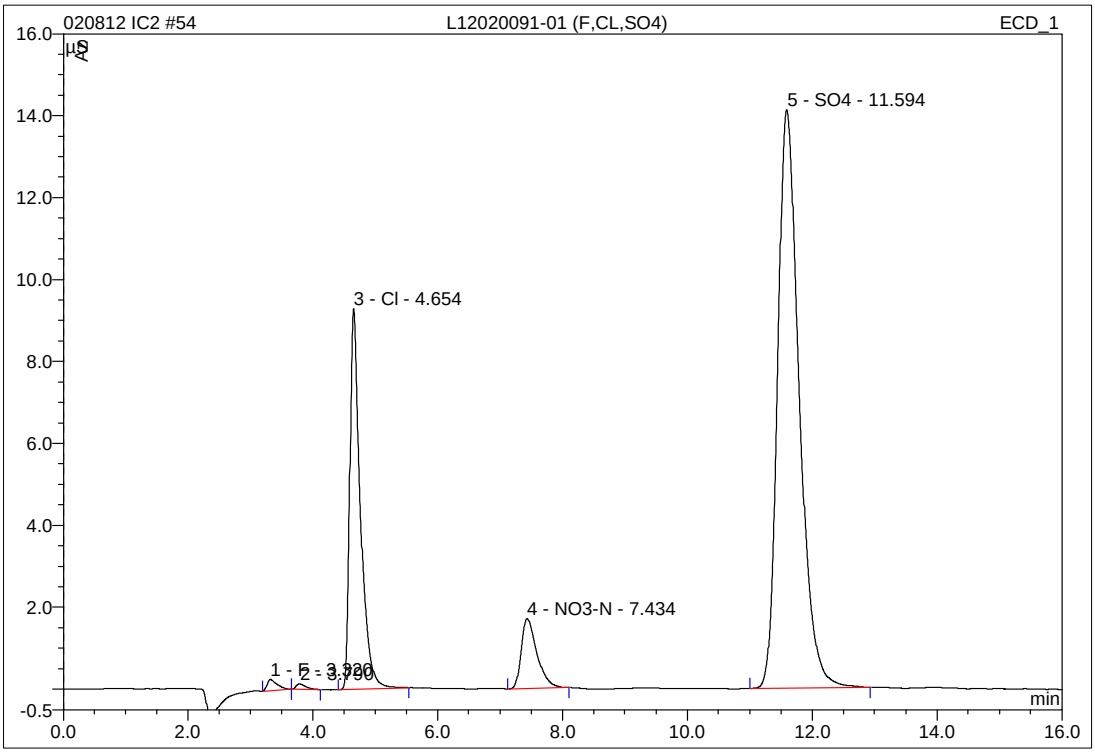
CCV - Modified 03/05/2008
PDF File ID: 2303221
Report generated 02/09/2012 14:17

2.2.1.3 Sample Data

54 L12020091-01 (F,CL,SO4)

1,1 JBK WG389105-03 REF

Sample Name:	**L12020091-01 (F,CL,SO4)**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 7:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	0.273	0.050	0.63	0.287	BMb
2	3.79	n.a.	0.133	0.024	0.29	n.a.	bMB
3	4.65	Cl	9.289	1.829	22.73	12.351	BMB
4	7.43	NO3-N	1.708	0.495	6.15	1.392	BMB
5	11.59	SO4	14.120	5.646	70.20	48.612	BMB
Total:			25.522	8.043	100.00	62.642	

IC/Integration

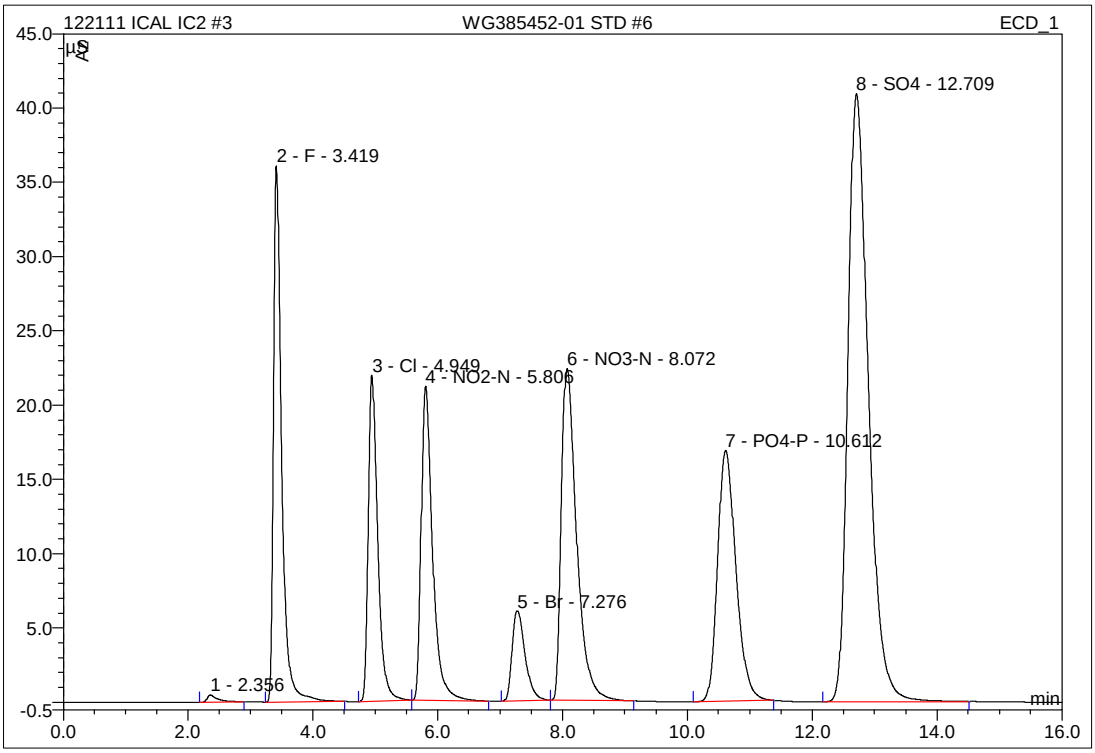
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2.2.1.4 Standards Data

3 WG385452-01 STD #6

1,1 JBK STD48131

Sample Name:	**WG385452-01 STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.36	n.a.	0.480	0.092	0.21	n.a.	BMB
2	3.42	F	36.097	5.381	12.51	25.930	BMB
3	4.95	Cl	21.965	3.843	8.93	25.938	BMB
4	5.81	NO2-N	21.160	4.468	10.39	15.345	bMB
5	7.28	Br	6.075	1.468	3.41	24.458	BMB
6	8.07	NO3-N	22.316	6.374	14.82	17.724	BMB
7	10.61	PO4-P	16.878	5.762	13.40	43.273	BMB
8	12.71	SO4	40.931	15.619	36.32	134.117	BMB
Total:			165.902	43.008	100.00	286.784	

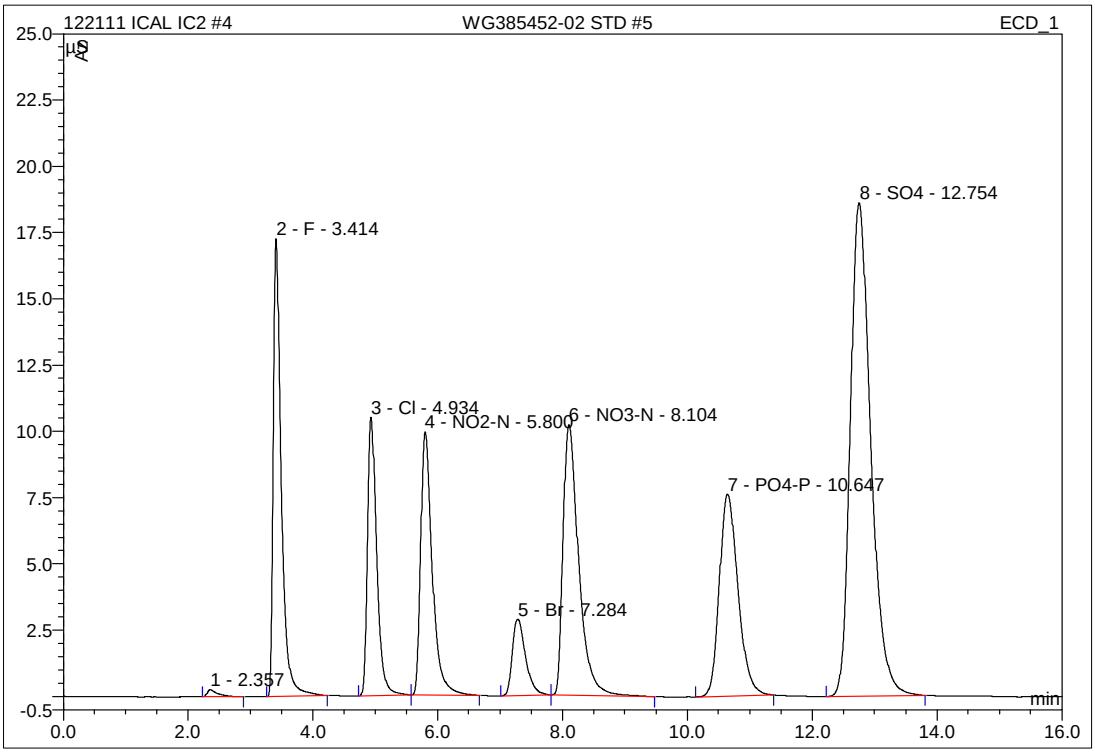
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG385452-02 STD #5

1,1 JBK STD48131

Sample Name:	**WG385452-02 STD #5**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.36	n.a.	0.270	0.053	0.26	n.a.	BMB
2	3.41	F	17.277	2.541	12.76	12.269	BMB
3	4.93	Cl	10.509	1.807	9.07	12.208	BMb
4	5.80	NO2-N	9.922	2.133	10.71	7.336	bMB
5	7.28	Br	2.875	0.706	3.55	11.793	BMb
6	8.10	NO3-N	10.190	2.969	14.90	8.264	bMB
7	10.65	PO4-P	7.628	2.645	13.28	19.888	BMB
8	12.75	SO4	18.618	7.064	35.47	60.768	BMB
Total:			77.288	19.918	100.00	132.526	

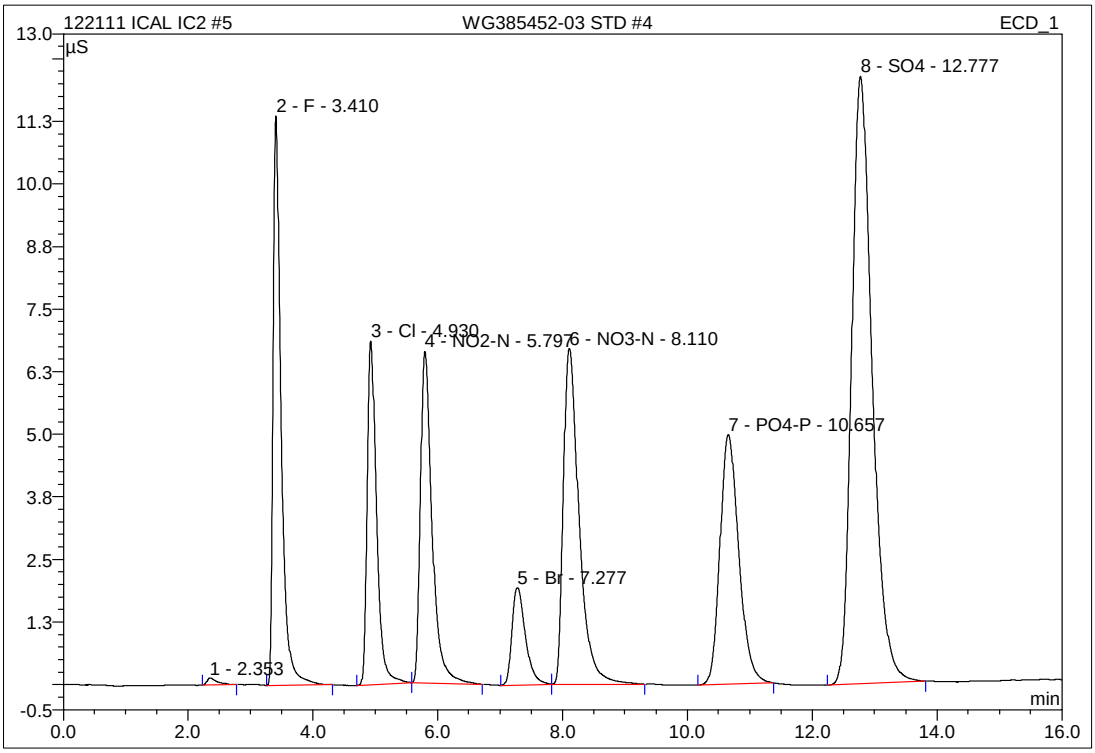
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 WG385452-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 12:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.35	n.a.	0.145	0.028	0.21	n.a.	BMB
2	3.41	F	11.364	1.682	12.77	8.138	BMB
3	4.93	Cl	6.868	1.199	9.11	8.106	BMB
4	5.80	NO2-N	6.623	1.435	10.89	4.943	BMB
5	7.28	Br	1.938	0.484	3.67	8.099	BMB
6	8.11	NO3-N	6.710	1.966	14.93	5.479	BMB
7	10.66	PO4-P	4.983	1.749	13.28	13.165	BMB
8	12.78	SO4	12.131	4.627	35.13	39.871	BMB
Total:			50.763	13.170	100.00	87.801	

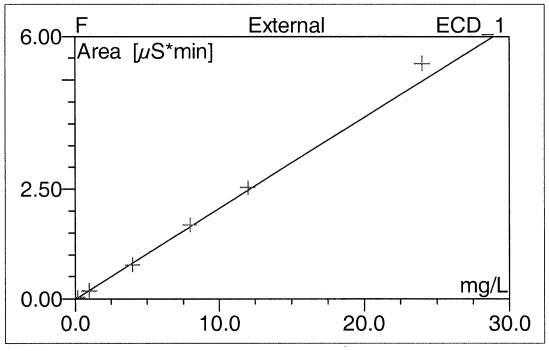
IC/Integration

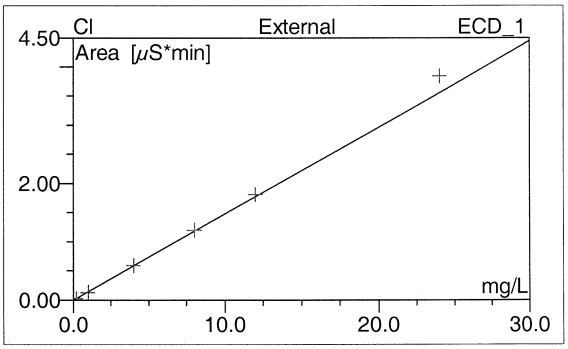
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

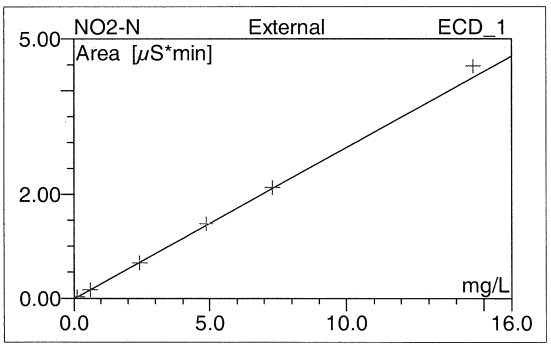
5 WG385452-03 STD #4

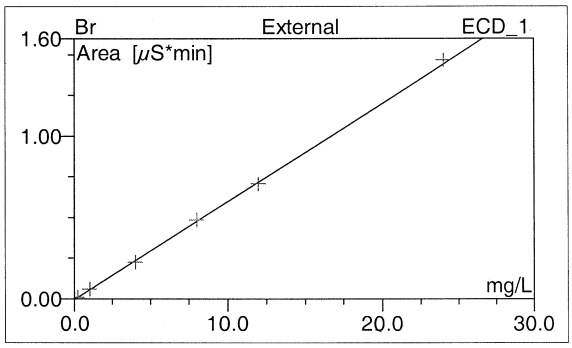
1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**##############**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**









No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.41	F	XXLOff	6	99.8106	-0.0092	0.2079	0.0000
3	4.93	Cl	XXLOff	6	99.7324	-0.0023	0.1482	0.0000
4	5.80	NO2-N	XXLOff	6	99.9310	-0.0067	0.2916	0.0000
5	7.28	Br	XXLOff	6	99.9357	-0.0035	0.0602	0.0000
6	8.11	NO3-N	XXLOff	6	99.7758	-0.0064	0.3600	0.0000
7	10.66	PO4-P	XXLOff	6	99.7256	-0.0060	0.1333	0.0000
8	12.78	SO4	XXLOff	6	99.7187	-0.0237	0.1166	0.0000
Average:					99.8043	-0.0083	0.1883	0.0000

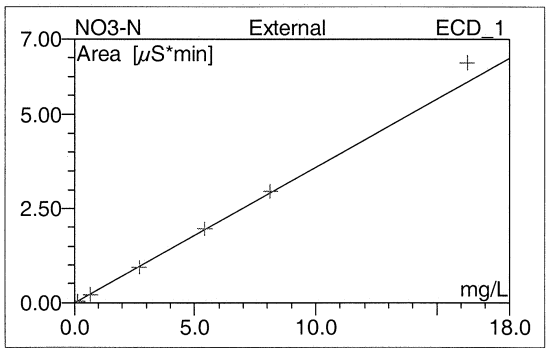
IC/Calibration(Batch)

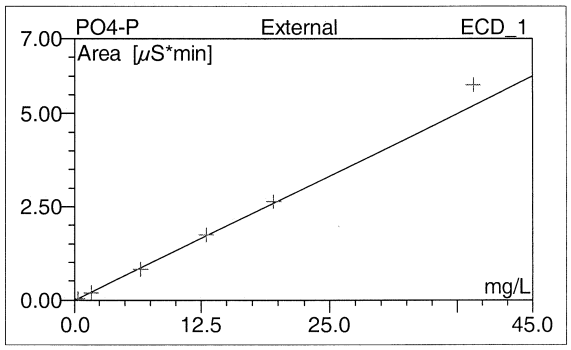
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

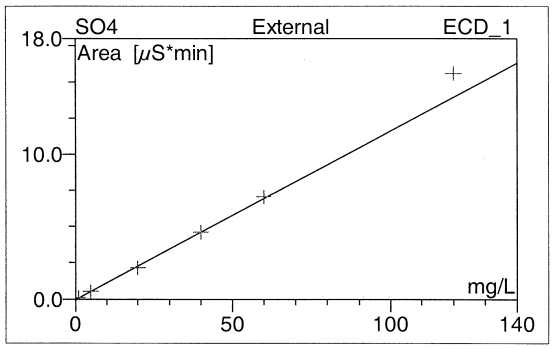
5 WG385452-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG385452-03 STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**##############**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**







No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.35	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.41	F	XXLOff	6	99.8106	-0.0092	0.2079	0.0000
3	4.93	Cl	XXLOff	6	99.7324	-0.0023	0.1482	0.0000
4	5.80	NO2-N	XXLOff	6	99.9310	-0.0067	0.2916	0.0000
5	7.28	Br	XXLOff	6	99.9357	-0.0035	0.0602	0.0000
6	8.11	NO3-N	XXLOff	6	99.7758	-0.0064	0.3600	0.0000
7	10.66	PO4-P	XXLOff	6	99.7256	-0.0060	0.1333	0.0000
8	12.78	SO4	XXLOff	6	99.7187	-0.0237	0.1166	0.0000
Average:					99.8043	-0.0083	0.1883	0.0000

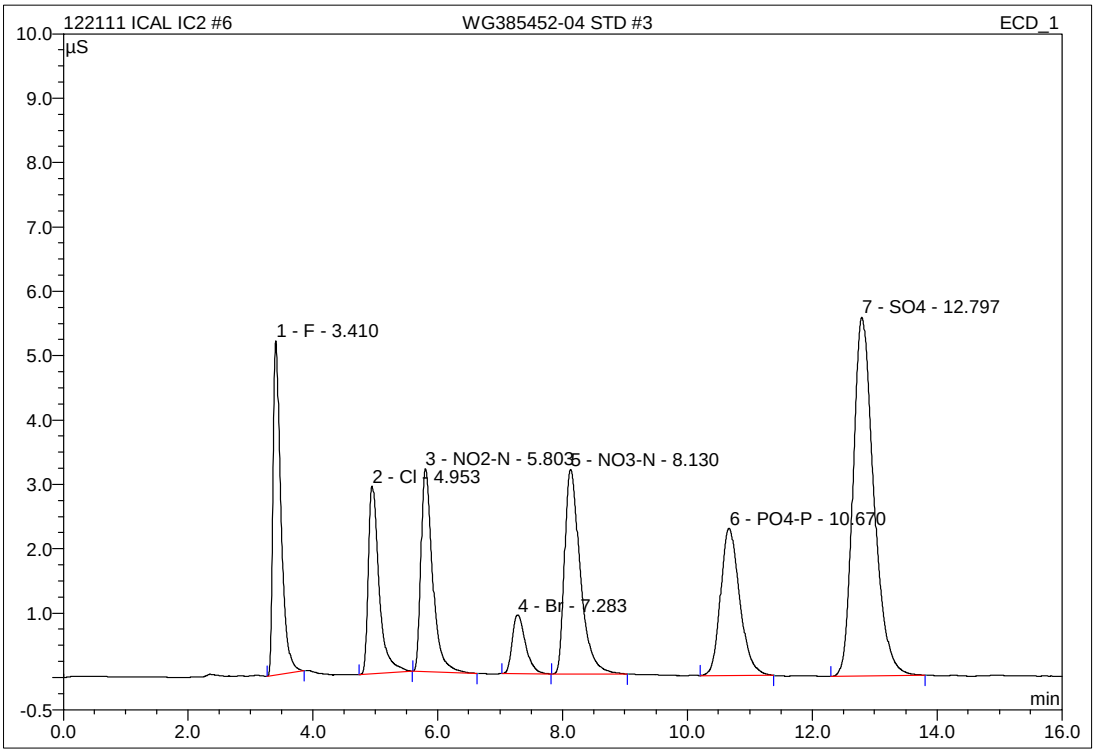
IC/Calibration(Batch)(2)

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG385452-04 STD #3

1,1 JBK STD48131

Sample Name:	**WG385452-04 STD #3**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.41	F	5.190	0.765	12.45	3.723	BMB
2	4.95	Cl	2.921	0.585	9.52	3.961	BMB
3	5.80	NO2-N	3.152	0.681	11.08	2.358	BMB
4	7.28	Br	0.914	0.225	3.65	3.790	BMB
5	8.13	NO3-N	3.178	0.930	15.14	2.602	BMB
6	10.67	PO4-P	2.284	0.814	13.25	6.152	BMB
7	12.80	SO4	5.576	2.145	34.91	18.592	BMB
Total:			23.216	6.144	100.00	41.176	

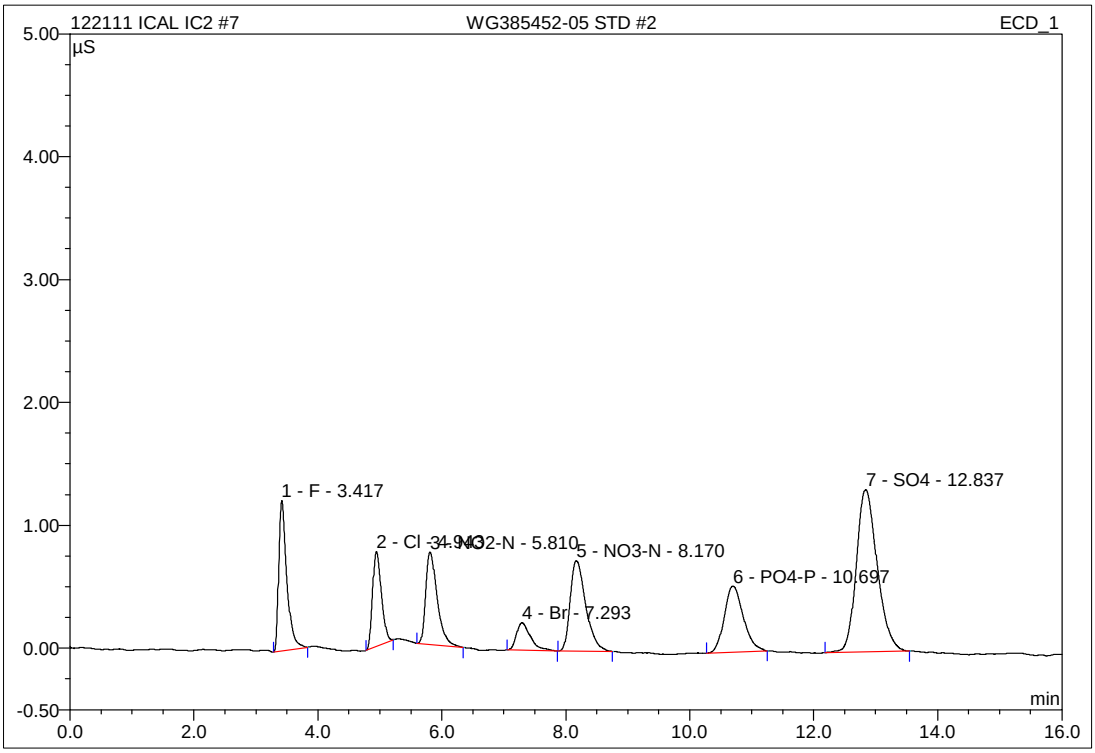
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG385452-05 STD #2

1,1 JBK STD48131

Sample Name:	**WG385452-05 STD #2**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	1.226	0.185	12.71	0.934	BMB
2	4.94	Cl	0.773	0.127	8.74	0.874	BMB
3	5.81	NO2-N	0.750	0.163	11.17	0.580	BMB
4	7.29	Br	0.224	0.059	4.08	1.045	BMB
5	8.17	NO3-N	0.734	0.214	14.71	0.612	BMB
6	10.70	PO4-P	0.536	0.191	13.11	1.476	BMB
7	12.84	SO4	1.321	0.516	35.48	4.630	BMB
Total:			5.565	1.455	100.00	10.152	

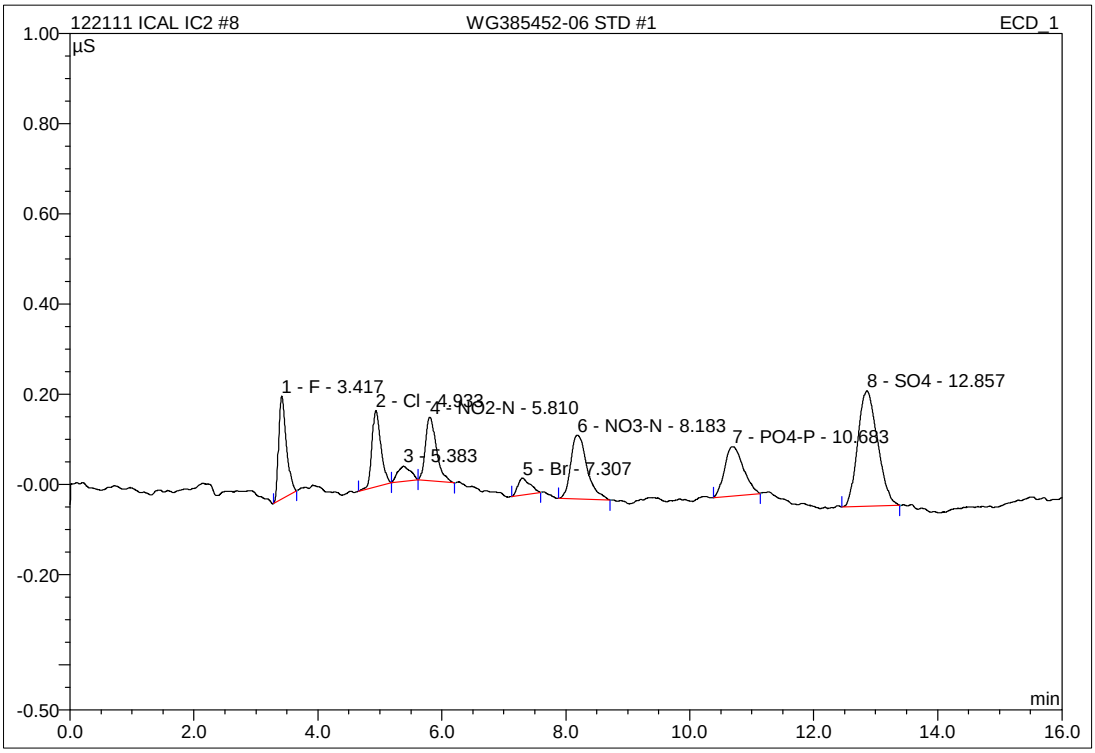
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG385452-06 STD #1

1,1 JBK STD48131

Sample Name:	**WG385452-06 STD #1**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 13:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.42	F	0.229	0.033	11.66	0.203	BMB
2	4.93	Cl	0.169	0.028	9.90	0.205	BMB
3	5.38	n.a.	0.033	0.008	2.77	n.a.	BMB
4	5.81	NO2-N	0.141	0.029	10.30	0.123	BMB
5	7.31	Br	0.037	0.008	2.99	0.199	BMB
6	8.18	NO3-N	0.142	0.043	15.30	0.138	BMB
7	10.68	PO4-P	0.110	0.038	13.54	0.333	BMB
8	12.86	SO4	0.256	0.095	33.53	1.017	BMB
Total:			1.116	0.283	100.00	2.218	

