Microbac

Laboratory Report Number: L13110337

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 November 20 2013

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1 without flagging

Microbac

Lab Report #: L13110337
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.

The following discrepancies were noted:

Discrepancy	Resolution
The sample(s) were out of the acceptable pH range: CLS MPL 30-1113-1: the PH is out on both metals bottles. MPL 16-1113-1: the PH is out on both metals bottles. MPL 26-1113-1: the PH is out on both metals bottles. Added 5ml HNO3 Lot#: RGT 28449 11/06/13 @ 1650. PH did adjust. CLS	Please adjust and proceed.

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0018540	I	4.0		1001845320760004575000803738596997	X

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 preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	No
12	Were VOA samples free of headspace (less than 6mm)?	NA

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Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL 30-1113-1	L13110337-01	11/05/2013 10:05	11/06/2013 10:54
MPL 16-1113-1	L13110337-02	11/05/2013 12:15	11/06/2013 10:54
MPL 26-1113-1	L13110337-03	11/05/2013 14:14	11/06/2013 10:54

Microbac REPORT L13110337
PREPARED FOR Environmental Waste Solutions
WORK ID:

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2.2.6.1 Summary Data 1196
2.2.6.2 QC Summary Data 1199
2.2.6.3 Raw Data 1206
2.2.7 Nitrate Data 1215
2.2.7.1 Summary Data 1216
2.2.7.2 QC Summary Data 1220
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1.0 Summary Data

1.1 Narratives

Login Number: L13110337
Department: Conventionals
Analyst:

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: 74615
Approved By: Deanna Hesson

Login Number: L13110337
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3015

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: WG452043 - The initial calibration blank analyzed on 08-NOV-2013 at 09:38 and continuing calibration blanks analyzed at 13:20 and 14:27 yielded results for vanadium that exceeded the limit of detection. With the permission of the project chemist, the vanadium results were reported with 'B' qualifiers to indicate the association with noncompliant calibration blanks. The CCB analyzed on 08-NOV-2013 at 13:56 yielded a result for sodium that exceeded the limit of quantitation. However, the reported sample results exceeded that of the CCB by greater than a factor of ten. The sodium results were reported with 'B' qualifiers to indicate the association with a noncompliant CCB.

BATCH QA/QC

Method Blank: WG452043 - The method blank analyzed on 08-NOV-2013 at 13:28 yielded a result for vanadium that

exceeded the limit of detection. With the permission of the project chemist, the vanadium results were reported with 'B' qualifiers to indicate the association with a noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG452043 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG452043 - Client samples 01, 02 and 03 required dilution analyses in order to obtain results for calcium within the calibration range. Client sample 03 required dilution analysis in order to obtain a result for magnesium within the calibration range.

Narrative ID: 74245
Approved By: Maren Beery
Maren Beery

Login Number: L13110337
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG452303 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 74639
Approved By: Maren Beery
Maren Beery

Login Number: L13110337
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis EPA300.0/SW846 9056

HOLDING TIMES

Sample Analysis: Hold times for NO2 and NO3 are 48 hours and the hold times for F, Cl, Br, and SO4 are 28 days. The hold time forms calculate the hold time based on 48 hours. All samples were analyzed in hold.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

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

SAMPLES

Samples: All acceptance criteria were met.

MANUAL INTEGRATION: No manual integration was required.

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Narrative ID: 74237
Approved By: Mike Cochran

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

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.

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Narrative ID: 74613
Approved By: Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst:

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.

Sample #	Analyte	Date	Result	Lower	Upper	Type
WG452812-02	Cyanide	2013-11-14 15:45:03	1.00	90	110	Recovery

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 74619

Approved By: Deanna Hesson

Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst: Deanna Hesson

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.

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Narrative ID: 74614
Approved By: Deanna Hesson

Login Number: L13110337
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.

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Narrative ID: 74616
Approved By: Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Analysis: The instrument used for the analysis of nitrate only analyzes for nitrate-nitrite (NO3NO2) which is the amount of total nitrate (NO3) and nitrite (NO2) combined. The NO3 concentration is determined by analyzing for NO3NO2 and NO2 and calculating NO3 by the difference. An unpreserved bottle only has a 48 hour hold time for NO3 and NO2 separately. However if the bottle is preserved with sulfuric acid, the hold time for NO3NO2 is 28 days. The NO2 was analyzed within 48 hours. The NO3NO2 was analyzed from a preserved container within 28 days..

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.

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Narrative ID: 74617
Approved By: Deanna Hesson

Dannadsson

Login Number: L13110337
Department: Conventionals
Analyst: Dorothy Payne

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.

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Narrative ID: 74618
Approved By: Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst: April Greene

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: The LCS recovery was below the advisory limit due to a lab accident. The LCS duplicate was acceptable.

Sample #	Analyte	Date	Result	Lower	Upper	Type
WG451940-02	Total Dissolved Solids	2013-11-08 11:05:02	28.0	80	120	Recovery
WG451940-03	Total Dissolved Solids	2013-11-08 11:05:03	110		10	RPD

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 74297

Approved By: Deanna Hesson

Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

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.

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Narrative ID: 74620
Approved By: Deanna Hesson

Login Number: L13110337
Department: Conventionals
Analyst: April Greene

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: All acceptance criteria were met.

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Narrative ID: 74621
Approved By: Deanna Hesson

1.2 Certificate of Analysis

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:16
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	P2.110813.141611
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	13.6		0.500	0.250
Potassium, Total	7440-09-7	3.51		1.00	0.500
Sodium, Total	7440-23-5	31.9	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0125	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:30
Collect Date:	11/05/2013 10:05	**Dilution:**	10	**File ID:**	P2.110813.153050
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	77.9		5.00	2.50

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 #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 11:35
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	NI.111813.113504
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	0.00745		0.00100	0.000500
Barium, Total	7440-39-3	0.0974		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00361		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00211		0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00284		0.00200	0.00100
Nickel, Total	7440-02-0	0.00470		0.00400	0.00200
Selenium, Total	7782-49-2	0.0268		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 30-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:47
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	M7.111113.114727
Sample Tag:	01	**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 #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 30-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:03
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	I1_110813-11
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	77.4	J	0.200	0.100
Fluoride	16984-48-8	0.204		0.200	0.100
Sulfate	14808-79-8	131	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 30-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 17:34
Collect Date:	11/05/2013 10:05	**Dilution:**	5	**File ID:**	I1_110813-30
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	63.8		1.00	0.500
Fluoride	16984-48-8		U	1.00	0.500
Sulfate	14808-79-8	109		5.00	2.50

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

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 30-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:22
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	OS13111513392801
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.48		0.000	0.000
Temperature At Determination (C)		18.5		0.000	0.000

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0

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

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	99.6		20.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	99.6		20.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141550-04
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0220		0.0100	0.00500

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:20
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141530-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.298		0.0100	0.00500

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141545-04
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.298	U	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL 30-1113-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG451875	**Analyst:**	DIH	**Run Date:**	11/07/2013 20:02
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	TI.110713.2002CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		547		50.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 30-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:47
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	SC131112001.042
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.172		0.100	0.0500

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 30-1113-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	11/07/2013 15:03
Workgroup #:	WG451996	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:10
Collect Date:	11/05/2013 10:05	**Dilution:**	4	**File ID:**	SC13111213490601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		7.95		0.200	0.100

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311070930-10
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 #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 30-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451940	**Analyst:**	ADG	**Run Date:**	11/08/2013 11:05
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	EN.1311081105-23
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		400		20.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 30-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 19:49
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	TC11082013.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	1.62		1.00	0.500

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 30-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	EN.1311080832-13
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

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:19
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	P2.110813.141912
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	8.69		0.500	0.250
Potassium, Total	7440-09-7	3.13		1.00	0.500
Sodium, Total	7440-23-5	24.7	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0126	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:33
Collect Date:	11/05/2013 12:15	**Dilution:**	10	**File ID:**	P2.110813.153352
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	53.0		5.00	2.50

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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 12:38
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	NI.111813.123804
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	0.00291		0.00100	0.000500
Barium, Total	7440-39-3	0.0638		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00155	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00117	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00824		0.00200	0.00100
Nickel, Total	7440-02-0	0.00266	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0105		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
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

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 16-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:49
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	M7.111113.114957
Sample Tag:	01	**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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 16-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:21
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	I1_110813-12
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	52.2	J	0.200	0.100
Fluoride	16984-48-8	0.233		0.200	0.100
Sulfate	14808-79-8	80.4		1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 16-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 17:52
Collect Date:	11/05/2013 12:15	**Dilution:**	5	**File ID:**	I1_110813-31
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	42.7		1.00	0.500
Fluoride	16984-48-8		U	1.00	0.500
Sulfate	14808-79-8	69.8		5.00	2.50

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 16-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:26
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	OS13111513402601
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.24		0.000	0.000
Temperature At Determination (C)		17.5		0.000	0.000

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	85.6		20.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	85.6		20.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141550-05
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0154		0.0100	0.00500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:20
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141530-08
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.134		0.0100	0.00500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141545-05
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.133	U	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL 16-1113-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG451875	**Analyst:**	DIH	**Run Date:**	11/07/2013 20:04
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	TI.110713.2004CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		437		50.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 16-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:47
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	SC131112001.043
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.139		0.100	0.0500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 16-1113-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	11/07/2013 15:03
Workgroup #:	WG451996	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:10
Collect Date:	11/05/2013 12:15	**Dilution:**	4	**File ID:**	SC13111213492701
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		48.4		0.200	0.100

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311070930-11
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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 16-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451975	**Analyst:**	ADG	**Run Date:**	11/07/2013 08:42
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	EN.1311070842-08
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		22.0		20.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 16-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 20:01
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	TC11082013.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	1.55		1.00	0.500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 16-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	EN.1311080832-14
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

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:22
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	P2.110813.142213
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Potassium, Total	7440-09-7	3.94		1.00	0.500
Sodium, Total	7440-23-5	45.9	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0165	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:36
Collect Date:	11/05/2013 14:14	**Dilution:**	10	**File ID:**	P2.110813.153654
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	180		5.00	2.50
Magnesium, Total	7439-95-4	48.0		5.00	2.50

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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 12:41
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	NI.111813.124109
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	0.00155		0.00100	0.000500
Barium, Total	7440-39-3	0.0627		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00926		0.00200	0.00100
Cobalt, Total	7440-48-4	0.000830	J	0.00100	0.000500
Copper, Total	7440-50-8	0.00352		0.00200	0.00100
Lead, Total	7439-92-1	0.000810	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0231		0.00200	0.00100
Nickel, Total	7440-02-0	0.0105		0.00400	0.00200
Selenium, Total	7782-49-2	0.0111		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
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

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 26-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:52
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	M7.111113.115228
Sample Tag:	01	**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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 26-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:38
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	I1_110813-13
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	210	J	0.200	0.100
Fluoride	16984-48-8	0.216		0.200	0.100
Sulfate	14808-79-8	658	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 26-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 18:09
Collect Date:	11/05/2013 14:14	**Dilution:**	10	**File ID:**	I1_110813-32
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	161		2.00	1.00
Fluoride	16984-48-8		U	2.00	1.00
Sulfate	14808-79-8	517		10.0	5.00

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

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 26-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:28
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	OS13111513403401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.12		0.000	0.000
Temperature At Determination (C)		17.6		0.000	0.000

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	70.4		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	70.4		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0

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

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141550-06
Sample Tag:	DL01	**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

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141530-09
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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141545-06
Sample Tag:	DL02	**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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	TIAMO1
Client ID:	MPL 26-1113-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG451875	**Analyst:**	DIH	**Run Date:**	11/07/2013 20:06
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	TI.110713.2006CO
Sample Tag:	01	**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		832		50.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 26-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:50
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	SC131112001.046
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.185		0.100	0.0500

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 26-1113-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	11/07/2013 15:03
Workgroup #:	WG451998	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:55
Collect Date:	11/05/2013 14:14	**Dilution:**	4	**File ID:**	SC13111213143101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		6.77		0.200	0.100

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311070930-12
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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 26-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451975	**Analyst:**	ADG	**Run Date:**	11/07/2013 08:42
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	EN.1311070842-09
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		1020		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 26-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 20:34
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	TC11082013.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	0.793	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 26-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	EN.1311080832-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		10.0		5.00	2.50

Certificate of Analysis

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: L13110337
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3015

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: WG452043 - The initial calibration blank analyzed on 08-NOV-2013 at 09:38 and continuing calibration blanks analyzed at 13:20 and 14:27 yielded results for vanadium that exceeded the limit of detection. With the permission of the project chemist, the vanadium results were reported with 'B' qualifiers to indicate the association with noncompliant calibration blanks. The CCB analyzed on 08-NOV-2013 at 13:56 yielded a result for sodium that exceeded the limit of quantitation. However, the reported sample results exceeded that of the CCB by greater than a factor of ten. The sodium results were reported with 'B' qualifiers to indicate the association with a noncompliant CCB.

BATCH QA/QC

Method Blank: WG452043 - The method blank analyzed on 08-NOV-2013 at 13:28 yielded a result for vanadium that

exceeded the limit of detection. With the permission of the project chemist, the vanadium results were reported with 'B' qualifiers to indicate the association with a noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG452043 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG452043 - Client samples 01, 02 and 03 required dilution analyses in order to obtain results for calcium within the calibration range. Client sample 03 required dilution analysis in order to obtain a result for magnesium within the calibration range.

Narrative ID: 74245
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:16
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	P2.110813.141611
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	13.6		0.500	0.250
Potassium, Total	7440-09-7	3.51		1.00	0.500
Sodium, Total	7440-23-5	31.9	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0125	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:30
Collect Date:	11/05/2013 10:05	**Dilution:**	10	**File ID:**	P2.110813.153050
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	77.9		5.00	2.50

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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:19
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	P2.110813.141912
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Magnesium, Total	7439-95-4	8.69		0.500	0.250
Potassium, Total	7440-09-7	3.13		1.00	0.500
Sodium, Total	7440-23-5	24.7	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0126	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:33
Collect Date:	11/05/2013 12:15	**Dilution:**	10	**File ID:**	P2.110813.153352
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	53.0		5.00	2.50

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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 14:22
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	P2.110813.142213
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Potassium, Total	7440-09-7	3.94		1.00	0.500
Sodium, Total	7440-23-5	45.9	B	0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0165	B	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/08/2013 08:44
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	11/08/2013 09:34
Workgroup #:	WG452043	**Analyst:**	KHR	**Run Date:**	11/08/2013 15:36
Collect Date:	11/05/2013 14:14	**Dilution:**	10	**File ID:**	P2.110813.153654
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Calcium, Total	7440-70-2	180		5.00	2.50
Magnesium, Total	7439-95-4	48.0		5.00	2.50

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

2.1.1.2 QC Summary Data

Example 6010 Calculations
Perkin Elmer Optima 4300 DV

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

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

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

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

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

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

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

4.0 Adjusting the concentration to dry weight:

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

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

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG451993
Analyst: ERP
Spike Analyst: ERP
Run Date: 11/08/2013 08:44
Method: 3015
Balance: BAL002
Instrument: MW-1
Instrument Start: 11/08/2013 08:44

SOP: ME407 Revison 14
Spike Solution: STD61081
Spike Witness: VC
HCL Lot #: COA17104
HNO3 Lot #: COA16631
Digestion Tubes Lot #: COA16971
ICP Filters- fisher-Lot# RGT26838
10,000 PPM Phosphorous L COA16596

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG451993-02	BLANK	1	40 mL	50 mL	203.868 g	203.866 g		
2	WG451993-03	LCS	1	40 mL	50 mL	207.698 g	207.696 g	5 mL	
3	L13110320-01	SAMP	1	40 mL	50 mL	203.109 g	203.102 g		11/15/13
4	L13110320-03	SAMP	1	40 mL	50 mL	205.376 g	205.373 g		11/15/13
5	L13110320-05	SAMP	1	40 mL	50 mL	205.433 g	205.428 g		11/15/13
6	L13110320-07	SAMP	1	40 mL	50 mL	202.948 g	202.939 g		11/15/13
7	L13110320-09	SAMP	1	40 mL	50 mL	204.916 g	204.906 g		11/15/13
8	L13110320-11	SAMP	1	40 mL	50 mL	207.866 g	207.865 g		11/15/13
9	L13110337-01	SAMP	1	40 mL	50 mL	208.009 g	207.94 g		11/15/13
10	L13110337-02	SAMP	1	40 mL	50 mL	206.649 g	206.645 g		11/15/13
11	L13110337-03	SAMP	1	40 mL	50 mL	203.845 g	203.841 g		11/15/13
12	L13110363-01	SAMP	1	40 mL	50 mL	204.709 g	204.705 g		11/15/13
13	L13110363-03	SAMP	1	40 mL	50 mL	203.526 g	203.516 g		11/15/13
14	L13110363-05	SAMP	1	40 mL	50 mL	205.359 g	205.359 g		11/15/13
15	L13110363-07	SAMP	1	40 mL	50 mL	205.057 g	205.064 g		11/15/13
16	L13110368-01	SAMP	1	40 mL	50 mL	204.706 g	204.705 g		11/18/13
17	WG451993-01	REF	1	40 mL	50 mL	206.203 g	206.196 g		
18	L13110368-03	RS01	1	40 mL	50 mL	206.203 g	206.196 g		11/18/13
19	L13110368-04	SAMP	1	40 mL	50 mL	204.453 g	204.436 g		11/18/13
20	L13110368-05	SAMP	1	40 mL	50 mL	204.44 g	204.444 g		11/18/13
21	WG451993-04	MS	1	40 mL	50 mL	211.69 g	211.691 g	5 mL	
22	L13110368-06	MS01	1	40 mL	50 mL	211.69 g	211.691 g	5 mL	11/18/13
23	WG451993-05	MSD	1	40 mL	50 mL	209.132 g	209.132 g	5 mL	
24	L13110368-07	SD01	1	40 mL	50 mL	209.132 g	209.132 g	5 mL	11/18/13
25	L13110371-01	SAMP	1	40 mL	50 mL	203.71 g	203.706 g		11/11/13
26	L13110383-01	SAMP	1	40 mL	50 mL	204.977 g	204.982 g		11/14/13
27	L13110383-02	SAMP	1	40 mL	50 mL	203.883 g	203.881 g		11/14/13