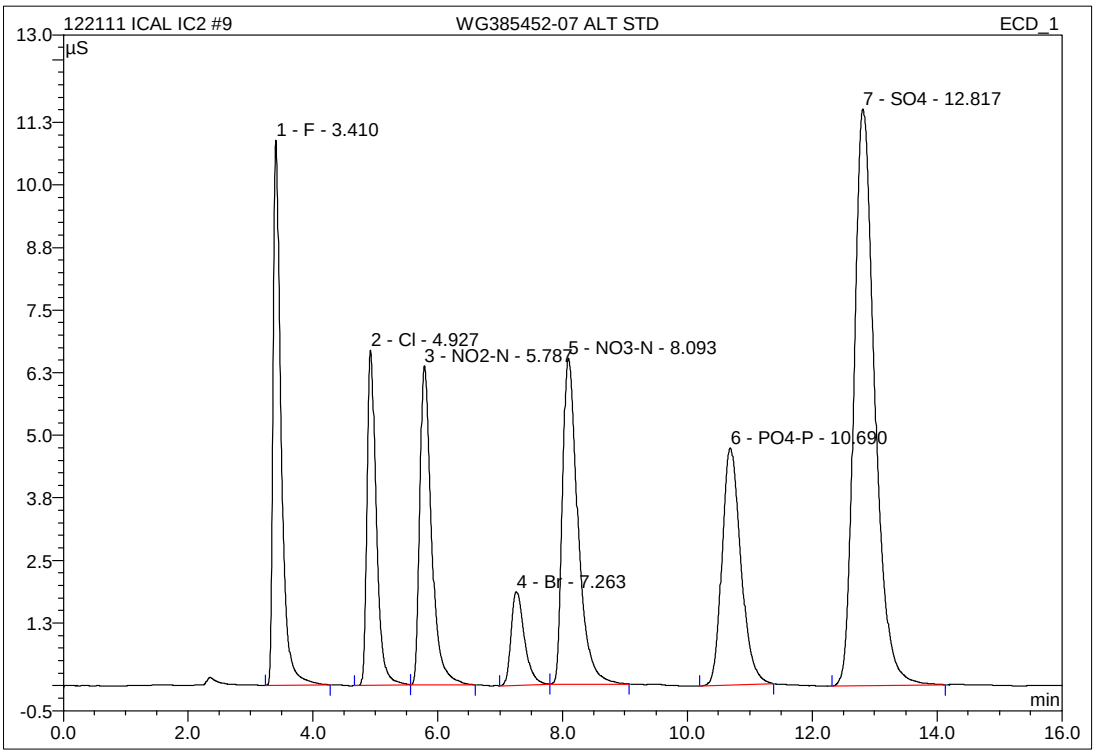
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG385452-07 ALT STD

1,1 JBK STD48132

Sample Name:	**WG385452-07 ALT STD**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 14:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.41	F	10.889	1.620	12.87	7.835	BMB
2	4.93	Cl	6.698	1.162	9.23	7.854	BMB
3	5.79	NO2-N	6.377	1.390	11.05	4.790	BMB
4	7.26	Br	1.863	0.461	3.66	7.714	BMb
5	8.09	NO3-N	6.508	1.876	14.91	5.228	bMB
6	10.69	PO4-P	4.738	1.657	13.17	12.478	BMB
7	12.82	SO4	11.518	4.419	35.11	38.090	BMB
Total:			48.590	12.584	100.00	83.990	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG385452-07 ALT STD

1,1 JBK STD48132

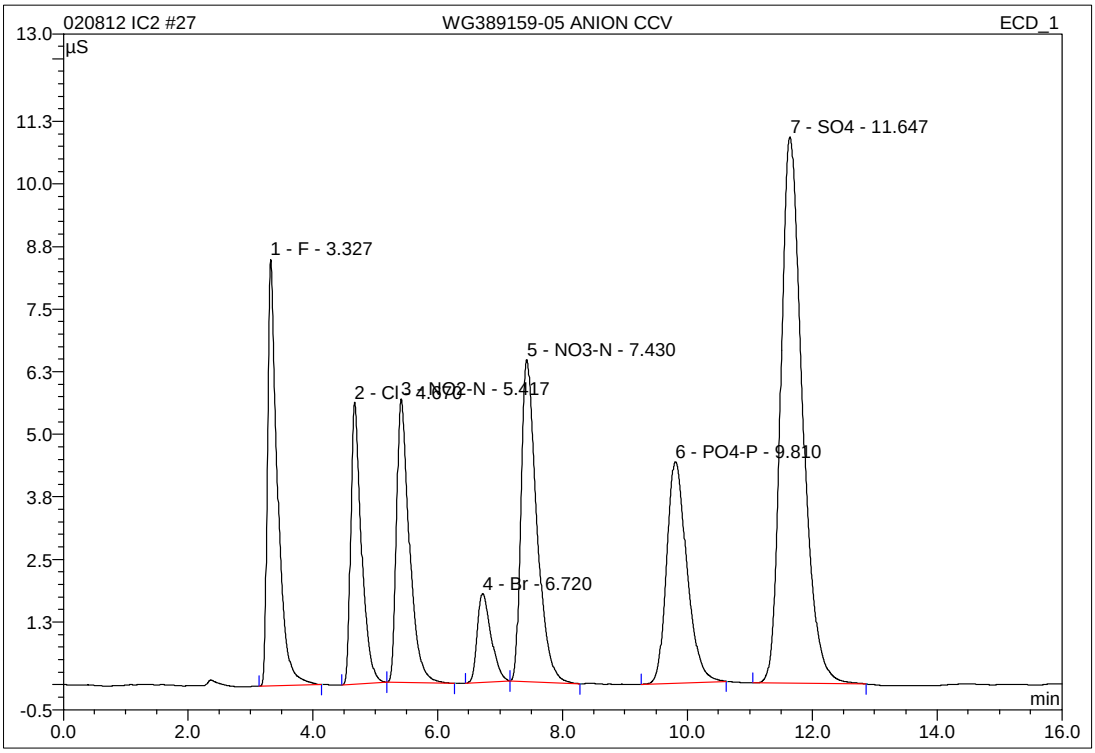
Sample Name:	**WG385452-07 ALT STD**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**12/21/2011 14:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG385452-07 ALT	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.8350	-2.06	PASS
Cl	8	7.8544	-1.82	PASS
NO2-N	4.8714	4.7901	-1.67	PASS
NO3-N	5.4216	5.2280	-3.57	PASS
Br	8	7.7140	-3.58	PASS
SO4	40	38.0903	-4.77	PASS
PO4-P	13.0456	12.4781	-4.35	PASS

27 WG389159-05 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG389159-05 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/8/2012 23:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.33	F	8.522	1.596	12.81	7.719	BMB
2	4.67	Cl	5.633	1.117	8.97	7.552	BMB
3	5.42	NO2-N	5.664	1.351	10.85	4.656	BMB
4	6.72	Br	1.779	0.455	3.65	7.610	BMB
5	7.43	NO3-N	6.433	1.873	15.04	5.220	BMB
6	9.81	PO4-P	4.424	1.667	13.39	12.550	BMB
7	11.65	SO4	10.911	4.394	35.29	37.880	BMB
Total:			43.366	12.452	100.00	83.187	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

27 WG389159-05 ANION CCV

1,1 JBK STD48131

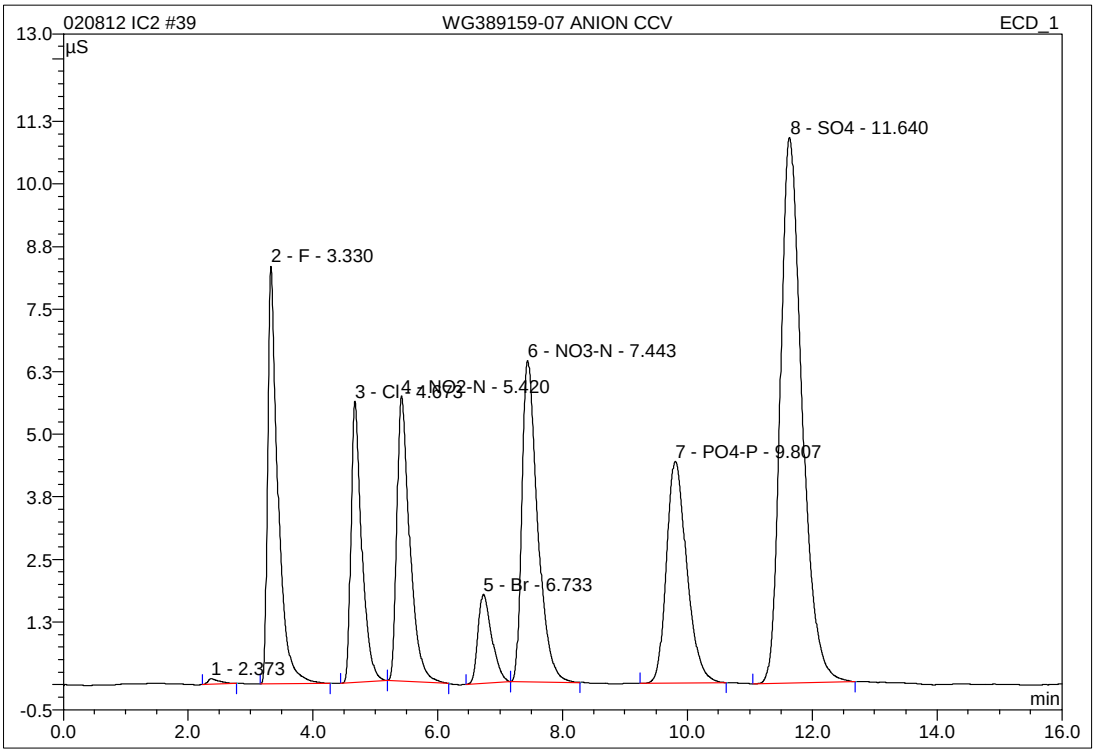
Sample Name:	**WG389159-05 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/8/2012 23:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG389159-05 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.7195	-3.51	PASS
Cl	8	7.5516	-5.60	PASS
NO2-N	4.8714	4.6556	-4.43	PASS
NO3-N	5.4216	5.2198	-3.72	PASS
Br	8	7.6105	-4.87	PASS
SO4	40	37.8800	-5.30	PASS
PO4-P	13.0456	12.5498	-3.80	PASS

39 WG389159-07 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG389159-07 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 3:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.37	n.a.	0.113	0.024	0.19	n.a.	BMB
2	3.33	F	8.345	1.599	12.80	7.738	BMB
3	4.67	Cl	5.621	1.119	8.95	7.565	BMb
4	5.42	NO2-N	5.699	1.363	10.91	4.698	bMB
5	6.73	Br	1.777	0.455	3.64	7.622	BMB
6	7.44	NO3-N	6.416	1.872	14.98	5.217	BMB
7	9.81	PO4-P	4.428	1.674	13.39	12.601	BMB
8	11.64	SO4	10.895	4.391	35.13	37.848	BMB
Total:			43.295	12.498	100.00	83.290	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

39 WG389159-07 ANION CCV

1,1 JBK STD48131

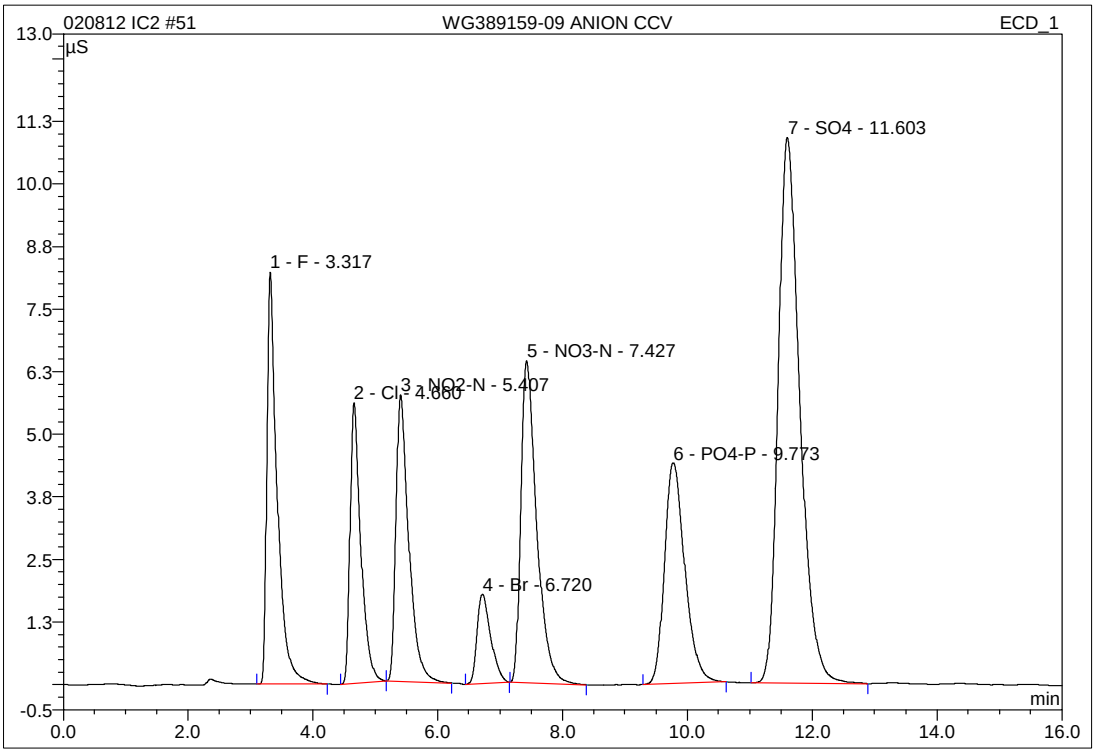
Sample Name:	**WG389159-07 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 3:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG389159-07 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.7385	-3.27	PASS
Cl	8	7.5652	-5.43	PASS
NO2-N	4.8714	4.6975	-3.57	PASS
NO3-N	5.4216	5.2170	-3.77	PASS
Br	8	7.6222	-4.72	PASS
SO4	40	37.8484	-5.38	PASS
PO4-P	13.0456	12.6010	-3.41	PASS

51 WG389159-09 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG389159-09 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 7:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	8.226	1.581	12.70	7.651	BMB
2	4.66	Cl	5.607	1.116	8.96	7.543	BMB
3	5.41	NO2-N	5.723	1.364	10.95	4.700	BMB
4	6.72	Br	1.782	0.453	3.63	7.578	BMB
5	7.43	NO3-N	6.432	1.885	15.14	5.255	BMB
6	9.77	PO4-P	4.409	1.663	13.36	12.522	BMB
7	11.60	SO4	10.899	4.388	35.24	37.825	BMB
Total:			43.079	12.450	100.00	83.073	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

51 WG389159-09 ANION CCV

1,1 JBK STD48131

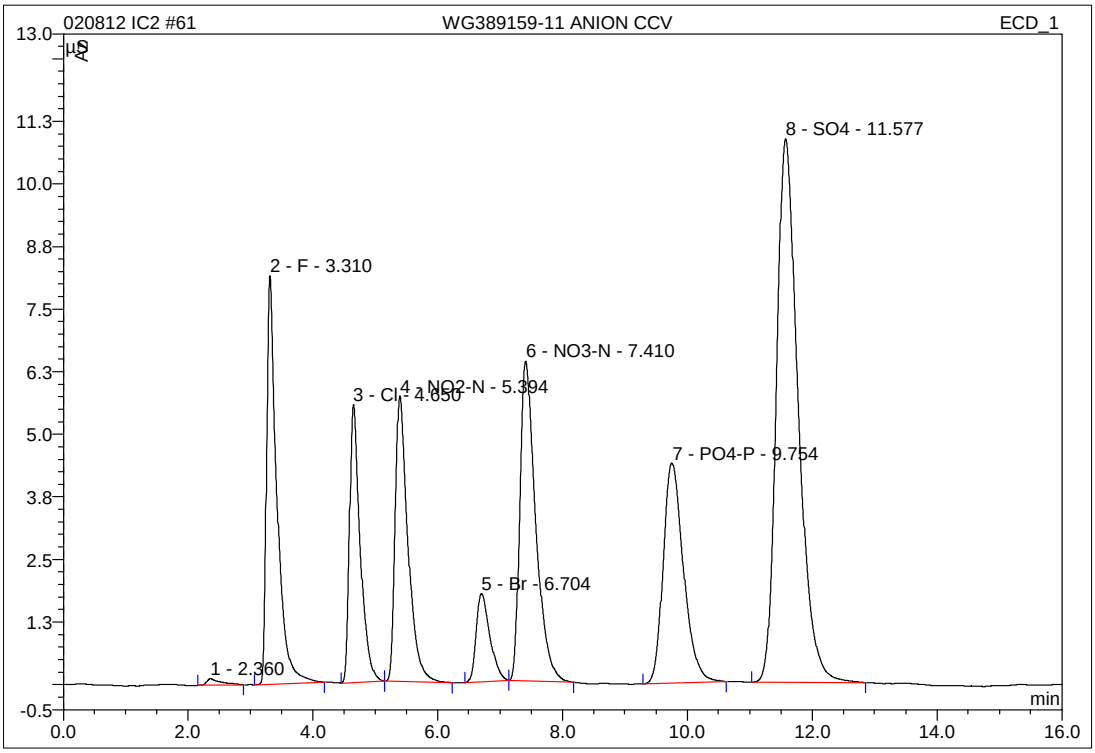
Sample Name:	**WG389159-09 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 7:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG389159-09 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.6512	-4.36	PASS
Cl	8	7.5429	-5.71	PASS
NO2-N	4.8714	4.7002	-3.51	PASS
NO3-N	5.4216	5.2550	-3.07	PASS
Br	8	7.5776	-5.28	PASS
SO4	40	37.8248	-5.44	PASS
PO4-P	13.0456	12.5215	-4.02	PASS

61 WG389159-11 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG389159-11 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 10:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.36	n.a.	0.129	0.034	0.27	n.a.	BMB
2	3.31	F	8.163	1.569	12.65	7.593	BMB
3	4.65	Cl	5.553	1.100	8.87	7.437	BMB
4	5.39	NO2-N	5.705	1.347	10.86	4.642	BMB
5	6.70	Br	1.754	0.446	3.59	7.463	BMB
6	7.41	NO3-N	6.386	1.864	15.03	5.196	BMB
7	9.75	PO4-P	4.396	1.661	13.39	12.507	BMB
8	11.58	SO4	10.853	4.381	35.33	37.768	BMB
Total:			42.940	12.403	100.00	82.607	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

61 WG389159-11 ANION CCV

1,1 JBK STD48131

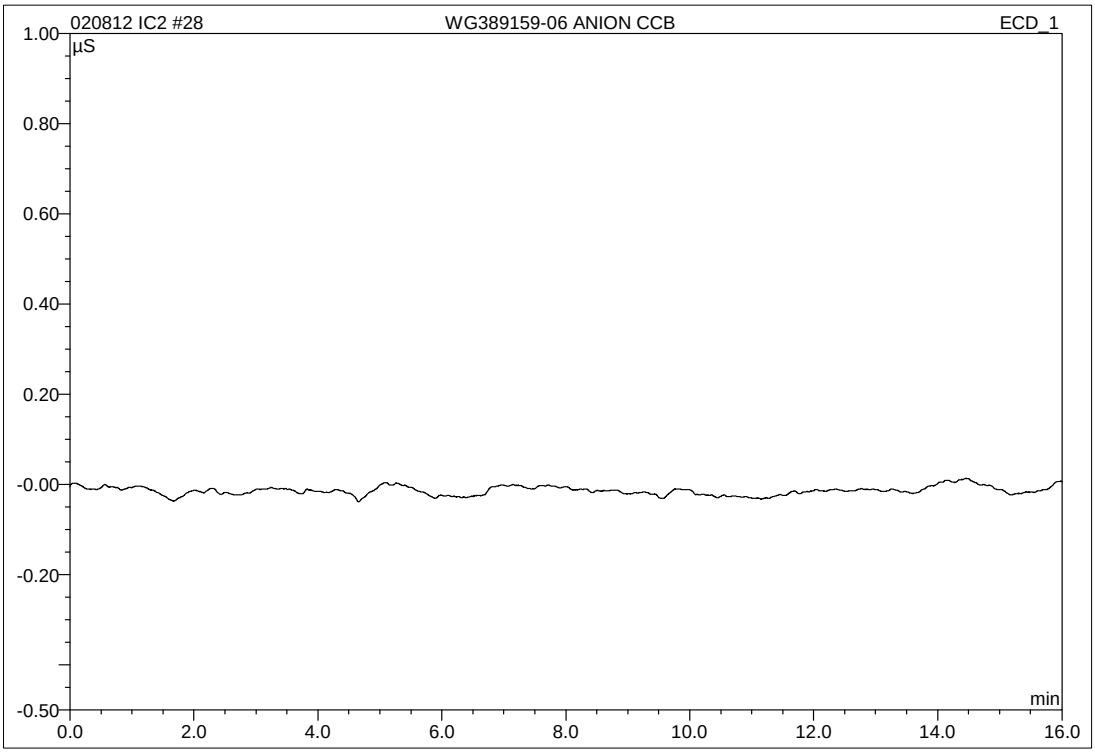
Sample Name:	**WG389159-11 ANION CCV**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 10:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

WG389159-11 ANI(	Actual mg/L	Recovered mg/L	%Difference	
F	8.00	7.5932	-5.09	PASS
Cl	8	7.4371	-7.04	PASS
NO2-N	4.8714	4.6423	-4.70	PASS
NO3-N	5.4216	5.1962	-4.16	PASS
Br	8	7.4628	-6.72	PASS
SO4	40	37.7684	-5.58	PASS
PO4-P	13.0456	12.5070	-4.13	PASS

28 WG389159-06 ANION CCB

1,1 JBK

Sample Name:	**WG389159-06 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/8/2012 23:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

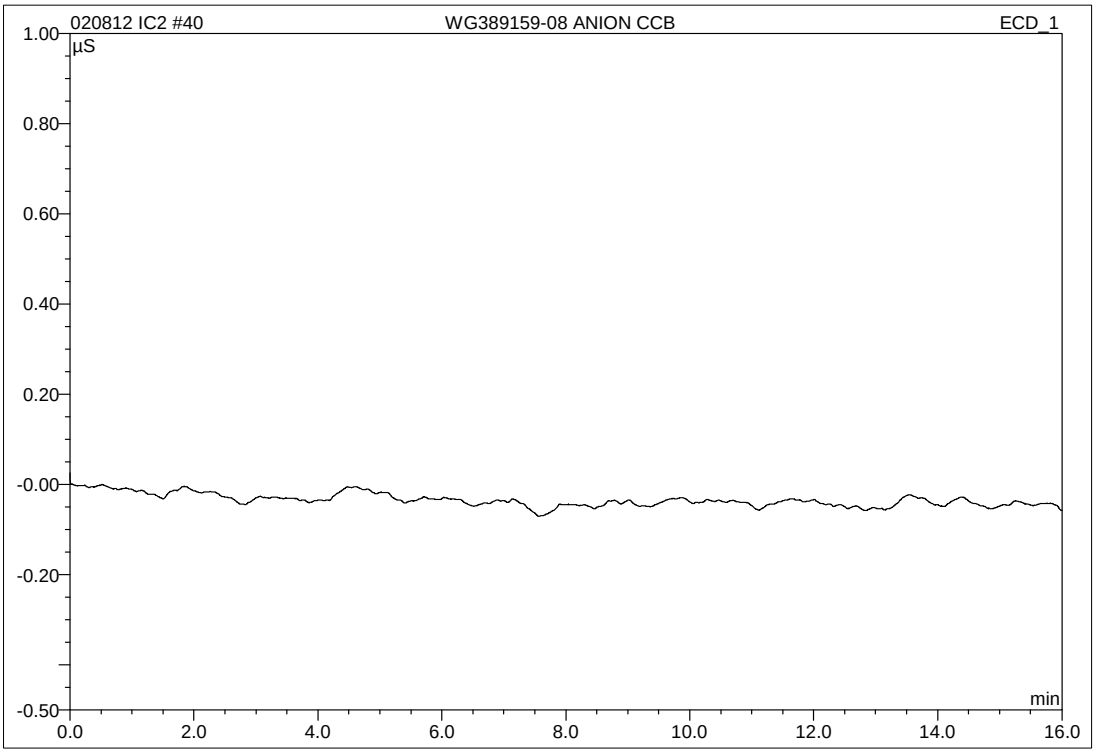


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

40 WG389159-08 ANION CCB

1,1 JBK

Sample Name:	**WG389159-08 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 3:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**

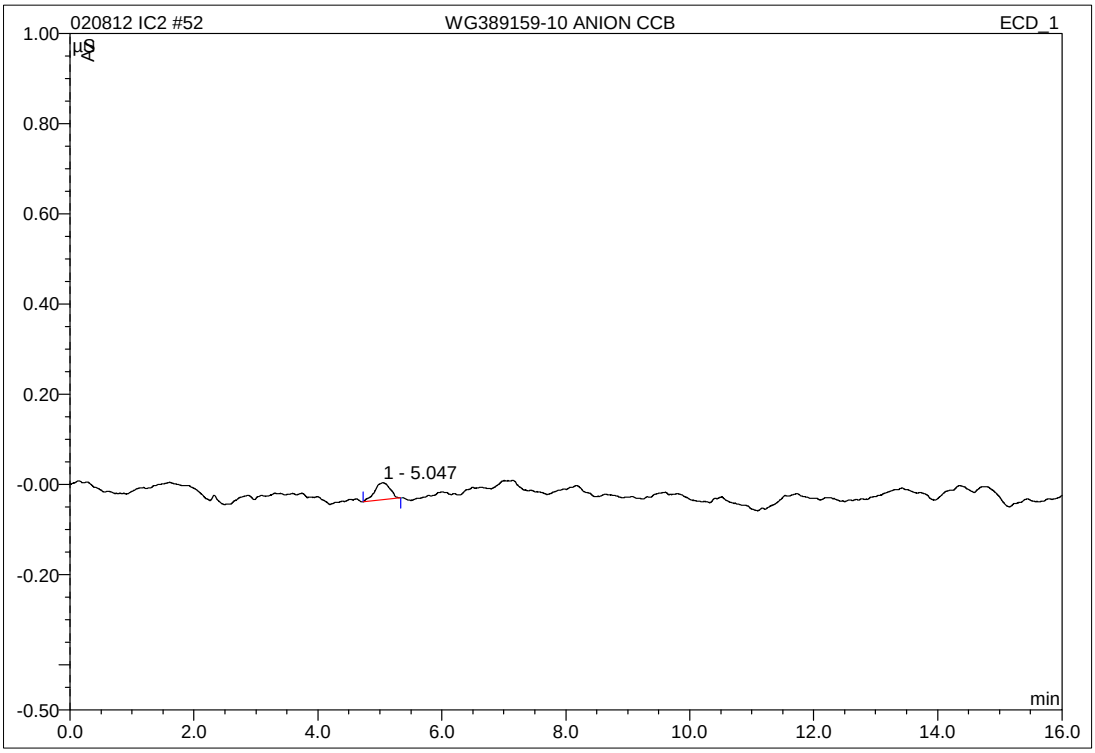


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

52 WG389159-10 ANION CCB

1,1 JBK

Sample Name:	**WG389159-10 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 7:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	5.05	n.a.	0.038	0.011	100.00	n.a.	BMB
Total:			0.038	0.011	100.00	0.000	

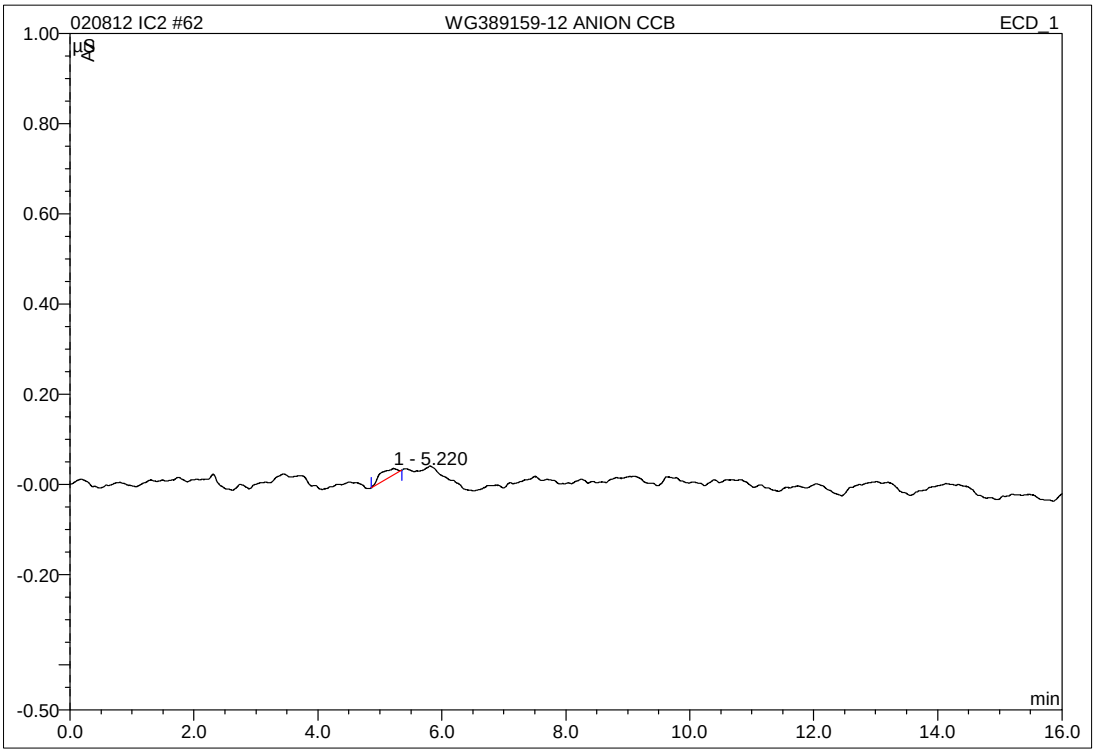
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

62 WG389159-12 ANION CCB

1,1 JBK

Sample Name:	**WG389159-12 ANION CCB**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 10:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	5.22	n.a.	0.015	0.006	100.00	n.a.	BMB
Total:			0.015	0.006	100.00	0.000	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

RETENTION TIME WINDOWS

Lab Name: Microbac Laboratories, Inc.

Instrument ID: IC1

IC Column: AG14A-SC/AS14A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	9/28/2011	9/28/2011	9/29/2011
File #	WG377440-01	WG377440-07	WG377498-01
Time	13:32	23:58	13:53

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.457	3.467	3.447	0.030
Cl	4.910	4.910	4.880	0.052
NO2-N	5.734	5.730	5.690	0.073
Br	7.110	7.097	7.047	0.100
NO3-N	7.870	7.857	7.800	0.112
PO4-P	10.834	10.843	10.754	0.147
SO4	13.124	13.137	13.007	0.215

Instrument ID: IC2

IC Column: AG14A-SC/AS14A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	8/3/2010	8/3/2010	8/4/2010
File #	WG338645-02	WG338692-07	WG338870-02
Time	12:15	22:42	12:00

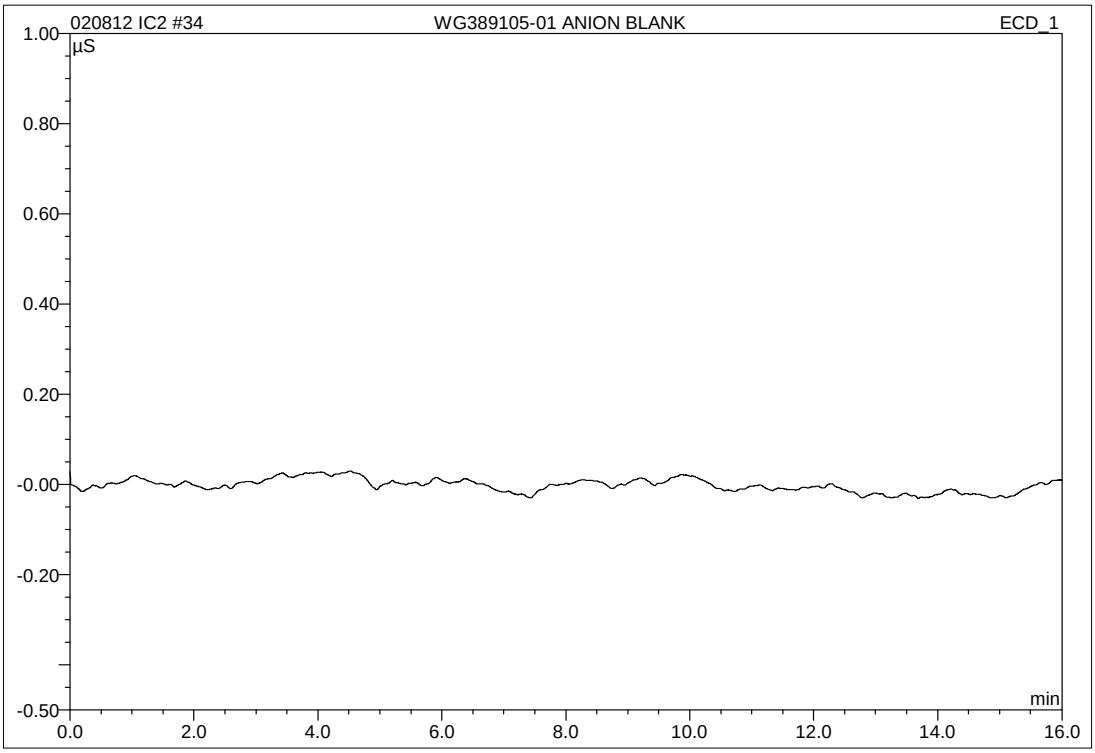
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.387	3.377	3.367	0.030
Cl	4.867	4.864	4.837	0.050
NO2-N	5.724	5.717	5.684	0.064
Br	7.174	7.160	7.117	0.089
NO3-N	8.020	8.007	7.954	0.105
PO4-P	10.640	10.607	10.580	0.090
SO4	12.580	12.574	12.507	0.122

2.2.1.5 Raw QC Data

34 WG389105-01 ANION BLANK

1,1 JBK

Sample Name:	**WG389105-01 ANION BLANK**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 1:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

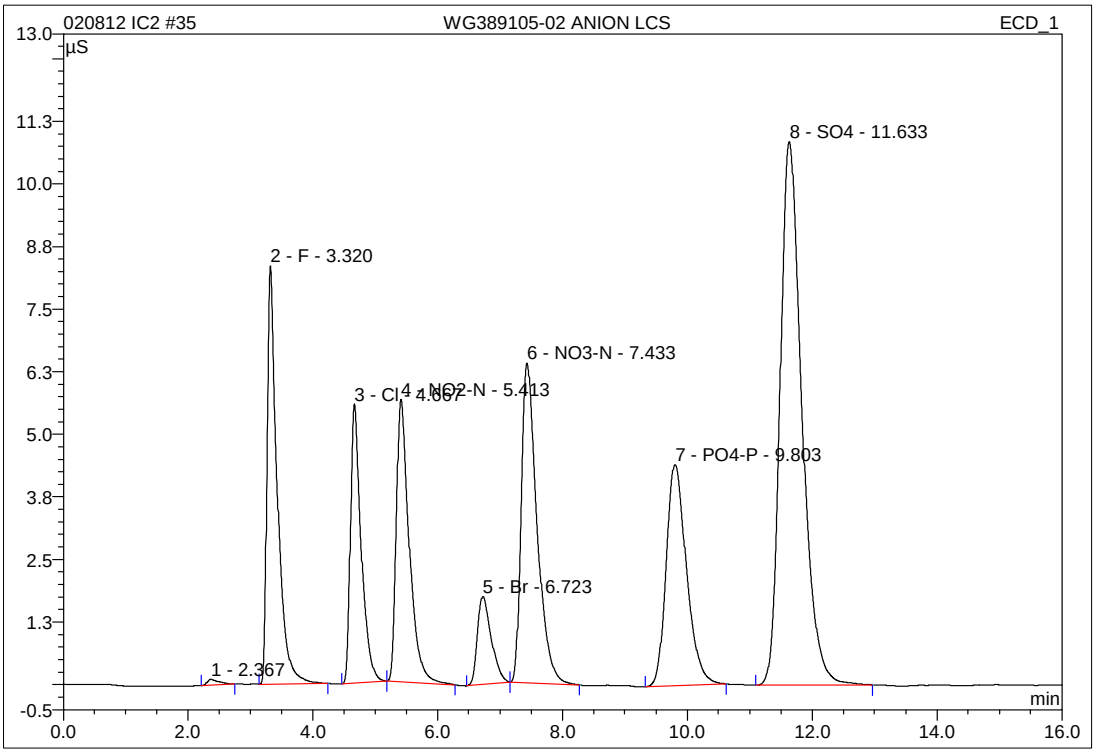
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

35 WG389105-02 ANION LCS

1,1 JBK STD48131

Sample Name:	**WG389105-02 ANION LCS**	*Injection Volume:*	**25.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 2:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.37	n.a.	0.115	0.025	0.20	n.a.	BMB
2	3.32	F	8.349	1.581	12.72	7.651	BMB
3	4.67	Cl	5.572	1.107	8.91	7.485	BMB
4	5.41	NO2-N	5.645	1.352	10.88	4.660	BMB
5	6.72	Br	1.761	0.451	3.63	7.550	BMb
6	7.43	NO3-N	6.382	1.859	14.96	5.180	bMB
7	9.80	PO4-P	4.417	1.669	13.43	12.562	BMB
8	11.63	SO4	10.854	4.383	35.27	37.784	BMB
Total:			43.094	12.427	100.00	82.873	

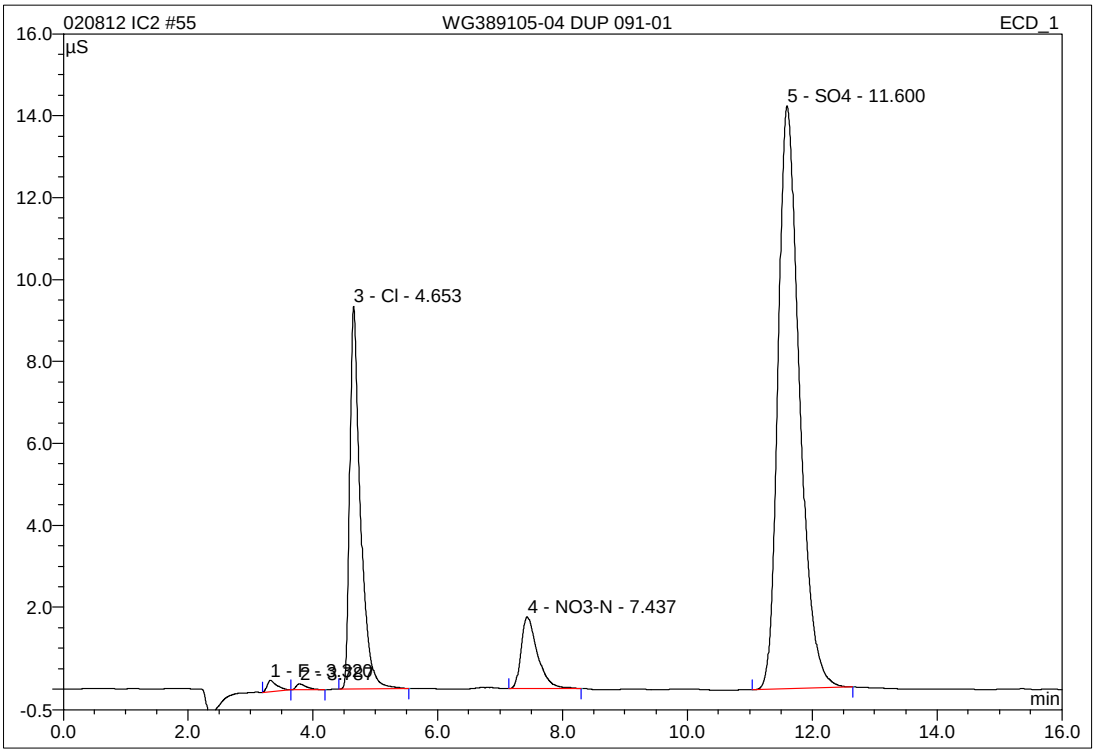
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

55 WG389105-04 DUP 091-01

1,1 JBK

Sample Name:	**WG389105-04 DUP 091-01**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 8:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	0.275	0.050	0.62	0.285	BMB
2	3.79	n.a.	0.143	0.029	0.35	n.a.	bMB
3	4.65	Cl	9.334	1.846	22.72	12.466	BMB
4	7.44	NO3-N	1.750	0.530	6.53	1.491	BMB
5	11.60	SO4	14.232	5.670	69.79	48.814	BMB
Total:			25.735	8.124	100.00	63.056	

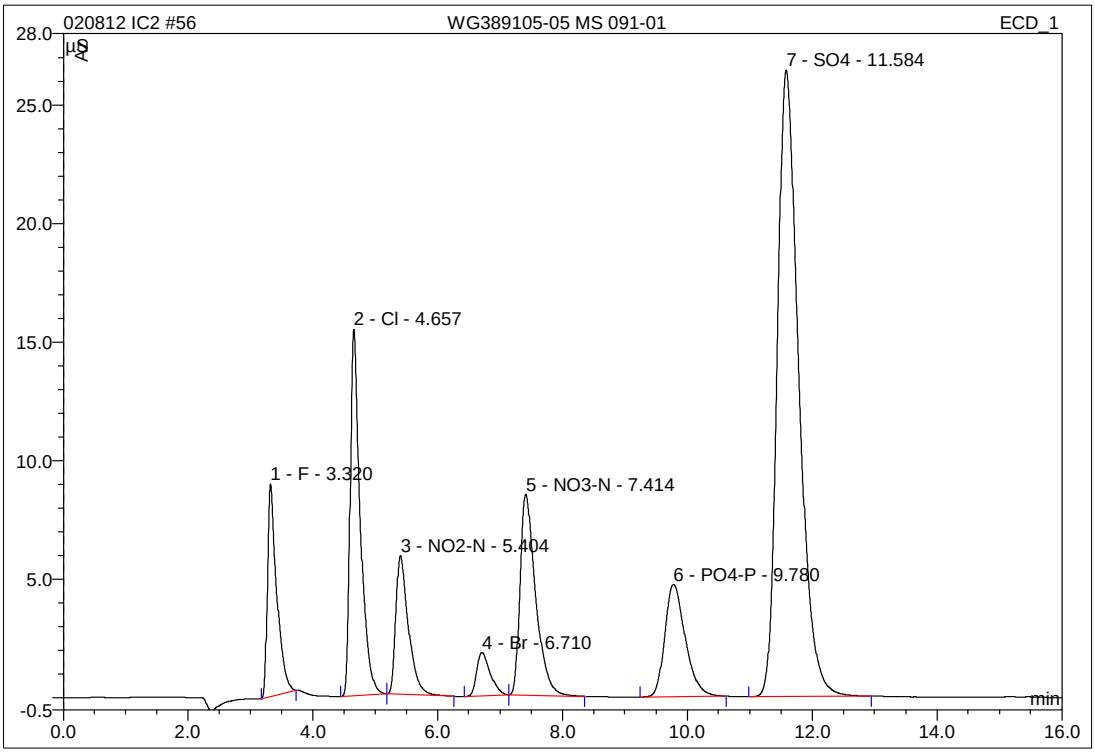
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

56 WG389105-05 MS 091-01

1,1 JBK

Sample Name:	**WG389105-05 MS 091-01**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 8:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	8.970	1.545	7.34	7.477	BMB
2	4.66	Cl	15.453	2.909	13.83	19.640	BMb
3	5.40	NO2-N	5.849	1.365	6.49	4.703	bMB
4	6.71	Br	1.820	0.459	2.18	7.692	BMB
5	7.41	NO3-N	8.478	2.445	11.62	6.810	BMB
6	9.78	PO4-P	4.732	1.802	8.57	13.565	BMB
7	11.58	SO4	26.427	10.514	49.97	90.344	BMB
Total:			71.728	21.039	100.00	150.230	

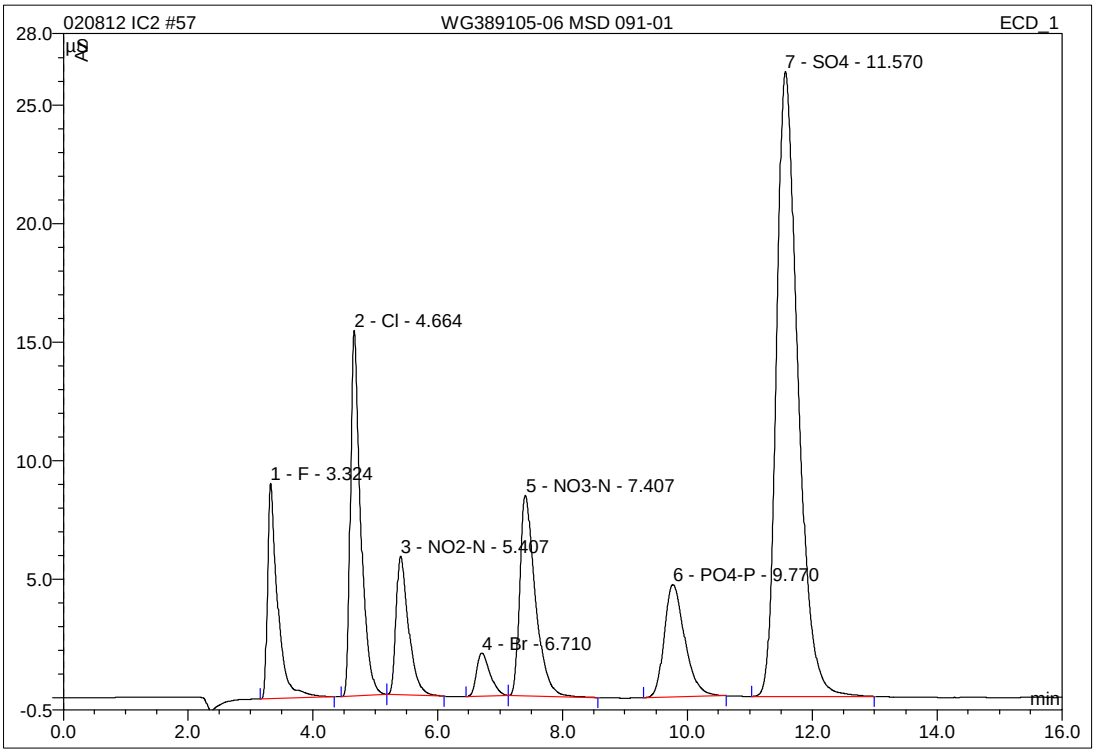
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

57 WG389105-06 MSD 091-01

1,1 JBK

Sample Name:	**WG389105-06 MSD 091-01**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056_300**	*Dilution Factor:*	**1.0000**
Recording Time:	**2/9/2012 8:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**16.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.32	F	9.094	1.716	8.10	8.299	BMB
2	4.66	Cl	15.424	2.933	13.84	19.801	BMb
3	5.41	NO2-N	5.851	1.350	6.37	4.652	bMB
4	6.71	Br	1.822	0.456	2.15	7.642	BMb
5	7.41	NO3-N	8.458	2.442	11.52	6.800	bMB
6	9.77	PO4-P	4.736	1.806	8.52	13.595	BMB
7	11.57	SO4	26.339	10.493	49.51	90.171	BMB
Total:			71.722	21.197	100.00	150.960	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2.2.2 PH Data

2.2.2.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

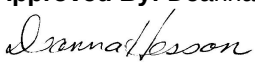
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42232
Approved By: Deanna Hesson



Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL23-0212-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG388761	**Analyst:**	HJR	**Run Date:**	02/06/2012 16:15
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	OS12020715183401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.80		0.000	0.000

2.2.2.2 QC Summary Data

Example pH Calculations
(Direct Readout Parameter)

Readout from instrument = result in S.U.

where:

Readout = direct readout from the instrument

Microbac Laboratories Inc.

Data Checklist

Date: 03-FEB-2012
Analyst: HJR
Analyst: NA
Method: PH
Instrument: ORION 4-STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388761

Calibration/Linearity	2/3/12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
07-FEB-2012

Secondary Reviewer:
08-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-08-2012 15:09:31

2.2.2.3 Raw Data

pH

Sample	Calibration Buffers	Time of Calibration	A Water Misc. Liquid	B 50% Slurry Of Solid	C 50% Water Org. Liq. Mix	Time Analyzed
LCS 6 ~~Std~~ 49324	7,4,10	1355	6.01			1400
02-0108-01	7,4,10	1355	7.23			1400
02-0091-01	7,4,10	1355	7.80			1400
DUP 02-0108-01	7,4,10	1355	7.24			1400
LCS 9 ~~Std~~ 49325	7,4,10	1355	9.02			1400

B,C) SW846 9045D

A) SM 4500-H(+)-B

A) EPA 150.1

A) SW846 9040C

SOP K1501 Rev 13

Circle Instrument

Orion 4-Star

Orion 710A #1

Orion 710A #2

Bante 922

Analyst: [signature] Date: 2/3/12

DCN#89831

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42230
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		96.7		20.0	10.0

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/07/2012 12:20
Workgroup #:	WG388932	**Analyst:**	DIH	**Run Date:**	02/07/2012 12:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207004.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		96.7		20.0	10.0

2.2.3.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 07-FEB-2012
Analyst: DIH
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388932 WG388957 WG388964

Calibration/Linearity	2/7/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
09-FEB-2012

Secondary Reviewer:
09-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-09-2012 15:45:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG388932

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							14		02/07/12	5	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2301363
Report generated 02/07/2012 21:18

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: SC120207004.010
Prep Date: 02/07/12 12:21
Analyzed Date: 02/07/12 12:21
Analyst: DIH

Work Group: WG388932
Blank Sample ID: WG388932-01
Instrument ID: SMARTCHEM
Method: 310.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388932-02	SC120207004.011	02/07/12 12:22	01
LCS2	WG388932-03	SC120207004.012	02/07/12 12:23	01
MPL23-0212-1	L12020091-01	SC120207004.024	02/07/12 12:30	01
MPL23-0212-1	L12020091-01	SC120207004.024	02/07/12 12:30	01
MPL23-0212-1	L12020091-01	SC120207004.024	02/07/12 12:30	01
DUP	WG388932-05	SC120207004.037	02/07/12 12:37	01

Report Name: BLANK_SUMMARY
PDF File ID: 2301364
Report generated 02/07/2012 21:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/07/12 12:21 Sample ID: WG388932-01
Instrument ID: SMARTCHEM Run Date: 02/07/12 12:21 Prep Method: 310.2
File ID: SC120207004.010 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG388932 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC - 07-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Total (as CaCO3)	10.0	20.0	10.0	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2301365
07-FEB-2012 21:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: DIH Prep Method: 310.2
Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
Workgroup (AAB#): WG388932 Units: mg/L
QC Key: DOD4 Lot #: STD49971

Sample ID: WG388932-02 LCS File ID: SC120207004.011 Run Date: 02/07/2012 12:22
Sample ID: WG388932-03 LCS2 File ID: SC120207004.012 Run Date: 02/07/2012 12:23

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	200	191	95.4	200	193	96.6	1.26	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2301366
Report generated: 02/07/2012 21:18

2.2.3.3 Raw Data

WORKGROUP: WG388932 A

388957 B

388964 C

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** A
Plan # 20120207004
2) **Workgroup** B
Plan # 20120207005
3) **Workgroup** C
Plan # 20120207006

	Analyte	1	2	3
		A1K		
	Run 1	Dilution		
SC Prepared Curve				
Position				
1-1	ICV 250			
1-2	BIK			
1-3	LCS 200			
1-4	LCSDUP			
1-5 *	02-138-02	1/5		color
1-6	03	1/5		
1-7	05	1/5		
1-8	06	1/5		
1-9	08	1/5		
1-10	09	1/5		↓
1-11	02-044-01			+BC
1-12	02			
1-13	03			↓
1-14	02-091-01			+BC
1-15 *	02-108-01			
1-16	02-146-01			+BC
1-17	02-145-02			
1-18	03			
1-19	04			
1-20	05			
1-21	06			
1-22	07			
2-1	08			
2-2	10			
2-3	DUP ~~10-06~~			

Position		Analyte	1	2	3
		Run 2			
2-4	1	ICV 250			
2-5	2	BIK			
2-6	3	LCS 200			
2-7	4	LCSDUP			
2-8	5	A 02-182-03			+BC •
2-9	6	B 02-182-01			↓
2-10	7	02-145-12			
2-11	8	13			
2-12	9	14			
2-13	10	DUP 14			
2-14	11	MS 16			
2-15	12	MSD 17			
2-16	13	15			
2-17	14	19			
2-18	15	20			
2-19	16	21			
2-20	17	22			
2-21	18	23			
2-22	19	24			
2-23	20	25			
2-24	21	27			
2-25	22	28			
2-26	1	29			
3-1	2	30			
3-2	3	31			
	4	32			
	5	33			
	7				
	8				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

* frozen in walk-in

DCN#89854

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
	Run3			
3-3 1	ICV 250			
3-4 2	BLK			
3-5 3	LCS 200			
3-6 4	LCSDUP			
3-7 5	02-145-06			
3-8 6	07			
3-9 7	08			
3-10 8	10			
3-11 9	02-166-02			
3-12 10	03			
3-13 11	04			
3-14 12	05			
3-15 13	06			

Position	Analyte	1	2	3
3-16 14	02-166-08			
3-17 15	09			
3-18 16	10			
3-19 17	11			
3-20 18	12			
3-21 19	13			
3-22 20	15			
3-23 21	16			
3-24 22	17			
3-25 1	DUP 17			
3-26 2	MS 18			* barely below * [illegible] spiked
3-27 3	MSD 19			
3-28 4	20			

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	ALK		Reagents
SOP & Revision	K3102 R14		R0+17024
Curve Stock (SC made)	std 47063		
Curve ID (user made)			
ICV	std 49970		
CCV	std 49969		
LCS	std 49971		
MS	std 47064 Dilution 0.2/5(2500) = 100		

Comments: all 02-044, 02-091, 02-146, 02-182 all pH < 8.3

Analyst: Joann Hosam Date: 2/7/12

DCN#89854

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.0	0.7256	0.00		12:14:43 PM
DIL-1	RBL	0.0	0.7237	0.00		12:15:01 PM
DIL-1	RBL	0.0	0.7195	0.00		12:15:55 PM
DIL-1	Std-1	0.0	-0.0013	0.00		12:16:13 PM
SR5-1	Std-2	10.0	-0.0168	0.00		12:17:07 PM
SR5-2	Std-3	20.0	-0.0311	0.00		12:17:25 PM
SR5-3	Std-4	50.0	-0.0727	0.00		12:18:19 PM
SR5-4	Std-5	100.0	-0.1621	0.00		12:18:37 PM
SR5-5	Std-6	200.0	-0.3456	0.00		12:19:32 PM
SR5-6	Std-7	250.0	-0.4275	0.00		12:19:49 PM
SR5-7	Std-8	300.0	-0.5015	0.00		12:20:44 PM
1	ICV 250	235.7	-0.3987	0.00		12:21:01 PM
2	WG388932-01 BLK	-2.1	0.0074	0.00	INV,><,LL	12:21:56 PM
3	WG388932-02 LCS	190.8	-0.3224	0.00		12:22:14 PM
4	WG388932-03 LCSDUP	193.2	-0.3265	0.00		12:23:08 PM
5	L12020138-02 (5)	145.1	-0.2445	0.00		12:23:26 PM
6	L12020138-03 (5)	158.4	-0.2672	0.00		12:24:20 PM
7	L12020138-05 (5)	237.7	-0.4021	0.00		12:24:38 PM
8	L12020138-06 (5)	134.9	-0.2271	0.00		12:25:32 PM
9	L12020138-08 (5)	169.2	-0.2857	0.00		12:25:50 PM
10	L12020138-09 (5)	60.4	-0.0998	0.00		12:26:44 PM
ST-2	CCV (150 mg/L)	152.9	-0.2579	101.95		12:27:02 PM
ST-3	CCB (0 mg/L)	7.6	-0.0094	0.00		12:27:56 PM
11	L12020044-01	89.3	-0.1493	0.00		12:28:14 PM
12	L12020044-02	89.6	-0.1498	0.00		12:29:08 PM
13	L12020044-03	91.6	-0.1533	0.00		12:29:26 PM
14	L12020091-01	96.7	-0.1619	0.00		12:30:20 PM
15	L12020108-01	87.6	-0.1464	0.00		12:30:38 PM
16	L12020146-01	87.4	-0.1460	0.00		12:31:32 PM
17	L12020145-02	27.1	-0.0428	0.00		12:31:50 PM
18	L12020145-03	32.2	-0.0516	0.00		12:32:44 PM
19	L12020145-04	88.1	-0.1472	0.00		12:33:02 PM
20	L12020145-05	122.0	-0.2051	0.00		12:33:56 PM
ST-2	CCV (150 mg/L)	166.9	-0.2817	111.26		12:34:14 PM
ST-3	CCB (0 mg/L)	19.2	-0.0293	0.00		12:35:08 PM
21	L12020145-06 ref wg-04	112.7	-0.1893	0.00		12:35:26 PM

Report Date :02/07/2012 Run Date :02/07/2012 Operator : WESTCO Plan # :20120207004

Plan Description : ALK-A-DIH/2/7/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
22	L12020145-07	119.9 X	-0.2015	0.00		12:36:20 PM
23	L12020145-08	199.7 X	-0.3375	0.00		12:36:38 PM
24	L12020145-10	35.4 X	-0.0571	0.00		12:37:32 PM
25	WG388932-05 DUP	114.8	-0.1929	0.00		12:37:50 PM
26	ID 26	21.4	-0.0331	0.00		12:38:44 PM
27	ID 27	26.5	-0.0418	0.00		12:39:02 PM
ST-2	CCV (150 mg/L)	164.7	-0.2780	109.81		12:39:56 PM
ST-3	CCB (0 mg/L)	25.8	-0.0405	0.00		12:40:14 PM

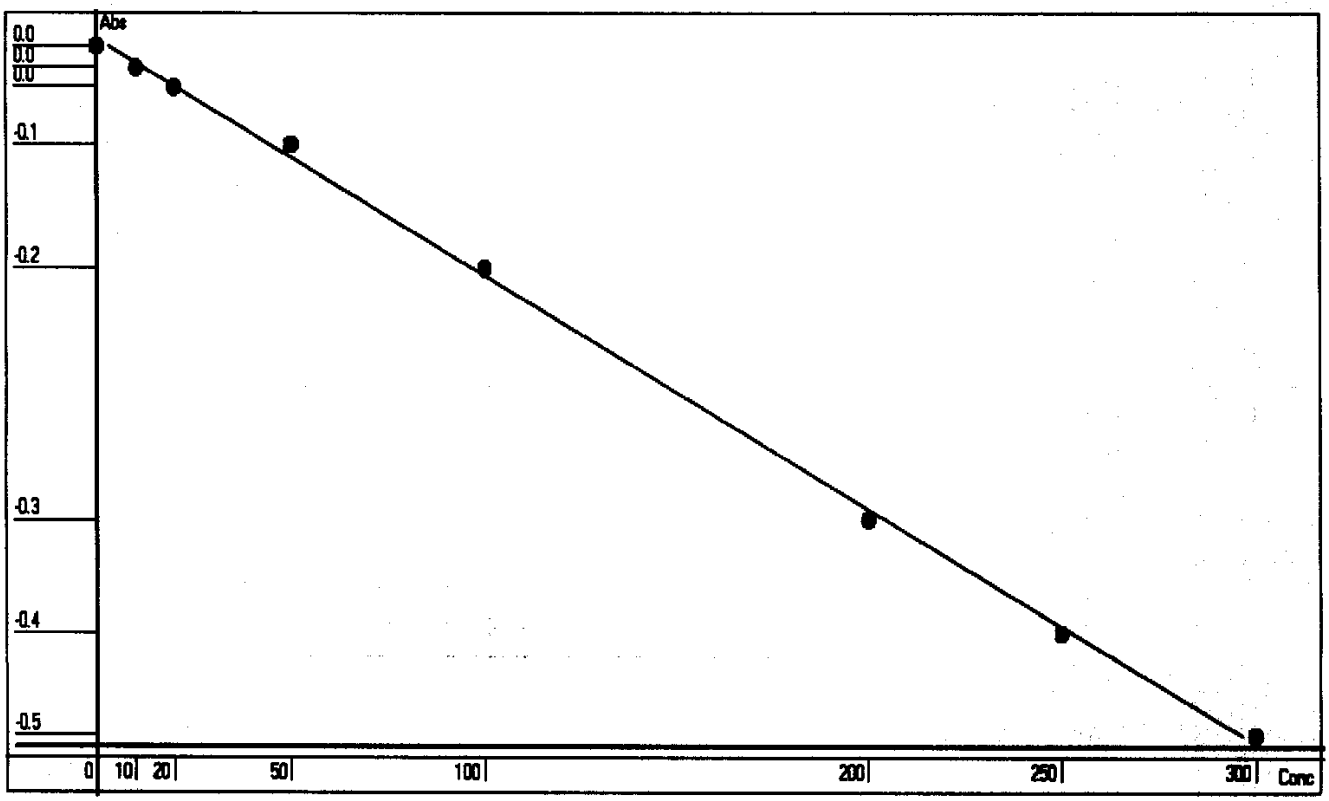
Report Date :02/07/2012 **Run Date :02/07/2012** **Operator : WESTCO** **Plan # :20120207004**

Plan Description : ALK-A-DIH/2/7/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120207004 Description : [ALK-A-DIH/2/7/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0013	0	2.9483	294.83
2	-0.0168	10	11.9771	19.77
3	-0.0311	20	20.3106	1.55
4	-0.0727	50	44.5735	-10.85
5	-0.1621	100	96.8164	-3.18
6	-0.3456	200	204.4805	2.24
7	-0.4275	250	252.7206	1.09
8	-0.5015	300	296.4071	-1.20

Conc= +8.6208*Abso^2 -582.3484*Abso +2.1912 R^2=0.9990

RBL
0.7247
0

Report Date 2/7/2012 Run Date 2/7/2012

2.2.4 Cyanide Data

2.2.4.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42236
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	02/08/2012 08:25
Workgroup #:	WG388944	**Analyst:**	JBK	**Run Date:**	02/08/2012 08:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202080830-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5		U	0.0100	0.00500

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	02/14/2012 10:45
Workgroup #:	WG389446	**Analyst:**	DLP	**Run Date:**	02/14/2012 13:40
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202141340-06
Sample Tag:	D02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	02/08/2012 08:25
Workgroup #:	WG388947	**Analyst:**	JBK	**Run Date:**	02/08/2012 08:40
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202080840-18
Sample Tag:	wd	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.2.4.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 08-FEB-2012
Analyst: DLP
Analyst: JBK
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388944

Calibration/Linearity	2/8/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-FEB-2012

Secondary Reviewer:
08-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-08-2012 15:10:30

Microbac Laboratories Inc.