L13110371-01	sample has a thin layer of oily substance; smells like deisal

Analyst: Erin Potter

Reviewer: Vicki Collins

MW_DIG - Modified 09/30/2009
PDF ID: 3190967
Report generated: 11/08/2013 10:15

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.110813.092343	WG452048-01	Calibration Point		1		11/08/13 09:23
2	P2.110813.092643	WG452048-02	Calibration Point		1		11/08/13 09:26
3	P2.110813.092943	WG452048-03	Calibration Point		1		11/08/13 09:29
4	P2.110813.093244	WG452048-04	Calibration Point		1		11/08/13 09:32
5	P2.110813.093448	WG452048-05	Calibration Point		1		11/08/13 09:34
6	P2.110813.093654	WG452048-06	Initial Calibration Verification		1		11/08/13 09:36
7	P2.110813.093857	WG452048-07	Initial Calib Blank		1		11/08/13 09:38
8	P2.110813.094157	WG452048-08	Interference Check		1		11/08/13 09:41
9	P2.110813.094400	WG452048-09	Interference Check		1		11/08/13 09:44
10	P2.110813.094601	WG452048-10	CCV		1		11/08/13 09:46
11	P2.110813.094806	WG452048-11	CCB		1		11/08/13 09:48
12	P2.110813.095949	WG451648-03	Method/Prep Blank	40/50	1		11/08/13 09:59
13	P2.110813.100250	WG451648-04	Laboratory Control S	40/50	1		11/08/13 10:02
14	P2.110813.100454	WG451648-01	Reference Sample		1	L13110163-01	11/08/13 10:04
15	P2.110813.100754	WG451648-05	Duplicate	40/50	1	L13110163-01	11/08/13 10:07
16	P2.110813.101054	WG451648-06	Matrix Spike	40/50	1	L13110163-01	11/08/13 10:10
17	P2.110813.101255	L13110163-02	3-010	40/50	1		11/08/13 10:12
18	P2.110813.101556	L13110168-01	DSJB	40/50	1		11/08/13 10:15
19	P2.110813.101901	L13110168-03	DSLTB	40/50	1		11/08/13 10:19
20	P2.110813.102205	WG451897-01	POST DIGESTION SPIKE		1	L13110168-03	11/08/13 10:22
21	P2.110813.102410	WG451897-02	Serial Dilution		5	L13110168-03	11/08/13 10:24
22	P2.110813.102709	WG452048-12	CCV		1		11/08/13 10:27
23	P2.110813.102914	WG452048-13	CCB		1		11/08/13 10:29
24	P2.110813.103214	L13110168-05	DSMRB	40/50	1		11/08/13 10:32
25	P2.110813.103514	L13110168-07	DSTB	40/50	1		11/08/13 10:35
26	P2.110813.103814	L13110168-09	DSTF	40/50	1		11/08/13 10:38
27	P2.110813.104114	L13110170-01	27-001	40/50	1		11/08/13 10:41
28	P2.110813.104419	L13110170-02	27-004	40/50	1		11/08/13 10:44
29	P2.110813.104723	WG451648-02	Reference Sample		1	L13110174-01	11/08/13 10:47
30	P2.110813.105024	WG451648-07	Matrix Spike	40/50	1	L13110174-01	11/08/13 10:50
31	P2.110813.105227	L13110179-01	FC-101	40/50	1		11/08/13 10:52
32	P2.110813.105528	L13110192-02	13J0706-01	40/50	1		11/08/13 10:55
33	P2.110813.105829	WG452048-14	CCV		1		11/08/13 10:58
34	P2.110813.110034	WG452048-15	CCB		1		11/08/13 11:00

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Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	P2.110813.110334	L13110192-04	13J0706-02	40/50	1		11/08/13 11:03
36	P2.110813.110635	L13110199-01	13J1726-01	40/50	1		11/08/13 11:06
37	P2.110813.110839	L13110199-02	13J1726-02	40/50	1		11/08/13 11:08
38	P2.110813.111047	L13110199-03	13J1726-03	40/50	1		11/08/13 11:10
39	P2.110813.111250	L13110199-04	13J1726-04	40/50	1		11/08/13 11:12
40	P2.110813.111453	L13110202-01	13J1716-01	40/50	1		11/08/13 11:14
41	P2.110813.111700	L13110204-01	001	40/50	1		11/08/13 11:17
42	P2.110813.112008	WG452048-16	CCV		1		11/08/13 11:20
43	P2.110813.112213	WG452048-17	CCB		1		11/08/13 11:22
44	P2.110813.112733	WG451658-03	Method/Prep Blank	40/50	1		11/08/13 11:27
45	P2.110813.113034	WG451658-04	Laboratory Control S	40/50	1		11/08/13 11:30
46	P2.110813.113238	WG451658-01	Reference Sample		1	L13101748-04	11/08/13 11:32
47	P2.110813.113538	WG451658-05	Matrix Spike	40/50	1	L13101748-04	11/08/13 11:35
48	P2.110813.113742	WG451658-06	Matrix Spike Duplica	40/50	1	L13101748-04	11/08/13 11:37
49	P2.110813.113947	L13110100-02	GW5 11.5-15.5	40/50	10		11/08/13 11:39
50	P2.110813.114148	L13110100-03	GW3 19-24	40/50	5		11/08/13 11:41
51	P2.110813.114352	WG451808-03	Post Digestion Spike		5	L13110100-03	11/08/13 11:43
52	P2.110813.114555	WG451808-04	Serial Dilution		25	L13110100-03	11/08/13 11:45
53	P2.110813.114754	WG452048-18	CCV		1		11/08/13 11:47
54	P2.110813.114959	WG452048-19	CCB		1		11/08/13 11:49
55	P2.110813.115259	WG451705-03	Method/Prep Blank	40/50	1		11/08/13 11:52
56	P2.110813.115559	WG451705-04	Laboratory Control S	40/50	1		11/08/13 11:55
57	P2.110813.115802	L13110198-01	13J1719-01	40/50	1		11/08/13 11:58
58	P2.110813.120103	WG451705-01	Reference Sample		1	L13110208-02	11/08/13 12:01
59	P2.110813.120408	WG451705-05	Duplicate	40/50	1	L13110208-02	11/08/13 12:04
60	P2.110813.120713	WG451705-06	Matrix Spike	40/50	1	L13110208-02	11/08/13 12:07
61	P2.110813.120922	L13110208-04	009	40/50	1		11/08/13 12:09
62	P2.110813.121229	L13110208-09	DBAS1-BNR009	40/50	1		11/08/13 12:12
63	P2.110813.121534	WG451989-01	Post Digestion Spike		1	L13110208-09	11/08/13 12:15
64	P2.110813.121739	WG451989-02	Serial Dilution		5	L13110208-09	11/08/13 12:17
65	P2.110813.122042	WG452048-20	CCV		1		11/08/13 12:20
66	P2.110813.122247	WG452048-21	CCB		1		11/08/13 12:22
67	P2.110813.122547	L13110208-11	DBAS2-BNR009	40/50	1		11/08/13 12:25
68	P2.110813.122851	L13110208-13	DBAS-BGR	40/50	1		11/08/13 12:28

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Marcia Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	P2.110813.123155	L13110208-15	DBAS-BGR020	40/50	1		11/08/13 12:31
70	P2.110813.123458	L13110208-17	DBR-3	40/50	1		11/08/13 12:34
71	P2.110813.123802	WG451705-02	Reference Sample		1	L13110208-20	11/08/13 12:38
72	P2.110813.124106	WG451705-07	Matrix Spike	40/50	1	L13110208-20	11/08/13 12:41
73	P2.110813.124310	L13110208-22	DUBR-2	40/50	1		11/08/13 12:43
74	P2.110813.124614	L13110208-24	UBAS-BGR	40/50	1		11/08/13 12:46
75	P2.110813.124918	L13110208-26	UBAS-BGR020	40/50	1		11/08/13 12:49
76	P2.110813.125222	WG452048-22	CCV		1		11/08/13 12:52
77	P2.110813.125427	WG452048-23	CCB		1		11/08/13 12:54
78	P2.110813.125727	L13110208-28	USBR-2	40/50	1		11/08/13 12:57
79	P2.110813.130031	L13110208-30	UUBR-1	40/50	1		11/08/13 13:00
80	P2.110813.130335	L13110220-02	012	40/50	1		11/08/13 13:03
81	P2.110813.130640	L13110220-04	DJCSW5	40/50	1		11/08/13 13:06
82	P2.110813.130940	L13110220-06	DMB001	40/50	1		11/08/13 13:09
83	P2.110813.131244	L13110220-08	DUHB-1	40/50	1		11/08/13 13:12
84	P2.110813.131544	L13110220-10	UUHB-1	40/50	1		11/08/13 13:15
85	P2.110813.131844	WG452048-24	CCV		1		11/08/13 13:18
86	P2.110813.132049	WG452048-25	CCB		1		11/08/13 13:20
87	P2.110813.132519	WG452048-26	Low Level Continuing Calibra		1		11/08/13 13:25
88	P2.110813.132820	WG451993-02	Method/Prep Blank	40/50	1		11/08/13 13:28
89	P2.110813.133120	WG451993-03	Laboratory Control S	40/50	1		11/08/13 13:31
90	P2.110813.133324	WG451993-01	Reference Sample		1	L13110368-03	11/08/13 13:33
91	P2.110813.133630	WG451993-04	Matrix Spike	40/50	1	L13110368-03	11/08/13 13:36
92	P2.110813.133842	WG451993-05	Matrix Spike Duplica	40/50	1	L13110368-03	11/08/13 13:38
93	P2.110813.134048	L13110371-01	WELL 8	40/50	5		11/08/13 13:40
94	P2.110813.134252	L13110383-01	WOOD W1	40/50	1		11/08/13 13:42
95	P2.110813.134556	L13110383-02	WOOD W2	40/50	1		11/08/13 13:45
96	P2.110813.134857	WG452043-01	Post Digestion Spike		1	L13110383-02	11/08/13 13:48
97	P2.110813.135101	WG452043-02	Serial Dilution		5	L13110383-02	11/08/13 13:51
98	P2.110813.135401	WG452048-27	CCV		1		11/08/13 13:54
99	P2.110813.135606	WG452048-28	CCB		1		11/08/13 13:56
100	P2.110813.135906	L13110320-01	EWTS-POND 1-1-5NOV2013	40/50	1		11/08/13 13:59
101	P2.110813.140206	L13110320-03	EWTS-POND 1-3TOPNOV20	40/50	1		11/08/13 14:02
102	P2.110813.140506	L13110320-05	EWTS-POND 1-3MIDDLENC	40/50	1		11/08/13 14:05

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Maren Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	P2.110813.140806	L13110320-07	EWTS-POND 1-3BOTTOMN	40/50	1		11/08/13 14:08
104	P2.110813.141009	L13110320-09	EWTS-POND 1-5-5NOV2013	40/50	1		11/08/13 14:10
105	P2.110813.141310	L13110320-11	EWTS-POND 1-7-5NOV2013	40/50	1		11/08/13 14:13
106	P2.110813.141611	L13110337-01	MPL 30-1113-1	40/50	1		11/08/13 14:16
107	P2.110813.141912	L13110337-02	MPL 16-1113-1	40/50	1		11/08/13 14:19
108	P2.110813.142213	L13110337-03	MPL 26-1113-1	40/50	1		11/08/13 14:22
109	P2.110813.142515	WG452048-29	CCV		1		11/08/13 14:25
110	P2.110813.142720	WG452048-30	CCB		1		11/08/13 14:27
111	P2.110813.143020	L13110363-01	FLUME	40/50	1		11/08/13 14:30
112	P2.110813.143326	L13110363-03	201-EFF	40/50	1		11/08/13 14:33
113	P2.110813.143627	L13110363-05	202-EFF	40/50	1		11/08/13 14:36
114	P2.110813.143928	L13110363-07	EMERGENCY BASIN	40/50	1		11/08/13 14:39
115	P2.110813.144229	L13110368-01	POWDP09-131105	40/50	1		11/08/13 14:42
116	P2.110813.144536	L13110368-04	POWMW20-131105	40/50	1		11/08/13 14:45
117	P2.110813.144841	L13110368-05	DUP-01-131105	40/50	1		11/08/13 14:48
118	P2.110813.145307	WG451993-01	Reference Sample		100	L13110368-03	11/08/13 14:53
119	P2.110813.145609	WG451993-04	Matrix Spike	40/50	100	L13110368-03	11/08/13 14:56
120	P2.110813.145911	WG451993-05	Matrix Spike Duplica	40/50	100	L13110368-03	11/08/13 14:59
121	P2.110813.150213	WG452048-31	CCV		1		11/08/13 15:02
122	P2.110813.150418	WG452048-32	CCB		1		11/08/13 15:04
123	P2.110813.150718	L13110368-01	POWDP09-131105	40/50	100		11/08/13 15:07
124	P2.110813.151020	L13110368-04	POWMW20-131105	40/50	100		11/08/13 15:10
125	P2.110813.151322	L13110368-05	DUP-01-131105	40/50	100		11/08/13 15:13
126	P2.110813.151624	WG452048-33	CCV		1		11/08/13 15:16
127	P2.110813.151829	WG452048-34	CCB		1		11/08/13 15:18
128	P2.110813.152129	WG452048-35	Low Level Continuing Calibra		1		11/08/13 15:21
129	P2.110813.152747	L13110371-01	WELL 8	40/50	100		11/08/13 15:27
130	P2.110813.153050	L13110337-01	MPL 30-1113-1	40/50	10		11/08/13 15:30
131	P2.110813.153352	L13110337-02	MPL 16-1113-1	40/50	10		11/08/13 15:33
132	P2.110813.153654	L13110337-03	MPL 26-1113-1	40/50	10		11/08/13 15:36
133	P2.110813.153956	L13110363-01	FLUME	40/50	100		11/08/13 15:39
134	P2.110813.154258	L13110363-03	201-EFF	40/50	100		11/08/13 15:42
135	P2.110813.154600	L13110363-05	202-EFF	40/50	100		11/08/13 15:46
136	P2.110813.154902	L13110363-07	EMERGENCY BASIN	40/50	100		11/08/13 15:49

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Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	P2.110813.155204	WG452048-36	CCV		1		11/08/13 15:52
138	P2.110813.155409	WG452048-37	CCB		1		11/08/13 15:54
139	P2.110813.155709	WG451680-03	Method/Prep Blank	40/50	1		11/08/13 15:57
140	P2.110813.160009	WG451680-04	Laboratory Control S	40/50	1		11/08/13 16:00
141	P2.110813.160213	WG451680-01	Reference Sample		1	L13110208-29	11/08/13 16:02
142	P2.110813.160517	WG451680-05	Duplicate	40/50	1	L13110208-29	11/08/13 16:05
143	P2.110813.160822	WG451680-06	Matrix Spike	40/50	1	L13110208-29	11/08/13 16:08
144	P2.110813.161027	L13110208-31	UUBR-1	40/50	1		11/08/13 16:10
145	P2.110813.161331	L13110210-03	DBR	40/50	1		11/08/13 16:13
146	P2.110813.161632	L13110210-05	UBR	40/50	1		11/08/13 16:16
147	P2.110813.161933	WG451899-01	Post Digestion Spike		1	L13110210-05	11/08/13 16:19
148	P2.110813.162138	WG451899-02	Serial Dilution		5	L13110210-05	11/08/13 16:21
149	P2.110813.162438	WG452048-38	CCV		1		11/08/13 16:24
150	P2.110813.162643	WG452048-39	CCB		1		11/08/13 16:26
151	P2.110813.162943	L13110211-02	204	40/50	1		11/08/13 16:29
152	P2.110813.163248	L13110213-02	001	40/50	1		11/08/13 16:32
153	P2.110813.163552	L13110213-04	DBR	40/50	1		11/08/13 16:35
154	P2.110813.163856	L13110213-06	UBR	40/50	1		11/08/13 16:38
155	P2.110813.164157	L13110213-08	DBAS-BGR001	40/50	1		11/08/13 16:41
156	P2.110813.164458	WG451680-02	Reference Sample		1	L13110213-10	11/08/13 16:44
157	P2.110813.164759	WG451680-07	Matrix Spike	40/50	1	L13110213-10	11/08/13 16:47
158	P2.110813.165004	L13110214-03	002	40/50	1		11/08/13 16:50
159	P2.110813.165308	L13110214-05	008	40/50	1		11/08/13 16:53
160	P2.110813.165613	WG452048-40	CCV		1		11/08/13 16:56
161	P2.110813.165818	WG452048-41	CCB		1		11/08/13 16:58
162	P2.110813.170118	L13110214-07	DUHR-1	40/50	1		11/08/13 17:01
163	P2.110813.170422	L13110215-02	002	40/50	1		11/08/13 17:04
164	P2.110813.170728	L13110215-08	DHAR-2	40/50	1		11/08/13 17:07
165	P2.110813.171033	L13110215-10	DHOR-2	40/50	1		11/08/13 17:10
166	P2.110813.171337	L13110215-13	UHOR-1	40/50	1		11/08/13 17:13
167	P2.110813.171641	L13110216-02	002	40/50	1		11/08/13 17:16
168	P2.110813.171946	WG452048-42	CCV		1		11/08/13 17:19
169	P2.110813.172151	WG452048-43	CCB		1		11/08/13 17:21
170	P2.110813.172451	WG451845-03	Method/Prep Blank	40/50	1		11/08/13 17:24