Data Checklist

Date: 08-FEB-2012
Analyst: DLP
Analyst: JBK
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388947

Calibration/Linearity	2/8/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-FEB-2012

Secondary Reviewer:
08-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-08-2012 15:10:28

Microbac Laboratories Inc.

Data Checklist

Date: 14-FEB-2012
Analyst: DLP
Analyst: NA
Method: CN-A
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG389446

Calibration/Linearity	02-14-12
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	
Primary Reviewer	DLP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
14-FEB-2012

Secondary Reviewer:
15-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-15-2012 11:24:21

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C

AAB#: WG388944

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							14		02/08/12	5.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2302607
Report generated 02/08/2012 14:50

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G

AAB#: WG389446

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							14		02/14/12	12.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2307531
Report generated 02/15/2012 09:40

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I

AAB#: WG388947

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							14		02/08/12	5.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2302592
Report generated 02/08/2012 14:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: 1V.1202080830-03
Prep Date: 02/08/12 08:30
Analyzed Date: 02/08/12 08:30
Analyst: JBK

Work Group: WG388944
Blank Sample ID: WG388944-01
Instrument ID: UV-120-1V
Method: 9014-9010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388944-02	1V.1202080830-04	02/08/12 08:30	
LCS	WG388944-03	1V.1202080830-05	02/08/12 08:30	
MPL23-0212-1	L12020091-01	1V.1202080830-07	02/08/12 08:30	
DUP	WG388944-06	1V.1202080830-13	02/08/12 08:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2302608
Report generated 02/08/2012 14:50

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: 1V.1202141340-03
Prep Date: 02/14/12 13:40
Analyzed Date: 02/14/12 13:40
Analyst: DLP

Work Group: WG389446
Blank Sample ID: WG389446-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG389446-02	1V.1202141340-04	02/14/12 13:40	
LCS	WG389446-03	1V.1202141340-05	02/14/12 13:40	
MPL23-0212-1	L12020091-01	1V.1202141340-06	02/14/12 13:40	D02
DUP	WG389446-06	1V.1202141340-13	02/14/12 13:40	

Report Name: BLANK_SUMMARY
PDF File ID: 2307532
Report generated 02/15/2012 09:40

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: 1V.1202080840-03
Prep Date: 02/08/12 08:40
Analyzed Date: 02/08/12 08:40
Analyst: JBK

Work Group: WG388947
Blank Sample ID: WG388947-01
Instrument ID: UV-120-1V
Method: SM4500-CN-I

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388947-02	1V.1202080840-04	02/08/12 08:40	wd
LCS	WG388947-03	1V.1202080840-05	02/08/12 08:40	wd
MPL23-0212-1	L12020091-01	1V.1202080840-18	02/08/12 08:40	wd
DUP	WG388947-06	1V.1202080840-22	02/08/12 08:40	wd

Report Name: BLANK_SUMMARY
PDF File ID: 2302593
Report generated 02/08/2012 14:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/08/12 08:30 Sample ID: WG388944-01
Instrument ID: UV-120-1V Run Date: 02/08/12 08:30 Prep Method: 9014-9010C
File ID: 1V.1202080830-03 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG388944 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 08-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.00500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2302609
08-FEB-2012 14:50

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/14/12 13:40 Sample ID: WG389446-01
Instrument ID: UV-120-1V Run Date: 02/14/12 13:40 Prep Method: SM4500-CN-C,G
File ID: 1V.1202141340-03 Analyst: DLP Method: SM4500-CN-C,G
Workgroup (AAB#): WG389446 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-14-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.00500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2307533
15-FEB-2012 09:40

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/08/12 08:40 Sample ID: WG388947-01
Instrument ID: UV-120-1V Run Date: 02/08/12 08:40 Prep Method: SM4500-CN-I
File ID: 1V.1202080840-03 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG388947 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 08-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.00500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2302594
08-FEB-2012 14:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG388944-02
Instrument ID: UV-120-1V Run Time: 08:30 Prep Method: 9014-9010C
File ID: 1V.1202080830-04 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG388944 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 08-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.198	99.1	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2302610
Report generated: 02/08/2012 14:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG388944-03
Instrument ID: UV-120-1V Run Time: 08:30 Prep Method: 9014-9010C
File ID: 1V.1202080830-05 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG388944 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 08-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0410	103	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2302610
Report generated: 02/08/2012 14:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/14/2012 Sample ID: WG389446-02
Instrument ID: UV-120-1V Run Time: 13:40 Prep Method: SM4500-CN-C,G
File ID: 1V.1202141340-04 Analyst: DLP Method: SM4500-CN-C,G
Workgroup (AAB#): WG389446 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-14-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.200	0.000942	0.471	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2307534
Report generated: 02/15/2012 09:40

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/14/2012 Sample ID: WG389446-03
Instrument ID: UV-120-1V Run Time: 13:40 Prep Method: SM4500-CN-C,G
File ID: 1V.1202141340-05 Analyst: DLP Method: SM4500-CN-C,G
Workgroup (AAB#): WG389446 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-14-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.0400	0.00120	3.01	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2307534
Report generated: 02/15/2012 09:40

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG388947-02
Instrument ID: UV-120-1V Run Time: 08:40 Prep Method: SM4500-CN-I
File ID: 1V.1202080840-04 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG388947 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-08-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.200	0.196	98.2	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2302595
Report generated: 02/08/2012 14:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/08/2012 Sample ID: WG388947-03
Instrument ID: UV-120-1V Run Time: 08:40 Prep Method: SM4500-CN-I
File ID: 1V.1202080840-05 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG388947 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-08-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0397	99.1	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2302595
Report generated: 02/08/2012 14:49

2.2.4.3 Raw Data

wg 3890860

Curves

Parameter: Cyanide Low

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: STD 48841

Concentration: 990 mg/L

Recipe for preparation of curve standards found in:

SOP: 163354 Revision: 14 Page: 15

Second Source Stock: STD 48842 (concentration: 1000 mg/L

Daily Preparation: 5(1000)/250=20
10(20)/100=2
concentration = 1(2)/50=0.04

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.000	50	5	578	0.000
0.00495	↓	↓	↓	0.038
0.0099				0.077
0.0198				0.157
0.0297				0.240
0.0396				0.317
0.0495				0.392
ICV (0.04)				0.323

Analyst: [signature] Date/Time: 2/8/12/0825

DCN#89867

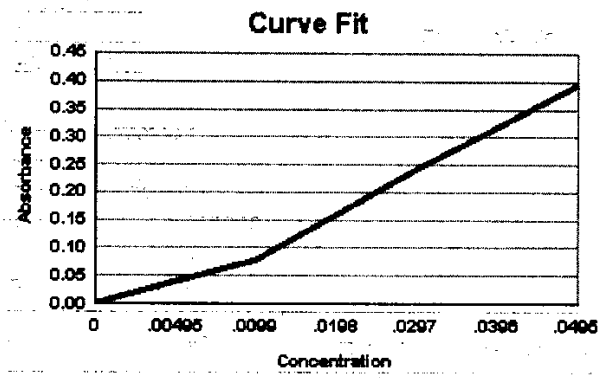
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG389086
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: JBK
Initial Calibration Date: 02/08/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 7.98462
Y-Intercept: -0.000605802
Coef. Of Correlation (R^2): 0.999813
Coef. Of Correlation (R): 0.999907

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.000605802
0.00495	0.0380	0.0000245	0.000188	0.0389181
0.00990	0.0770	0.0000980	0.000762	0.0784420
0.0198	0.157	0.000392	0.00311	0.157490
0.0297	0.240	0.000882	0.00713	0.236538
0.0396	0.317	0.00157	0.0126	0.315585
0.0495	0.392	0.00245	0.0194	0.394633



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 02/08/2012 14:02

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG389086
File ID: 1V.1202080825-08
CCV ID: WG389086-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:25
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12 08:25:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0405	8.08	1.3	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 02/08/2012 14:02

[redacted]

/*

wg 389085

Curves

Parameter: Cyanide High

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: STD 48861

Concentration: 990 mg/L

Recipe for preparation of curve standards found in:

SOP: K3354 Revision: 14 Page: 15

Second Source Stock: STD 48862 (concentration: 1000 mg/L)

Daily Preparation: 5(1000)/250=20
10(20)/100=2

concentration = 5(2)/50=0.2

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.000	50	1	578	0.000
0.0198	↓	↓	↓	0.031
0.0396				0.062
0.099				0.155
0.198				0.317
0.292				0.472
0.394				0.645
ICV (0.2)				0.318

Analyst: [signature] Date/Time: 2/8/12/0820

DCN#89866

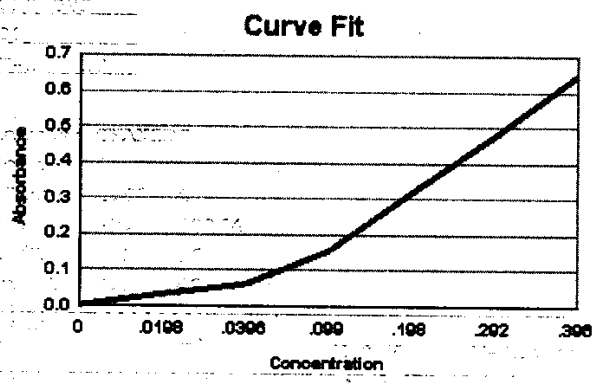
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG389085
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: JRK
Initial Calibration Date: 02/08/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 1.62854
Y-Intercept: -0.00269264
Coef. Of Correlation (R^2): 0.999896
Coef. Of Correlation (R): 0.999948

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00269264
0.0198	0.0310	0.000392	0.000614	0.0295525
0.0396	0.0620	0.00157	0.00246	0.0617976
0.0990	0.155	0.00980	0.0153	0.158533
0.198	0.317	0.0392	0.0628	0.319759
0.292	0.472	0.0853	0.138	0.472841
0.396	0.645	0.157	0.255	0.642210



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 02/08/2012 14:04

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG389085
File ID: 1V.1202080820-08
CCV ID: WG389085-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:20
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12 08:20:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.197	1.59	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 02/08/2012 14:05

[redacted]

Curves

WG 389516

Parameter: CN LOW

Spectrophotometer: UV 120-1V

Calibration (Curve) standard stock: STD 48861

Concentration: 990 mg/L

Recipe for preparation of curve standards found in:

SOP: 3354 Revision: 14 Page: 15

Second Source Stock: STD 48862 (concentration: 1000 mg/L

Daily Preparation: 5(1000)/250 = 20

10(20)/1000 = 2

concentration = 1(2)/50 = 0.04

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
STD 5 (0.0495)	50	5 cm	578	0.387
STD 6 (0.0396)				0.293
STD 7 (0.0297)				0.220
STD 8 (0.0198)				0.144
STD 9 (0.0099)				0.074
STD 10 (0.0049 5)				0.037
STD 11 (0.000)				0.000
2nd Source (0.04)	50	5 cm	578	0.311

Analyst: [signature] Date/Time: 02-14-12/1045

DCN#89937

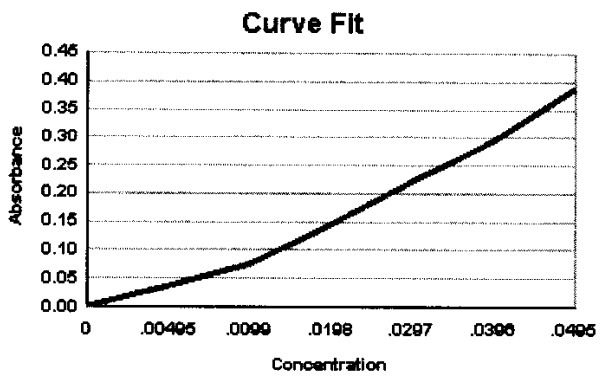
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG389516
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: DLP
Initial Calibration Date: 02/14/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 7.67401
Y-Intercept: -0.00322526
Coef. Of Correlation (R^2): 0.998121
Coef. Of Correlation (R): 0.999060

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00322526
0.00495	0.0370	0.0000245	0.000183	0.0347611
0.00990	0.0740	0.0000980	0.000733	0.0727474
0.0198	0.144	0.000392	0.00285	0.148720
0.0297	0.220	0.000882	0.00653	0.224693
0.0396	0.293	0.00157	0.0116	0.300666
0.0495	0.387	0.00245	0.0192	0.376638



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 02/14/2012 11:39

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG389516
File ID: 1V.1202141045-08
CCV ID: WG389516-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 10:45
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12 10:45:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0409	7.78	2.3	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 02/14/2012 11:39

[redacted]

WORKGROUP: WG388947

CYANIDE

☐ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2
☒ WD method SM4500 CN I

Matrix: (Liquid (mg/L)) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 118561 TRUE VALUE: 990
Daily dilution: 5(990)/1000 = 19.98
10(19.98)/100 = 1.98
5(1.98)/100 = 0.198
5(1.98)/100 = ~~0.396~~ 0.0198

LCS STOCK: 118562 TRUE VALUE: 1000
Daily dilution: 5(1000)/1000 = 20
10(20)/100 = 2
5(2)/100 = 0.2
1(2)/100 = 0.04

curve reference: 2/08/12
Spec: UV-120-1V

SPIKE: (daily dilution) 5(2)/100 = 0.2
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV (high): 0.318 ppm	50				1	0.318
0.0198 CCV (low): ~~0.0396~~ ppm	50				5	0.151
Blank	50	✓	NO		1	0.005
LCS: 0.2 ppm	50	✓	NO		1	0.317
LCS: 0.04 ppm	50	✓	NO		5	0.316
02-068-01	50	✓	NO		1	0.020
01-798-01	50	✓	NO		1	0.003
Ref 02-016-01	50	✓	NO		1,5	0.072, 0.334
MS 02	50	✓	NO		1	0.389
MSD 03	50	✓	NO		1	0.394
04	50	✓	NO		1,5	0.064, 0.254
05	50	✓	NO		1	0.069, 0.313
06	50	✓	NO		1	0.069, 0.31
-07	50	✓	NO		1	0.048, 0.237
02-044-01	50	✓	NO		5	0.007
-02	50	✓	NO		1,5	0.075, 0.357
-03	50	✓	NO		1	0.080, 0.379
* 02-091-01	50	✓	NO		5	0.010
02-146-01	50	✓	NO		5	0.190
from wg 388944 std (0.5) (.02)	50	✓	NO		1	0.313
std (0.04) (.02)	50	✓	NO		5	0.153
Duplicate: 02-068-01	50	✓	NO		5	0.023
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm) 0.318	50				1	0.316
0.0198 CCV (low): (ppm) ~~0.0396~~	50				5	0.154

ANALYST: Quantity Paige DATE/TIME: (on) 02-07-12/1000
(off) 02-07-12/1130
(color)

* Sample has been Frozen. 2/8/12 1040

DCN#89859

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG388947 **Analyst:** JBK
Analyte: CYANIDE **Date:** 02/08/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG388947-01	50	50	0.00500	7.985	-0.0006058	0.00070207	0.00070207	1	mg/L
WG388947-02	50	50	0.317	1.629	-0.002693	0.19631	0.19631	1	mg/L
WG388947-03	50	50	0.316	7.985	-0.0006058	0.039652	0.039652	1	mg/L
L12020068-01	50	50	0.0200	7.985	-0.0006058	0.0025807	ND	1	mg/L
WG388947-04	50	50	0.0200	7.985	-0.0006058	0.0025807	0.0025807	1	mg/L
L12010798-01	50	50	0.00300	7.985	-0.0006058	0.00045159	ND	1	mg/L
L12020016-01	50	50	0.334	7.985	-0.0006058	0.041906	0.041906	1	mg/L
WG388947-05	50	50	0.334	7.985	-0.0006058	0.041906	0.041906	1	mg/L
L12020016-02	50	50	0.389	1.629	-0.002693	0.24052	0.24052	1	mg/L
WG388947-07	50	50	0.389	1.629	-0.002693	0.24052	0.24052	1	mg/L
L12020016-03	50	50	0.394	1.629	-0.002693	0.24359	0.24359	1	mg/L
WG388947-08	50	50	0.394	1.629	-0.002693	0.24359	0.24359	1	mg/L
L12020016-04	50	50	0.284	7.985	-0.0006058	0.035644	0.035644	1	mg/L
L12020016-05	50	50	0.313	7.985	-0.0006058	0.039276	0.039276	1	mg/L
L12020016-06	50	50	0.311	7.985	-0.0006058	0.039026	0.039026	1	mg/L
L12020016-07	50	50	0.237	7.985	-0.0006058	0.029758	0.029758	1	mg/L
L12020044-01	50	50	0.00700	7.985	-0.0006058	0.00095256	ND	1	mg/L
L12020044-02	50	50	0.357	7.985	-0.0006058	0.044787	0.044787	1	mg/L
L12020044-03	50	50	0.379	7.985	-0.0006058	0.047542	0.047542	1	mg/L
L12020091-01	50	50	0.0100	7.985	-0.0006058	0.0013283	ND	1	mg/L
L12020146-01	50	50	0.190	7.985	-0.0006058	0.023872	0.023872	1	mg/L
WG388947-06	50	50	0.0230	7.985	-0.0006058	0.0029564	0.0029564	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 02/08/2012 14:40

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-20
CCV ID: WG389097-05
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.194	1.57	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/08/2012 14:42

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-21
CCV ID: WG389097-06
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0192	7.65	4.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/08/2012 14:42

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-02
CCV ID: WG389097-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0190	7.63	4.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-01
CCV ID: WG389097-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.197	1.61	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-23
CCV ID: WG389097-07
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.196	1.60	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:35

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389097
File ID: 1V.1202080840-24
CCV ID: WG389097-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:40
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0194	7.78	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:35

[redacted]

WORKGROUP: WG388944

CYANIDE

☑ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2
☐ WD method SM4500 CN I

Matrix: Liquid (mg/L) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 48861 TRUE VALUE: 990
Daily dilution: 5(990)/2.50 = 19.80
10(19.80)/10 = 1.98
5(1.98)/50 = 0.198 5/50(0.198) = 0.0198
5(1.98)/250 = 0.0396 7-32/2/8

LCS STOCK: 48862 TRUE VALUE: 100.0
Daily dilution: 5(1000)/2.50 = 20
10(20)/100 = 2
5(2)/50 = 0.2
5(2)/250 = 0.04

curve reference: 2/8/12
Spec: UV-120-1V

SPIKE: (daily dilution) 5(2)/50 = 0.2
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV (high): 0.198 ppm	50				1	0.323
0.0198 CCV (low): 0.0396 ppm	50				5	0.157
Blank	50	✓	NO		↓	0.005
LCS: 0.2 ppm	50	✓	NO		1	0.320
LCS: 0.04 ppm	50	✓	NO		5	0.327
02-066-01	50	✓	NO		1	0.154
* 02-091-01	50	✓	NO		↓	0.005
02-146-01	50	✓	NO		1	0.415
STD 0.2	50	✓	NO		↓	0.313
STD 0.02	50	✓	NO		5	0.153
Duplicate 02-066-01	50	✓	NO		5	0.149
MS: 0.2 ppm 02-146-01	50	✓	NO		1	0.713
MSD: (ppm)						
CCV high: (ppm) 0.198	50				1	0.320
0.0198 CCV (low): (ppm) 0.0396	50				5	0.155

ANALYST: Kristy Pope DATE/TIME: (on) 02-07-12/1000
(off) 02-07-12/1230
(color) 3/8/12/0930

* Sample has been Frozen

DCN#89857

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG388944 **Analyst:** JBK
Analyte: CYANIDE **Date:** 02/08/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG388944-01	50	50	0.00500	7.985	-0.0006058	0.00070207	0.00070207	1	mg/L
WG388944-02	50	50	0.320	1.629	-0.002693	0.19815	0.19815	1	mg/L
WG388944-03	50	50	0.327	7.985	-0.0006058	0.041030	0.041030	1	mg/L
L12020066-01	50	50	0.154	7.985	-0.0006058	0.019363	19.363	1	ug/L
WG388944-04	50	50	0.154	7.985	-0.0006058	0.019363	0.019363	1	mg/L
L12020091-01	50	50	0.00500	7.985	-0.0006058	0.00070207	ND	1	mg/L
WG388944-05	50	50	0.415	1.629	-0.002693	0.25648	0.25648	1	mg/L
L12020146-01	50	50	0.415	1.629	-0.002693	0.25648	0.25648	1	mg/L
WG388944-06	50	50	0.149	7.985	-0.0006058	0.018737	0.018737	1	mg/L
WG388944-07	50	50	0.713	1.629	-0.002693	0.43947	0.43947	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 02/08/2012 14:14

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-09
CCV ID: WG389088-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.194	1.57	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/08/2012 14:21

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-10
CCV ID: WG389088-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.02	0.0192	7.65	4.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/08/2012 14:21

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-11
CCV ID: WG389088-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.198	1.62	0.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:25

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-01
CCV ID: WG389088-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.200	1.63	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:25

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-02
CCV ID: WG389088-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0197	7.93	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:25

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389088
File ID: 1V.1202080830-12
CCV ID: WG389088-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/08/2012
Run Time: 08:30
Analyst: JBK
Cal ID: UV-120 - 08-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0195	7.83	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/08/2012 14:25

[redacted]

WORKGROUP: WG389446

CYANIDE

☐ Total method 9010B/9014 A
SM4500 CN C,E
EPA 335.2
☐ WD method SM4500 CN I

Matrix: (Liquid) (mg/L) Soil (mg/Kg)

SOP #: K3354 Revision 14

CCV(Cal STDs): 488661 TRUE VALUE: 99.0
Daily dilution: 5(99.0)/250 = 19.80
10(19.80)/100 = 1.98
5(1.98)/50 = 0.198
10(1.98)/100 = 0.198
5(0.198)/50 = 0.0198
curve reference: 389515 389516
Spec: UV-120-1V 02-14-D

LCS STOCK: 488662 TRUE VALUE: 100.0
Daily dilution: 5(100)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
10(2)/100 = 0.04
SPIKE: (daily dilution) 5(2)/50 = 0.20
(same stock as LCS)

Sample	Volume mL/grams	pH>12	Sulfide Presence	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
02-14-12 0.198						
CCV (high): ~~0.2~~ ppm	50				1cm	0.286
CCV (low): 0.0198 ppm	50				5cm	0.140
Blank	50	✓	NO		5cm	0.002
LCS: 0.2 ppm	50	✓	NO		5cm	0.004
LCS: 0.04 ppm	50	✓	NO		5cm	0.006
* 02-091-01	50	✓	NO		5cm	0.006
02-146-01	50	✓	NO		5cm	0.009
02-220-01	50	✓	NO		5cm	0.007
-02	50	✓	NO		5cm	0.006
03	50	✓	NO		5cm	0.004
STD 0.2	50	✓	NO		1cm	0.287
STD 0.02	50	✓	NO		5cm	0.139
Duplicate 02-220-03	50	✓	NO		5cm	0.004
MS: (ppm) 02-091-01	50	✓	NO		5cm	0.003
MSD: (ppm)						
CCV high: (ppm) 0.198	50				1cm	0.287
CCV (low): (ppm) 0.0198	50				5cm	0.141

ANALYST: Christy Pappe DATE/TIME: (on) 02-14-12/0850
(off) 02-14-12/1020
(color) 02-14-12/1340

* Sample has been frozen.

DCN#89930

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG389446 treated
Analyte: CYANIDE

Analyst: DLP
Date: 02/14/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG389446-01	50	50	0.00200	7.674	-0.003225	0.00068090	0.00068090	1	mg/L
WG389446-02	50	50	0.00400	7.674	-0.003225	0.00094152	0.00094152	1	mg/L
WG389446-03	50	50	0.00600	7.674	-0.003225	0.0012021	0.0012021	1	mg/L
L12020091-01	50	50	0.00600	7.674	-0.003225	0.0012021	ND	1	mg/L
WG389446-05	50	50	0.00600	7.674	-0.003225	0.0012021	0.0012021	1	mg/L
L12020146-01	50	50	0.00900	7.674	-0.003225	0.0015931	0.25489	1	mg/L
L12020220-01	50	50	0.00700	7.674	-0.003225	0.0013325	0.0057400	1	mg/L
L12020220-02	50	50	0.00600	7.674	-0.003225	0.0012021	0.010950	1	mg/L
L12020220-03	50	50	0.00400	7.674	-0.003225	0.00094152	0.0023000	1	mg/L
WG389446-04	50	50	0.00400	7.674	-0.003225	0.00094152	0.00094152	1	mg/L
WG389446-06	50	50	0.00400	7.674	-0.003225	0.00094152	0.00094152	1	mg/L
WG389446-07	50	50	0.00300	7.674	-0.003225	0.00081121	0.00081121	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 02/15/2012 09:36

[redacted]

Cyanide, Amenable to Chlorination (mg/L)
CN (Total) - CN (Treated) = CN-A

SAMPLE	2/10/2012 CN (Total)	2/14/2012 CN (Treated)	CN-A
L12020091	0.0007021	0.0012021	-0.0005
L12020146-01	0.25648	0.0015931	0.254887
L12020220-01	0.0070661	0.0013325	0.005734
L12020220-02	0.012148	0.0012021	0.010946
L12020220-03	0.0039387	0.00094152	0.002997
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0

Cyanide, Amenable to Chlorination (CN-A) is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to verify that all of the cyanide in the spike solution is amenable (the treated portion is ND)

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-11
CCV ID: WG389584-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.212	1.45	7.1	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/15/2012 11:13

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-12
CCV ID: WG389584-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0185	7.02	6.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 02/15/2012 11:13

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-01
CCV ID: WG389584-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.211	1.44	6.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 16:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-02
CCV ID: WG389584-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0187	7.07	5.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 16:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-15
CCV ID: WG389584-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.212	1.45	7.1	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 16:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389584
File ID: 1V.1202141340-16
CCV ID: WG389584-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 02/14/2012
Run Time: 13:40
Analyst: DLP
Cal ID: UV-120 - 14-FEB-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0188	7.12	5.1	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 16:45

[redacted]

2.2.5 Conductivity Data

2.2.5.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42231
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL23-0212-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG388884	**Analyst:**	DLP	**Run Date:**	02/06/2012 14:30
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	32.1202061430-17
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		328		1.00	0.500

2.2.5.2 QC Summary Data

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 06-FEB-2012
Analyst: DLP
Analyst: NA
Method: COND
Instrument: YSI-32
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388884

Calibration/Linearity	01-13-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	
Primary Reviewer	DLP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
07-FEB-2012

Secondary Reviewer:
10-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-10-2012 14:40:46

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 AAB#: WG388884

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							28		02/06/12	4.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2304447
Report generated 02/10/2012 13:41

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: 32.1202061430-01
Prep Date: 02/06/12 14:30
Analyzed Date: 02/06/12 14:30
Analyst: DLP

Work Group: WG388884
Blank Sample ID: WG388884-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388884-02	32.1202061430-02	02/06/12 14:30	
MPL23-0212-1	L12020091-01	32.1202061430-17	02/06/12 14:30	
DUP	WG388884-06	32.1202061430-20	02/06/12 14:30	
DUP	WG388884-07	32.1202061430-21	02/06/12 14:30	
LCS2	WG388884-03	32.1202061430-22	02/06/12 14:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2304448
Report generated 02/10/2012 13:41

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 14:30 Sample ID: WG388884-01
Instrument ID: YSI-32 Run Date: 02/06/12 14:30 Prep Method: 120.1
File ID: 32.1202061430-01 Analyst: DLP Method: 120.1
Workgroup (AAB#): WG388884 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	0.500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2304449
10-FEB-2012 13:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: DLP Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG388884 Units: umhos/cm
QC Key: DOD4 Lot #: STD49788

Sample ID: WG388884-02 LCS File ID: 32.1202061430-02 Run Date: 02/06/2012 14:30
Sample ID: WG388884-03 LCS2 File ID: 32.1202061430-22 Run Date: 02/06/2012 14:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1430	102	1410	1440	102	0.0758	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2304450
Report generated: 02/10/2012 13:41

2.2.5.3 Raw Data

CONDUCTIVITY

☐EPA 120.1/SM2510B SOP K1201 Revision#: 13

LCS: STD 49788 ☑Cell Constants Determined 1-13-12
Daily Dilution: 10 0.1 mS/10 = 1.42 ☑Cells Clean