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	P2.110813.172752	WG451845-04	Laboratory Control S	40/50	1		11/08/13 17:27
172	P2.110813.172957	WG451845-01	Reference Sample		1	L13110231-01	11/08/13 17:29
173	P2.110813.173302	WG451845-05	Duplicate	40/50	1	L13110231-01	11/08/13 17:33
174	P2.110813.173607	WG451845-06	Matrix Spike	40/50	1	L13110231-01	11/08/13 17:36
175	P2.110813.173813	L13110231-03	012	40/50	1		11/08/13 17:38
176	P2.110813.174118	L13110231-05	DMC1	40/50	1		11/08/13 17:41
177	P2.110813.174423	L13110231-07	UMC	40/50	1		11/08/13 17:44
178	P2.110813.174754	WG452061-01	Post Digestion Spike		1	L13110231-07	11/08/13 17:47
179	P2.110813.174959	WG452061-02	Serial Dilution		5	L13110231-07	11/08/13 17:49
180	P2.110813.175300	WG452048-44	CCV		1		11/08/13 17:53
181	P2.110813.175505	WG452048-45	CCB		1		11/08/13 17:55
182	P2.110813.175805	L13110231-09	UMC2	40/50	1		11/08/13 17:58
183	P2.110813.180110	L13110256-01	FC-1	40/50	1		11/08/13 18:01
184	P2.110813.180415	L13110256-03	FC-2	40/50	1		11/08/13 18:04
185	P2.110813.180720	L13110256-05	FC-3	40/50	1		11/08/13 18:07
186	P2.110813.181025	L13110256-07	FC-4	40/50	1		11/08/13 18:10
187	P2.110813.181330	WG451845-02	Reference Sample		1	L13110256-09	11/08/13 18:13
188	P2.110813.181635	WG451845-07	Matrix Spike	40/50	1	L13110256-09	11/08/13 18:16
189	P2.110813.181841	L13110257-01	FC-147	40/50	1		11/08/13 18:18
190	P2.110813.182143	L13110257-03	FC-148	40/50	1		11/08/13 18:21
191	P2.110813.182449	WG452048-46	CCV		1		11/08/13 18:24
192	P2.110813.182654	WG452048-47	CCB		1		11/08/13 18:26
193	P2.110813.182956	L13110259-01	FC-211	40/50	1		11/08/13 18:29
194	P2.110813.183333	L13110259-03	FC-212	40/50	1		11/08/13 18:33
195	P2.110813.183638	L13110259-05	FC-213	40/50	1		11/08/13 18:36
196	P2.110813.183943	L13110259-07	FC-214	40/50	1		11/08/13 18:39
197	P2.110813.184244	L13110263-01	LE-7	40/50	1		11/08/13 18:42
198	P2.110813.184546	L13110263-03	LE-8	40/50	1		11/08/13 18:45
199	P2.110813.184850	L13110263-06	LE-10	40/50	1		11/08/13 18:48
200	P2.110813.185154	WG452048-48	CCV		1		11/08/13 18:51
201	P2.110813.185359	WG452048-49	CCB		1		11/08/13 18:53
202	P2.110813.185701	WG451856-03	Method/Prep Blank	40/50	1		11/08/13 18:57
203	P2.110813.190002	WG451856-04	Laboratory Control S	40/50	1		11/08/13 19:00
204	P2.110813.190207	WG451856-01	REFERANCE		1	L13110260-07	11/08/13 19:02

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Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
205	P2.110813.190509	WG451856-05	Duplicate	40/50	1	L13110260-07	11/08/13 19:05
206	P2.110813.190811	WG451856-06	Matrix Spike	40/50	1	L13110260-07	11/08/13 19:08
207	P2.110813.191017	L13110260-10	FC-175	40/50	1		11/08/13 19:10
208	P2.110813.191324	L13110260-12	FC-176	40/50	1		11/08/13 19:13
209	P2.110813.191630	L13110260-14	FC-177	40/50	1		11/08/13 19:16
210	P2.110813.191936	WG452062-01	Post Digestion Spike		1	L13110260-14	11/08/13 19:19
211	P2.110813.192143	WG452062-02	Serial Dilution		5	L13110260-14	11/08/13 19:21
212	P2.110813.192449	WG452048-50	CCV		1		11/08/13 19:24
213	P2.110813.192654	WG452048-51	CCB		1		11/08/13 19:26
214	P2.110813.192956	L13110260-16	FC-179	40/50	1		11/08/13 19:29
215	P2.110813.193302	L13110260-19	FC-181	40/50	1		11/08/13 19:33
216	P2.110813.193605	L13110260-22	FC-183	40/50	1		11/08/13 19:36
217	P2.110813.193908	L13110260-25	FC-185	40/50	1		11/08/13 19:39
218	P2.110813.194219	L13110260-29	FC-190	40/50	1		11/08/13 19:42
219	P2.110813.194521	L13110260-31	FC-190-ULC	40/50	1		11/08/13 19:45
220	P2.110813.194823	WG451856-02	Reference Sample		1	L13110264-01	11/08/13 19:48
221	P2.110813.195125	WG451856-07	Matrix Spike	40/50	1	L13110264-01	11/08/13 19:51
222	P2.110813.195330	L13110264-03	LE-8	40/50	1		11/08/13 19:53
223	P2.110813.195635	WG452048-52	CCV		1		11/08/13 19:56
224	P2.110813.195841	WG452048-53	CCB		1		11/08/13 19:58
225	P2.110813.200143	L13110264-06	LE-10	40/50	1		11/08/13 20:01
226	P2.110813.200448	L13110265-01	FC-87	40/50	1		11/08/13 20:04
227	P2.110813.200750	L13110266-01	FC-16	40/50	1		11/08/13 20:07
228	P2.110813.201055	L13110266-03	FC-17	40/50	1		11/08/13 20:10
229	P2.110813.201401	L13110271-01	FC-40	40/50	1		11/08/13 20:14
230	P2.110813.201706	L13110272-01	FC-61	40/50	1		11/08/13 20:17
231	P2.110813.202011	L13110274-01	LE-1	40/50	1		11/08/13 20:20
232	P2.110813.202316	WG452048-54	CCV		1		11/08/13 20:23
233	P2.110813.202521	WG452048-55	CCB		1		11/08/13 20:25
234	P2.110813.202823	WG451846-03	Method/Prep Blank	40/50	1		11/08/13 20:28
235	P2.110813.203124	WG451846-04	Laboratory Control S	40/50	1		11/08/13 20:31
236	P2.110813.203329	WG451846-01	Reference Sample		1	L13110256-02	11/08/13 20:33
237	P2.110813.203634	WG451846-05	Duplicate	40/50	1	L13110256-02	11/08/13 20:36
238	P2.110813.203939	WG451846-06	Matrix Spike	40/50	1	L13110256-02	11/08/13 20:39

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
239	P2.110813.204145	L13110256-04	FC-2	40/50	1		11/08/13 20:41
240	P2.110813.204451	L13110256-06	FC-3	40/50	1		11/08/13 20:44
241	P2.110813.204756	L13110256-08	FC-4	40/50	1		11/08/13 20:47
242	P2.110813.205101	WG452064-01	Post Digestion Spike		1	L13110256-08	11/08/13 20:51
243	P2.110813.205307	WG452064-02	Serial Dilution		5	L13110256-08	11/08/13 20:53
244	P2.110813.205608	WG452048-56	CCV		1		11/08/13 20:56
245	P2.110813.205814	WG452048-57	CCB		1		11/08/13 20:58
246	P2.110813.210116	L13110256-10	FC-5	40/50	1		11/08/13 21:01
247	P2.110813.210421	L13110257-02	FC-147	40/50	1		11/08/13 21:04
248	P2.110813.210726	L13110257-04	FC-148	40/50	1		11/08/13 21:07
249	P2.110813.211032	WG451846-02	Reference Sample		1	L13110259-02	11/08/13 21:10
250	P2.110813.211337	WG451846-07	Matrix Spike	40/50	1	L13110259-02	11/08/13 21:13
251	P2.110813.211543	L13110259-04	FC-212	40/50	1		11/08/13 21:15
252	P2.110813.211848	L13110259-06	FC-213	40/50	1		11/08/13 21:18
253	P2.110813.212154	L13110259-08	FC-214	40/50	1		11/08/13 21:21
254	P2.110813.212459	L13110263-02	LE-7	40/50	1		11/08/13 21:24
255	P2.110813.212804	WG452048-58	CCV		1		11/08/13 21:28
256	P2.110813.213010	WG452048-59	CCB		1		11/08/13 21:30
257	P2.110813.213312	L13110263-04	LE-8	40/50	1		11/08/13 21:33
258	P2.110813.213617	L13110263-07	LE-10	40/50	1		11/08/13 21:36
259	P2.110813.213922	L13110264-02	LE-7	40/50	1		11/08/13 21:39
260	P2.110813.214227	L13110264-04	LE-8	40/50	1		11/08/13 21:42
261	P2.110813.214532	L13110264-07	LE-10	40/50	1		11/08/13 21:45
262	P2.110813.214837	L13110266-02	FC-16	40/50	1		11/08/13 21:48
263	P2.110813.215143	L13110266-04	FC-17	40/50	1		11/08/13 21:51
264	P2.110813.215450	WG452048-60	CCV		1		11/08/13 21:54
265	P2.110813.215656	WG452048-61	CCB		1		11/08/13 21:56
266	P2.110813.215958	L13090029-21	PE2	40/50	1		11/08/13 21:59
267	P2.110813.220300	L13090029-30	PE2	40/50	1		11/08/13 22:03
268	P2.110813.220602	BLK	BLK		1		11/08/13 22:06
269	P2.110813.220904	BLK	BLK		1		11/08/13 22:09
270	P2.110813.221206	WG452048-62	CCV		1		11/08/13 22:12
271	P2.110813.221412	WG452048-63	CCB		1		11/08/13 22:14
272	P2.110813.221714	BLK	BLK		1		11/08/13 22:17

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 110813H3R.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010/200.7 SOP: ME600E Rev: 14
Maintenance Log ID: 48105

Calibration Std: STD61062 ICV Std: STD61061 Post Spike: STD61080
ICSA: STD60853 ICSAB: STD61198 Int. Std: RGT17684
CCV: STD61200 LLCCV: Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
273	P2.110813.222016	BLK	BLK		1		11/08/13 22:20
274	P2.110813.222318	BLK	BLK		1		11/08/13 22:23
275	P2.110813.222620	BLK	BLK		1		11/08/13 22:26
276	P2.110813.222922	BLK	BLK		1		11/08/13 22:29
277	P2.110813.223224	BLK	BLK		1		11/08/13 22:32
278	P2.110813.223526	BLK	BLK		1		11/08/13 22:35
279	P2.110813.223828	BLK	BLK		1		11/08/13 22:38
280	P2.110813.224130	BLK	BLK		1		11/08/13 22:41
281	P2.110813.224432	BLK	BLK		1		11/08/13 22:44

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Microbac Laboratories Inc.

Data Checklist

Date: 08-NOV-2013
Analyst: KHR
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: PE-ICP2
Curve Workgroup: 452048
Runlog ID: 56969
Analytical Workgroups: 451897, 451808, 451989, 452043, 451899, 452061, 452062, 452064

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	0179, 0192, 0100, 0198, 0208, 0320,
	0337, 0363, 0368, 0371, 0383
Client Forms	X
Level X	0100
Level 3	
Level 4	0320, 0337, 0368, 0371
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	SLP
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
11-NOV-2013

Secondary Reviewer:
11-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-11-2013 13:06:24

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B

AAB#: WG452043

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	2.9	180		11/08/13	3.2	180	
MPL 30-1113-1	01	11/05/13					11/08/2013	2.9	180		11/08/13	3.2	180	
MPL 16-1113-1	02	11/05/13					11/08/2013	2.9	180		11/08/13	3.1	180	
MPL 16-1113-1	02	11/05/13					11/08/2013	2.9	180		11/08/13	3.1	180	
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	180		11/08/13	3	180	
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	180		11/08/13	3.1	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3193736
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: P2.110813.132820
Prep Date: 11/08/13 08:44
Analyzed Date: 11/08/13 13:28
Analyst: KHR

Work Group: WG452043
Blank Sample ID: WG451993-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451993-03	P2.110813.133120	11/08/13 13:31	01
MPL 30-1113-1	L13110337-01	P2.110813.141611	11/08/13 14:16	01
MPL 16-1113-1	L13110337-02	P2.110813.141912	11/08/13 14:19	01
MPL 26-1113-1	L13110337-03	P2.110813.142213	11/08/13 14:22	01
MPL 30-1113-1	L13110337-01	P2.110813.153050	11/08/13 15:30	DL01
MPL 16-1113-1	L13110337-02	P2.110813.153352	11/08/13 15:33	DL01
MPL 26-1113-1	L13110337-03	P2.110813.153654	11/08/13 15:36	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3193737
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 08:44 Sample ID: WG451993-02
Instrument ID: PE-ICP2 Run Date: 11/08/13 13:28 Prep Method: 3015
File ID: P2.110813.132820 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG452043 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-08-NOV-13

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Magnesium, Total	0.250	0.500	0.250	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	0.00536	1	*
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: 3193738
11-NOV-2013 09:03

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/08/2013 Sample ID: WG451993-03
Instrument ID: PE-ICP2 Run Time: 13:31 Prep Method: 3015
File ID: P2.110813.133120 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG452043 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD61081 Cal ID: PE-ICP-08-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Total	0.0313	0.0291	93.2	80 - 120	
Calcium, Total	6.25	6.14	98.2	80 - 120	
Magnesium, Total	6.25	6.17	98.7	80 - 120	
Potassium, Total	31.3	29.8	95.2	80 - 120	
Sodium, Total	31.3	29.5	94.4	80 - 120	
Tin, Total	0.625	0.634	101	80 - 120	
Vanadium, Total	0.625	0.609	97.4	80 - 120	
Zinc, Total	0.625	0.613	98.0	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3193739
Report generated: 11/11/2013 09:03

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

Loginnum: L13110337 Cal ID: PE-ICP2- Worknum: WG452043
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG451993-01 File ID: P2.110813.133324 Dil: 1 Matrix: WATER
Sample ID: WG451993-04 MS File ID: P2.110813.133630 Dil: 1 Units: mg/L
Sample ID: WG451993-05 MSD File ID: P2.110813.133842 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Dissolved	0.00105	0.0313	0.0284	87.6	0.0313	0.0282	86.9	0.752	80 - 120	20	
Calcium, Dissolved	402	6.25	290	-1780	6.25	210	-3060	32.0	80 - 120	20	*#
Magnesium, Dissolved	464	6.25	248	-3450	6.25	143	-5140	54.0	80 - 120	20	*#
Potassium, Dissolved	28.3	31.3	46.9	59.6	31.3	40.7	39.9	14.1	80 - 120	20	*
Tin, Dissolved	ND	0.625	0.534	85.4	0.625	0.559	89.4	4.64	80 - 120	20	
Vanadium	0.0193	0.625	0.614	95.1	0.625	0.604	93.6	1.56	80 - 120	20	
Zinc	ND	0.625	0.566	90.6	0.625	0.578	92.5	2.10	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: 3193820
Report generated 11/11/2013 09:50

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

Loginnum: L13110337 Cal ID: PE-ICP2 - Worknum: WG452043
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG451993-01 File ID: P2.110813.145307 Dil: 100 Matrix: WATER
Sample ID: WG451993-04 MS File ID: P2.110813.145609 Dil: 100 Units: mg/L
Sample ID: WG451993-05 MSD File ID: P2.110813.145911 Dil: 100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Sodium, Dissolved	1730	31.3	959	-2450	31.3	648	-3450	38.7	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: 3193820
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13110337 **Worknum:** WG452043
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG452043-02 **File ID:** P2.110813.135101 **Dil:** 5 **Units:** mg/L
Sample: L13110383-02 **File ID:** P2.110813.134556 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Beryllium	ND	U	ND	U		
Calcium	43.2		43.6		0.81	
Magnesium	15.7		15.8		0.87	
Potassium	1.34	X	ND	U		
Sodium	4.62	X	4.86	X	5.10	
Tin	ND	U	ND	U		
Vanadium	0.00588	F	0.0278	F	373.00	
Zinc	ND	U	ND	U		

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

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 3193734
11/11/2013 09:03

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13110337 **Worknum:** WG452043
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG452043-01 **File ID:** P2.110813.134857 **Dil:** 1 **Units:** mg/L
Sample ID: L13110383-02 **File ID:** P2.110813.134556 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0241		0	U	.025	96.3	75 - 125	
CALCIUM	45.3		43.2		5	127.8	75 - 125	N
MAGNESIUM	19.1		15.7		5	100.2	75 - 125	
POTASSIUM	25.7		1.34		25	97.9	75 - 125	
SODIUM	28.6		4.62		25	97.9	75 - 125	
TIN	0.521		0	U	.5	104.2	75 - 125	
VANADIUM	0.497		0.00588	F	.5	98.3	75 - 125	
ZINC	0.502		0	U	.5	100.4	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: 3193735
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L13110337**	Workgroup (AAB#):	**WG452043**
Analytical Method:	**6010B**	Instrument ID:	**PE-ICP2**
ICAL Worknum:	**WG452048**	Initial Calibration Date:	**08-NOV-2013 09:34**

	WG452048-01		WG452048-02		WG452048-03		WG452048-04		WG452048-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-1420	.0005	223	.001	476	.05	27600	.1	56200	.999966	
CALCIUM	0	-74.5	NA	NA	.2	27.5	10	1590	20	3250	.999941	
MAGNESIUM	0	19.0	.1	83.8	.2	168	10	9850	20	19500	.999991	
POTASSIUM	0	61.1	.5	515	1	1050	50	63500	100	125000	1	
SODIUM	0	780	.5	3800	1	7890	50	474000	100	941000	1	
TIN	0	43.7	.01	38.8	.02	83.6	1	5200	1	10300	.999992	
VANADIUM	0	7420	.01	1660	.02	2970	1	158000	2	323000	.999947	
ZINC	0	39.0	.01	198	.02	387	1	23700	2	47400	1	

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: 3193745
Report generated: 11-NOV-2013 09:03