SAMPLE	DILUTION	CELL	MULTIPLIER	Direct Instrument READING
BLANK		0.1	µs	4.74
LCS: (1412)		1.0	mS	1.319
01-767-01		1.0	mS	0.302
ms -02		1.0	mS	0.300
msD -03		1.0	mS	0.305
01-798-01		1.0	mS	0.223
02-016-01		1.0	mS	0.741
ms -02		1.0	mS	0.742
msD -03		1.0	mS	0.738
-04		1.0	mS	0.518
05		1.0	mS	0.624
06		1.0	mS	0.621
-07		1.0	mS	0.381
02-44-01		1.0	mS	0.313
-02		1.0	mS	0.614
03		1.0	mS	0.608
02-091-01		1.0	mS	0.302
02-108-01		1.0	mS	0.422
02-146-01		1.0	mS	0.425
DUP: 02-016-01		1.0	mS	0.740
DUP: 02-016-04		1.0	mS	0.522
LCS: 1412		1.0	mS	1.320

Analyst: [signature] Date/Time: 02-06-12 1430

*LCS/CCV required at end of run
* Duplicate required on 10% of samples

DCN#89850

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG388884

Product: 120.1\

Analyte: Conductivity

Analyst: DLP

Run Date: 02/06/2012 14:30

SAMPLE NUMBER	Cell	Multiplier	Reading	Dil	Analytical	Reported	Units
WG388884-01	.1008	1	4.74	1	0.4778	0.4778	umhos/cm
WG388884-02	1.0874	1000	1.319	1	1434	1434	umhos/cm
L12010767-01	1.0874	1000	.302	1	328.4	328.4	umhos/cm
L12010767-02	1.0874	1000	.3	1	326.2	326.2	umhos/cm
L12010767-03	1.0874	1000	.305	1	331.7	331.7	umhos/cm
L12010798-01	1.0874	1000	.223	1	242.5	242.5	umhos/cm
L12020016-01	1.0874	1000	.741	1	805.8	805.8	umhos/cm
WG388884-04	1.0874	1000	.741	1	805.8	805.8	umhos/cm
L12020016-02	1.0874	1000	.742	1	806.9	806.9	umhos/cm
L12020016-03	1.0874	1000	.738	1	802.5	802.5	umhos/cm
L12020016-04	1.0874	1000	.518	1	563.3	563.3	umhos/cm
WG388884-05	1.0874	1000	.518	1	563.3	563.3	umhos/cm
L12020016-05	1.0874	1000	.624	1	678.5	678.5	umhos/cm
L12020016-06	1.0874	1000	.621	1	675.3	675.3	umhos/cm
L12020016-07	1.0874	1000	.381	1	414.3	414.3	umhos/cm
L12020044-01	1.0874	1000	.313	1	340.4	340.4	umhos/cm
L12020044-02	1.0874	1000	.614	1	667.7	667.7	umhos/cm
L12020044-03	1.0874	1000	.608	1	661.1	661.1	umhos/cm
L12020091-01	1.0874	1000	.302	1	328.4	328.4	umhos/cm
L12020108-01	1.0874	1000	.422	1	458.9	458.9	umhos/cm
L12020146-01	1.0874	1000	.425	1	462.1	462.1	umhos/cm
WG388884-06	1.0874	1000	.74	1	804.7	804.7	umhos/cm
WG388884-07	1.0874	1000	.522	1	567.6	567.6	umhos/cm
WG388884-03	1.0874	1000	1.32	1	1435	1435	umhos/cm

COND_REPORT - Modified 03/05/2008

Report generated 02/07/2012 16:57

[redacted]

2.2.6 Ammonia Data

2.2.6.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 350.1/SM4500-NH3 B(NH3)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42233
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	02/07/2012 08:29
Workgroup #:	WG388904	**Analyst:**	DIH	**Run Date:**	02/07/2012 08:52
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC120207001.033
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.2.6.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 07-FEB-2012
Analyst: DIH
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388906 WG388907 WG388904

Calibration/Linearity	2/7/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
10-FEB-2012

Secondary Reviewer:
10-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-10-2012 15:33:13

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 AAB#: WG388904

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							28		02/07/12	4.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2301322
Report generated 02/07/2012 21:09

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: SC120207001.009
Prep Date: 02/07/12 08:31
Analyzed Date: 02/07/12 08:31
Analyst: DIH

Work Group: WG388904
Blank Sample ID: WG388904-01
Instrument ID: SMARTCHEM
Method: 350.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388904-02	SC120207001.010	02/07/12 08:32	01
MPL23-0212-1	L12020091-01	SC120207001.033	02/07/12 08:52	01
DUP	WG388904-05	SC120207001.037	02/07/12 08:56	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2301323
Report generated 02/07/2012 21:09

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/07/12 08:31 Sample ID: WG388904-01
Instrument ID: SMARTCHEM Run Date: 02/07/12 08:31 Prep Method: 350.1
File ID: SC120207001.009 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG388904 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-07-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrogen, Ammonia	0.0500	0.100	0.0500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2301324
07-FEB-2012 21:09

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Run Date: 02/07/2012 Sample ID: WG388904-02
Instrument ID: SMARTCHEM Run Time: 08:32 Prep Method: 350.1
File ID: SC120207001.010 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG388904 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49779 Cal ID: SMARTC-07-FEB-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	1.86	92.9	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2301325
Report generated: 02/07/2012 21:10

2.2.6.3 Raw Data

WORKGROUP: WG388904

388906
388907

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** _____
Plan # 20120207001
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Analyte		1	2	3
		NH3		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 1.5			
1-2	BLK			
1-3	LCS 2			
1-4	02-014-01	5ml/50 *	1/20	1/200
1-5	02	5ml/50 *	1/20	1/200
1-6	03	5ml/50 *	1/20	1/200
1-7	06	5ml/50 *	1/2	1/20
1-8 *	02-021-01	*	1/4	
1-9	02	1ml/50 *	1/4	1/200
1-10	03			
1-11	04			
1-12	05			
1-13 *	02-023-01			
1-14	02			
1-15	03			
1-16	04			
1-17	05			
1-18 *	02-068-02			
1-19 *	02-076-03			
1-20	02-006-01	1/4		
1-21	02	1/4		
1-22	02-091-01			
2-1	02-016-01			
2-2	MS 02			
2-3	Msd 03			

Position	Analyte	1	2	3
2-4 5	DUP 006-01	1/4		
2-5 6	MS 006-02	1/4		
2-6	BLK			
2-7	LCS 2			
2-8	02-016-04			
2-9	05			
2-10	06			
2-11	07			
2-12 *	02-033-02			
2-13 *	02-101-02			
2-14 *	02-114-01			
2-15	02-044-01			
2-16	02			
2-17	03			
2-18	DUP			
2-19	MS			
2-20	BLK-AA			
2-21	LCS 2			
2-22	LCSDUP			
2-23 *	02-075-01			
2-24 *	04			
2-25 *	DUP04			
2-26 *	MS07			
3-1 *	MSd10			
3-2 *	13			

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

* frozen in walkin

DCN#89852

WORKGROUP: WG388904

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3	02-07516			
3-4	19			
3-5	22			
3-6	25			
3-7	28			
3-8	31			
3-9	34			
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

Position	Analyte	1	2	3
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [x] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	NH3	AA	Reagents
SOP & Revision	K3501 R17		RO+16729
Curve Stock (SC made)	std49628		RO+16833
Curve ID (user made)			RO+16835
ICV	std49784		
CCV	std49630		
LCS		std49857	
MS	~~cal~~ dist Dilution log	std49779 0.1/10(100)=1.0	

Comments: _____

Analyst: [signature] Date: 2/7/12

DCN#89852

2/6/12 [illegible]

~~* Sample in walk-in on 1st of frozen when it broke~~ [illegible]
Samples were frozen in walk-in cooler (-8 for 12 hrs)

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 17

LCS: Std 49779
10(100)/100=10

SPIKE: Std 49779
10(100)/100=10

WATER (mg/L)

DAILY DIL. 10(10)/50=2.0

DAILY DIL. 5(10)/50=1.0

SOIL (mg/Kg)

☑ easy-dist method

☐ macro method

RGT 16972
RGT 16894

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	NO	yes	
LCS(2.0) ✓	50	NO	yes	
02-014-01 ✓	5mL	NO	yes	
02 ✓	5mL	NO	yes	
03 ✓	5mL	NO	yes	
04 ✓	5mL	NO	yes	
* 02-021-01 ✓	50	yes	yes	Final water
* 02	~~50~~ 1mL	NO	yes	DAF1 "
* 03 ✓	50	NO	yes	Shore mw #1
* 04 ✓	50	NO	yes	Shore mw #2
* 05 ✓	50	NO	yes	shore mw #3
* 02-023-01 ✓	50	NO	yes	NF mw #1
* 02	50	NO	yes	NF mw #2
* 03	50	NO	yes	NFmw #3
* 04	50	NO	yes	NFmw #4
* 05	50	NO	yes	NFmw #5
02-053-03				frozen and Broke
* 02-068-02 ✓	50	NO	yes	
* 02-076-03 ✓	50	NO	yes	
02-086-01 ✓	50	NO	yes	
02 ✓	50	NO	yes	
02-116-01 ✓	50	NO	yes	
DUP 02-086-01 ✓	50	NO	yes	
MS 02-116-02 ✓	50	NO	yes	
MSD " 03 ✓	50	NO	yes	

Analyst: Jamie Moore

Date/Time: 2/6/12 @ 800

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

02-091-01 ✓	50	NO	yes	
MS 02-086-02 ✓	50	NO	yes	

Samples in Walkin and got froze when refrigerator broke.

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 17

LCS: Std 49779 10(100)/100=10 | SPIKE: Std 49779 10(100)/100=10 | WATER (mg/L) | SOIL (mg/Kg)

DAILY DIL. 10(10)/50=2.0 | DAILY DIL. 5(10)

☑ easy-dist method ☐ macro method

RGT 16972
RGT 16894

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	No	yes	
LCS(2.0) ✓	50	No	yes	
02-016-04 ✓	50	No	yes	
05 ✓	50	No	yes	
06 ✓	50	No	yes	
07 ✓	50	No	yes	
*02-033-02 ✓	50	yes	yes	
*02-101-02 ✓	50	No	yes	
*02-114-01 ✓	50	yes	yes	
02-044-01	50	No	yes	
02	50	No	yes	
03	50	No	yes	
DUP 02-044-03	50	No	yes	
MS 02-044-03	50	No	yes	

Analyst: Jammy Morris Date/Time: 2/6/12 @ 1230

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0548	0.00		8:22:02 AM
DIL-1	RBL	0.000	0.0539	0.00		8:22:20 AM
DIL-1	RBL	0.000	0.0521	0.00		8:23:50 AM
DIL-1	Std-1	0.000	-0.0043	0.00	INV	8:24:08 AM
SR5-1	Std-2	0.030	0.0051	0.00		8:25:38 AM
SR5-2	Std-3	0.094	0.0278	0.00		8:25:56 AM
SR5-3	Std-4	0.600	0.1308	0.00		8:27:26 AM
SR5-4	Std-5	1.050	0.2334	0.00		8:27:44 AM
SR5-5	Std-6	2.100	0.4650	0.00		8:29:14 AM
ST-1	Std-7	3.000	0.6938	0.00		8:29:32 AM
1	ICV 1.5	1.537	0.3487	0.00		8:31:02 AM
2	WG388904-01 BLK	0.036	0.0050	0.00		8:31:20 AM
3	WG388904-02 LCS	1.858	0.4222	0.00		8:32:50 AM
4	L12020014-01 (200)	3.214 X	0.7327	0.00	><,LH	8:33:08 AM
5	L12020014-02 (200)	2.275	0.5177	0.00		8:34:38 AM
6	L12020014-03 (200)	1.142	0.2583	0.00		8:34:56 AM
7	L12020014-06 (20)	3.710 X	0.8463	0.00	><,LH	8:36:26 AM
8	L12020021-01 (4)	1.781	0.4046	0.00		8:36:44 AM
9	L12020021-02 (200)	1.632	0.3704	0.00		8:38:14 AM
10	L12020021-03	0.065	0.0117	0.00		8:38:32 AM
ST-2	CCV (1.5 mg/L)	1.443	0.3273	96.22		8:40:02 AM
ST-3	CCB (0 mg/L)	-0.029	-0.0098	0.00	INV,><,LL	8:40:20 AM
11	L12020021-04	0.048	0.0078	0.00		8:41:50 AM
12	L12020021-05	0.052	0.0085	0.00		8:42:08 AM
13	L12020023-01	0.084	0.0160	0.00		8:43:39 AM
14	L12020023-02	0.094	0.0183	0.00		8:43:56 AM
15	L12020023-03	0.133	0.0273	0.00		8:45:27 AM
16	L12020023-04	0.040	0.0058	0.00		8:45:45 AM
17	L12020023-05	0.085	0.0163	0.00		8:47:15 AM
18	L12020068-02	0.077	0.0144	0.00		8:47:33 AM
19	L12020076-03	0.180	0.0381	0.00		8:49:03 AM
20	L12020006-01 (4)	1.850	0.4204	0.00		8:49:21 AM

Report Date :02/07/2012 **Run Date :2/7/2012** **Operator : WESTCO** **Plan # :20120207001**

Plan Description : NH3-A-DIH/2/7/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-2	CCV (1.5 mg/L)	1.434	0.3252	95.61		8:50:51 AM
ST-3	CCB (0 mg/L)	-0.029	-0.0098	0.00	INV,><,LL	8:51:09 AM
21	L12020006-02 (4)	2.006	0.4562	0.00		8:52:39 AM
22	L12020091-01	0.026	0.0028	0.00		8:52:57 AM
23	L12020016-01	0.016	0.0003	0.00		8:54:27 AM
24	L12020016-02 MS	1.063	0.2401	0.00		8:54:45 AM
25	L12020016-03 MSD	1.004	0.2268	0.00		8:56:15 AM
26	WG388904-05 (4) DUP	2.108	0.4795	0.00		8:56:33 AM
27	WG388904-06 (4) MS	2.526	0.5753	0.00		8:58:03 AM
28	WG388906-01 BLK	-0.011	-0.0058	0.00	INV,><,LL	8:58:21 AM
29	WG388906-02 LCS	1.917	0.4357	0.00		8:59:51 AM
30	L12020016-04	-0.004	-0.0041	0.00	INV,LL	9:00:09 AM
ST-2	CCV (1.5 mg/L)	1.442	0.3270	96.13		9:01:39 AM
ST-3	CCB (0 mg/L)	-0.031	-0.0103	0.00	INV,><,LL	9:01:57 AM
31	L12020016-05	-0.020	-0.0078	0.00	INV,><,LL	9:03:27 AM
32	L12020016-06	0.024	0.0023	0.00		9:03:45 AM
33	L12020016-07	0.005	-0.0021	0.00	INV	9:05:15 AM
34	L12020033-02	1.919	0.4362	0.00		9:05:33 AM
35	L12020101-02	1.980	0.4503	0.00		9:07:03 AM
36	L12020114-01	0.345	0.0757	0.00		9:07:21 AM
37	L12020044-01	-0.008	-0.0052	0.00	INV,><,LL	9:08:51 AM
38	L12020044-02	-0.023	-0.0085	0.00	INV,><,LL	9:09:09 AM
39	L12020044-03	-0.014	-0.0063	0.00	INV,><,LL	9:10:39 AM
40	WG388906-04 DUP	-0.007	-0.0049	0.00	INV,><,LL	9:10:57 AM
ST-2	CCV (1.5 mg/L)	1.449	0.3286	96.60		9:12:27 AM
ST-3	CCB (0 mg/L)	-0.032	-0.0105	0.00	INV,><,LL	9:12:45 AM
41	WG388906-05 MS	0.920	0.2075	0.00		9:14:15 AM
42	WG388907-01 BLKAA	-0.025	-0.0091	0.00	INV,><,LL	9:14:33 AM
43	WG388907-02 LCS	1.995	0.4536	0.00		9:16:04 AM
44	WG388907-03 LCSDUP	1.925	0.4376	0.00		9:16:21 AM
45	L12020075-01	-0.044	-0.0133	0.00	INV,><,LL	9:17:51 AM
46	L12020075-04	-0.040	-0.0124	0.00	INV,><,LL	9:18:09 AM

Report Date :02/07/2012 **Run Date :2/7/2012** **Operator : WESTCO** **Plan # :20120207001**

Plan Description : NH3-A-DIH/2/7/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
47	WG388907-05 DUP	-0.038	-0.0119	0.00	INV,><,LL	9:19:40 AM
48	L12020075-07 MS	0.702	0.1576	0.00		9:19:58 AM
49	L12020075-10 MSD	0.663	0.1486	0.00		9:21:28 AM
50	L12020075-13	-0.043	-0.0132	0.00	INV,><,LL	9:21:45 AM
ST-2	CCV (1.5 mg/L)	1.440	0.3266	96.01		9:23:16 AM
ST-3	CCB (0 mg/L)	-0.025	-0.0089	0.00	INV,><,LL	9:23:34 AM
51	L12020075-16	-0.042	-0.0130	0.00	INV,><,LL	9:25:04 AM
52	L12020075-19	-0.048	-0.0142	0.00	INV,><,LL	9:25:22 AM
53	L12020075-22	-0.041	-0.0127	0.00	INV,><,LL	9:26:52 AM
54	L12020075-25	-0.038	-0.0119	0.00	INV,><,LL	9:27:10 AM
55	L12020075-28	-0.042	-0.0129	0.00	INV,><,LL	9:28:40 AM
56	L12020075-31	-0.039	-0.0121	0.00	INV,><,LL	9:28:58 AM
57	L12020075-34	-0.029	-0.0100	0.00	INV,><,LL	9:30:28 AM
58	ID 58	0.005X	-0.0021	0.00	INV	9:30:46 AM
59	ID 59	-0.036X	-0.0114	0.00	INV,><,LL	9:32:16 AM
60	ID 60	-0.033X	-0.0109	0.00	INV,><,LL	9:32:34 AM
ST-2	CCV (1.5 mg/L)	1.411	0.3200	94.09		9:34:04 AM
ST-3	CCB (0 mg/L)	-0.020	-0.0078	0.00	INV,><,LL	9:34:22 AM
4-[1/2]	L12020014-01 (200)	3.416	0.3879	0.00	LH	9:46:32 AM
7-[1/2]	L12020014-06 (20)	3.922	0.4459	0.00	LH	9:48:20 AM
ST-2	CCV (1.5 mg/L)	1.481	0.3360	98.75		9:48:20 AM
ST-3	CCB (0 mg/L)	-0.011	-0.0058	0.00	INV,><,LL	9:49:50 AM

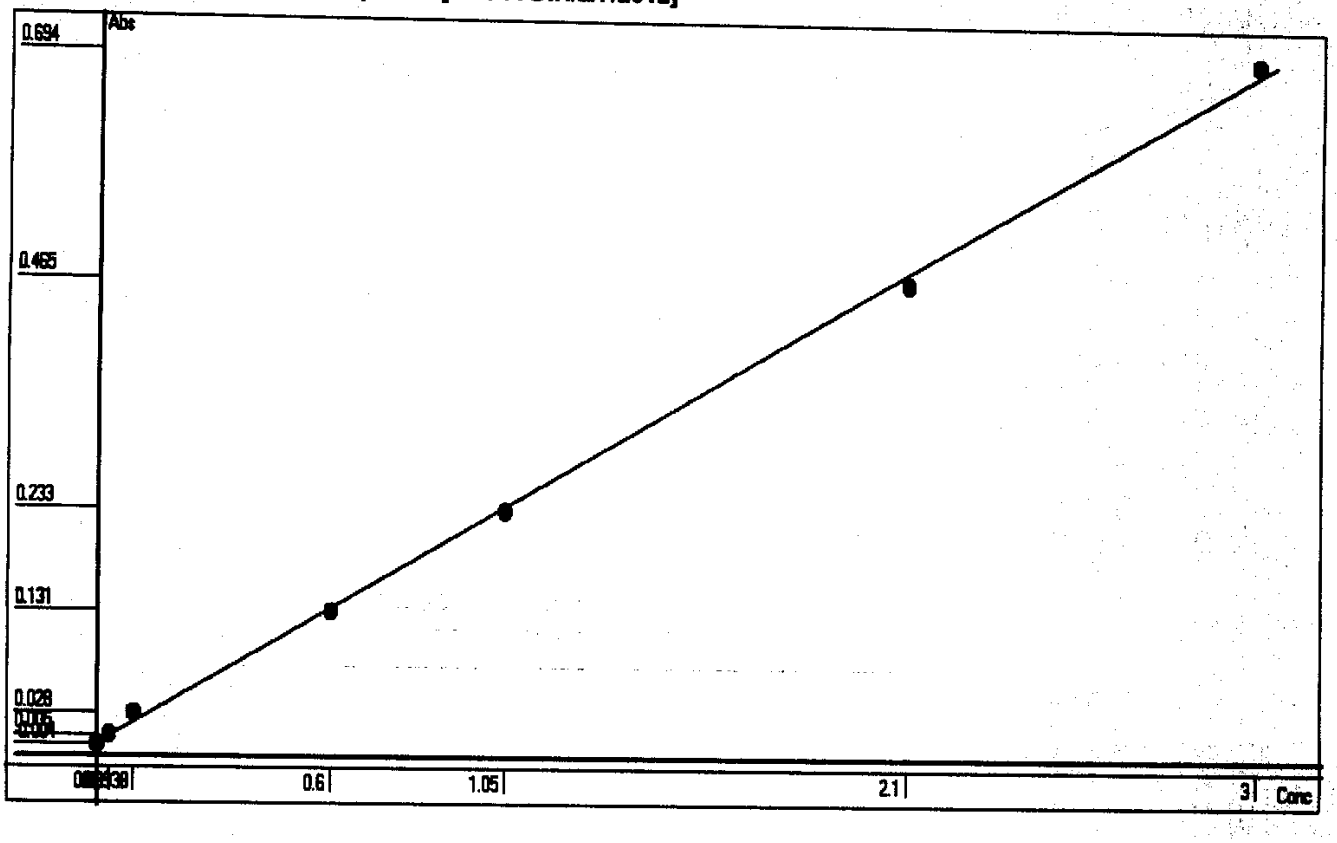
Report Date :02/07/2012 **Run Date :2/7/2012** **Operator : WESTCO** **Plan # :20120207001**

Plan Description : NH3-A-DIH/2/7/2012

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20120207001 Description : [NH3-A-DIH/2/7/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0043	0	-0.0047	-0.47
2	0.0051	0.03	0.0364	21.33
3	0.0278	0.0938	0.1355	44.46
4	0.1308	0.6	0.5853	-2.45
5	0.2334	1.05	1.0334	-1.58
6	0.4650	2.1	2.0448	-2.63
7	0.6938	3	3.0441	1.47

Conc= +4.3672*Abso +0.0141 R^2=0.9991

RBL
0.0544
0

Report Date 2/7/2012 Run Date 2/7/2012

2.2.7 Nitrate Data

2.2.7.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

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

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

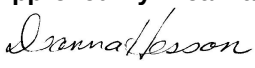
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42234
Approved By: Deanna Hesson



Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL23-0212-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/03/2012 13:00
Workgroup #:	WG388788	**Analyst:**	DIH	**Run Date:**	02/06/2012 09:16
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	SC12020614515201
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.55		0.0500	0.0250

2.2.7.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 06-FEB-2012
Analyst: DIH
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388788 WG388789

Calibration/Linearity	2/6/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
06-FEB-2012

Secondary Reviewer:
06-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-06-2012 15:50:38

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG388788

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							28		02/06/12	3.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2299644
Report generated 02/06/2012 15:38

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: SC12020614480301
Prep Date: 02/06/12 09:16
Analyzed Date: 02/06/12 09:16
Analyst: DIH

Work Group: WG388788
Blank Sample ID: WG388788-01
Instrument ID: SMARTCHEM
Method: 353.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS2	WG388788-03	SC12020614482401	02/06/12 09:16	
LCS	WG388788-02	SC12020614481601	02/06/12 09:16	
MPL23-0212-1	L12020091-01	SC12020614515201	02/06/12 09:16	
DUP	WG388788-05	SC12020614484301	02/06/12 09:16	

Report Name: BLANK_SUMMARY
PDF File ID: 2299645
Report generated 02/06/2012 15:38

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 09:16 Sample ID: WG388788-01
Instrument ID: SMARTCHEM Run Date: 02/06/12 09:16 Prep Method: 353.2
File ID: SC12020614480301 Analyst: DIH Method: 353.2
Workgroup (AAB#): WG388788 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-03-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrate-Nitrite (as N)	0.0250	0.0500	0.0250	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2299646
06-FEB-2012 15:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: DIH Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG388788 Units: mg/L
QC Key: DOD4 Lot #: STD49945

Sample ID: WG388788-02 LCS File ID: SC12020614481601 Run Date: 02/06/2012 09:16
Sample ID: WG388788-03 LCS2 File ID: SC12020614482401 Run Date: 02/06/2012 09:16

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	0.975	97.5	1.00	1.01	101	3.92	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2299647
Report generated: 02/06/2012 15:38

2.2.7.3 Raw Data

WORKGROUP: WG388788

388789

SMARTCHEM RUN LOG

Daily Check

- [ ] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [x] NO3 Reagent bottle connected / purged
- [x] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # 131442

1) **Workgroup** _____
Plan # 20120206001
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Position	Analyte	1	2	3
		NO3		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 1.5			
1-2	BLK			
1-3	LCS 1			
1-4	LCSDUP			
1-5	NO2 1			
1-6	02-074-01	1/75	*	
1-7	02-095-01		*	
1-8	02-097-02	1/15	*	
1-9	02-108-01			
1-10	02-043-01			
1-11	DUP 01			
1-12	MS 03			
1-13	MSD 05			
1-14	07			
1-15	09			
1-16	11			
1-17	13			
1-18	01-798-01			
1-19	02-016-01		AUTO	1/2 ✓
1-20	MS 02		"	1/2 ✓
1-21	MSD 03		"	1/2 ✓
1-22	04			✓
2-1	05			
2-2	06			
2-3	07			✓

Position	Analyte	1	2	3
2-4	01-044-01			
2-5	02		AUTO	1/2
2-6	03		"	1/2
2-7	01-091-01			
2-8	BLK			
2-9	LCS			
2-10	LCSDUP			
2-11	02-104-01	1/5	*	color
2-12	02	1/5	*	↓
2-13	03	1/5	*	↓
2-14	MPZ4 02-146-01			
2-15	DUP			
2-16	MS ↓			
2-17				
2-18				
2-19				
2-20				
2-21				
2-22				
2-23				
2-24				
2-25				
2-26				
3-1				
3-2				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

* These samples were partially frozen from log-in walk in cooler going to -8 for 12 hours.

DCN#89835

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3				
3-4				
3-5				
3-6				
3-7				
3-8				
3-9				
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

Position	Analyte	1	2	3
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [x] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte		NO3		Reagents
SOP & Revision		K3532 R18		Rot 16628
Curve Stock (SC made)	dm 2/14	~~std49628~~	std49809	Rot 16820
Curve ID (user made)	NO2		std49488	
ICV	dm 2/14	~~std49784~~	std49811	
CCV	dm 2/14	~~std49630~~	std49810	
LCS		std49945		
MS		std48249 Dilution 0.1/5(25)=0.5		

Comments: _____

Analyst: Donna Olsson Date: 2/6/12

DCN#89835

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag		Analysis Time
DIL-1	RBL	0.000	0.0179	0.00			9:04:21 AM
DIL-1	RBL	0.000	0.0189	0.00			9:05:33 AM
DIL-1	RBL	0.000	0.0171	0.00			9:06:45 AM
DIL-1	RBL	0.000	0.0165	0.00			9:07:57 AM
DIL-1	Std-1	0.000	-0.0022	0.00	INV		9:09:09 AM
SR5-1	Std-2	0.040	0.0105	0.00			9:10:21 AM
SR5-2	Std-3	0.100	0.0328	0.00			9:11:33 AM
SR5-3	Std-4	0.500	0.1647	0.00			9:12:45 AM
SR5-4	Std-5	1.000	0.3283	0.00			9:13:58 AM
ST-1	Std-6	2.000	0.6544	0.00			9:15:10 AM
1	ICV 1.5	1.577	0.5167	0.00			9:16:22 AM
2	WG388788-01 BLK	0.000	-0.0011	0.00	INV,LL		9:17:34 AM
3	WG388788-02 LCS	0.975	0.3188	0.00			9:18:46 AM
4	WG388788-03 LCSDUP	1.014	0.3318	0.00			9:19:58 AM
5	NO2	0.992	0.3245	0.00		NO2	9:21:10 AM
6	L12020074-01 (75)	1.078	0.3527	0.00		0.048	9:22:22 AM
7	L12020095-01	0.145	0.0464	0.00		0	9:23:34 AM
8	L120120097-02 (15)	0.808	0.2641	0.00		0.187	9:24:46 AM
9	L12020108-01	0.300	0.0975	0.00		0	9:25:58 AM
10	L12020043-01	0.046	0.0140	0.00			9:27:10 AM
ST-2	CCV (1 mg/L)	0.982	0.3211	98.15			9:28:22 AM
ST-3	CCB (0 mg/L)	-0.008	-0.0036	0.00	INV,><,LL		9:29:34 AM
11	DUP 01	0.039	0.0117	0.00			9:30:46 AM
12	L12020043-03 MS	0.412	0.1341	0.00			9:31:58 AM
13	L12020043-05 MSD	0.448	0.1460	0.00			9:33:10 AM
14	L12020043-07	0.014	0.0036	0.00			9:34:22 AM
15	L12020043-09	0.015	0.0039	0.00			9:35:34 AM
16	L12020043-11	0.082	0.0257	0.00			9:36:46 AM
17	L12020043-13	0.015	0.0039	0.00			9:37:58 AM
18	L12010798-01	1.086	0.3553	0.00			9:39:10 AM
19	L12020016-01	8.941 X	2.9336	0.00	EPL,><,LH		9:40:22 AM
20	L12020016-02 MS	8.873 X	2.9112	0.00	EPL,><,LH		9:41:34 AM

Report Date :02/06/2012 **Run Date :2/6/2012** **Operator : WESTCO** **Plan # :20120206001**

Plan Description : NO3-A-DIH/2/6/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-2	CCV (1 mg/L)	0.966	0.3160	96.59		9:42:46 AM
ST-3	CCB (0 mg/L)	-0.003	-0.0019	0.00	INV,LL	9:43:58 AM
21	L12020016-03 MSD	8.881 X	2.9139	0.00	EPL,><,LH	9:45:10 AM
22	L12020016-04	6.685 X	2.1932	0.00	EPL,><,LH	9:46:22 AM
23	L12020016-05	7.626 X	2.5018	0.00	EPL,><,LH	9:47:34 AM
24	L12020016-06	7.285 X	2.3900	0.00	><,LH	9:48:46 AM
25	L12020016-07	5.392 X	1.7686	0.00	><,LH	9:49:58 AM
26	L12020044-01	2.426 X	0.7953	0.00	><,LH	9:51:10 AM
27	L12020044-02	8.408 X	2.7587	0.00	EPL,><,LH	9:52:22 AM
28	L12020044-03	8.423 X	2.7635	0.00	EPL,><,LH	9:53:34 AM
29	L12020091-01	1.545	0.5061	0.00		9:54:46 AM
30	WG388789-01 BLK	-0.002	-0.0018	0.00	INV,LL	9:55:58 AM
ST-2	CCV (1 mg/L)	0.971	0.3178	97.14		9:57:10 AM
ST-3	CCB (0 mg/L)	0.005	0.0007	0.00		9:58:22 AM
31	WG388789-02 LCS	1.048	0.3428	0.00		9:59:35 AM
32	WG389789-03 LCSDUP	1.012	0.3310	0.00		10:00:46 AM
33	L12020104-01 (5)	0.016	0.0042	0.00		10:01:59 AM
34	L12020104-02 (5)	0.021	0.0058	0.00		10:03:11 AM
35	L12020104-03 (5)	0.028	0.0081	0.00		10:04:22 AM
36	ID 36 02-146-01	4.606 X	1.5108	0.00	><,LH	10:05:35 AM
37	DUP	4.497 X	1.4749	0.00	><,LH	10:06:47 AM
38	MS	5.002 X	1.6408	0.00	><,LH	10:07:59 AM
39	ID 39	1.012	0.3311	0.00		10:09:11 AM
40	ID 40	1.046	0.3421	0.00		10:10:23 AM
ST-2	CCV (1 mg/L)	0.977	0.3196	97.69		10:11:35 AM
ST-3	CCB (0 mg/L)	-0.006	-0.0029	0.00	INV,><,LL	10:12:47 AM
19-[1/4]	L12020016-01 (2)	4.572	0.3741	0.00	LH	10:21:57 AM
20-[1/4]	L12020016-02 MS (2)	4.866	0.3982	0.00	LH	10:24:03 AM
21-[1/4]	L12020016-03 MSD (2)	4.495	0.3678	0.00	LH	10:26:09 AM
22-[1/4]	L12020016-04	6.769	0.5544	0.00	LH	10:28:16 AM
23-[1/4]	L12020016-05	8.334 X	0.6828	0.00	><,LH	10:30:22 AM
24-[1/4]	L12020016-06	8.317 X	0.6814	0.00	><,LH	10:32:28 AM

Report Date :02/06/2012 **Run Date :2/6/2012** **Operator : WESTCO** **Plan # :20120206001**

Plan Description : NO3-A-DIH/2/6/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
25-[1/4]	L12020016-07	5.847	0.4787	0.00	LH	10:34:33 AM
26-[1/4]	L12020044-01	2.550	0.2082	0.00	LH	10:36:39 AM
27-[1/4]	L12020044-02 (2)	4.351	0.3560	0.00	LH	10:38:45 AM
28-[1/4]	L12020044-03 (2)	4.176	0.3416	0.00	LH	10:40:51 AM
ST-2	CCV (1 mg/L)	0.957	0.3130	95.68		10:41:45 AM
ST-3	CCB (0 mg/L)	-0.003	-0.0021	0.00	INV,LL	10:42:57 AM
36-[1/4]	ID 36 02-146-01	5.053	0.4136	0.00	LH	10:45:21 AM
37-[1/4]	DUP	4.905	0.4014	0.00	LH	10:47:27 AM
38-[1/4]	MS	5.583	0.4571	0.00	LH	10:49:33 AM
ST-2	CCV (1 mg/L)	0.989	0.3236	98.91		10:50:27 AM
ST-3	CCB (0 mg/L)	-0.005	-0.0028	0.00	INV,><,LL	10:51:39 AM
23-[1/8]	L12020016-05	7.818	0.3197	0.00	LH	11:00:49 AM
24-[1/8]	L12020016-06	8.005	0.3274	0.00	LH	11:02:55 AM
ST-2	CCV (1 mg/L)	0.958	0.3133	95.77		11:03:49 AM
ST-3	CCB (0 mg/L)	0.003	-0.0002	0.00	INV	11:05:01 AM

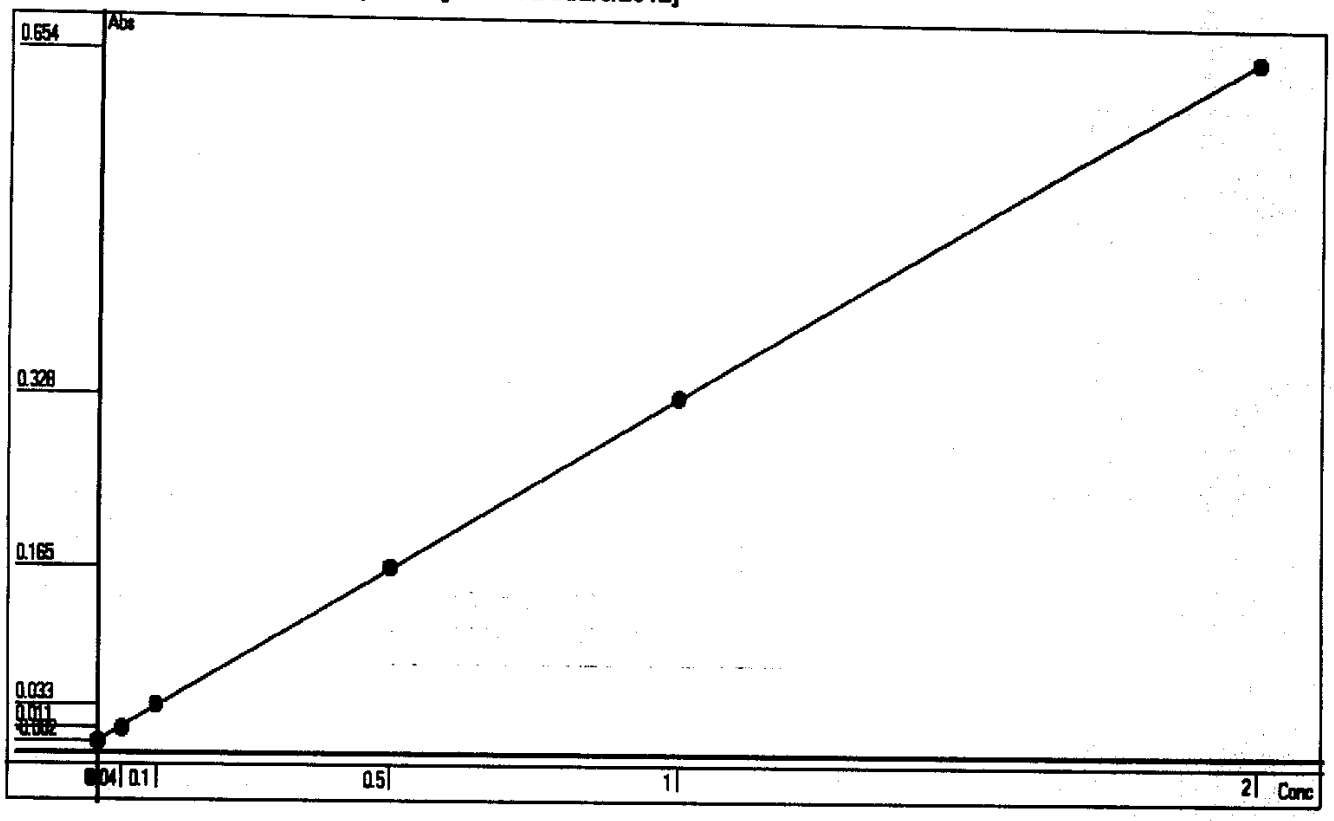
Report Date :02/06/2012 **Run Date :2/6/2012** **Operator : WESTCO** **Plan # :20120206001**

Plan Description : NO3-A-DIH/2/6/2012

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20120206001 Description : [NO3-A-DIH/2/6/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0022	0	-0.0035	-0.35
2	0.0105	0.04	0.0352	-12.00
3	0.0328	0.1	0.1031	3.10
4	0.1647	0.5	0.5050	1.00
5	0.3283	1	1.0035	0.35
6	0.6544	2	1.9970	-0.15

Conc= +3.0468*Abso +0.0032 **R^2=1.0000**

RBL
0.0175
0

Report Date 2/6/2012 Run Date 2/6/2012

2.2.8 Orthophosphate Data

2.2.8.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 365.2/SM4500-P E (Orthophosphate)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42235
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL23-0212-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	12/21/2011 14:35
Workgroup #:	WG388759	**Analyst:**	HJR	**Run Date:**	02/03/2012 14:35
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	1V.1202031435-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2		U	0.0500	0.0250

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.2.8.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 03-FEB-2012
Analyst: HJR
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: WG385747
Runlog ID:
Analytical Workgroups: WG388759

Calibration/Linearity	12/21/11
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
14-FEB-2012

Secondary Reviewer:
14-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-14-2012 16:44:30

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-20th

AAB#: WG388759

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							2		02/03/12	1.1	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2306750
Report generated 02/14/2012 15:50

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: 1V.1202031435-02
Prep Date: 02/03/12 14:35
Analyzed Date: 02/03/12 14:35
Analyst: HJR

Work Group: WG388759
Blank Sample ID: WG388759-01
Instrument ID: UV-120-1V
Method: SM4500-P-E-20th

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388759-02	1V.1202031435-03	02/03/12 14:35	
LCS2	WG388759-03	1V.1202031435-04	02/03/12 14:35	
MPL23-0212-1	L12020091-01	1V.1202031435-05	02/03/12 14:35	
DUP	WG388759-05	1V.1202031435-06	02/03/12 14:35	

Report Name: BLANK_SUMMARY
PDF File ID: 2306751
Report generated 02/14/2012 15:50

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/03/12 14:35 Sample ID: WG388759-01
Instrument ID: UV-120-1V Run Date: 02/03/12 14:35 Prep Method: SM4500-P-E-20th
File ID: 1V.1202031435-02 Analyst: HJR Method: SM4500-P-E-20th
Workgroup (AAB#): WG388759 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 03-FEB-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Orthophosphate	0.0250	0.0500	0.0250	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2306752
14-FEB-2012 15:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: HJR Prep Method: SM4500-P-E-20th
Instrument ID: UV-120-1V Matrix: Water Method: SM4500-P-E-20th
Workgroup (AAB#): WG388759 Units: mg/L
QC Key: DOD4 Lot #: STD49894

Sample ID: WG388759-02 LCS File ID: 1V.1202031435-03 Run Date: 02/03/2012 14:35
Sample ID: WG388759-03 LCS2 File ID: 1V.1202031435-04 Run Date: 02/03/2012 14:35

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	0.993	99.3	1.00	0.990	99.0	0.310	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2306753
Report generated: 02/14/2012 15:50

2.2.8.3 Raw Data

W G385 747

Curves

Parameter: PO4

Spectrophotometer: UV-120-IV

Calibration (Curve) standard stock: Std 47333

Concentration: 1000 mg/L

Recipe for preparation of curve standards found in:

SOP: ~~CH3653~~ 12/2/11 Revision: 13 Page: 9

Second Source Stock: Std 49228 (concentration: 10 mg/L)

Daily Preparation: 5(10)/50

concentration = 1.0 mg/L

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
1.0	50	1cm	880	0.643
0.7	50	1cm	880	0.475
0.5	50	1cm	880	0.321
0.2	50	1cm	880	0.133
0.1	50	1cm	880	0.068
0.05	50	1cm	880	0.033
0.00	50	1cm	880	0.001
Second Source (1.0)	50	1cm	880	0.647

Analyst: Holly Ferd Date/Time: 12/21/11 1435

DCN#89407

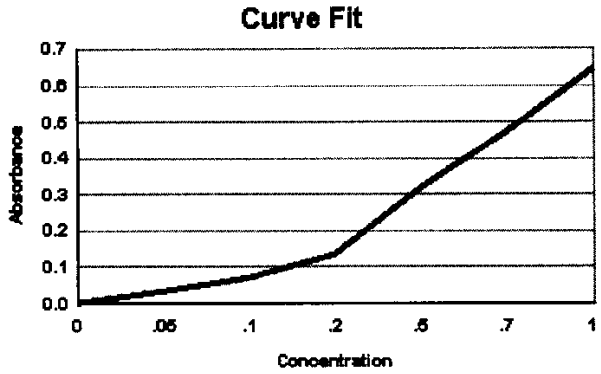
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG385747
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 12/21/2011

Analyte: ORTHOPHOSPHATE
Number of Points: 7
Slope: 0.649901
Y-Intercept: 0.00239330
Coef. Of Correlation (R^2): 0.998781
Coef. Of Correlation (R): 0.999390

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	0.00239330
0.0500	0.0330	0.00250	0.00165	0.0348883
0.100	0.0680	0.0100	0.00680	0.0673834
0.200	0.133	0.0400	0.0266	0.132373
0.500	0.321	0.250	0.161	0.327344
0.700	0.475	0.490	0.333	0.457324
1.00	0.643	1.00	0.643	0.652294



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 12/27/2011 10:18

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG385747
File ID: 1V.1112211435-08
CCV ID: WG385747-08
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 12/21/2011
Run Time: 14:35
Analyst: HJR
Cal ID: UV-120 - 21-DEC-11 14:35:07

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	1	0.992	0.647	0.8	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 12/27/2011 10:19

[redacted]

WORKGROUP: WG388759

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 13

Color Reagent Chemicals
COA 15323
RGT 16865
RGT 16566
RGT 16866

CCV: Std 49893
Daily Dilution: 5(10)150
Daily Dilution: 0.5
Spectrophotometer: UV-120-1V

LCS: Std 49894
Daily Dilution: 5(10)150
Daily Dilution: 1.0
Curve ID: ~~WG 385~~ 747 12/21/11

Spike: Std 49894
Daily Dilution: 2(10)150
Daily Dilution: 0.4

SAMPLE	VOLUME	pH 7 ± 0.2	DILUTION	ABSORBANCE @ 880 nm
CCV: 0.5 mg/L	50	✓		0.326
BLANK	50	✓		0.003
LCS: 1.0 ppm	50	✓		0.648
LCSDUP: 1.0 ppm	50	✓		0.646
02-0091-01	50	✓		0.009
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
DUP: ~~02-0091-01~~	50	✓		0.008
MS: (0.4) ~~02-0091-01~~	50	✓		0.259
MSD: ( )	50			
CCV: (0.5)	50	✓		0.327

ANALYST: [signature] DATE / TIME: 2/3/12 1435

DCN#89829

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG388759
Analyte: ORTHOPHOSPHATE

Analyst: HJR
Date: 02/03/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG388759-01	50	50	0.00300	0.6499	0.002393	0.00093353	0.00093353	1	mg/L
WG388759-02	50	50	0.648	0.6499	0.002393	0.99339	0.99339	1	mg/L
WG388759-03	50	50	0.646	0.6499	0.002393	0.99032	0.99032	1	mg/L
L12020091-01	50	50	0.00900	0.6499	0.002393	0.010166	ND	1	mg/L
WG388759-04	50	50	0.00900	0.6499	0.002393	0.010166	0.010166	1	mg/L
WG388759-05	50	50	0.00800	0.6499	0.002393	0.0086270	0.0086270	1	mg/L
WG388759-06	50	50	0.259	0.6499	0.002393	0.39484	0.39484	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 02/14/2012 09:04

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389513
File ID: 1V.1202031435-01
CCV ID: WG389513-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 02/03/2012
Run Time: 14:35
Analyst: HJR
Cal ID: UV-120 - 03-FEB-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.498	0.652	0.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 09:03

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG389513
File ID: 1V.1202031435-08
CCV ID: WG389513-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 02/03/2012
Run Time: 14:35
Analyst: HJR
Cal ID: UV-120 - 03-FEB-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.499	0.654	0.2	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 02/14/2012 09:03

[redacted]

2.2.9 Total Dissolved Solids Data

2.2.9.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: The sample was stored in a refrigerator that failed. The sample became frozen for about 12 hours. The sample was thawed before analyzing.

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

Narrative ID: 42047
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL23-0212-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG388846	**Analyst:**	HJR	**Run Date:**	02/06/2012 12:33
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EN.1202061233-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		226		20.0	10.0

2.2.9.2 QC Summary Data

Example Total Dissolved Solids Calculations

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 06-FEB-2012
Analyst: HJR
Analyst: NA
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388846

Calibration/Linearity	2/6/12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-FEB-2012

Secondary Reviewer:
10-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-10-2012 14:41:55

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG388846

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							7		02/06/12	4	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2304358
Report generated 02/10/2012 13:29

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: EN.1202061233-01
Prep Date: 02/06/12 12:33
Analyzed Date: 02/06/12 12:33
Analyst: HJR

Work Group: WG388846
Blank Sample ID: WG388846-01
Instrument ID: OVEN
Method: 160.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388846-02	EN.1202061233-02	02/06/12 12:33	
LCS2	WG388846-03	EN.1202061233-03	02/06/12 12:33	
MPL23-0212-1	L12020091-01	EN.1202061233-04	02/06/12 12:33	
DUP	WG388846-05	EN.1202061233-11	02/06/12 12:33	

Report Name: BLANK_SUMMARY
PDF File ID: 2304359
Report generated 02/10/2012 13:29

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 12:33 Sample ID: WG388846-01
Instrument ID: OVEN Run Date: 02/06/12 12:33 Prep Method: 160.1/SM2540C
File ID: EN.1202061233-01 Analyst: HJR Method: 160.1
Workgroup (AAB#): WG388846 Matrix: Water Units: mg/L
Contract #: Cal ID: OVEN-

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Total Dissolved Solids	5.00	10.0	5.00	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2304360
10-FEB-2012 13:29

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: HJR Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG388846 Units: mg/L
QC Key: DOD4 Lot #: STD48299

Sample ID: WG388846-02 LCS File ID: EN.1202061233-02 Run Date: 02/06/2012 12:33
Sample ID: WG388846-03 LCS2 File ID: EN.1202061233-03 Run Date: 02/06/2012 12:33

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	512	102	500	506	101	1.18	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2304361
Report generated: 02/10/2012 13:29

2.2.9.3 Raw Data

TOTAL DISSOLVED SOLIDS

SOP K1601 Revision #: 12
☑ EPA 160.1/ SM2540C

Oven: ☑ TDS1 ☐ MISC1

Balance: AND GR-202 / Other

LCS: Std 48299
Daily Dilution:

Matrix Spike:
Daily Dilution:

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK		100				
LCS: _____mg/L		50				
LCSDUP: _____mg/L		50				
* 02-0091-01		50				
* 02-0098-01		50				
* 02-0087-01		50				
* 05		50				
* 02-0092-01		50				
* 02-0108-01		50				
02-0146-01		50				
DUP: ~~02-0091-01~~		50				
DUP: _____						

ANALYST: Dolly Reed

DATE/TIME: (on) 2/6/12

DATE/TIME: (off)

DATE/TIME: (off)

DATE/TIME: (off)

* Duplicate required on 10% of samples

* Samples were frozen in Walk in, thawed completely then Ran.

DCN#89846

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG388846
Analyst: HJR
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: K1601 Revison 12
Spike Solution: STD48299
Daily Dilution: 5(5000)/50=500

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG388846-01	P8	100	74.9887	74.9884	74.9886		-1.000	-1.000	mg/L
WG388846-02	Q	50	64.2029	64.2284	64.2285		512.0	512.0	mg/L
WG388846-03	K4	50	82.1637	82.1892	82.189		506.0	506.0	mg/L
L12020091-01	12A	50	53.1934	53.2046	53.2047		226.0	226.0	mg/L
WG388846-04	12A	50	53.1934	53.2046	53.2047		226.0	226.0	mg/L
L12020098-01	C7	50	64.8281	64.8366	64.8368		174.0	174.0	mg/L
L12020087-01	19	50	53.0272	53.1305	53.1305		2066	2066	mg/L
L12020087-05	L17	50	77.933	77.9979	77.9979		1298	1298	mg/L
L12020092-01	D2	50	75.566	75.5836	75.5837		354.0	354.0	mg/L
L12020108-01	L	50	65.9744	65.9811	65.9813		138.0	138.0	mg/L
L12020146-01	L7	50	80.5609	80.5669	80.567		122.0	122.0	mg/L
WG388846-05	B4	50	66.9301	66.941	66.9415		228.0	228.0	mg/L

L12020108-01	samples were frozen, then thawed and ran
L12020087-01	samples were frozen, then thawed and ran
L12020098-01	samples were frozen, then thawed and ran
L12020091-01	samples were frozen, then thawed and ran
L12020087-05	samples were frozen, then thawed and ran
L12020092-01	samples were frozen, then thawed and ran
WG388846-04	samples were frozen, then thawed and ran

Analyst: HJR

*Duplicate required on 10% of samples

Date/Time (on) : 02/06/2012 12:33
Date/Time (off): 02/07/2012 14:00
Date/Time (off): 02/08/2012 10:25
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2299303
Report generated: 02/08/2012 10:30

Microbac

2.2.10 Total Organic Carbon Data

2.2.10.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Deanna Hesson

METHOD

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

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

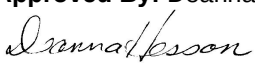
Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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

Narrative ID: 42237
Approved By: Deanna Hesson



Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL23-0212-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG388670	**Analyst:**	DIH	**Run Date:**	02/03/2012 14:20
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	TC02032012.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.39		1.00	0.500

2.2.10.2 QC Summary Data

Total Organic Carbon Example Calculations
(Direct Readout Parameter)

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 03-FEB-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388670

Calibration/Linearity	12/6/2011
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
10-FEB-2012

Secondary Reviewer:
10-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-10-2012 15:34:47

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG388670

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							28		02/03/12	1.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2301415
Report generated 02/07/2012 21:29

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: TC02032012.003
Prep Date: 02/03/12 09:23
Analyzed Date: 02/03/12 09:23
Analyst: DIH

Work Group: WG388670
Blank Sample ID: WG388670-01
Instrument ID: TOC-VWP
Method: 415.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388670-02	TC02032012.004	02/03/12 09:36	01
LCS2	WG388670-03	TC02032012.005	02/03/12 09:48	01
DUP	WG388670-05	TC02032012.010	02/03/12 10:58	01
MPL23-0212-1	L12020091-01	TC02032012.024	02/03/12 14:20	01

Report Name: BLANK_SUMMARY
PDF File ID: 2301416
Report generated 02/07/2012 21:29

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/03/12 09:23 Sample ID: WG388670-01
Instrument ID: TOC-VWP Run Date: 02/03/12 09:23 Prep Method: 415.1
File ID: TC02032012.003 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG388670 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-06-DEC-11

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Total Organic Carbon	0.500	1.00	0.500	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name: BLANK
PDF ID: 2301417
07-FEB-2012 21:29

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG388670 Units: mg/L
QC Key: DOD4 Lot #: STD49306

Sample ID: WG388670-02 LCS File ID: TC02032012.004 Run Date: 02/03/2012 09:36
Sample ID: WG388670-03 LCS2 File ID: TC02032012.005 Run Date: 02/03/2012 09:48

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	27.1	108	25.0	26.7	107	1.52	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2301418
Report generated: 02/07/2012 21:29

2.2.10.3 Raw Data

WG384145

TC/TIC CURVES

Total Organic Carbon

MAKE DAILY

CCV (TOC): _____ (5/200)(1000) = 25mg/L

LCS (TOC): _____ (5/200)(1000) = 25mg/L

CCV (TIC): _____ (5/200)(1000) = 25mg/L

See Below

MS (TOC): _____

Calibration Curve Date: _____

Reagent: RGT 16590 RGT 16642

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ WG_____

SOP: K 4151 Rev. 13

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full
☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate
☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution	Position	Sample ID	Dilution	Position	Sample ID	Dilution
1	TC Curve		26	TC Curve		51		
2	TIC Curve		27	STD 47222		52		
3	TC ICV		28			53	See SOP for	
4	TIC ICV		29	TIC Curve		54	Curve points	
5			30	STD 47189		55		
6			31			56		
7			32			57		
8			33			58		
9			34			59		
10			35			60		
11			36			61		
12			37	TC ICV		62		
13			38	STD 47544		63	5/200(1000)	
14			39			64	= 25 mg/L	
15			40	TIC ICV		65		
16			41	STD 47190		66		
17			42			67		
18			43			68		
19	All points analyzed		44			69		
20	in duplicate		45			70		
21			46			71		
22			47			72		
23			48			73		
24			49			74		
25			50			75		

Analyst: _____ Date/Time: 12/04/2011

DCN#89227

C:\TOC3201\Data\CURVES-12-06-2011.t32

	Analyst	Sample Name	Result	Status	Date / Time	Vial
1	TC	TC CURVE		Complet	12/06/2011 09:46:27 AM	0, 1, 2, 3, 4, 5
2	IC	TIC CURVE		Complet	12/06/2011 05:00:56 PM	0, 6, 7, 8, 9, 10
3	TC	TC ICV	✓ 93.08% TC:23.27mg/L	Complet	12/06/2011 05:13:38 PM	11
4	IC	TIC ICV	✓ 104.24% IC:26.21mg/L	Complet	12/06/2011 05:25:50 PM	12

12/07/2011 08:14:31 AM 1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Cal. Curve

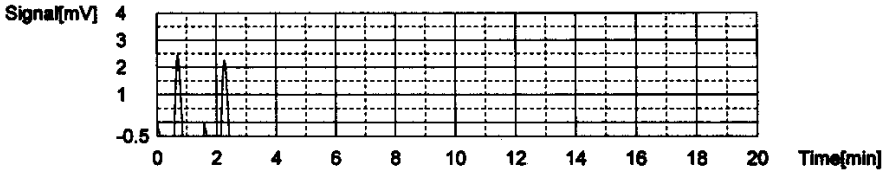
Sample Name: TC CURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-12-06-2011.2011_12_06_08_40_57.cal
Status Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	6.123	500uL	1	*******		12/06/2011 08:44:40 AM
2	5.308	500uL	1	*******		12/06/2011 08:48:33 AM

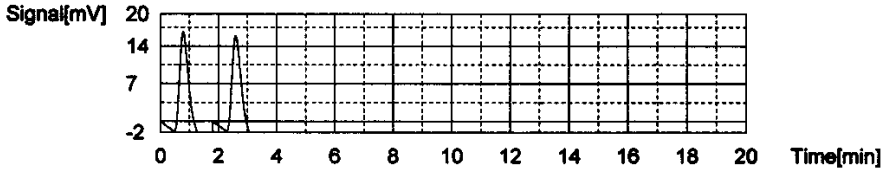
Acid Add. 0.000%
Mean Area 5.716



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	39.77	500uL	1	*******		12/06/2011 08:54:04 AM
2	39.18	500uL	1	*******		12/06/2011 08:58:10 AM

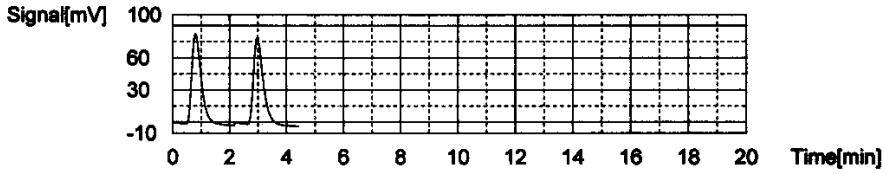
Acid Add. 0.000%
Mean Area 39.48



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	191.7	500uL	1	*******		12/06/2011 09:04:17 AM
2	189.4	500uL	1	*******		12/06/2011 09:08:49 AM

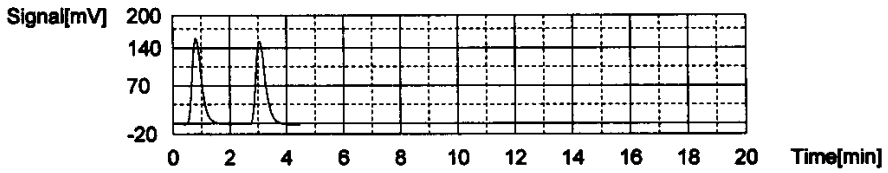
Acid Add. 0.000%
Mean Area 190.6



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	367.0	500uL	1	*******		12/06/2011 09:15:00 AM
2	367.7	500uL	1	*******		12/06/2011 09:20:26 AM

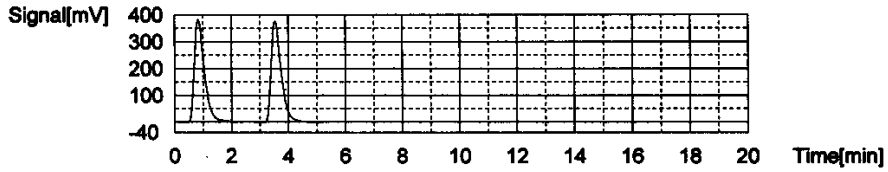
Acid Add. 0.000%
Mean Area 367.4



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	938.7	500uL	1	*******		12/06/2011 09:27:05 AM
2	928.1	500uL	1	*******		12/06/2011 09:31:51 AM

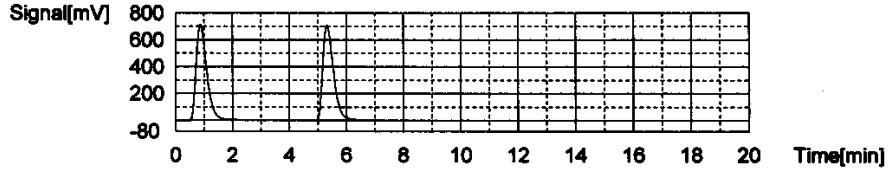
Acid Add. 0.000%
Mean Area 933.4



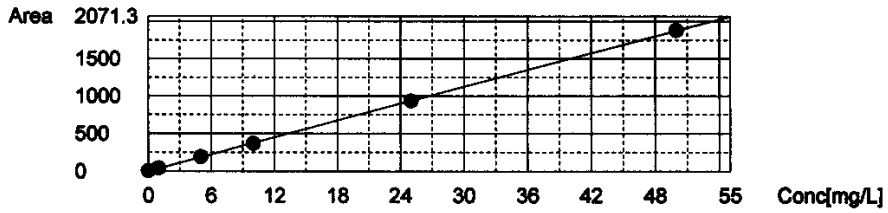
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1902	500uL	1	*******		12/06/2011 09:40:15 AM
2	1864	500uL	1	*******		12/06/2011 09:46:27 AM