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13110337
Instrument ID: PE-ICP2
File ID: P2.110813.093857
Workgroup (AAB#): WG452043
Matrix: WATER

Run Date: 11/08/2013
Run Time: 09:38
Analyst: KHR
Cal ID: PE-ICP2 - 08-NOV-13

Sample ID: WG452048-07
Method: 6010B
Units: mg/L

Analytes	MDL	RDL	Concentration	Qualifier
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SODIUM	.2	.4	.2	U
TIN	.2	.4	.2	U
VANADIUM	.004	.008	.00501	F
ZINC	.008	.016	.008	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: 3193747
Report generated 11/11/2013 09:03

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-11
Instrument ID: PE-ICP2
Run Time: 09:48
Method: 6010B
File ID: P2.110813.094806
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-25
Instrument ID: PE-ICP2
Run Time: 13:20
Method: 6010B
File ID: P2.110813.132049
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00449	F
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-28
Instrument ID: PE-ICP2
Run Time: 13:56
Method: 6010B
File ID: P2.110813.135606
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.746	*
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-30
Instrument ID: PE-ICP2
Run Time: 14:27
Method: 6010B
File ID: P2.110813.142720
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00503	F
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-32
Instrument ID: PE-ICP2
Run Time: 15:04
Method: 6010B
File ID: P2.110813.150418
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.254	F
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00407	F
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-34
Instrument ID: PE-ICP2
Run Time: 15:18
Method: 6010B
File ID: P2.110813.151829
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00400	U
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-37
Instrument ID: PE-ICP2
Run Time: 15:54
Method: 6010B
File ID: P2.110813.155409
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Sodium	0.200	0.400	0.200	U
Tin	0.200	0.400	0.200	U
Vanadium	0.00400	0.00800	0.00591	F
Zinc	0.00800	0.0160	0.00800	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: 3193750
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L13110337 Run Date: 11/08/2013 Sample ID: WG452048-06
Instrument ID: PE-ICP2 Run Time: 09:36 Method: 6010B
File ID: P2.110813.093654 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG452043 Cal ID: PE-ICP - 08-NOV-13
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0502	100	90 - 110	
Calcium		10	9.98	99.8	90 - 110	
Magnesium		10	9.78	97.8	90 - 110	
Potassium		50	49.6	99.1	90 - 110	
Sodium		50	49.3	98.5	90 - 110	
Tin		1	1.02	102	90 - 110	
Vanadium		1	0.947	94.7	90 - 110	
Zinc		1	0.993	99.3	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 3193746
Report generated 11/11/2013 09:03

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-10
Instrument ID: PE-ICP2
Run Time: 09:46
Method: 6010B
File ID: P2.110813.094601
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0498	mg/L	99.6	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	49.3	mg/L	98.5	90 - 110		
Sodium		50.0	48.8	mg/L	97.7	90 - 110		
Tin		1.00	1.00	mg/L	100	90 - 110		
Vanadium		1.00	0.991	mg/L	99.1	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-24
Instrument ID: PE-ICP2
Run Time: 13:18
Method: 6010B
File ID: P2.110813.131844
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0490	mg/L	98.1	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	10.0	mg/L	100	90 - 110		
Potassium		50.0	50.7	mg/L	101	90 - 110		
Sodium		50.0	48.5	mg/L	96.9	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.00	mg/L	100	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-27
Instrument ID: PE-ICP2
Run Time: 13:54
Method: 6010B
File ID: P2.110813.135401
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0491	mg/L	98.2	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	50.7	mg/L	101	90 - 110		
Sodium		50.0	49.7	mg/L	99.4	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-29
Instrument ID: PE-ICP2
Run Time: 14:25
Method: 6010B
File ID: P2.110813.142515
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0483	mg/L	96.5	90 - 110		
Calcium		10.0	10.0	mg/L	100	90 - 110		
Magnesium		10.0	9.95	mg/L	99.5	90 - 110		
Potassium		50.0	50.8	mg/L	102	90 - 110		
Sodium		50.0	47.9	mg/L	95.8	90 - 110		
Tin		1.00	0.995	mg/L	99.5	90 - 110		
Vanadium		1.00	0.992	mg/L	99.2	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-31
Instrument ID: PE-ICP2
Run Time: 15:02
Method: 6010B
File ID: P2.110813.150213
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.9	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	51.7	mg/L	103	90 - 110		
Sodium		50.0	50.9	mg/L	102	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.03	mg/L	103	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-33
Instrument ID: PE-ICP2
Run Time: 15:16
Method: 6010B
File ID: P2.110813.151624
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0481	mg/L	96.2	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	9.92	mg/L	99.2	90 - 110		
Potassium		50.0	50.4	mg/L	101	90 - 110		
Sodium		50.0	48.9	mg/L	97.9	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	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452048-36
Instrument ID: PE-ICP2
Run Time: 15:52
Method: 6010B
File ID: P2.110813.155204
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG452043
Cal ID: PE-ICP - 08-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0484	mg/L	96.8	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	51.6	mg/L	103	90 - 110		
Sodium		50.0	48.8	mg/L	97.6	90 - 110		
Tin		1.00	1.02	mg/L	102	90 - 110		
Vanadium		1.00	1.00	mg/L	100	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193749
Report generated 11/11/2013 09:50

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L13110337 **Workgroup (AAB#):** WG452043
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG452048-08 **File ID:** P2.110813.094157 **Units:** mg/L
Sol. AB : WG452048-09 **File ID:** P2.110813.094400 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	-0.0000200	NS	0.250	0.242	96.8	
Calcium	250	264	106	250	268	107	
Magnesium	250	260	104	250	252	101	
Potassium	NS	-0.0426	NS	5.00	4.69	93.8	
Sodium	NS	0.0188	NS	5.00	4.87	97.4	
Tin	NS	-0.0608	NS	NS	-0.0630	NS	
Vanadium	NS	-0.00228	NS	0.250	0.234	93.6	
Zinc	NS	-0.00356	NS	0.500	0.449	89.8	

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: 3193748
Report generated 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0.0681	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	0.206	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	24.1	0
CALCIUM	227.55	0	0	0	0	0
CHROMIUM	267.72	0	0	-0.490	1.50	0
COBALT	228.62	0	0	0	5.90	-0.192
COPPER	327.39	0.0717	0	0	0	0
IRON	239.56	-0.460	-0.119	-0.241	0.430	0.0546
LEAD	220.35	0	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0.130	0	0	0	0
MOLYBDENUM	202.03	0	69.0	5.34	-1.00	-0.750
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0.200	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	-2.05	0	0.0990	0	0.360
ZINC	206.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	-0.158	0	0	-0.0238
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	10.0	0	5.00	0
BARIUM	233.53	0	0	0	0.337	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	0	0
CHROMIUM	267.72	-0.0220	0	0	-0.200	0
COBALT	228.62	0	180	-3.64	0	0
COPPER	327.39	0	0	0	0	0
IRON	239.56	0.215	-24.0	0.000840	0.0262	0.0722
LEAD	220.35	0	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.104	0	0	0
MANGANESE	257.61	-0.100	0	0	0	0
MOLYBDENUM	202.03	-0.376	10.6	0.0420	-1.80	0.170
NICKEL	231.60	-0.00974	-831	-0.0400	0.129	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	3.00	0	2.21	0
VANADIUM	290.88	0	0	0.0800	0	-0.567
ZINC	206.20	0	0	0	0	-0.0400

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	0	0
CHROMIUM	267.72	-0.0400	0	0	0	0
COBALT	228.62	0.280	2.77	0	0	0
COPPER	327.39	0	0	0	0	0
IRON	239.56	-0.0800	0	0	0	0.540
LEAD	220.35	0	0	0	0	0
LITHIUM	670.78	0.154	0	0	0	0
MAGNESIUM	279.08	0	0.0200	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	-0.0774	0	0	0	-18.0
NICKEL	231.60	0.150	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.0700	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	1.00	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	-1.05	0	0	0	0
VANADIUM	290.88	-0.440	0	0	0	0
ZINC	206.20	-0.0613	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	0	0	0	-0.166
ANTIMONY	206.84	0	0	0	-0.0500	-0.0100
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	0	0
CHROMIUM	267.72	-0.110	0	0	0	0.0550
COBALT	228.62	0	0	0	1.05	0.462
COPPER	327.39	0	0	0	0	1.00
IRON	239.56	-0.0445	-0.0490	0	0	0.0327
LEAD	220.35	0	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	-0.209	0	0	0.600
MOLYBDENUM	202.03	-0.197	0	0	0	-0.500
NICKEL	231.60	0	0	0	0	-0.190
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0.400	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	-0.200	-0.480	0	0	-0.224
ZINC	206.20	-0.0553	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
ALUMINUM	396.15	0	0.000612	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	-0.740	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	0	0.0223
CHROMIUM	267.72	8.46	0	0	0	0
COBALT	228.62	0.730	-0.250	0	0	0
COPPER	327.39	0	0	0	0	0
IRON	239.56	-0.0366	-0.210	0	0	0
LEAD	220.35	0	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0.300	0	0	0
MOLYBDENUM	202.03	-1.46	0	11.1	0	0
NICKEL	231.60	-0.745	-0.376	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	-0.220	0	0	0
VANADIUM	290.88	-0.920	-0.100	0	0	0
ZINC	206.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L13110337 **Date:** 12/29/2012
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	-0.0270	0	0
ANTIMONY	206.84	0	0	0	-0.300
ARSENIC	188.98	0	0	0.200	0
BARIUM	233.53	0	0	0.0400	0
BERYLLIUM	234.86	0	0	0	0
BORON	249.68	0	0	0	0
CADMIUM	228.80	0	0	0	0
CALCIUM	227.55	-0.150	0	0	0
CHROMIUM	267.72	0.297	0	0	-8.16
COBALT	228.62	0	1.00	0	0
COPPER	327.39	0	0	0	-0.200
IRON	239.56	0	0	-0.00351	0.000100
LEAD	220.35	0	0	0	-0.100
LITHIUM	670.78	0	0	0	0
MAGNESIUM	279.08	0	0	0.0260	0
MANGANESE	257.61	0	1.00	0	0
MOLYBDENUM	202.03	0	-0.120	0.178	0
NICKEL	231.60	0	0	0	-0.200
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	0	0	0	0
SILICON	251.61	0	0	0	0
SILVER	328.07	0	0	0	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	0	0	0	0
TIN	189.93	0	0	0	0
TITANIUM	334.94	0	-12.0	0	0
VANADIUM	290.88	0	-2.76	0	-0.100
ZINC	206.20	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 3193744
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L13110337 **Date:** 08/14/2013
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	450.0
Antimony	10.00	45.0
Arsenic	10.00	9.0
Barium	10.00	9.0
Beryllium	10.00	4.5
Boron	10.00	45.0
Cadmium	10.00	4.5
Calcium	10.00	450.0
Chromium	10.00	45.0
Cobalt	10.00	45.0
Copper	10.00	45.0
Iron	10.00	450.0
Lead	10.00	90.0
Lithium	10.00	0.9
Magnesium	10.00	450.0
Manganese	10.00	27.0
Molybdenum	10.00	45.0
Nickel	10.00	45.0
Potassium	10.00	80.0
Selenium	10.00	45.0
Silicon	10.00	36.0
Silver	10.00	4.5
Sodium	10.00	180.0
Strontium	10.00	2.7
Thallium	10.00	45.0
Tin	10.00	45.0
Titanium	10.00	18.0
Vanadium	10.00	45.0
Zinc	10.00	45.0

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 3193742
Report generated: 11/11/2013 09:03

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L13110337 **Date:** 09/20/2013
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Phosphorus	10.00	180.0

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 3193742
Report generated: 11/11/2013 09:03

2.1.1.3 Raw Data

Reprocessing Begun
Logged In Analyst: peicp2 Technique: ICP Continuous

Results Data Set (original): 110813H3
Results Library (original): C:\pe\peicp2\Results\results1.mdb
Results Data Set (reprocessed): 110813H3R
Results Library (reprocessed): C:\pe\peicp2\Results\results1.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: S0 Date Collected: 11/8/2013 9:23:43 AM
Analyst: Data Type: Reprocessed on 11/8/2013 9:58:31 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: S0

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	2231379.3	17609.24	0.79%		
YRADIAL	151596.8	2684.30	1.77%		
Ga 417.206	775429.0	16146.91	2.08%		
GaRADIAL	40460.5	1555.13	3.84%		
Ag 328.068†	-354.2	141.32	39.89%	[0.00]	mg/L
Al 396.153†	3.7	7.27	194.49%	[0.00]	mg/L
As 188.979†	-6.2	5.30	85.63%	[0.00]	mg/L
Ba 233.527†	-136.1	17.45	12.82%	[0.00]	mg/L
Be 234.861†	-1420.6	26.21	1.84%	[0.00]	mg/L
B 249.677†	288.9	36.52	12.64%	[0.00]	mg/L
Ca 227.546†	-74.5	1.08	1.45%	[0.00]	mg/L
Cd 228.802†	34.0	2.80	8.24%	[0.00]	mg/L
Co 228.616†	-4.5	6.11	134.84%	[0.00]	mg/L
Cr 267.716†	146.7	11.82	8.05%	[0.00]	mg/L
Cu 327.393†	-788.9	94.53	11.98%	[0.00]	mg/L
Fe 239.562†	-5.7	3.34	58.53%	[0.00]	mg/L
Mg 279.077†	19.0	6.39	33.69%	[0.00]	mg/L
Mn 257.610†	346.7	15.00	4.33%	[0.00]	mg/L
Mo 202.031†	58.3	4.39	7.53%	[0.00]	mg/L
Ni 231.604†	-171.1	7.71	4.51%	[0.00]	mg/L
Pb 220.353†	-62.8	1.66	2.65%	[0.00]	mg/L
Sb 206.836†	10.0	5.92	59.48%	[0.00]	mg/L
Se 196.026†	19.0	4.43	23.39%	[0.00]	mg/L
Si 251.611†	668.8	26.25	3.93%	[0.00]	mg/L
Sn 189.927†	43.7	4.82	11.04%	[0.00]	mg/L
Ti 334.940†	906.9	106.44	11.74%	[0.00]	mg/L
Tl 190.801†	-58.5	2.52	4.31%	[0.00]	mg/L
V 290.880†	7415.4	284.41	3.84%	[0.00]	mg/L
Zn 206.200†	39.0	3.05	7.81%	[0.00]	mg/L
K 766.490†	61.1	24.14	39.49%	[0.00]	mg/L
Na 589.592†	780.4	193.54	24.80%	[0.00]	mg/L
Sr 407.771†	-342.4	42.50	12.41%	[0.00]	mg/L
Li 670.784†	64.7	45.30	70.03%	[0.00]	mg/L
P 214.914†	59.4	10.43	17.58%	[0.00]	mg/L

Sequence No.: 2 Autosampler Location: 2
Sample ID: S1 Date Collected: 11/8/2013 9:26:43 AM
Analyst: Data Type: Reprocessed on 11/8/2013 9:58:33 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: S1

Approved: November 11, 2013

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: S1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2203665.6	14036.03	0.64%		
YRADIAL	146977.0	5987.27	4.07%		
Ga 417.206	784985.4	2707.32	0.34%		
GaRADIAL	40993.4	932.38	2.27%		
Ag 328.068†	740.2	181.39	24.51%	[0.0032]	mg/L
Al 396.153†	216.8	8.87	4.09%	[0.08]	mg/L
Ba 233.527†	568.4	4.73	0.83%	[0.008]	mg/L
Be 234.861†	222.9	5.78	2.60%	[0.0004]	mg/L
Cd 228.802†	10.6	3.92	37.10%	[0.0004]	mg/L
Co 228.616†	26.8	1.54	5.73%	[0.0016]	mg/L
Cr 267.716†	377.7	14.95	3.96%	[0.004]	mg/L
Cu 327.393†	689.8	34.76	5.04%	[0.004]	mg/L
Fe 239.562†	87.1	4.00	4.59%	[0.032]	mg/L
Mg 279.077†	83.8	10.67	12.73%	[0.08]	mg/L
Mn 257.610†	2188.2	38.38	1.75%	[0.004]	mg/L
Mo 202.031†	116.4	2.06	1.77%	[0.008]	mg/L
Ni 231.604†	106.7	4.22	3.95%	[0.004]	mg/L
Pb 220.353†	18.3	5.47	29.96%	[0.004]	mg/L
Sb 206.836†	14.9	1.55	10.36%	[0.0096]	mg/L
Si 251.611†	1148.6	31.14	2.71%	[0.04]	mg/L
Sn 189.927†	38.8	4.23	10.90%	[0.008]	mg/L
Ti 334.940†	5600.9	159.87	2.85%	[0.008]	mg/L
V 290.880†	1661.5	223.64	13.46%	[0.008]	mg/L
Zn 206.200†	198.4	8.76	4.42%	[0.008]	mg/L
K 766.490†	514.7	42.53	8.26%	[0.4]	mg/L
Na 589.592†	3803.1	285.49	7.51%	[0.4]	mg/L
Sr 407.771†	7512.2	307.24	4.09%	[0.008]	mg/L
Li 670.784†	448.7	32.90	7.33%	[0.008]	mg/L
P 214.914†	79.3	12.74	16.07%	[0.08]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S2 **Date Collected: 11/8/2013 9:29:43 AM**
Analyst: **Data Type: Reprocessed on 11/8/2013 9:58:34 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S2

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: S2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2233008.5	6593.87	0.30%		
YRADIAL	149654.1	1558.83	1.04%		
Ga 417.206	792779.2	3372.88	0.43%		
GaRADIAL	41782.4	1159.04	2.77%		
Ag 328.068†	1431.3	130.13	9.09%	[0.0064]	mg/L
Al 396.153†	457.4	6.00	1.31%	[0.16]	mg/L
As 188.979†	7.7	5.78	74.94%	[0.0064]	mg/L
Ba 233.527†	1133.2	10.79	0.95%	[0.016]	mg/L
Be 234.861†	476.2	22.58	4.74%	[0.0008]	mg/L
B 249.677†	257.8	12.34	4.78%	[0.008]	mg/L
Ca 227.546†	27.5	11.38	41.41%	[0.16]	mg/L
Cd 228.802†	18.3	4.70	25.63%	[0.0008]	mg/L
Co 228.616†	56.6	4.82	8.53%	[0.0032]	mg/L
Cr 267.716†	738.9	12.00	1.62%	[0.008]	mg/L
Cu 327.393†	1427.9	9.05	0.63%	[0.008]	mg/L
Fe 239.562†	170.0	2.36	1.39%	[0.064]	mg/L
Mg 279.077†	167.9	3.50	2.08%	[0.16]	mg/L
Mn 257.610†	4369.5	21.66	0.50%	[0.008]	mg/L

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Mo 202.031†	230.1	4.56	1.98%	[0.016]	mg/L
Ni 231.604†	252.0	11.56	4.59%	[0.008]	mg/L
Pb 220.353†	57.4	2.72	4.74%	[0.008]	mg/L
Sb 206.836†	34.0	2.39	7.03%	[0.0192]	mg/L
Se 196.026†	7.4	5.73	77.41%	[0.0062]	mg/L
Si 251.611†	2300.3	27.81	1.21%	[0.08]	mg/L
Sn 189.927†	83.6	6.64	7.94%	[0.016]	mg/L
Ti 334.940†	11122.1	48.41	0.44%	[0.016]	mg/L
Tl 190.801†	16.1	11.81	73.39%	[0.008]	mg/L
V 290.880†	2968.8	232.98	7.85%	[0.016]	mg/L
Zn 206.200†	386.5	10.64	2.75%	[0.016]	mg/L
K 766.490†	1046.1	47.90	4.58%	[0.8]	mg/L
Na 589.592†	7891.5	287.18	3.64%	[0.8]	mg/L
Sr 407.771†	14977.0	666.96	4.45%	[0.016]	mg/L
Li 670.784†	987.2	34.16	3.46%	[0.016]	mg/L
P 214.914†	138.3	7.34	5.31%	[0.16]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S3 **Date Collected: 11/8/2013 9:32:44 AM**
Analyst: **Data Type: Reprocessed on 11/8/2013 9:58:35 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S3

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: S3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2222556.7	5936.66	0.27%		
YRADIAL	154902.6	1789.94	1.16%		
Ga 417.206	811185.3	9642.97	1.19%		
GaRADIAL	42862.5	457.53	1.07%		
Ag 328.068†	84695.2	614.55	0.73%	[0.40]	mg/L
Al 396.153†	26948.9	179.03	0.66%	[10.00]	mg/L
As 188.979†	547.5	7.45	1.36%	[0.40]	mg/L
Ba 233.527†	69190.6	1730.81	2.50%	[1.00]	mg/L
Be 234.861†	27629.3	250.24	0.91%	[0.05]	mg/L
B 249.677†	23785.8	420.58	1.77%	[0.50]	mg/L
Ca 227.546†	1590.8	31.14	1.96%	[10.00]	mg/L
Cd 228.802†	1131.7	24.94	2.20%	[0.05]	mg/L
Co 228.616†	3737.8	16.72	0.45%	[0.20]	mg/L
Cr 267.716†	43711.0	797.10	1.82%	[0.50]	mg/L
Cu 327.393†	79491.5	949.03	1.19%	[0.50]	mg/L
Fe 239.562†	10627.1	78.58	0.74%	[4.00]	mg/L
Mg 279.077†	9854.0	108.79	1.10%	[10.00]	mg/L
Mn 257.610†	252934.3	6465.19	2.56%	[0.50]	mg/L
Mo 202.031†	14600.7	341.86	2.34%	[1.00]	mg/L
Ni 231.604†	15541.7	328.05	2.11%	[0.50]	mg/L
Pb 220.353†	2666.7	13.78	0.52%	[0.50]	mg/L
Sb 206.836†	1964.0	27.35	1.39%	[1.20]	mg/L
Se 196.026†	275.9	5.50	1.99%	[0.40]	mg/L
Si 251.611†	137326.3	1791.51	1.30%	[5.00]	mg/L
Sn 189.927†	5195.1	12.07	0.23%	[1.00]	mg/L
Ti 334.940†	711387.7	760.19	0.11%	[1.00]	mg/L
Tl 190.801†	765.6	7.67	1.00%	[0.50]	mg/L
V 290.880†	158452.4	4708.07	2.97%	[1.00]	mg/L
Zn 206.200†	23693.1	519.03	2.19%	[1.00]	mg/L
K 766.490†	63549.0	401.77	0.63%	[50.00]	mg/L
Na 589.592†	473819.8	2846.02	0.60%	[50.00]	mg/L
Sr 407.771†	908523.9	3104.08	0.34%	[1.00]	mg/L
Li 670.784†	60647.3	147.00	0.24%	[1.00]	mg/L
P 214.914†	8112.6	57.12	0.70%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S4 **Date Collected: 11/8/2013 9:34:48 AM**

Approved: November 11, 2013

Analyst:
Logged In Analyst (Original) : peicp2
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 11/8/2013 9:58:36 AM
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: S4

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: S4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2204614.5	13760.43	0.62%		
YRADIAL	150385.2	2657.08	1.77%		
Ga 417.206	799347.4	12006.13	1.50%		
GaRADIAL	42219.8	524.38	1.24%		
Ag 328.068†	172828.8	468.93	0.27%	[0.80]	mg/L
Al 396.153†	52689.2	529.88	1.01%	[20.00]	mg/L
As 188.979†	1103.3	9.89	0.90%	[0.80]	mg/L
Ba 233.527†	139356.6	1967.43	1.41%	[2.00]	mg/L
Be 234.861†	56200.5	502.78	0.89%	[0.10]	mg/L
B 249.677†	49919.2	364.03	0.73%	[1.00]	mg/L
Ca 227.546†	3249.2	48.30	1.49%	[20.00]	mg/L
Cd 228.802†	2265.3	27.95	1.23%	[0.10]	mg/L
Co 228.616†	7406.6	87.21	1.18%	[0.40]	mg/L
Cr 267.716†	87924.3	944.53	1.07%	[1.00]	mg/L
Cu 327.393†	162550.3	475.91	0.29%	[1.00]	mg/L
Fe 239.562†	20964.4	205.38	0.98%	[8.00]	mg/L
Mg 279.077†	19533.9	46.65	0.24%	[20.00]	mg/L
Mn 257.610†	494567.6	7689.50	1.55%	[1.00]	mg/L
Mo 202.031†	29306.9	348.40	1.19%	[2.00]	mg/L
Ni 231.604†	31106.2	431.79	1.39%	[1.00]	mg/L
Pb 220.353†	5280.3	57.46	1.09%	[1.00]	mg/L
Sb 206.836†	3941.7	41.43	1.05%	[2.40]	mg/L
Se 196.026†	555.7	5.00	0.90%	[0.80]	mg/L
Si 251.611†	281341.2	2271.70	0.81%	[10.00]	mg/L
Sn 189.927†	10306.2	118.10	1.15%	[2.00]	mg/L
Ti 334.940†	1412825.1	14854.91	1.05%	[2.00]	mg/L
Tl 190.801†	1501.9	6.90	0.46%	[1.00]	mg/L
V 290.880†	323463.8	6678.02	2.06%	[2.00]	mg/L
Zn 206.200†	47385.0	525.67	1.11%	[2.00]	mg/L
K 766.490†	124963.2	786.51	0.63%	[100.00]	mg/L
Na 589.592†	940686.7	17967.45	1.91%	[100.00]	mg/L
Sr 407.771†	1839405.3	48725.12	2.65%	[2.00]	mg/L
Li 670.784†	117852.9	1326.94	1.13%	[2.00]	mg/L
P 214.914†	16552.2	204.91	1.24%	[20]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin, Calc Int	-183.7	215500	0.00000	0.999952	
Al 396.153	4	Lin, Calc Int	88.4	2641	0.00000	0.999939	
As 188.979	3	Wt. Lin	-1.1	1376	0.00000	0.999995	
Ba 233.527	4	Lin, Calc Int	-51.6	69610	0.00000	0.999994	
Be 234.861	4	Lin, Calc Int	-51.0	560700	0.00000	0.999966	
B 249.677	3	Lin, Calc Int	-277.9	49780	0.00000	0.999718	
Ca 227.546	3	Lin, Calc Int	-5.5	162.1	0.00000	0.999941	
Cd 228.802	4	Lin, Calc Int	0.4	22640	0.00000	1.000000	
Co 228.616	4	Lin, Calc Int	2.6	18540	0.00000	0.999989	
Cr 267.716	4	Lin, Calc Int	-12.1	87840	0.00000	0.999996	
Cu 327.393	4	Lin, Calc Int	-170.1	162000	0.00000	0.999941	
Fe 239.562	4	Lin, Calc Int	19.8	2625	0.00000	0.999978	
Mg 279.077	4	Lin, Calc Int	16.3	977.5	0.00000	0.999991	
Mn 257.610	4	Lin, Calc Int	899.1	495700	0.00000	0.999941	
Mo 202.031	4	Lin, Calc Int	-8.2	14650	0.00000	0.999999	
Ni 231.604	4	Lin, Calc Int	-6.0	31110	0.00000	1.000000	
Pb 220.353	4	Lin, Calc Int	7.2	5282	0.00000	0.999986	
Sb 206.836	4	Lin, Calc Int	-0.3	1641	0.00000	0.999998	
Se 196.026	3	Wt. Lin	3.1	686.3	0.00000	0.999979	

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Si 251.611	4	Lin, Calc Int	-394.0	28050	0.00000	0.999932
Sn 189.927	4	Lin, Calc Int	4.8	5159	0.00000	0.999992
Ti 334.940	4	Lin, Calc Int	547.9	707100	0.00000	0.999994
Tl 190.801	3	Lin, Calc Int	4.5	1502	0.00000	0.999953
V 290.880	4	Lin, Calc Int	-174.3	161200	0.00000	0.999947
Zn 206.200	4	Lin, Calc Int	5.2	23690	0.00000	1.000000
K 766.490	4	Non Lin, Calc Int	3.4	1292	-0.42635	1.000000
Na 589.592	4	Non Lin, Calc Int	80.0	9544	-1.37645	1.000000
Sr 407.771	4	Lin, Calc Int	-1263.0	918200	0.00000	0.999982
Li 670.784	4	Lin, Calc Int	221.2	59140	0.00000	0.999900
P 214.914	4	Lin, Calc Int	-14.4	825.2	0.00000	0.999951

Sequence No.: 6 **Autosampler Location: 11**
Sample ID: ICV 2nd Vendor **Date Collected: 11/8/2013 9:36:54 AM**
Analyst: **Data Type: Reprocessed on 11/8/2013 9:58:37 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICV 2nd Vendor

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: ICV 2nd Vendor

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2224983.2						23879.84	1.07%
YRADIAL	152942.5						1732.67	1.13%
Ga 417.206	803934.3						13696.79	1.70%
GaRADIAL	42281.8						338.72	0.80%
Ag 328.068†	85732.1	0.402	mg/L	0.0038	0.402	mg/L	0.0038	0.93%
QC value within limits for Ag 328.068 Recovery = 100.51%								
Al 396.153†	25853.5	9.69	mg/L	0.046	9.69	mg/L	0.046	0.47%
QC value within limits for Al 396.153 Recovery = 96.87%								
As 188.979†	571.1	0.411	mg/L	0.0071	0.411	mg/L	0.0071	1.72%
QC value within limits for As 188.979 Recovery = 102.75%								
Ba 233.527†	67716.2	0.974	mg/L	0.0214	0.974	mg/L	0.0214	2.20%
QC value within limits for Ba 233.527 Recovery = 97.36%								
Be 234.861†	28361.9	0.0502	mg/L	0.00037	0.0502	mg/L	0.00037	0.73%
QC value within limits for Be 234.861 Recovery = 100.39%								
B 249.677†	25220.9	0.508	mg/L	0.0023	0.508	mg/L	0.0023	0.46%
QC value within limits for B 249.677 Recovery = 101.67%								
Ca 227.546†	1539.1	9.98	mg/L	0.125	9.98	mg/L	0.125	1.26%
QC value within limits for Ca 227.546 Recovery = 99.84%								
Cd 228.802†	1136.0	0.0487	mg/L	0.00134	0.0487	mg/L	0.00134	2.75%
QC value within limits for Cd 228.802 Recovery = 97.44%								
Co 228.616†	3764.9	0.202	mg/L	0.0022	0.202	mg/L	0.0022	1.11%
QC value within limits for Co 228.616 Recovery = 101.03%								
Cr 267.716†	42756.2	0.487	mg/L	0.0050	0.487	mg/L	0.0050	1.04%
QC value within limits for Cr 267.716 Recovery = 97.45%								
Cu 327.393†	79169.0	0.491	mg/L	0.0035	0.491	mg/L	0.0035	0.70%
QC value within limits for Cu 327.393 Recovery = 98.23%								
Fe 239.562†	10191.9	3.87	mg/L	0.029	3.87	mg/L	0.029	0.75%
QC value within limits for Fe 239.562 Recovery = 96.87%								
Mg 279.077†	9558.7	9.78	mg/L	0.014	9.78	mg/L	0.014	0.15%
QC value within limits for Mg 279.077 Recovery = 97.78%								
Mn 257.610†	247852.6	0.499	mg/L	0.0107	0.499	mg/L	0.0107	2.14%
QC value within limits for Mn 257.610 Recovery = 99.77%								
Mo 202.031†	14440.1	0.987	mg/L	0.0166	0.987	mg/L	0.0166	1.68%
QC value within limits for Mo 202.031 Recovery = 98.70%								
Ni 231.604†	15600.3	0.501	mg/L	0.0057	0.501	mg/L	0.0057	1.13%
QC value within limits for Ni 231.604 Recovery = 100.26%								
Pb 220.353†	2571.3	0.487	mg/L	0.0059	0.487	mg/L	0.0059	1.22%
QC value within limits for Pb 220.353 Recovery = 97.37%								
Sb 206.836†	1980.2	1.21	mg/L	0.018	1.21	mg/L	0.018	1.51%
QC value within limits for Sb 206.836 Recovery = 100.46%								
Se 196.026†	287.4	0.416	mg/L	0.0102	0.416	mg/L	0.0102	2.44%
QC value within limits for Se 196.026 Recovery = 103.91%								
Si 251.611†	137998.4	4.92	mg/L	0.040	4.92	mg/L	0.040	0.81%

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   QC value within limits for Si 251.611  Recovery = 98.46%
Sn 189.927†            5241.8        1.02 mg/L        0.012        1.02 mg/L        0.012   1.17%
   QC value within limits for Sn 189.927  Recovery = 101.52%
Ti 334.940†          707774.8        1.00 mg/L        0.015        1.00 mg/L        0.015   1.45%
   QC value within limits for Ti 334.940  Recovery = 100.15%
Tl 190.801†             731.5       0.498 mg/L       0.0084       0.498 mg/L       0.0084   1.68%
   QC value within limits for Tl 190.801  Recovery = 99.63%
V 290.880†           152694.4       0.947 mg/L       0.0257       0.947 mg/L       0.0257   2.72%
   QC value less than the lower limit for V 290.880  Recovery = 94.72%
Zn 206.200†           23429.9       0.993 mg/L       0.0193       0.993 mg/L       0.0193   1.95%
   QC value within limits for Zn 206.200  Recovery = 99.33%
K 766.490†            63048.7        49.6 mg/L         0.39        49.6 mg/L         0.39   0.78%
   QC value within limits for K 766.490  Recovery = 99.10%
Na 589.592†          466951.7        49.3 mg/L         0.57        49.3 mg/L         0.57   1.16%
   QC value within limits for Na 589.592  Recovery = 98.54%
Sr 407.771†          857374.8       0.935 mg/L       0.0222       0.935 mg/L       0.0222   2.38%
   QC value less than the lower limit for Sr 407.771  Recovery = 93.48%
Li 670.784†           58186.1       0.980 mg/L       0.0033       0.980 mg/L       0.0033   0.33%
   QC value within limits for Li 670.784  Recovery = 98.02%
P 214.914†             8190.2        9.94 mg/L        0.126        9.94 mg/L        0.126   1.27%
   QC value within limits for P 214.914  Recovery = 99.42%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 7                                  Autosampler Location: 1
Sample ID: ICB                                   Date Collected: 11/8/2013 9:38:57 AM
Analyst:                                         Data Type: Reprocessed on 11/8/2013 9:58:38 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                               Initial Sample Vol:
Dilution:                                        Sample Prep Vol:

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Nebulizer Parameters: ICB
Analyte                 Back Pressure    Flow
All                    172.0 kPa        0.45 L/min