Acid Add. 0.000%
Mean Area 1883



Slope: 37.57
Intercept 0.09333
r^2 0.999936 ✓
Zero Shift No



Cal. Curve

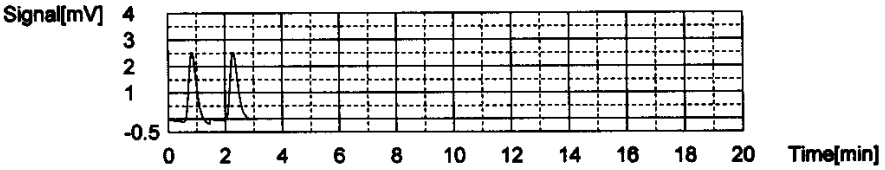
Sample Name: TIC CURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-12-06-2011B.2011_12_06_15_47_44.cal
Status Completed

Type	Anal.
Standard	IC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	5.003	500uL	1	*******		12/06/2011 03:51:39 PM
2	4.762	500uL	1	*******		12/06/2011 03:55:32 PM

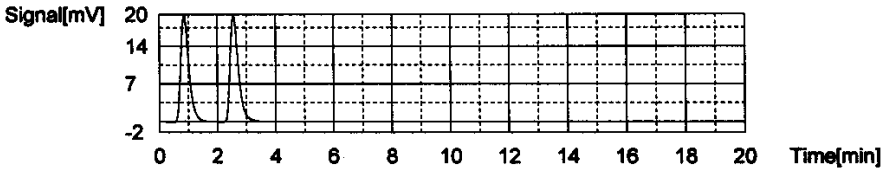
Acid Add. 10.00%
Mean Area 4.883



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	38.88	500uL	1	*******		12/06/2011 04:02:55 PM
2	38.91	500uL	1	*******		12/06/2011 04:07:20 PM

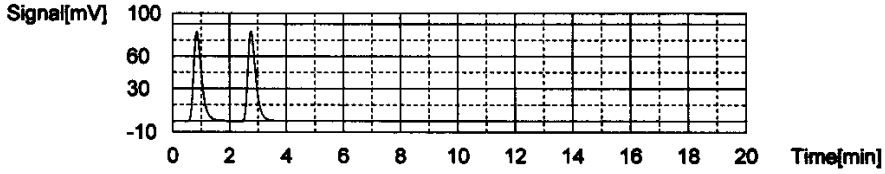
Acid Add. 10.00%
Mean Area 38.90



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.3	500uL	1	*******		12/06/2011 04:15:09 PM
2	162.3	500uL	1	*******		12/06/2011 04:19:53 PM

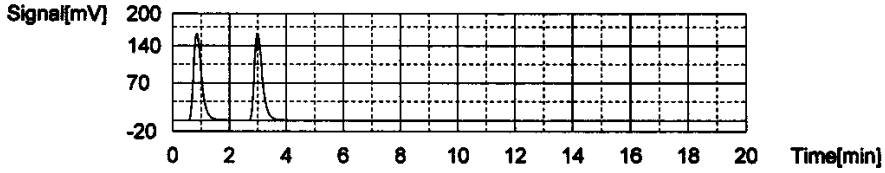
Acid Add. 10.00%
Mean Area 161.3



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	317.9	500uL	1	*******		12/06/2011 04:28:01 PM
2	319.9	500uL	1	*******		12/06/2011 04:33:00 PM

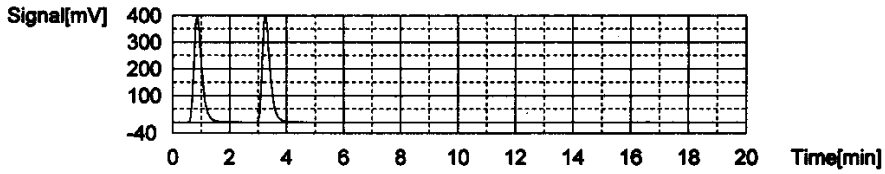
Acid Add. 10.00%
Mean Area 318.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	765.1	500uL	1	*******		12/06/2011 04:41:31 PM
2	765.8	500uL	1	*******		12/06/2011 04:46:44 PM

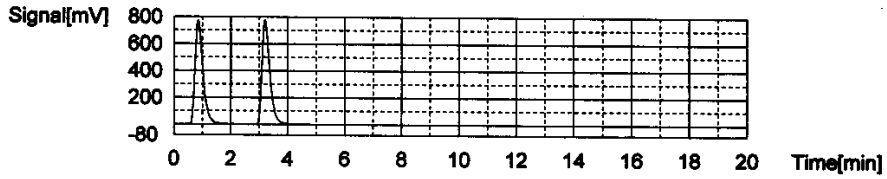
Acid Add. 10.00%
Mean Area 765.5



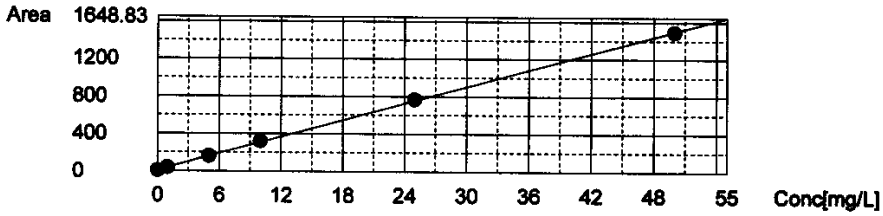
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1490	500uL	1	*******		12/06/2011 04:55:30 PM
2	1495	500uL	1	*******		12/06/2011 05:00:56 PM

Acid Add. 10.00%
Mean Area 1493



Slope: 29.72
Intercept 12.89
r^2 0.999826 ✓
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-12-06-2011.cal
Status Completed
Chk. Result

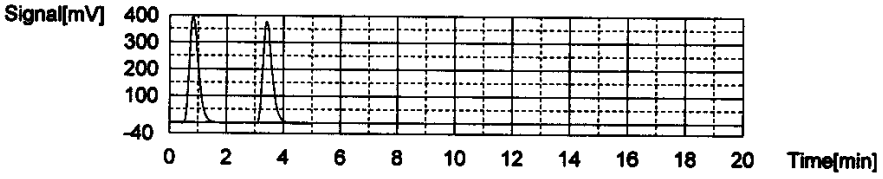
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:23.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	889.3	23.67mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:08:57 PM
2	859.5	22.87mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:13:38 PM

Mean Area 874.4
Mean Conc. 23.27mg/L



Sample

Sample Name: TIC ICV
Sample ID: Untitled
Origin: TICCURVE-12-06-2011B.cal
Status Completed
Chk. Result

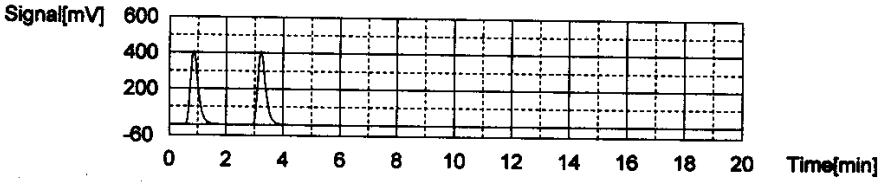
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:26.21mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	788.9	26.11mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:20:43 PM
2	794.9	26.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:25:50 PM

Mean Area 791.9
Mean Conc. 26.21mg/L



Total Organic Carbon

MAKE DAILY

CCV (TOC): std47222 (5/200)(1000) = 25mg/L

LCS (TOC): std49306 (5/200)(1000) = 25mg/L

CCV (TIC): std47189 (5/200)(1000) = 25mg/L

MS (TOC): 0.4/40(1000)=10

Calibration Curve Date: 12/6/11

Reagent: R0t16963 R0t16590

☐ SM5310-C : Matrix 2 WG_____

☑ EPA 415.1/9060A(mod): Matrix 1 WG_____ WG_____

SOP: K 4151 Rev. 14

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid waste container

Position	Sample ID	Dilution	Position	Sample ID	Dilution	Position	Sample ID	Dilution
1	TIC 25		26	CCV		51		
2	CCV 25		27	CCB		52		
3	BLK		28			53		
4	LCS 25		29			54		
5	LCSDUP		30			55		
6	01-791-05	1/50	31			56		
7	02-006-01		32			57		
8	02		33			58		
9	02-016-01		34			59		
10	DUP 01		35			60		
11	MS 02		36			61		
12	MSD 03		37			62		
13	02-090-01		38			63		
14	CCV		39			64		
15	CCB		40			65		
16	02-006-02	1/2	41			66		
17	02-016-04		42			67		
18	05		43			68		
19	06		44			69		
20	07		45			70		
21	02-044-01		46			71		
22	02		47			72		
23	03		48			73		
24	02-091-01		49			74		
25	02-105-01		50			75		

Analyst: [signature] Date/Time: 2/3/12

DCN#89814

C:\TOC3201\Data\02-03-2012-DIH-TOC.t32

	Analys	Sample Name	Result	Status	Date / Time	Vial
1	TOC	TIC 25	TOC:1.049mg/L TC:26.19mg/L IC:25.14mg/L	Complet	02/03/2012 09:06:28 AM	1
2	TOC	CCV 25	!!Error!! TOC:24.24mg/L TC:24.06mg/L IC:-0.1826mg	Complet	02/03/2012 09:18:48 AM	2
3	TOC	WG388670-01 BLK	!!Error!! TOC:0.4257mg/L TC:0.2767mg/L IC:-0.1489m	Complet	02/03/2012 09:27:50 AM	0
4	TOC	WG388670-02 LCS	!!Error!! TOC:27.12mg/L TC:26.88mg/L IC:-0.2430mg	Complet	02/03/2012 09:40:32 AM	4
5	TOC	WG388670-03 LCSDUP	!!Error!! TOC:26.71mg/L TC:26.47mg/L IC:-0.2387mg	Complet	02/03/2012 09:53:18 AM	5
6	TOC	L12010791-05 (50)	TOC:2.034mg/L TC:10.99mg/L IC:8.954mg/L	Complet	02/03/2012 10:06:01 AM	6
7	TOC	L12020006-01	TOC:9.010mg/L TC:47.77mg/L IC:38.76mg/L	Complet	02/03/2012 10:21:49 AM	7
8	TOC		TOC:8.750mg/L TC:51.69mg/L IC:42.94mg/L	Complet	02/03/2012 10:37:43 AM	8
9	TOC	L12020016-01	TOC:3.389mg/L TC:22.01mg/L IC:18.62mg/L	Complet	02/03/2012 10:51:05 AM	9
10	TOC	WG388670-05 DUP	TOC:2.862mg/L TC:21.56mg/L IC:18.70mg/L	Complet	02/03/2012 11:04:02 AM	10
11	TOC	L12020016-02 MS	TOC:12.43mg/L TC:27.07mg/L IC:14.64mg/L	Complet	02/03/2012 11:17:29 AM	11
12	TOC	L12020016-03 MSD	TOC:12.14mg/L TC:25.02mg/L IC:12.88mg/L	Complet	02/03/2012 11:36:31 AM	12
13	TOC	L12020090-01	TOC:8.462mg/L TC:22.75mg/L IC:14.29mg/L	Complet	02/03/2012 11:50:16 AM	13
14	TOC	CCV	!!Error!! TOC:21.97mg/L TC:21.84mg/L IC:-0.1239mg	Complet	02/03/2012 12:02:36 PM	14
15	TOC	CCB	!!Error!! TOC:0.3926mg/L TC:0.2493mg/L IC:-0.1433m	Complet	02/03/2012 12:11:40 PM	0
16	TOC	L12020006-02 (2)	TOC:3.553mg/L TC:17.73mg/L IC:14.18mg/L	Complet	02/03/2012 12:44:01 PM	16
17	TOC	L12020016-04	TOC:2.786mg/L TC:16.28mg/L IC:13.49mg/L	Complet	02/03/2012 12:56:45 PM	17
18	TOC	L12020016-05	TOC:3.361mg/L TC:20.00mg/L IC:16.64mg/L	Complet	02/03/2012 01:09:50 PM	18
19	TOC	L12020016-06	TOC:3.181mg/L TC:19.48mg/L IC:16.30mg/L	Complet	02/03/2012 01:22:51 PM	19
20	TOC	L12020016-07	TOC:1.226mg/L TC:13.56mg/L IC:12.34mg/L	Complet	02/03/2012 01:35:33 PM	20
21	TOC	L12020044-01	TOC:0.6502mg/L TC:12.77mg/L IC:12.12mg/L	Complet	02/03/2012 01:48:14 PM	21
22	TOC	L12020044-02	TOC:1.256mg/L TC:11.33mg/L IC:10.08mg/L	Complet	02/03/2012 02:00:29 PM	22
23	TOC	L12020044-03	TOC:1.084mg/L TC:11.41mg/L IC:10.33mg/L	Complet	02/03/2012 02:13:01 PM	23
24	TOC	L12020091-01	TOC:1.392mg/L TC:11.66mg/L IC:10.27mg/L	Complet	02/03/2012 02:25:32 PM	24
25	TOC	L12020105-01	!!Error!! TOC:13.37mg/L TC:13.18mg/L IC:-0.1941mg	Complet	02/03/2012 02:38:16 PM	25
26	TOC	CCV	!!Error!! TOC:25.27mg/L TC:25.22mg/L IC:-0.04730mg	Complet	02/03/2012 04:10:04 PM	26
27	TOC	CCB	!!Error!! TOC:0.3972mg/L TC:0.2466mg/L IC:-0.1506m	Complet	02/03/2012 04:19:00 PM	0

02/07/2012 09:09:31 AM 1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

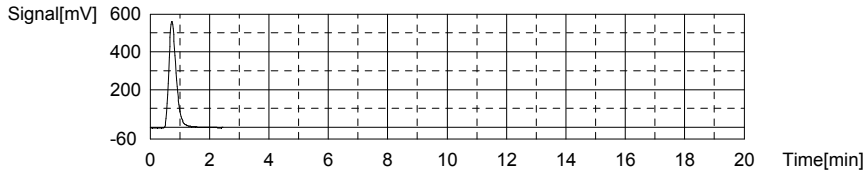
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.049mg/L TC:26.19mg/L IC:25.14mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	984.2	26.19mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 09:00:21 AM

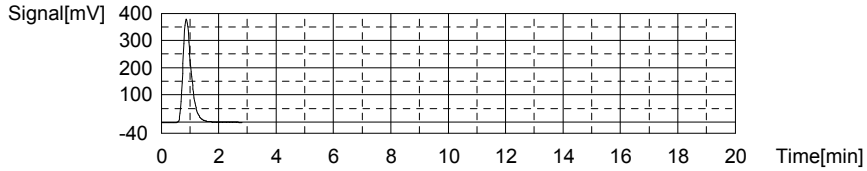
Mean Area 984.2
Mean Conc. 26.19mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	760.2	25.14mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 09:06:28 AM

Mean Area 760.2
Mean Conc. 25.14mg/L



Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

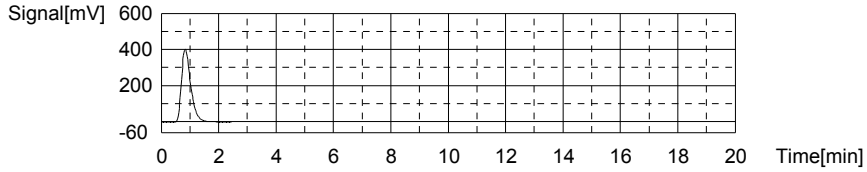
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.24mg/L TC:24.06mg/L IC:-0.1826mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	904.1	24.06mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 09:14:20 AM

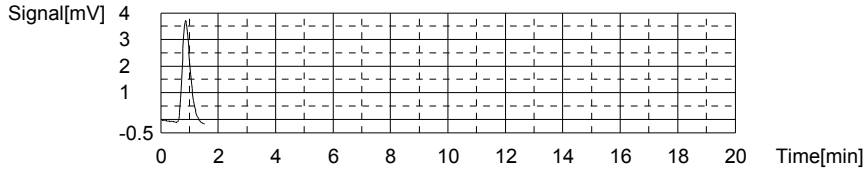
Mean Area 904.1
Mean Conc. 24.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.459	-0.1826mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 09:18:48 AM

Mean Area 7.459
Mean Conc. -0.1826mg/L



Sample

Sample Name: WG388670-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

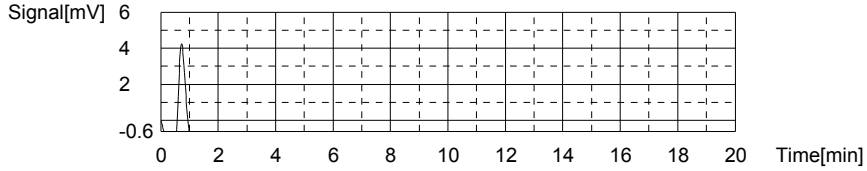
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4257mg/L TC:0.2767mg/L IC:-0.1489mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.49	0.2767mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 09:23:52 AM

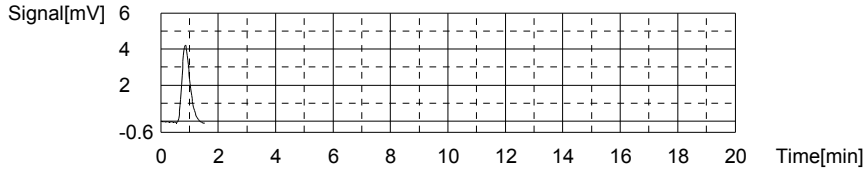
Mean Area 10.49
Mean Conc. 0.2767mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.459	-0.1489mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 09:27:50 AM

Mean Area 8.459
Mean Conc. -0.1489mg/L



Sample

Sample Name: WG388670-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

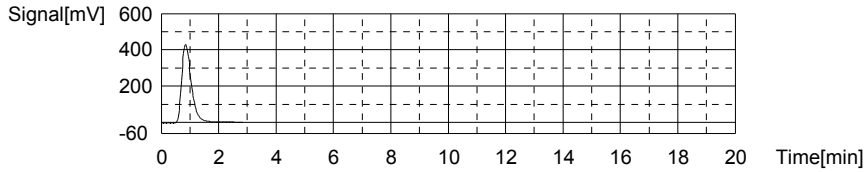
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:27.12mg/L TC:26.88mg/L IC:-0.2430mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1010	26.88mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 09:36:06 AM

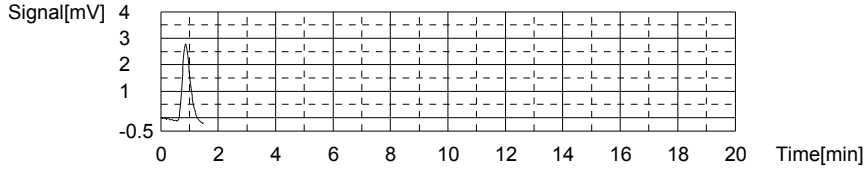
Mean Area 1010
Mean Conc. 26.88mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.664	-0.2430mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 09:40:32 AM

Mean Area 5.664
Mean Conc. -0.2430mg/L



Sample

Sample Name: WG388670-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

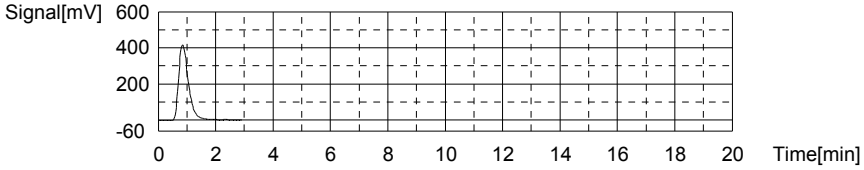
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.71mg/L TC:26.47mg/L IC:-0.2387mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	994.6	26.47mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 09:48:52 AM

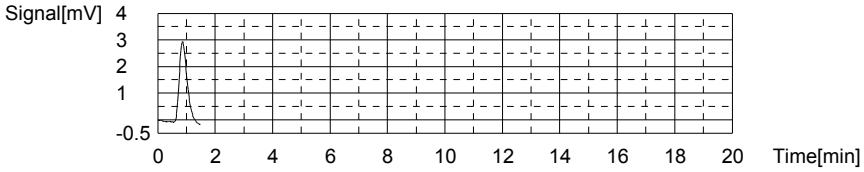
Mean Area 994.6
Mean Conc. 26.47mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.790	-0.2387mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 09:53:18 AM

Mean Area 5.790
Mean Conc. -0.2387mg/L



Sample

Sample Name: L12010791-05 (50)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

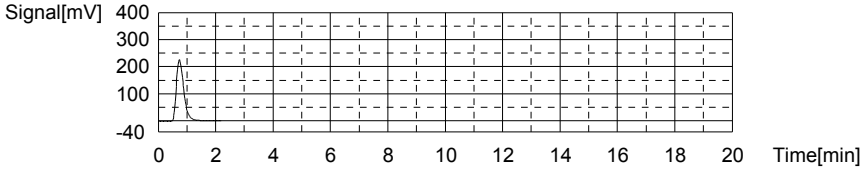
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.034mg/L TC:10.99mg/L IC:8.954mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	412.9	10.99mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 10:00:55 AM

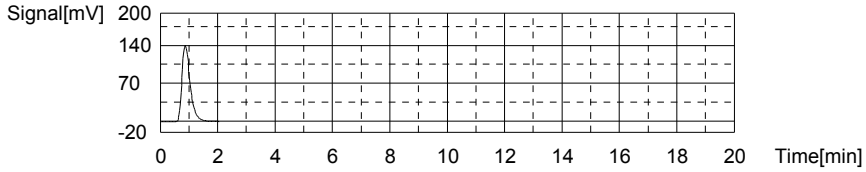
Mean Area 412.9
Mean Conc. 10.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	279.0	8.954mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 10:06:01 AM

Mean Area 279.0
Mean Conc. 8.954mg/L



Sample

Sample Name: L12020006-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

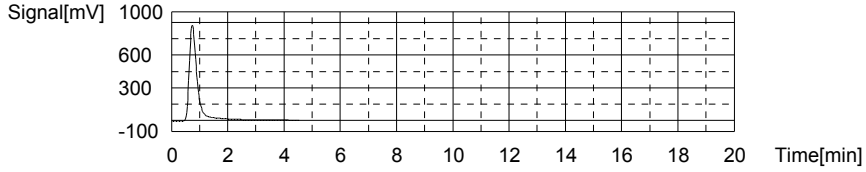
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.010mg/L TC:47.77mg/L IC:38.76mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1795	47.77mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 10:15:58 AM

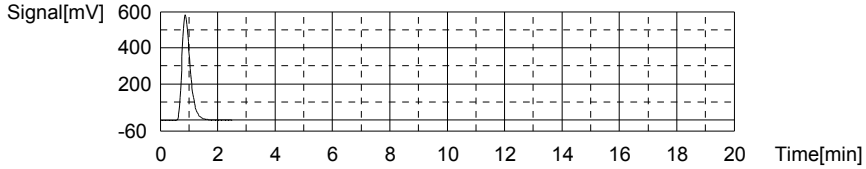
Mean Area 1795
Mean Conc. 47.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1165	38.76mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 10:21:49 AM

Mean Area 1165
Mean Conc. 38.76mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

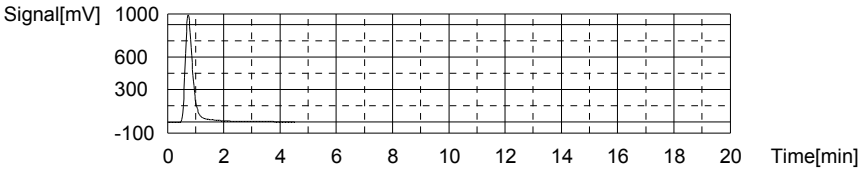
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.750mg/L TC:51.69mg/L IC:42.94mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1942	51.69mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 10:31:46 AM

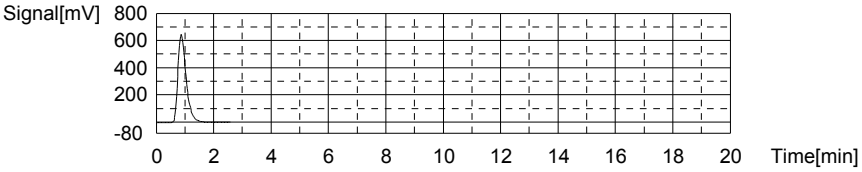
Mean Area 1942
Mean Conc. 51.69mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1289	42.94mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 10:37:43 AM

Mean Area 1289
Mean Conc. 42.94mg/L



Sample

Sample Name: L12020016-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

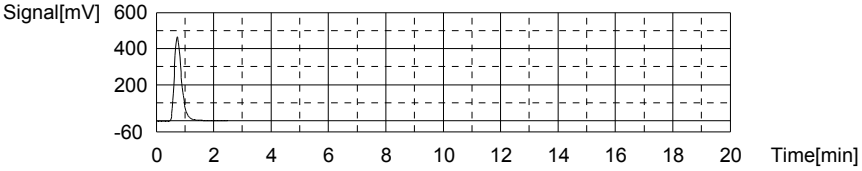
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.389mg/L TC:22.01mg/L IC:18.62mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	827.0	22.01mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 10:45:37 AM

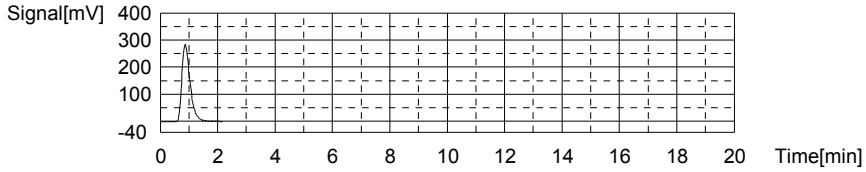
Mean Area 827.0
Mean Conc. 22.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	566.3	18.62mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 10:51:05 AM

Mean Area 566.3
Mean Conc. 18.62mg/L



Sample

Sample Name: WG388670-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

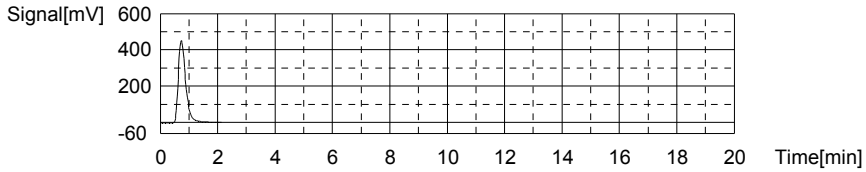
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.862mg/L TC:21.56mg/L IC:18.70mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	810.1	21.56mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 10:58:38 AM

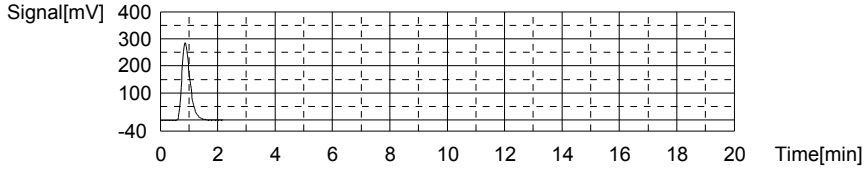
Mean Area 810.1
Mean Conc. 21.56mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	568.6	18.70mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 11:04:02 AM

Mean Area 568.6
Mean Conc. 18.70mg/L



Sample

Sample Name: L12020016-02 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

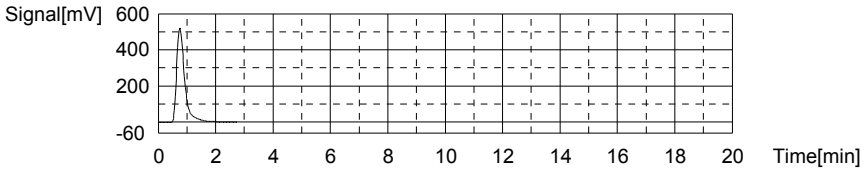
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.43mg/L TC:27.07mg/L IC:14.64mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1017	27.07mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 11:12:11 AM

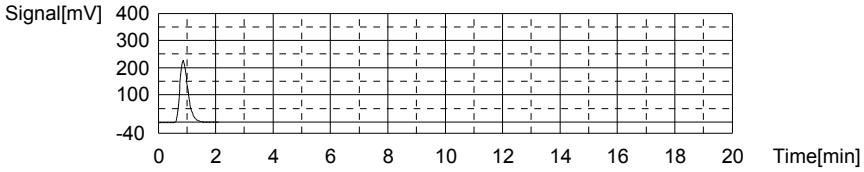
Mean Area 1017
Mean Conc. 27.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	447.9	14.64mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 11:17:29 AM

Mean Area 447.9
Mean Conc. 14.64mg/L



Sample

Sample Name: L12020016-03 MSD
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

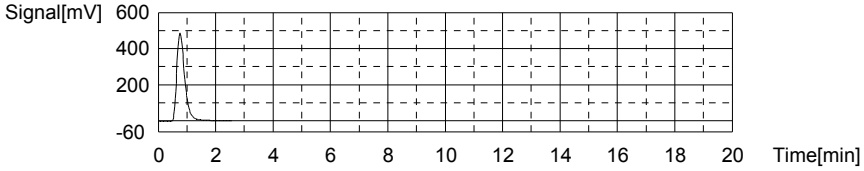
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.14mg/L TC:25.02mg/L IC:12.88mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	940.1	25.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 11:31:18 AM

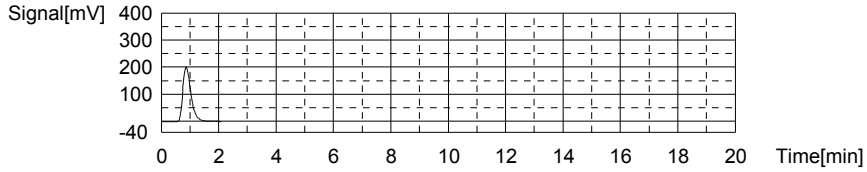
Mean Area 940.1
Mean Conc. 25.02mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	395.7	12.88mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 11:36:31 AM