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Mean Data: ICB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units     Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029            2163162.6                                                   17150.03   0.79%
YRADIAL               150223.0                                                    3006.89   2.00%
Ga 417.206            768518.4                                                    8428.46   1.10%
GaRADIAL               41724.8                                                     481.28   1.15%
Ag 328.068†               -9.6     0.00082 mg/L      0.000396     0.00082 mg/L      0.000396  48.47%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               -4.4     -0.0353 mg/L       0.00237     -0.0353 mg/L       0.00237   6.71%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -1.2    -0.00008 mg/L      0.000317    -0.00008 mg/L      0.000317 401.68%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -8.4     0.00062 mg/L      0.000055     0.00062 mg/L      0.000055   8.87%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              -26.4     0.00005 mg/L      0.000031     0.00005 mg/L      0.000031  66.95%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               683.9      0.0193 mg/L       0.00131      0.0193 mg/L       0.00131   6.78%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                8.8      0.0872 mg/L       0.05968      0.0872 mg/L       0.05968  68.48%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                1.1     0.00003 mg/L      0.000104     0.00003 mg/L      0.000104 380.43%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -0.5    -0.00016 mg/L      0.000335    -0.00016 mg/L      0.000335 210.52%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -5.3     0.00008 mg/L      0.000019     0.00008 mg/L      0.000019  24.39%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              392.4     0.00347 mg/L      0.000643     0.00347 mg/L      0.000643  18.50%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                6.4    -0.00511 mg/L      0.002471    -0.00511 mg/L      0.002471  48.31%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                5.8     -0.0107 mg/L       0.00447     -0.0107 mg/L       0.00447  41.76%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               50.1    -0.00171 mg/L      0.000032    -0.00171 mg/L      0.000032   1.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
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Mo 202.031†              22.3     0.00209 mg/L      0.000241     0.00209 mg/L      0.000241  11.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†             -21.1    -0.00048 mg/L      0.000154    -0.00048 mg/L      0.000154  31.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               1.4    -0.00110 mg/L      0.001638    -0.00110 mg/L      0.001638 148.96%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               0.8     0.00069 mg/L      0.002989     0.00069 mg/L      0.002989 431.96%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.7    -0.00217 mg/L      0.006373    -0.00217 mg/L      0.006373 293.82%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              77.4     0.0168 mg/L       0.00042      0.0168 mg/L       0.00042   2.48%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              24.4     0.00379 mg/L      0.001060     0.00379 mg/L      0.001060  27.95%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              50.0    -0.00069 mg/L      0.000069    -0.00069 mg/L      0.000069   9.98%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.1    -0.00374 mg/L      0.004721    -0.00374 mg/L      0.004721 126.11%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              632.9     0.00501 mg/L      0.001340     0.00501 mg/L      0.001340  26.75%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               3.9    -0.00005 mg/L      0.000251    -0.00005 mg/L      0.000251 490.27%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               82.8     0.0614 mg/L       0.01188      0.0614 mg/L       0.01188  19.36%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             121.8     0.00438 mg/L      0.032225     0.00438 mg/L      0.032225 736.48%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              28.6     0.00140 mg/L      0.000144     0.00140 mg/L      0.000144  10.27%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             201.9    -0.00033 mg/L      0.001294    -0.00033 mg/L      0.001294 397.01%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†               18.5      0.0399 mg/L       0.00919      0.0399 mg/L       0.00919  23.02%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8 **Autosampler Location: 12**
Sample ID: ICSA **Date Collected: 11/8/2013 9:41:57 AM**
Analyst: **Data Type: Reprocessed on 11/8/2013 9:58:39 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2074808.0						24497.33	1.18%
YRADIAL	148132.0						362.61	0.24%
Ga 417.206	777374.4						14439.11	1.86%
GaRADIAL	42688.3						484.57	1.14%
Ag 328.068†	-8989.6	0.00054	mg/L	0.000541	0.00054	mg/L	0.000541	101.04%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	677417.3	256	mg/L	8.9	256	mg/L	8.9	3.48%
QC value within limits for Al 396.153 Recovery = 102.58%								
As 188.979†	-12.4	0.00003	mg/L	0.003029	0.00003	mg/L	0.003029	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	326.8	-0.00381	mg/L	0.000069	-0.00381	mg/L	0.000069	1.80%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	12913.2	-0.00002	mg/L	0.000478	-0.00002	mg/L	0.000478	>999.9%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	2928.4	0.0220	mg/L	0.00136	0.0220	mg/L	0.00136	6.17%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	42402.6	264	mg/L	2.2	264	mg/L	2.2	0.84%
QC value within limits for Ca 227.546 Recovery = 105.59%								
Cd 228.802†	-1.0	0.00026	mg/L	0.000192	0.00026	mg/L	0.000192	74.82%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	16.7	-0.00174	mg/L	0.000468	-0.00174	mg/L	0.000468	26.95%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            160.8     0.00018 mg/L      0.000134     0.00018 mg/L      0.000134  72.39%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†           -916.1     0.00115 mg/L      0.000345     0.00115 mg/L      0.000345  30.00%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†         258529.2        98.5 mg/L          0.42        98.5 mg/L          0.42   0.43%
   QC value within limits for Fe 239.562  Recovery = 98.48%
Mg 279.077†         254038.6         260 mg/L           0.6         260 mg/L           0.6   0.22%
   QC value within limits for Mg 279.077  Recovery = 103.93%
Mn 257.610†          -1207.2     0.00131 mg/L      0.000221     0.00131 mg/L      0.000221  16.86%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -1.4     0.00201 mg/L      0.000702     0.00201 mg/L      0.000702  34.94%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†            -13.6    -0.00024 mg/L      0.000605    -0.00024 mg/L      0.000605 255.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†            -151.7    -0.00225 mg/L      0.001693    -0.00225 mg/L      0.001693  75.14%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†            -12.1    -0.00356 mg/L      0.003015    -0.00356 mg/L      0.003015  84.67%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -16.2     0.00003 mg/L      0.006837     0.00003 mg/L      0.006837 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†           2443.4       0.101 mg/L        0.0045       0.101 mg/L        0.0045   4.40%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†           -308.6     -0.0608 mg/L       0.00196     -0.0608 mg/L       0.00196   3.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†         -25653.0     0.00218 mg/L      0.001405     0.00218 mg/L      0.001405  64.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†            -33.7     -0.0189 mg/L       0.00385     -0.0189 mg/L       0.00385  20.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†            3229.9    -0.00228 mg/L      0.004917    -0.00228 mg/L      0.004917 215.69%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             47.9    -0.00356 mg/L      0.000357    -0.00356 mg/L      0.000357  10.03%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†             -51.6     -0.0426 mg/L       0.02274     -0.0426 mg/L       0.02274  53.39%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            259.2      0.0188 mg/L       0.01181      0.0188 mg/L       0.01181  62.89%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†           7316.7     0.00100 mg/L      0.000299     0.00100 mg/L      0.000299  29.96%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†            117.1    -0.00176 mg/L      0.001027    -0.00176 mg/L      0.001027  58.33%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†             57.8      0.0876 mg/L       0.01370      0.0876 mg/L       0.01370  15.64%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 9                                   Autosampler Location: 13
Sample ID: ICSAB                                  Date Collected: 11/8/2013 9:44:00 AM
Analyst:                                          Data Type: Reprocessed on 11/8/2013 9:58:41 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: ICSAB
Analyte                 Back Pressure    Flow
All                    171.0 kPa         0.45 L/min

------------------------------------------------------------------------------------------
Mean Data: ICSAB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029           2120304.0                                                      9530.60   0.45%
YRADIAL              148874.1                                                      3491.28   2.35%
Ga 417.206           795486.1                                                      5290.24   0.67%
GaRADIAL              42524.3                                                      1028.04   2.42%
Ag 328.068†           95165.8       0.483 mg/L        0.0026       0.483 mg/L        0.0026   0.54%
   QC value within limits for Ag 328.068  Recovery = 96.64%
Al 396.153†          653000.4         247 mg/L           8.9         247 mg/L           8.9   3.59%
   QC value within limits for Al 396.153  Recovery = 98.89%
As 188.979†            326.8       0.247 mg/L        0.0074       0.247 mg/L        0.0074   3.01%
   QC value within limits for As 188.979  Recovery = 98.73%
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Approved: November 11, 2013

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Ba 233.527†            17322.8       0.241 mg/L        0.0045       0.241 mg/L        0.0045   1.86%
   QC value within limits for Ba 233.527  Recovery = 96.23%
Be 234.861†           148475.9       0.242 mg/L        0.0013       0.242 mg/L        0.0013   0.53%
   QC value within limits for Be 234.861  Recovery = 96.97%
B 249.677†              2399.1    -0.00030 mg/L      0.002776    -0.00030 mg/L      0.002776 913.79%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†            42975.9         268 mg/L           2.2          268 mg/L           2.2   0.82%
   QC value within limits for Ca 227.546  Recovery = 107.11%
Cd 228.802†            10540.6       0.465 mg/L        0.0049       0.465 mg/L        0.0049   1.05%
   QC value within limits for Cd 228.802  Recovery = 93.08%
Co 228.616†             4266.6       0.227 mg/L        0.0049       0.227 mg/L        0.0049   2.15%
   QC value within limits for Co 228.616  Recovery = 90.97%
Cr 267.716†            21849.9       0.247 mg/L        0.0036       0.247 mg/L        0.0036   1.46%
   QC value within limits for Cr 267.716  Recovery = 98.91%
Cu 327.393†            35770.1       0.227 mg/L        0.0007       0.227 mg/L        0.0007   0.30%
   QC value within limits for Cu 327.393  Recovery = 90.95%
Fe 239.562†           251068.6        95.6 mg/L          0.51        95.6 mg/L          0.51   0.54%
   QC value within limits for Fe 239.562  Recovery = 95.64%
Mg 279.077†           246052.2         252 mg/L           1.3         252 mg/L           1.3   0.50%
   QC value within limits for Mg 279.077  Recovery = 100.66%
Mn 257.610†           119096.9       0.244 mg/L        0.0028       0.244 mg/L        0.0028   1.13%
   QC value within limits for Mn 257.610  Recovery = 97.57%
Mo 202.031†              -15.7     0.00115 mg/L      0.000541     0.00115 mg/L      0.000541  47.04%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†            14435.9       0.464 mg/L        0.0082       0.464 mg/L        0.0082   1.76%
   QC value within limits for Ni 231.604  Recovery = 92.77%
Pb 220.353†             2342.0       0.469 mg/L        0.0113       0.469 mg/L        0.0113   2.42%
   QC value within limits for Pb 220.353  Recovery = 93.74%
Sb 206.836†              775.5       0.475 mg/L        0.0038       0.475 mg/L        0.0038   0.80%
   QC value within limits for Sb 206.836  Recovery = 94.94%
Se 196.026†              144.9       0.234 mg/L        0.0070       0.234 mg/L        0.0070   3.01%
   QC value within limits for Se 196.026  Recovery = 93.61%
Si 251.611†              241.7      0.0227 mg/L       0.00614      0.0227 mg/L       0.00614  27.09%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -320.2     -0.0630 mg/L       0.00299     -0.0630 mg/L       0.00299   4.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†           -25074.5     0.00346 mg/L      0.000350     0.00346 mg/L      0.000350  10.12%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              695.0       0.466 mg/L        0.0177       0.466 mg/L        0.0177   3.79%
   QC value within limits for Tl 190.801  Recovery = 93.22%
V 290.880†             41198.1       0.234 mg/L        0.0053       0.234 mg/L        0.0053   2.28%
   QC value within limits for V 290.880  Recovery = 93.57%
Zn 206.200†            10700.6       0.449 mg/L        0.0087       0.449 mg/L        0.0087   1.94%
   QC value within limits for Zn 206.200  Recovery = 89.73%
K 766.490†              6065.2        4.69 mg/L         0.004        4.69 mg/L         0.004   0.09%
   QC value within limits for K 766.490  Recovery = 93.87%
Na 589.592†            46545.0        4.87 mg/L         0.024        4.87 mg/L         0.024   0.49%
   QC value within limits for Na 589.592  Recovery = 97.44%
Sr 407.771†             6825.4     0.00035 mg/L      0.000090     0.00035 mg/L      0.000090  25.69%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              105.7    -0.00195 mg/L      0.001243    -0.00195 mg/L      0.001243  63.66%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†               -54.9     -0.0491 mg/L       0.04510     -0.0491 mg/L       0.04510  91.91%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 10                                    Autosampler Location: 6
Sample ID: CCV                                      Date Collected: 11/8/2013 9:46:01 AM
Analyst:                                            Data Type: Reprocessed on 11/8/2013 9:58:42 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCV
Analyte                 Back Pressure    Flow
All                   172.0 kPa         0.45 L/min

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Mean Data: CCV
                  Mean Corrected         Calib.                        Sample
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Approved: November 11, 2013

Analyte	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	2206537.5				29273.85	1.33%
YRADIAL	153579.9				1567.53	1.02%
Ga 417.206	798247.9				14247.00	1.78%
GaRADIAL	42204.1				175.77	0.42%
Ag 328.068†	86099.4	0.404 mg/L	0.0032	0.404 mg/L	0.0032	0.80%
QC value within limits for Ag 328.068 Recovery = 100.97%						
Al 396.153†	26595.7	9.97 mg/L	0.018	9.97 mg/L	0.018	0.18%
QC value within limits for Al 396.153 Recovery = 99.68%						
As 188.979†	552.6	0.398 mg/L	0.0066	0.398 mg/L	0.0066	1.67%
QC value within limits for As 188.979 Recovery = 99.38%						
Ba 233.527†	69777.3	1.00 mg/L	0.021	1.00 mg/L	0.021	2.07%
QC value within limits for Ba 233.527 Recovery = 100.32%						
Be 234.861†	28155.8	0.0498 mg/L	0.00058	0.0498 mg/L	0.00058	1.17%
QC value within limits for Be 234.861 Recovery = 99.61%						
B 249.677†	24445.9	0.493 mg/L	0.0097	0.493 mg/L	0.0097	1.98%
QC value within limits for B 249.677 Recovery = 98.54%						
Ca 227.546†	1604.1	10.4 mg/L	0.14	10.4 mg/L	0.14	1.32%
QC value within limits for Ca 227.546 Recovery = 103.90%						
Cd 228.802†	1173.0	0.0504 mg/L	0.00140	0.0504 mg/L	0.00140	2.77%
QC value within limits for Cd 228.802 Recovery = 100.83%						
Co 228.616†	3735.1	0.200 mg/L	0.0036	0.200 mg/L	0.0036	1.78%
QC value within limits for Co 228.616 Recovery = 100.25%						
Cr 267.716†	43708.8	0.498 mg/L	0.0064	0.498 mg/L	0.0064	1.28%
QC value within limits for Cr 267.716 Recovery = 99.62%						
Cu 327.393†	81189.4	0.504 mg/L	0.0026	0.504 mg/L	0.0026	0.52%
QC value within limits for Cu 327.393 Recovery = 100.73%						
Fe 239.562†	10502.0	3.99 mg/L	0.011	3.99 mg/L	0.011	0.29%
QC value within limits for Fe 239.562 Recovery = 99.82%						
Mg 279.077†	9854.3	10.1 mg/L	0.05	10.1 mg/L	0.05	0.46%
QC value within limits for Mg 279.077 Recovery = 100.81%						
Mn 257.610†	254764.1	0.513 mg/L	0.0119	0.513 mg/L	0.0119	2.32%
QC value within limits for Mn 257.610 Recovery = 102.56%						
Mo 202.031†	14611.9	0.999 mg/L	0.0221	0.999 mg/L	0.0221	2.21%
QC value within limits for Mo 202.031 Recovery = 99.88%						
Ni 231.604†	15668.5	0.504 mg/L	0.0105	0.504 mg/L	0.0105	2.08%
QC value within limits for Ni 231.604 Recovery = 100.70%						
Pb 220.353†	2677.5	0.507 mg/L	0.0074	0.507 mg/L	0.0074	1.47%
QC value within limits for Pb 220.353 Recovery = 101.40%						
Sb 206.836†	1956.2	1.19 mg/L	0.005	1.19 mg/L	0.005	0.38%
QC value within limits for Sb 206.836 Recovery = 99.24%						
Se 196.026†	284.1	0.411 mg/L	0.0036	0.411 mg/L	0.0036	0.88%
QC value within limits for Se 196.026 Recovery = 102.74%						
Si 251.611†	140682.2	5.02 mg/L	0.073	5.02 mg/L	0.073	1.45%
QC value within limits for Si 251.611 Recovery = 100.37%						
Sn 189.927†	5170.9	1.00 mg/L	0.014	1.00 mg/L	0.014	1.45%
QC value within limits for Sn 189.927 Recovery = 100.14%						
Ti 334.940†	698043.8	0.988 mg/L	0.0107	0.988 mg/L	0.0107	1.08%
QC value within limits for Ti 334.940 Recovery = 98.78%						
Tl 190.801†	779.7	0.530 mg/L	0.0081	0.530 mg/L	0.0081	1.52%
QC value within limits for Tl 190.801 Recovery = 106.05%						
V 290.880†	159795.9	0.991 mg/L	0.0302	0.991 mg/L	0.0302	3.05%
QC value within limits for V 290.880 Recovery = 99.12%						
Zn 206.200†	23940.3	1.01 mg/L	0.025	1.01 mg/L	0.025	2.45%
QC value within limits for Zn 206.200 Recovery = 101.49%						
K 766.490†	62691.4	49.3 mg/L	0.09	49.3 mg/L	0.09	0.19%
QC value within limits for K 766.490 Recovery = 98.53%						
Na 589.592†	462801.5	48.8 mg/L	1.30	48.8 mg/L	1.30	2.66%
QC value within limits for Na 589.592 Recovery = 97.66%						
Sr 407.771†	881321.1	0.961 mg/L	0.0369	0.961 mg/L	0.0369	3.84%
QC value within limits for Sr 407.771 Recovery = 96.09%						
Li 670.784†	59615.7	1.00 mg/L	0.002	1.00 mg/L	0.002	0.16%
QC value within limits for Li 670.784 Recovery = 100.44%						
P 214.914†	8096.3	9.83 mg/L	0.167	9.83 mg/L	0.167	1.70%
QC value within limits for P 214.914 Recovery = 98.29%						

All analyte(s) passed QC.

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Sequence No.: 11 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 9:48:06 AM**
Analyst: **Data Type: Reprocessed on 11/8/2013 9:58:43 AM**
Logged In Analyst (Original) : peicp2

Approved: November 11, 2013

Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2240145.1						13638.46	0.61%
YRADIAL	153111.6						2294.05	1.50%
Ga 417.206	797825.6						4757.37	0.60%
GaRADIAL	42443.4						695.06	1.64%
Ag 328.068†	-49.6	0.00063	mg/L	0.000481	0.00063	mg/L	0.000481	76.18%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	89.5	0.00031	mg/L	0.020004	0.00031	mg/L	0.020004	>999.9%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-3.2	-0.00154	mg/L	0.003104	-0.00154	mg/L	0.003104	201.58%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-2.3	0.00071	mg/L	0.000084	0.00071	mg/L	0.000084	11.82%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	32.9	0.00015	mg/L	0.000021	0.00015	mg/L	0.000021	14.23%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	304.3	0.0117	mg/L	0.00146	0.0117	mg/L	0.00146	12.46%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	3.2	0.0533	mg/L	0.03380	0.0533	mg/L	0.03380	63.45%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	7.1	0.00030	mg/L	0.000041	0.00030	mg/L	0.000041	13.56%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-1.1	-0.00020	mg/L	0.000617	-0.00020	mg/L	0.000617	314.83%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	14.7	0.00031	mg/L	0.000047	0.00031	mg/L	0.000047	15.25%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	490.1	0.00408	mg/L	0.000195	0.00408	mg/L	0.000195	4.78%
QC value greater than the upper limit for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	27.5	0.00296	mg/L	0.005291	0.00296	mg/L	0.005291	178.81%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	57.9	0.0426	mg/L	0.01654	0.0426	mg/L	0.01654	38.80%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	49.5	-0.00171	mg/L	0.000030	-0.00171	mg/L	0.000030	1.73%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	12.5	0.00141	mg/L	0.000377	0.00141	mg/L	0.000377	26.73%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-8.7	-0.00008	mg/L	0.000410	-0.00008	mg/L	0.000410	495.77%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	2.6	-0.00085	mg/L	0.000583	-0.00085	mg/L	0.000583	68.31%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.8	0.00133	mg/L	0.001650	0.00133	mg/L	0.001650	123.92%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.6	-0.00085	mg/L	0.009077	-0.00085	mg/L	0.009077	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	32.2	0.0152	mg/L	0.00029	0.0152	mg/L	0.00029	1.90%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	7.3	0.00047	mg/L	0.000280	0.00047	mg/L	0.000280	59.81%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-110.9	-0.00092	mg/L	0.000078	-0.00092	mg/L	0.000078	8.47%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-3.6	-0.00543	mg/L	0.004278	-0.00543	mg/L	0.004278	78.81%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	417.2	0.00367	mg/L	0.002157	0.00367	mg/L	0.002157	58.79%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	20.9	0.00067	mg/L	0.000260	0.00067	mg/L	0.000260	38.97%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	39.6	0.0280	mg/L	0.02369	0.0280	mg/L	0.02369	84.70%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	145.2	0.00683	mg/L	0.013411	0.00683	mg/L	0.013411	196.42%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	125.3	0.00151	mg/L	0.000309	0.00151	mg/L	0.000309	20.43%
QC value within limits for Sr 407.771 Recovery = Not calculated								

Approved: November 11, 2013

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Li 670.784†              121.2    -0.00169 mg/L      0.000925    -0.00169 mg/L      0.000925  54.69%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                5.6      0.0243 mg/L       0.00530      0.0243 mg/L       0.00530  21.84%
   QC value within limits for P 214.914  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

Approved: November 11, 2013

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Analysis Begun

Start Time: 11/8/2013 9:59:48 AM **Plasma On Time: 11/8/2013 6:59:30 AM**
Logged In Analyst: peicp2 **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N4011401 Autosampler Model: Cetac

Sample Information File: C:\pe\peicp2\Sample Information\FRIDAY1.sif
Batch ID:
Results Data Set: 110813H3R
Results Library: C:\pe\peicp2\Results\results1.mdb

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Sequence No.: 1 **Autosampler Location: 14**
Sample ID: PBW 1T WG451648-03 **Date Collected: 11/8/2013 9:59:49 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 1T WG451648-03

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: PBW 1T WG451648-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2362426.2						20665.87	0.87%
YRADIAL	161428.1						7755.19	4.80%
Ga 417.206	849136.7						11508.18	1.36%
GaRADIAL	41865.5						82.49	0.20%
Ag 328.068†	20.9	0.00095	mg/L	0.000203	0.00095	mg/L	0.000203	21.38%
Al 396.153†	-5.0	-0.0354	mg/L	0.00148	-0.0354	mg/L	0.00148	4.19%
As 188.979†	-1.5	-0.00027	mg/L	0.000981	-0.00027	mg/L	0.000981	365.60%
Ba 233.527†	7.4	0.00085	mg/L	0.000147	0.00085	mg/L	0.000147	17.29%
Be 234.861†	86.2	0.00024	mg/L	0.000035	0.00024	mg/L	0.000035	14.46%
B 249.677†	-158.2	0.00240	mg/L	0.000404	0.00240	mg/L	0.000404	16.79%
Ca 227.546†	1.4	0.0423	mg/L	0.02826	0.0423	mg/L	0.02826	66.80%
Cd 228.802†	-0.2	-0.00002	mg/L	0.000068	-0.00002	mg/L	0.000068	282.27%
Co 228.616†	4.6	0.00011	mg/L	0.000399	0.00011	mg/L	0.000399	359.45%
Cr 267.716†	4.1	0.00018	mg/L	0.000129	0.00018	mg/L	0.000129	70.36%
Cu 327.393†	251.1	0.00260	mg/L	0.000833	0.00260	mg/L	0.000833	32.06%
Fe 239.562†	21.5	0.00067	mg/L	0.001544	0.00067	mg/L	0.001544	231.04%
Mg 279.077†	12.9	-0.00345	mg/L	0.008470	-0.00345	mg/L	0.008470	245.40%
Mn 257.610†	81.8	-0.00165	mg/L	0.000027	-0.00165	mg/L	0.000027	1.66%
Mo 202.031†	0.2	0.00057	mg/L	0.000245	0.00057	mg/L	0.000245	43.00%
Ni 231.604†	2.4	0.00027	mg/L	0.000317	0.00027	mg/L	0.000317	116.84%
Pb 220.353†	0.7	-0.00123	mg/L	0.001473	-0.00123	mg/L	0.001473	119.55%
Sb 206.836†	2.1	0.00148	mg/L	0.002475	0.00148	mg/L	0.002475	167.37%
Se 196.026†	3.9	0.00106	mg/L	0.002156	0.00106	mg/L	0.002156	203.70%
Si 251.611†	-14.8	0.0135	mg/L	0.00106	0.0135	mg/L	0.00106	7.83%
Sn 189.927†	-2.5	-0.00142	mg/L	0.000788	-0.00142	mg/L	0.000788	55.53%
Ti 334.940†	-155.5	-0.00099	mg/L	0.000206	-0.00099	mg/L	0.000206	20.86%
Tl 190.801†	1.7	-0.00192	mg/L	0.002612	-0.00192	mg/L	0.002612	136.28%
V 290.880†	-281.3	-0.00066	mg/L	0.003049	-0.00066	mg/L	0.003049	459.46%
Zn 206.200†	121.3	0.00490	mg/L	0.000191	0.00490	mg/L	0.000191	3.90%
K 766.490†	18.0	0.0113	mg/L	0.04366	0.0113	mg/L	0.04366	387.37%
Na 589.592†	220.5	0.0147	mg/L	0.03662	0.0147	mg/L	0.03662	248.93%
Sr 407.771†	2.3	0.00138	mg/L	0.000043	0.00138	mg/L	0.000043	3.10%
Li 670.784†	-11.1	-0.00393	mg/L	0.000292	-0.00393	mg/L	0.000292	7.42%
P 214.914†	-26.3	-0.0143	mg/L	0.01416	-0.0143	mg/L	0.01416	98.73%

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Sequence No.: 2 **Autosampler Location: 15**
Sample ID: LCSW 1T WG451648-04 **Date Collected: 11/8/2013 10:02:50 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Sheri L. Pabgard

Nebulizer Parameters: LCSW 1T WG451648-04

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: LCSW 1T WG451648-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2251817.8						15328.72	0.68%
YRADIAL	152840.7						3339.71	2.19%
Ga 417.206	820798.8						17079.88	2.08%
GaRADIAL	43008.5						666.88	1.55%
Ag 328.068†	41946.8	0.197	mg/L	0.0010	0.197	mg/L	0.0010	0.52%
Al 396.153†	12546.8	4.68	mg/L	0.121	4.68	mg/L	0.121	2.59%
As 188.979†	257.2	0.185	mg/L	0.0027	0.185	mg/L	0.0027	1.45%
Ba 233.527†	33573.8	0.483	mg/L	0.0088	0.483	mg/L	0.0088	1.83%
Be 234.861†	13213.5	0.0234	mg/L	0.00016	0.0234	mg/L	0.00016	0.68%
B 249.677†	47268.9	0.953	mg/L	0.0089	0.953	mg/L	0.0089	0.93%
Ca 227.546†	757.9	4.93	mg/L	0.034	4.93	mg/L	0.034	0.70%
Cd 228.802†	538.9	0.0232	mg/L	0.00052	0.0232	mg/L	0.00052	2.23%
Co 228.616†	1797.0	0.0964	mg/L	0.00061	0.0964	mg/L	0.00061	0.63%
Cr 267.716†	21214.3	0.242	mg/L	0.0042	0.242	mg/L	0.0042	1.74%
Cu 327.393†	39396.7	0.245	mg/L	0.0017	0.245	mg/L	0.0017	0.70%
Fe 239.562†	5097.4	1.93	mg/L	0.052	1.93	mg/L	0.052	2.68%
Mg 279.077†	4717.8	4.82	mg/L	0.081	4.82	mg/L	0.081	1.67%
Mn 257.610†	123559.2	0.248	mg/L	0.0046	0.248	mg/L	0.0046	1.84%
Mo 202.031†	7065.3	0.483	mg/L	0.0090	0.483	mg/L	0.0090	1.86%
Ni 231.604†	7613.6	0.245	mg/L	0.0038	0.245	mg/L	0.0038	1.56%
Pb 220.353†	1282.5	0.242	mg/L	0.0030	0.242	mg/L	0.0030	1.26%
Sb 206.836†	943.8	0.575	mg/L	0.0042	0.575	mg/L	0.0042	0.73%
Se 196.026†	130.8	0.187	mg/L	0.0079	0.187	mg/L	0.0079	4.25%
Si 251.611†	66911.3	2.39	mg/L	0.009	2.39	mg/L	0.009	0.37%
Sn 189.927†	-26.4	-0.00606	mg/L	0.000930	-0.00606	mg/L	0.000930	15.34%
Ti 334.940†	336846.9	0.476	mg/L	0.0078	0.476	mg/L	0.0078	1.64%
Tl 190.801†	368.3	0.249	mg/L	0.0066	0.249	mg/L	0.0066	2.63%
V 290.880†	76656.4	0.476	mg/L	0.0139	0.476	mg/L	0.0139	2.93%
Zn 206.200†	11494.8	0.487	mg/L	0.0073	0.487	mg/L	0.0073	1.49%
K 766.490†	29613.9	23.1	mg/L	0.69	23.1	mg/L	0.69	3.01%
Na 589.592†	221261.3	23.3	mg/L	0.08	23.3	mg/L	0.08	0.37%
Sr 407.771†	427954.8	0.467	mg/L	0.0051	0.467	mg/L	0.0051	1.10%
Li 670.784†	28396.2	0.476	mg/L	0.0127	0.476	mg/L	0.0127	2.66%
P 214.914†	-153.9	-0.169	mg/L	0.0264	-0.169	mg/L	0.0264	15.64%

Sequence No.: 3
Sample ID: L1311016301 WG451648-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 11/8/2013 10:04:54 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311016301 WG451648-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016301 WG451648-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2214486.4						13887.25	0.63%
YRADIAL	154723.2						3505.76	2.27%
Ga 417.206	825198.5						11428.03	1.38%
GaRADIAL	43879.2						1517.77	3.46%
Ag 328.068†	332.6	0.00243	mg/L	0.000171	0.00243	mg/L	0.000171	7.02%
Al 396.153†	167.7	0.0298	mg/L	0.00500	0.0298	mg/L	0.00500	16.76%
As 188.979†	-9.3	-0.00493	mg/L	0.005274	-0.00493	mg/L	0.005274	106.93%
Ba 233.527†	2086.4	0.0307	mg/L	0.00053	0.0307	mg/L	0.00053	1.72%
Be 234.861†	61.1	0.00017	mg/L	0.000067	0.00017	mg/L	0.000067	38.05%
B 249.677†	1828.3	0.0423	mg/L	0.00246	0.0423	mg/L	0.00246	5.82%
Ca 227.546†	7278.4	44.9	mg/L	1.11	44.9	mg/L	1.11	2.46%
Cd 228.802†	-1.6	-0.00006	mg/L	0.000074	-0.00006	mg/L	0.000074	120.52%
Co 228.616†	0.2	-0.00013	mg/L	0.000306	-0.00013	mg/L	0.000306	235.76%

Approved: November 11, 2013

Cr 267.716†	76.7	0.00100	mg/L	0.000183	0.00100	mg/L	0.000183	18.26%
Cu 327.393†	364.0	0.00330	mg/L	0.000328	0.00330	mg/L	0.000328	9.93%
Fe 239.562†	348.6	0.125	mg/L	0.0036	0.125	mg/L	0.0036	2.87%
Mg 279.077†	10719.9	11.0	mg/L	0.25	11.0	mg/L	0.25	2.29%
Mn 257.610†	17778.2	0.0341	mg/L	0.00009	0.0341	mg/L	0.00009	0.27%
Mo 202.031†	36.2	0.00304	mg/L	0.000382	0.00304	mg/L	0.000382	12.58%
Ni 231.604†	13.3	0.00063	mg/L	0.000185	0.00063	mg/L	0.000185	29.52%
Pb 220.353†	10.9	0.00070	mg/L	0.001360	0.00070	mg/L	0.001360	195.01%
Sb 206.836†	-3.0	-0.00160	mg/L	0.000308	-0.00160	mg/L	0.000308	19.21%
Se 196.026†	5.6	0.00365	mg/L	0.009532	0.00365	mg/L	0.009532	261.13%
Si 251.611†	6394.1	0.242	mg/L	0.0078	0.242	mg/L	0.0078	3.22%
Sn 189.927†	-202.9	-0.0403	mg/L	0.00095	-0.0403	mg/L	0.00095	2.37%
Ti 334.940†	-2272.8	0.00275	mg/L	0.001418	0.00275	mg/L	0.001418	51.55%
Tl 190.801†	-15.7	-0.0135	mg/L	0.00047	-0.0135	mg/L	0.00047	3.49%
V 290.880†	868.1	0.00616	mg/L	0.001023	0.00616	mg/L	0.001023	16.60%
Zn 206.200†	48.5	0.00183	mg/L	0.000284	0.00183	mg/L	0.000284	15.52%
K 766.490†	4180.2	3.22	mg/L	0.034	3.22	mg/L	0.034	1.07%
Na 589.592†	107468.2	11.3	mg/L	0.12	11.3	mg/L	0.12	1.08%
Sr 407.771†	122697.9	0.134	mg/L	0.0053	0.134	mg/L	0.0053	3.97%
Li 670.784†	113.4	-0.00182	mg/L	0.000356	-0.00182	mg/L	0.000356	19.53%
P 214.914†	10.9	0.0308	mg/L	0.01273	0.0308	mg/L	0.01273	41.41%

Sequence No.: 4 **Autosampler Location: 17**
Sample ID: L1311016301DU WG451648-05 **Date Collected: 11/8/2013 10:07:54 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016301DU WG451648-05

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016301DU WG451648-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2252946.6						30274.99	1.34%
YRADIAL	155746.4						5577.24	3.58%
Ga 417.206	833252.0						10901.73	1.31%
GaRADIAL	44189.7						724.60	1.64%
Ag 328.068†	271.9	0.00214	mg/L	0.000062	0.00214	mg/L	0.000062	2.89%
Al 396.153†	180.6	0.0347	mg/L	0.00920	0.0347	mg/L	0.00920	26.50%
As 188.979†	-18.1	-0.0114	mg/L	0.00201	-0.0114	mg/L	0.00201	17.65%
Ba 233.527†	2037.1	0.0300	mg/L	0.00043	0.0300	mg/L	0.00043	1.44%
Be 234.861†	67.6	0.00019	mg/L	0.000029	0.00019	mg/L	0.000029	15.54%
B 249.677†	1457.6	0.0348	mg/L	0.00171	0.0348	mg/L	0.00171	4.90%
Ca 227.546†	7154.2	44.2	mg/L	0.78	44.2	mg/L	0.78	1.76%
Cd 228.802†	-4.7	-0.00017	mg/L	0.000028	-0.00017	mg/L	0.000028	16.91%
Co 228.616†	-3.0	-0.00030	mg/L	0.000279	-0.00030	mg/L	0.000279	92.92%
Cr 267.716†	66.5	0.00089	mg/L	0.000137	0.00089	mg/L	0.000137	15.46%
Cu 327.393†	263.3	0.00268	mg/L	0.000262	0.00268	mg/L	0.000262	9.79%
Fe 239.562†	338.4	0.121	mg/L	0.0037	0.121	mg/L	0.0037	3.08%
Mg 279.077†	10438.2	10.7	mg/L	0.43	10.7	mg/L	0.43	3.99%
Mn 257.610†	18555.6	0.0356	mg/L	0.00159	0.0356	mg/L	0.00159	4.48%
Mo 202.031†	32.1	0.00276	mg/L	0.000241	0.00276	mg/L	0.000241	8.74%
Ni 231.604†	16.4	0.00072	mg/L	0.000194	0.00072	mg/L	0.000194	26.79%
Pb 220.353†	14.7	0.00142	mg/L	0.001579	0.00142	mg/L	0.001579	111.44%
Sb 206.836†	-1.5	-0.00070	mg/L	0.001708	-0.00070	mg/L	0.001708	245.35%
Se 196.026†	1.8	-0.00192	mg/L	0.008500	-0.00192	mg/L	0.008500	442.91%
Si 251.611†	6292.4	0.238	mg/L	0.0106	0.238	mg/L	0.0106	4.44%
Sn 189.927†	-201.0	-0.0399	mg/L	0.00187	-0.0399	mg/L	0.00187	4.69%
Ti 334.940†	-2985.3	0.00163	mg/L	0.000561	0.00163	mg/L	0.000561	34.45%
Tl 190.801†	-6.8	-0.00759	mg/L	0.004083	-0.00759	mg/L	0.004083	53.77%
V 290.880†	468.0	0.00369	mg/L	0.002242	0.00369	mg/L	0.002242	60.79%
Zn 206.200†	47.2	0.00178	mg/L	0.000352	0.00178	mg/L	0.000352	19.79%
K 766.490†	4033.1	3.11	mg/L	0.111	3.11	mg/L	0.111	3.57%
Na 589.592†	103640.4	10.9	mg/L	0.03	10.9	mg/L	0.03	0.29%
Sr 407.771†	118457.9	0.129	mg/L	0.0041	0.129	mg/L	0.0041	3.18%
Li 670.784†	14.0	-0.00350	mg/L	0.001658	-0.00350	mg/L	0.001658	47.32%
P 214.914†	6.0	0.0248	mg/L	0.01039	0.0248	mg/L	0.01039	41.90%