Mean Area 395.7
Mean Conc. 12.88mg/L



Sample

Sample Name: L12020090-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

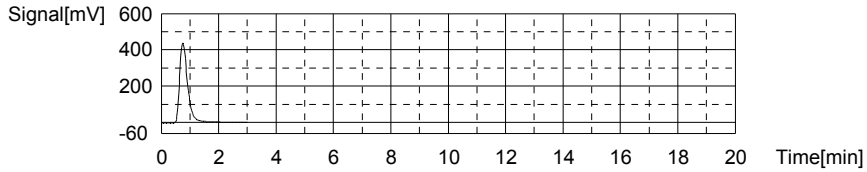
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.462mg/L TC:22.75mg/L IC:14.29mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	854.9	22.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 11:44:57 AM

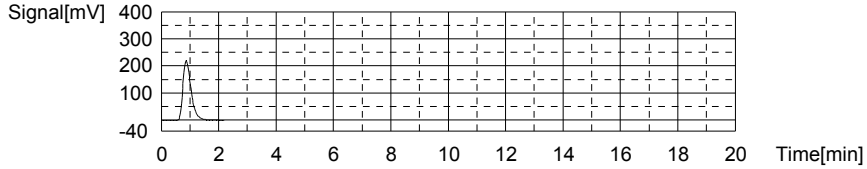
Mean Area 854.9
Mean Conc. 22.75mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	437.6	14.29mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 11:50:16 AM

Mean Area 437.6
Mean Conc. 14.29mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

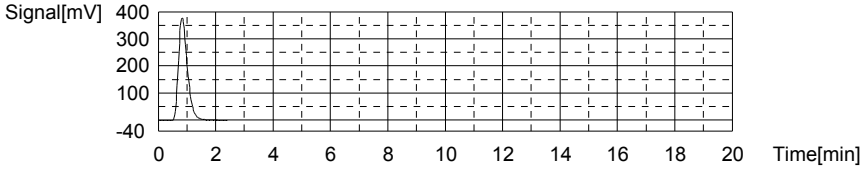
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:21.97mg/L TC:21.84mg/L IC:-0.1239mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	820.7	21.84mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 11:58:06 AM

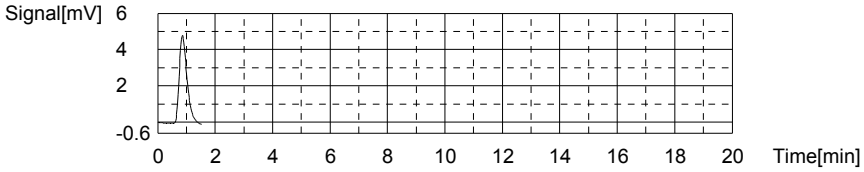
Mean Area 820.7
Mean Conc. 21.84mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.204	-0.1239mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 12:02:36 PM

Mean Area 9.204
Mean Conc. -0.1239mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

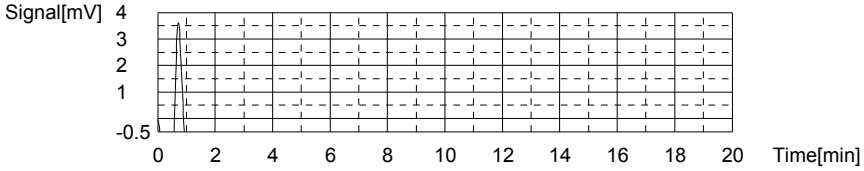
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3926mg/L TC:0.2493mg/L IC:-0.1433mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.459	0.2493mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 12:07:38 PM

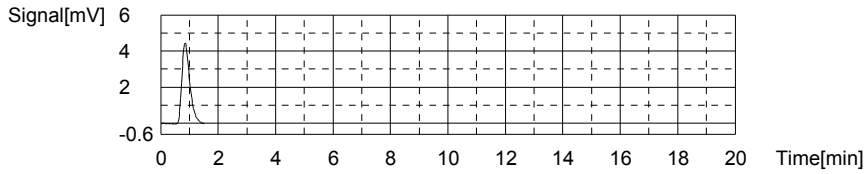
Mean Area 9.459
Mean Conc. 0.2493mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.627	-0.1433mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 12:11:40 PM

Mean Area 8.627
Mean Conc. -0.1433mg/L



Sample

Sample Name: L12020006-02 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

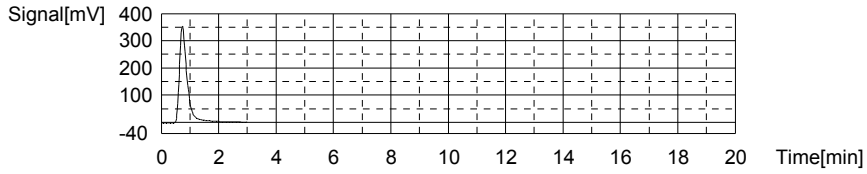
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.553mg/L TC:17.73mg/L IC:14.18mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	666.3	17.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 12:38:46 PM

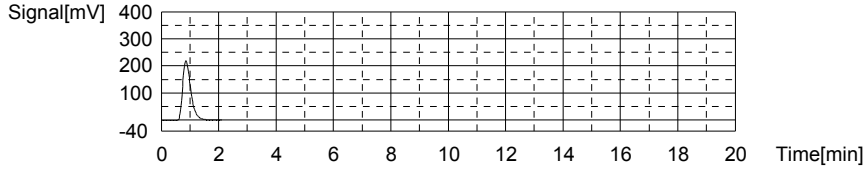
Mean Area 666.3
Mean Conc. 17.73mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	434.3	14.18mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 12:44:01 PM

Mean Area 434.3
Mean Conc. 14.18mg/L



Sample

Sample Name: L12020016-04
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

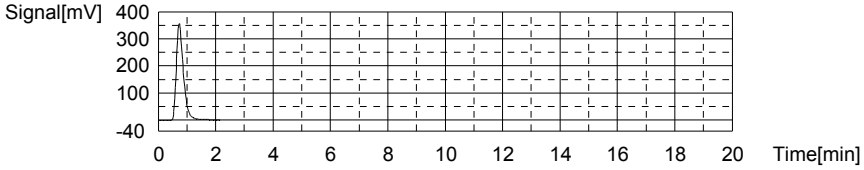
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.786mg/L TC:16.28mg/L IC:13.49mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	611.7	16.28mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 12:51:36 PM

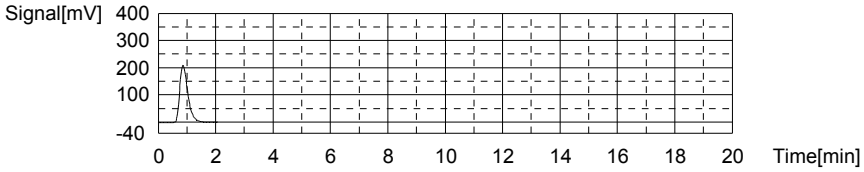
Mean Area 611.7
Mean Conc. 16.28mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	413.9	13.49mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 12:56:45 PM

Mean Area 413.9
Mean Conc. 13.49mg/L



Sample

Sample Name: L12020016-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

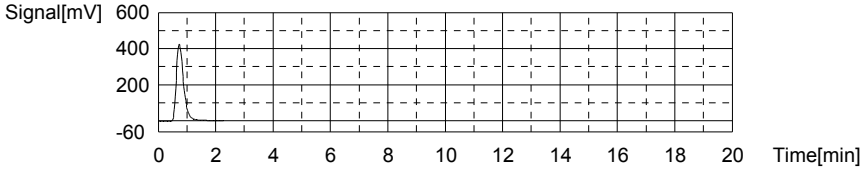
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.361mg/L TC:20.00mg/L IC:16.64mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	751.6	20.00mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 01:04:27 PM

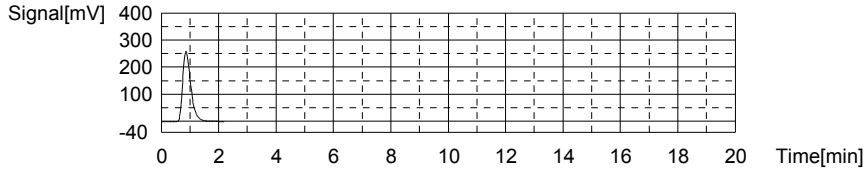
Mean Area 751.6
Mean Conc. 20.00mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	507.5	16.64mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 01:09:50 PM

Mean Area 507.5
Mean Conc. 16.64mg/L



Sample

Sample Name: L12020016-06
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

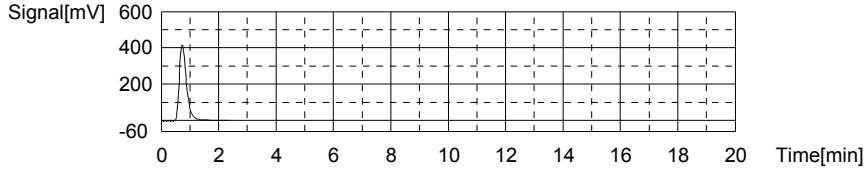
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.181mg/L TC:19.48mg/L IC:16.30mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	732.1	19.48mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 01:17:36 PM

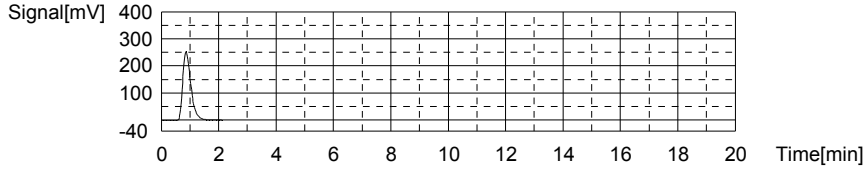
Mean Area 732.1
Mean Conc. 19.48mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	497.4	16.30mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 01:22:51 PM

Mean Area 497.4
Mean Conc. 16.30mg/L



Sample

Sample Name: L12020016-07
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

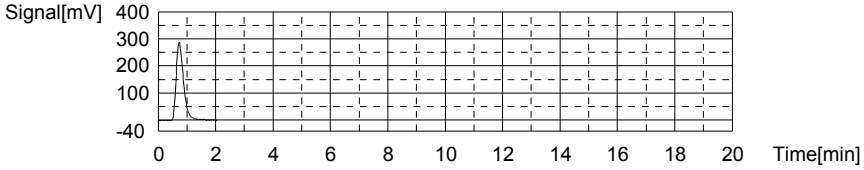
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.226mg/L TC:13.56mg/L IC:12.34mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	509.6	13.56mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 01:30:20 PM

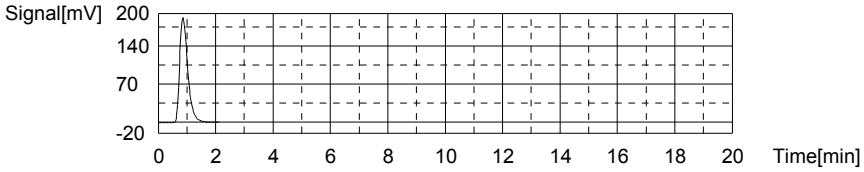
Mean Area 509.6
Mean Conc. 13.56mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	379.5	12.34mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 01:35:33 PM

Mean Area 379.5
Mean Conc. 12.34mg/L



Sample

Sample Name: L12020044-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

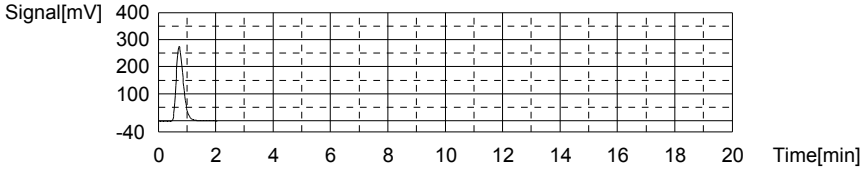
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6502mg/L TC:12.77mg/L IC:12.12mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	480.0	12.77mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 01:43:02 PM

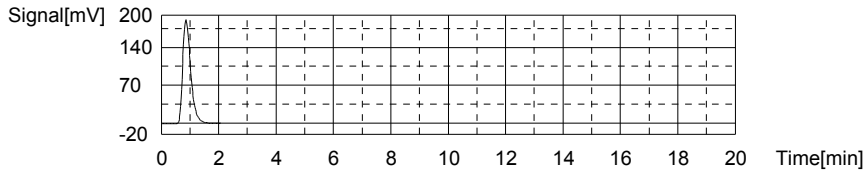
Mean Area 480.0
Mean Conc. 12.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	373.2	12.12mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 01:48:14 PM

Mean Area 373.2
Mean Conc. 12.12mg/L



Sample

Sample Name: L12020044-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

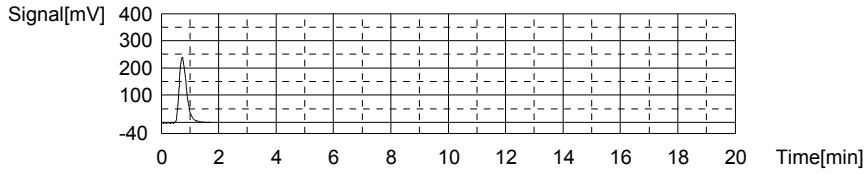
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.256mg/L TC:11.33mg/L IC:10.08mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	425.9	11.33mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 01:55:23 PM

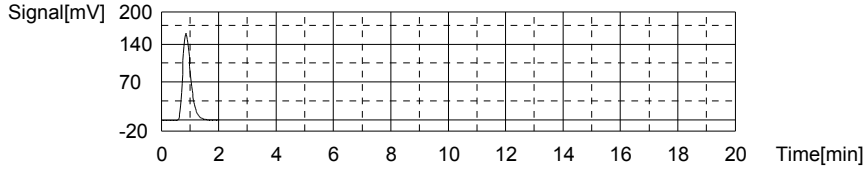
Mean Area 425.9
Mean Conc. 11.33mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	312.4	10.08mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 02:00:29 PM

Mean Area 312.4
Mean Conc. 10.08mg/L



Sample

Sample Name: L12020044-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

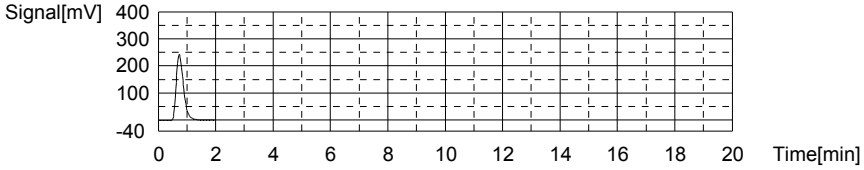
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.084mg/L TC:11.41mg/L IC:10.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	428.8	11.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 02:07:52 PM

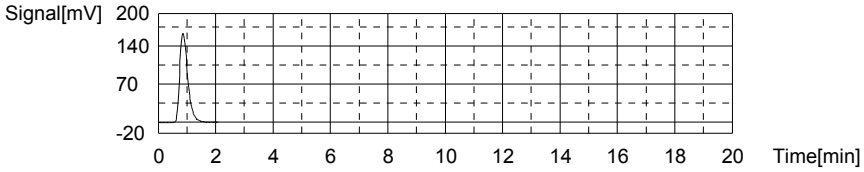
Mean Area 428.8
Mean Conc. 11.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	319.8	10.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 02:13:01 PM

Mean Area 319.8
Mean Conc. 10.33mg/L



Sample

Sample Name: L12020091-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

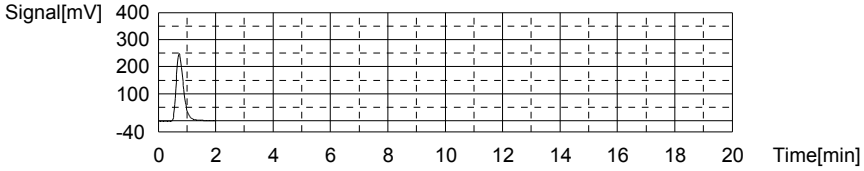
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.392mg/L TC:11.66mg/L IC:10.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	438.1	11.66mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 02:20:26 PM

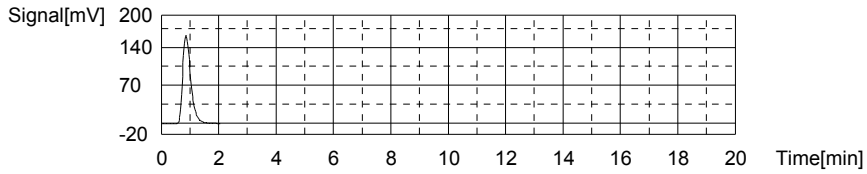
Mean Area 438.1
Mean Conc. 11.66mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	318.0	10.27mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 02:25:32 PM

Mean Area 318.0
Mean Conc. 10.27mg/L



Sample

Sample Name: L12020105-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

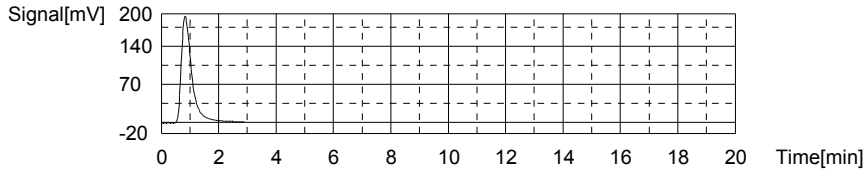
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:13.37mg/L TC:13.18mg/L IC:-0.1941mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	495.2	13.18mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 02:33:51 PM

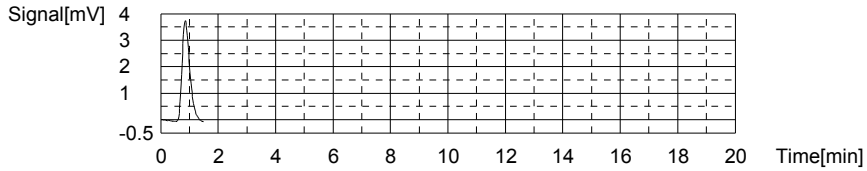
Mean Area 495.2
Mean Conc. 13.18mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.118	-0.1941mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 02:38:16 PM

Mean Area 7.118
Mean Conc. -0.1941mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

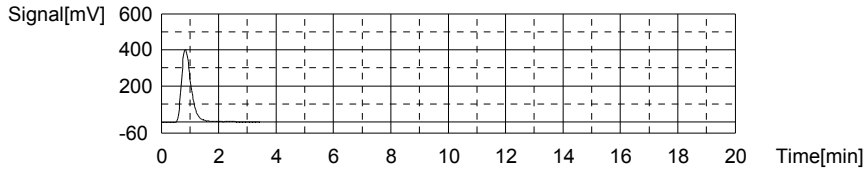
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.27mg/L TC:25.22mg/L IC:-0.04730mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	947.7	25.22mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 04:05:36 PM

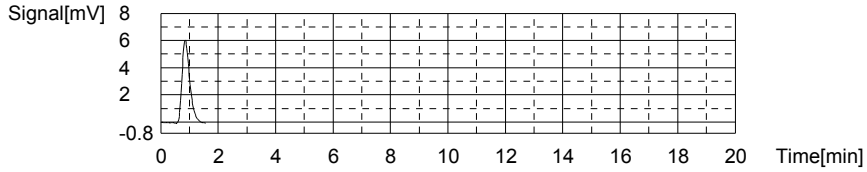
Mean Area 947.7
Mean Conc. 25.22mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.48	-0.04730mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 04:10:04 PM

Mean Area 11.48
Mean Conc. -0.04730mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

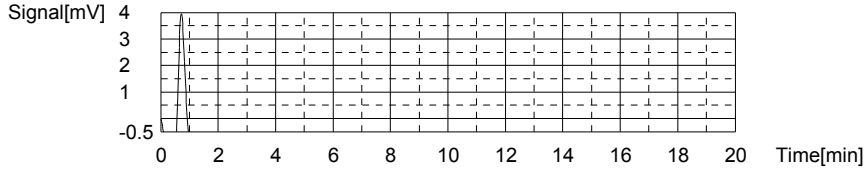
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3972mg/L TC:0.2466mg/L IC:-0.1506mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.359	0.2466mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	02/03/2012 04:15:05 PM

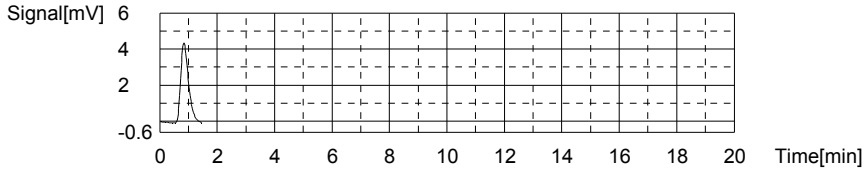
Mean Area 9.359
Mean Conc. 0.2466mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.411	-0.1506mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	02/03/2012 04:19:00 PM

Mean Area	8.411
Mean Conc.	-0.1506mg/L



2.2.11 Total Suspended Solids Data

2.2.11.1 Summary Data

Login Number: L12020091
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 160.2/SM2540 D (Total Suspended Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: The sample was stored in a refrigerator that failed. The sample became frozen for about 12 hours. The sample was thawed before analyzing.

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

Narrative ID: 42042
Approved By: Deanna Hesson

Microbac

Lab Report #: L12020091
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12020091-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL23-0212-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG388844	**Analyst:**	HJR	**Run Date:**	02/06/2012 12:31
Collect Date:	02/02/2012 11:40	**Dilution:**	1	**File ID:**	EN.1202061231-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids			U	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

2.2.11.2 QC Summary Data

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 06-FEB-2012
Analyst: HJR
Analyst: NA
Method: TSS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG388844

Calibration/Linearity	2/6/12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-FEB-2012

Secondary Reviewer:
10-FEB-2012

CHECKLIST1 - Modified 03/05/2008
Generated: FEB-10-2012 14:41:56

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.2 AAB#: WG388844

Login Number: L12020091

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
MPL23-0212-1	01	02/02/12							7		02/06/12	4	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2304338
Report generated 02/10/2012 13:24

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12020091
Blank File ID: EN.1202061231-01
Prep Date: 02/06/12 12:31
Analyzed Date: 02/06/12 12:31
Analyst: HJR

Work Group: WG388844
Blank Sample ID: WG388844-01
Instrument ID: OVEN
Method: 160.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG388844-02	EN.1202061231-02	02/06/12 12:31	
LCS2	WG388844-03	EN.1202061231-03	02/06/12 12:31	
MPL23-0212-1	L12020091-01	EN.1202061231-04	02/06/12 12:31	
DUP	WG388844-05	EN.1202061231-14	02/06/12 12:31	

Report Name: BLANK_SUMMARY
PDF File ID: 2304339
Report generated 02/10/2012 13:24

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12020091 Prep Date: 02/06/12 12:31 Sample ID: WG388844-01
Instrument ID: OVEN Run Date: 02/06/12 12:31 Prep Method: 160.2/SM2540D
File ID: EN.1202061231-01 Analyst: HJR Method: 160.2
Workgroup (AAB#): WG388844 Matrix: Water Units: mg/L
Contract #: Cal ID: OVEN-

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Total Suspended Solids	2.50	5.00	2.50	1	U

LOD Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 2304340
10-FEB-2012 13:24

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12020091 Analyst: HJR Prep Method: 160.2/SM2540D
Instrument ID: OVEN Matrix: Water Method: 160.2
Workgroup (AAB#): WG388844 Units: mg/L
QC Key: DOD4 Lot #: STD49939

Sample ID: WG388844-02 LCS File ID: EN.1202061231-02 Run Date: 02/06/2012 12:31
Sample ID: WG388844-03 LCS2 File ID: EN.1202061231-03 Run Date: 02/06/2012 12:31

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	49.0	98.0	50.0	48.0	96.0	2.06	75 - 125	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2304341
Report generated: 02/10/2012 13:24

2.2.11.3 Raw Data

WORKGROUP: WG388844

TOTAL SUSPENDED SOLIDS

LCS: Std 49939

Oven: ☐ TSS1 ☐ Other

MS: _____ mL LCS & _____ mL sample

Balance: ~~AND GR-202~~ / Other

Method: EPA 160.2 / SM2540D SOP #: K1602 Revision #: ~~B~~

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BLK	200				
LCS: _____mg/L	LCS	100				
LCSDUP: _____mg/L	LCS2	100				
* 02-0093-01	1	200				
* 02-0150-01	2	200				
* -02	3	200				
* -03	4	200				
* -04	5	200				
* 02-0087-01	6	200				
* -04	7	200				
* 02-0092-01	8	200				
* 02-0094-01	9	200				
* -02	10	200				
DUP: 02-0087-01	DP1	200				
DUP:						

ANALYST: Dolly Zeed

DATE/TIME: (on) 2/6/12

DATE/TIME: (off)

DATE/TIME: (off)

DATE/TIME: (off)

* Duplicate required on 10% of samples

* Samples were frozen in the walk in, thawed completely then ran

DCN#89844

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG388844
Analyst: HJR
Analyte: TOTAL SUSPENDED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.2/SM2540D
SOP: K1602 Revison 13
Spike Solution: STD49939
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG388844-01	BLK	200	0.1003	0.1	0.1001		-1.000	-1.000	mg/L
WG388844-02	LCS	100	0.0999	0.1047	0.1048		49.00	49.00	mg/L
WG388844-03	LCS2	100	0.0984	0.1032	0.1032		48.00	48.00	mg/L
L12020091-01	1	200	0.0994	0.0995	0.0995		0.5000	ND	mg/L
L12020100-01	2	200	0.0988	0.1019	0.1015		13.50	13.50	mg/L
L12020100-02	3	200	0.0991	0.1022	0.102		14.50	14.50	mg/L
L12020100-03	4	200	0.0984	0.1005	0.1004		10.00	10.00	mg/L
L12020100-04	5	200	0.1014	0.1016	0.1016		1.000	ND	mg/L
L12020087-01	6	200	0.1002	0.1054	0.1052		25.00	25.00	mg/L
WG388844-04	6	200	0.1002	0.1054	0.1052		25.00	25.00	mg/L
L12020087-04	7	200	0.0983	0.0985	0.0984		0.5000	ND	mg/L
L12020092-01	8	200	0.0989	0.1045	0.1046		28.50	28.50	mg/L
L12020094-01	9	200	0.0999	0.1129	0.113		65.50	65.50	mg/L
L12020094-02	10	200	0.1012	0.1018	0.1018		3.000	3.000	mg/L
WG388844-05	DUP1	200	0.0998	0.1047	0.1047		24.50	24.50	mg/L

L12020091-01	sample was frozen,thawed and ran
L12020100-01	sample was frozen,thawed and ran
L12020100-02	sample was frozen,thawed and ran
L12020100-03	sample was frozen,thawed and ran
L12020100-04	sample was frozen,thawed and ran
L12020087-01	sample was frozen,thawed and ran
L12020087-04	sample was frozen,thawed and ran
L12020092-01	sample was frozen,thawed and ran
L12020094-01	sample was frozen,thawed and ran
L12020094-02	sample was frozen,thawed and ran
WG388844-04	sample was frozen,thawed and ran

Analyst:

*Duplicate required on 10% of samples

Date/Time (on) : 02/06/2012 12:31
Date/Time (off): 02/07/2012 10:05
Date/Time (off): 02/07/2012 14:40
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2299273
Report generated: 02/07/2012 14:41

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
February 15, 2012

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DHG - DEBORAH H. GRIFFITHS
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH	DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON
EDL - ERIN D. LONG	ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN
HAV - HEMA VILASAGAR	HJR - HOLLY J. REED	JAL - JOHN A. LENT
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD
JLL - JOHN L. LENT	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS	PWD - PAUL W. DENT	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG		

Microbac Laboratories Inc.
List of Valid Qualifiers
February 15, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

Qualkey: DOD

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

L12020091 / Revision: 0 / 1161 total pages

COC No. A 28477

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Zia / SHAW

Project Contact: Mark Lyon

Contact Phone #: 305-262-8920

Turn Around Requirements: Normal

Location: WSMR

Project ID: STP

Sampler (print): Bradley T. Davis

Signature: Brad T. Davis

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Anions	Cond pH PO4	Alkalinity	Total, Free, Amenable CN	Metals	NH3 TOC NO3 NO2	TSS TDS								TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MPL23-0212-1		X	2-2-12	1140	W	7		X	X	X	X	X	X	X									

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Brad T. Davis	2-2-12	1600			
Relinquished by: (Signature)	Date	Time			

Microbac OVD
Received: 02/03/2012 10:30
By: CARA STRICKLER 221000022107

Cara Strickler

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Generated: 02/15/2012 15:38

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020091
Account: 3005
Project: 3005.011
Samples: 1
Due Date: 14-FEB-2012

Samplenum	Container ID	Products
L12020091-01	934328	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	03-FEB-2012 11:45	CLS		
2	ANALYZ	WET	SEM	07-FEB-2012 08:45	JBK	DIH	
3	STORE	WET	A1	09-FEB-2012 09:01	JKT	JBK	

Samplenum	Container ID	Products
L12020091-01	934329	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	
3	STORE	WET	A1	08-FEB-2012 09:13	JKS	DIH	

Samplenum	Container ID	Products
L12020091-01	934330	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 11:52	DIH	JKS	
3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	

Samplenum	Container ID	Products
L12020091-01	934331	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	
3	STORE	WET	A1	09-FEB-2012 08:29	JKS	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020091
Account: 3005
Project: 3005.011
Samples: 1
Due Date: 14-FEB-2012

Samplenum	Container ID	Products
L12020091-01	934332	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	
3	STORE	WET	A1	10-FEB-2012 07:41	AZH	TMM	

Samplenum	Container ID	Products
L12020091-01	934333	AG-MS AL AS-MS B BA-MS BE-AX CA CD-MS CO-MS CF

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		
2	ANALYZ	W1	MET	04-FEB-2012 13:05	DIH	JKS	
3	STORE	DIG	A1	07-FEB-2012 12:16	JKS	ERP	

Samplenum	Container ID	Products
L12020091-01	934334	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	03-FEB-2012 11:45	CLS		
2	ANALYZ	W1	WET	04-FEB-2012 12:36	DIH	JKS	
3	STORE	WET	A1	15-FEB-2012 08:10	JKS	DLP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login