Approved: November 11, 2013

Sequence No.: 5 **Autosampler Location: 18**
Sample ID: L1311016301MS WG451648-06 **Date Collected: 11/8/2013 10:10:54 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016301MS WG451648-06

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016301MS WG451648-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2292726.0						43077.19	1.88%
YRADIAL	155899.5						3761.69	2.41%
Ga 417.206	828502.4						11865.56	1.43%
GaRADIAL	44000.4						825.18	1.88%
Ag 328.068†	40917.4	0.192	mg/L	0.0015	0.192	mg/L	0.0015	0.80%
Al 396.153†	12495.0	4.66	mg/L	0.123	4.66	mg/L	0.123	2.65%
As 188.979†	254.1	0.184	mg/L	0.0012	0.184	mg/L	0.0012	0.65%
Ba 233.527†	34161.1	0.492	mg/L	0.0097	0.492	mg/L	0.0097	1.98%
Be 234.861†	13128.4	0.0233	mg/L	0.00027	0.0233	mg/L	0.00027	1.15%
B 249.677†	48713.7	0.982	mg/L	0.0118	0.982	mg/L	0.0118	1.20%
Ca 227.546†	7796.7	48.3	mg/L	0.83	48.3	mg/L	0.83	1.72%
Cd 228.802†	529.0	0.0227	mg/L	0.00024	0.0227	mg/L	0.00024	1.07%
Co 228.616†	1725.3	0.0925	mg/L	0.00260	0.0925	mg/L	0.00260	2.81%
Cr 267.716†	20555.4	0.234	mg/L	0.0023	0.234	mg/L	0.0023	0.97%
Cu 327.393†	36869.3	0.229	mg/L	0.0014	0.229	mg/L	0.0014	0.63%
Fe 239.562†	5250.4	1.99	mg/L	0.071	1.99	mg/L	0.071	3.54%
Mg 279.077†	14379.8	14.7	mg/L	0.47	14.7	mg/L	0.47	3.22%
Mn 257.610†	133803.3	0.268	mg/L	0.0050	0.268	mg/L	0.0050	1.85%
Mo 202.031†	7129.2	0.488	mg/L	0.0120	0.488	mg/L	0.0120	2.46%
Ni 231.604†	7470.5	0.240	mg/L	0.0060	0.240	mg/L	0.0060	2.50%
Pb 220.353†	1258.7	0.238	mg/L	0.0078	0.238	mg/L	0.0078	3.29%
Sb 206.836†	934.5	0.569	mg/L	0.0141	0.569	mg/L	0.0141	2.47%
Se 196.026†	130.4	0.186	mg/L	0.0037	0.186	mg/L	0.0037	2.01%
Si 251.611†	72458.9	2.59	mg/L	0.011	2.59	mg/L	0.011	0.44%
Sn 189.927†	-189.7	-0.0377	mg/L	0.00133	-0.0377	mg/L	0.00133	3.52%
Ti 334.940†	332329.7	0.476	mg/L	0.0052	0.476	mg/L	0.0052	1.10%
Tl 190.801†	347.0	0.235	mg/L	0.0019	0.235	mg/L	0.0019	0.83%
V 290.880†	74275.8	0.461	mg/L	0.0109	0.461	mg/L	0.0109	2.37%
Zn 206.200†	11175.7	0.474	mg/L	0.0118	0.474	mg/L	0.0118	2.48%
K 766.490†	32684.4	25.5	mg/L	0.68	25.5	mg/L	0.68	2.68%
Na 589.592†	322067.7	33.9	mg/L	0.05	33.9	mg/L	0.05	0.14%
Sr 407.771†	543090.7	0.591	mg/L	0.0067	0.591	mg/L	0.0067	1.14%
Li 670.784†	27574.8	0.463	mg/L	0.0114	0.463	mg/L	0.0114	2.46%
P 214.914†	-120.3	-0.128	mg/L	0.0344	-0.128	mg/L	0.0344	26.81%

Sequence No.: 6 **Autosampler Location: 19**
Sample ID: L1311016302 **Date Collected: 11/8/2013 10:12:55 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016302

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016302

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2264053.6						17521.38	0.77%
YRADIAL	154330.4						4637.49	3.00%
Ga 417.206	850094.4						8598.76	1.01%
GaRADIAL	44359.6						480.45	1.08%

Approved: November 11, 2013

Ag 328.068†	379.5	0.00263	mg/L	0.000257	0.00263	mg/L	0.000257	9.74%
Al 396.153†	83.8	-0.00194	mg/L	0.002152	-0.00194	mg/L	0.002152	110.74%
As 188.979†	-10.0	-0.00508	mg/L	0.005438	-0.00508	mg/L	0.005438	107.15%
Ba 233.527†	1615.7	0.0239	mg/L	0.00011	0.0239	mg/L	0.00011	0.47%
Be 234.861†	102.4	0.00025	mg/L	0.000045	0.00025	mg/L	0.000045	18.06%
B 249.677†	2111.4	0.0479	mg/L	0.00139	0.0479	mg/L	0.00139	2.90%
Ca 227.546†	10379.8	64.1	mg/L	1.10	64.1	mg/L	1.10	1.72%
Cd 228.802†	-1.6	-0.00006	mg/L	0.000330	-0.00006	mg/L	0.000330	574.96%
Co 228.616†	4.5	0.00012	mg/L	0.000437	0.00012	mg/L	0.000437	362.48%
Cr 267.716†	79.9	0.00104	mg/L	0.000096	0.00104	mg/L	0.000096	9.28%
Cu 327.393†	198.8	0.00228	mg/L	0.001003	0.00228	mg/L	0.001003	44.03%
Fe 239.562†	385.8	0.139	mg/L	0.0061	0.139	mg/L	0.0061	4.37%
Mg 279.077†	15685.3	16.0	mg/L	0.15	16.0	mg/L	0.15	0.95%
Mn 257.610†	36965.6	0.0728	mg/L	0.00105	0.0728	mg/L	0.00105	1.44%
Mo 202.031†	39.6	0.00329	mg/L	0.000398	0.00329	mg/L	0.000398	12.12%
Ni 231.604†	40.4	0.00150	mg/L	0.000347	0.00150	mg/L	0.000347	23.13%
Pb 220.353†	19.2	0.00223	mg/L	0.001341	0.00223	mg/L	0.001341	60.04%
Sb 206.836†	-1.8	-0.00085	mg/L	0.000850	-0.00085	mg/L	0.000850	99.55%
Se 196.026†	3.5	0.00058	mg/L	0.002799	0.00058	mg/L	0.002799	480.29%
Si 251.611†	29524.9	1.07	mg/L	0.009	1.07	mg/L	0.009	0.89%
Sn 189.927†	-239.8	-0.0474	mg/L	0.00118	-0.0474	mg/L	0.00118	2.49%
Ti 334.940†	-6461.7	-0.00030	mg/L	0.000142	-0.00030	mg/L	0.000142	46.68%
Tl 190.801†	-20.9	-0.0171	mg/L	0.00668	-0.0171	mg/L	0.00668	39.14%
V 290.880†	953.8	0.00656	mg/L	0.002020	0.00656	mg/L	0.002020	30.81%
Zn 206.200†	35.1	0.00127	mg/L	0.000109	0.00127	mg/L	0.000109	8.62%
K 766.490†	4698.9	3.62	mg/L	0.051	3.62	mg/L	0.051	1.41%
Na 589.592†	187789.2	19.7	mg/L	0.17	19.7	mg/L	0.17	0.86%
Sr 407.771†	195251.4	0.212	mg/L	0.0071	0.212	mg/L	0.0071	3.34%
Li 670.784†	150.8	-0.00119	mg/L	0.000739	-0.00119	mg/L	0.000739	62.08%
P 214.914†	11.4	0.0313	mg/L	0.01422	0.0313	mg/L	0.01422	45.48%

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Sequence No.: 7 **Autosampler Location: 20**
Sample ID: L1311016801 **Date Collected: 11/8/2013 10:15:56 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016801

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311016801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2236383.2						27147.97	1.21%
YRADIAL	157166.0						1507.43	0.96%
Ga 417.206	844491.2						8979.34	1.06%
GaRADIAL	44762.0						1107.47	2.47%
Ag 328.068†	365.9	0.00265	mg/L	0.000539	0.00265	mg/L	0.000539	20.33%
Al 396.153†	499.0	0.155	mg/L	0.0030	0.155	mg/L	0.0030	1.92%
As 188.979†	-10.3	-0.00547	mg/L	0.005764	-0.00547	mg/L	0.005764	105.38%
Ba 233.527†	1975.2	0.0291	mg/L	0.00030	0.0291	mg/L	0.00030	1.04%
Be 234.861†	121.2	0.00024	mg/L	0.000006	0.00024	mg/L	0.000006	2.57%
B 249.677†	4727.2	0.100	mg/L	0.0027	0.100	mg/L	0.0027	2.68%
Ca 227.546†	8775.3	54.2	mg/L	1.86	54.2	mg/L	1.86	3.44%
Cd 228.802†	3.1	0.00015	mg/L	0.000047	0.00015	mg/L	0.000047	31.21%
Co 228.616†	-2.8	-0.00028	mg/L	0.000552	-0.00028	mg/L	0.000552	194.26%
Cr 267.716†	184.8	0.00223	mg/L	0.000166	0.00223	mg/L	0.000166	7.46%
Cu 327.393†	270.6	0.00273	mg/L	0.000622	0.00273	mg/L	0.000622	22.76%
Fe 239.562†	768.8	0.284	mg/L	0.0019	0.284	mg/L	0.0019	0.65%
Mg 279.077†	62468.1	63.9	mg/L	0.45	63.9	mg/L	0.45	0.71%
Mn 257.610†	6629.1	0.0116	mg/L	0.00029	0.0116	mg/L	0.00029	2.51%
Mo 202.031†	42.1	0.00345	mg/L	0.000750	0.00345	mg/L	0.000750	21.77%
Ni 231.604†	-5.5	0.00002	mg/L	0.000425	0.00002	mg/L	0.000425	>999.9%
Pb 220.353†	30.1	0.00435	mg/L	0.001815	0.00435	mg/L	0.001815	41.76%
Sb 206.836†	-4.2	-0.00235	mg/L	0.001239	-0.00235	mg/L	0.001239	52.82%
Se 196.026†	-2.5	-0.00816	mg/L	0.007809	-0.00816	mg/L	0.007809	95.70%
Si 251.611†	76071.9	2.73	mg/L	0.083	2.73	mg/L	0.083	3.05%
Sn 189.927†	-214.9	-0.0426	mg/L	0.00124	-0.0426	mg/L	0.00124	2.91%

Approved: November 11, 2013

Ti 334.940†	-4392.2	0.00114	mg/L	0.000257	0.00114	mg/L	0.000257	22.58%
Tl 190.801†	-19.4	-0.0160	mg/L	0.00391	-0.0160	mg/L	0.00391	24.46%
V 290.880†	1556.8	0.00903	mg/L	0.001737	0.00903	mg/L	0.001737	19.24%
Zn 206.200†	73.4	0.00289	mg/L	0.000311	0.00289	mg/L	0.000311	10.76%
K 766.490†	6995.2	5.31	mg/L	0.126	5.31	mg/L	0.126	2.37%
Na 589.592†	1040290.5	111	mg/L	2.8	111	mg/L	2.8	2.55%
Sr 407.771†	188347.3	0.205	mg/L	0.0042	0.205	mg/L	0.0042	2.07%
Li 670.784†	772.9	0.00933	mg/L	0.000717	0.00933	mg/L	0.000717	7.69%
P 214.914†	13.3	0.0336	mg/L	0.01021	0.0336	mg/L	0.01021	30.40%

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Sequence No.: 8 **Autosampler Location: 21**
Sample ID: L1311016803 **Date Collected: 11/8/2013 10:19:01 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016803

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311016803

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2312586.0						50030.11	2.16%
YRADIAL	156559.4						7925.52	5.06%
Ga 417.206	869743.2						25622.71	2.95%
GaRADIAL	43831.6						1330.21	3.03%
Ag 328.068†	224.4	0.00186	mg/L	0.000250	0.00186	mg/L	0.000250	13.46%
Al 396.153†	66.3	-0.00852	mg/L	0.001069	-0.00852	mg/L	0.001069	12.55%
As 188.979†	-10.0	-0.00581	mg/L	0.007071	-0.00581	mg/L	0.007071	121.78%
Ba 233.527†	4250.6	0.0618	mg/L	0.00175	0.0618	mg/L	0.00175	2.83%
Be 234.861†	106.1	0.00027	mg/L	0.000093	0.00027	mg/L	0.000093	34.39%
B 249.677†	806.6	0.0218	mg/L	0.00052	0.0218	mg/L	0.00052	2.39%
Ca 227.546†	4678.0	28.9	mg/L	1.15	28.9	mg/L	1.15	3.96%
Cd 228.802†	0.4	0.00003	mg/L	0.000271	0.00003	mg/L	0.000271	869.61%
Co 228.616†	-2.0	-0.00026	mg/L	0.000218	-0.00026	mg/L	0.000218	85.10%
Cr 267.716†	68.6	0.00092	mg/L	0.000113	0.00092	mg/L	0.000113	12.36%
Cu 327.393†	242.4	0.00255	mg/L	0.000323	0.00255	mg/L	0.000323	12.67%
Fe 239.562†	145.5	0.0477	mg/L	0.00332	0.0477	mg/L	0.00332	6.97%
Mg 279.077†	10442.6	10.7	mg/L	0.31	10.7	mg/L	0.31	2.89%
Mn 257.610†	3345.5	0.00494	mg/L	0.000238	0.00494	mg/L	0.000238	4.83%
Mo 202.031†	22.9	0.00213	mg/L	0.000546	0.00213	mg/L	0.000546	25.64%
Ni 231.604†	-9.6	-0.00011	mg/L	0.000141	-0.00011	mg/L	0.000141	125.85%
Pb 220.353†	10.6	0.00065	mg/L	0.000396	0.00065	mg/L	0.000396	60.87%
Sb 206.836†	-3.5	-0.00193	mg/L	0.000786	-0.00193	mg/L	0.000786	40.76%
Se 196.026†	2.1	-0.00145	mg/L	0.002550	-0.00145	mg/L	0.002550	175.88%
Si 251.611†	95409.4	3.42	mg/L	0.077	3.42	mg/L	0.077	2.25%
Sn 189.927†	-169.0	-0.0337	mg/L	0.00221	-0.0337	mg/L	0.00221	6.56%
Ti 334.940†	-2814.7	-0.00042	mg/L	0.000225	-0.00042	mg/L	0.000225	53.23%
Tl 190.801†	-8.6	-0.00876	mg/L	0.004158	-0.00876	mg/L	0.004158	47.46%
V 290.880†	536.8	0.00412	mg/L	0.000919	0.00412	mg/L	0.000919	22.27%
Zn 206.200†	69.8	0.00273	mg/L	0.000409	0.00273	mg/L	0.000409	14.94%
K 766.490†	3124.3	2.38	mg/L	0.076	2.38	mg/L	0.076	3.17%
Na 589.592†	312349.6	32.9	mg/L	0.84	32.9	mg/L	0.84	2.55%
Sr 407.771†	281768.0	0.307	mg/L	0.0195	0.307	mg/L	0.0195	6.35%
Li 670.784†	284.9	0.00108	mg/L	0.001058	0.00108	mg/L	0.001058	98.20%
P 214.914†	10.8	0.0306	mg/L	0.01150	0.0306	mg/L	0.01150	37.57%

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Sequence No.: 9 **Autosampler Location: 22**
Sample ID: L1311016803PS WG451897-01 **Date Collected: 11/8/2013 10:22:05 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016803PS WG451897-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311016803PS WG451897-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2296545.4						17192.57	0.75%
YRADIAL	153645.9						2236.87	1.46%
Ga 417.206	828762.8						5571.73	0.67%
GaRADIAL	43444.7						503.09	1.16%
Ag 328.068†	42927.9	0.202	mg/L	0.0038	0.202	mg/L	0.0038	1.86%
Al 396.153†	13342.3	4.98	mg/L	0.099	4.98	mg/L	0.099	1.98%
As 188.979†	274.2	0.198	mg/L	0.0077	0.198	mg/L	0.0077	3.86%
Ba 233.527†	37650.8	0.542	mg/L	0.0151	0.542	mg/L	0.0151	2.79%
Be 234.861†	13763.7	0.0244	mg/L	0.00060	0.0244	mg/L	0.00060	2.47%
B 249.677†	49995.7	1.01	mg/L	0.028	1.01	mg/L	0.028	2.81%
Ca 227.546†	5288.2	32.9	mg/L	0.17	32.9	mg/L	0.17	0.52%
Cd 228.802†	553.0	0.0237	mg/L	0.00019	0.0237	mg/L	0.00019	0.82%
Co 228.616†	1797.4	0.0964	mg/L	0.00149	0.0964	mg/L	0.00149	1.55%
Cr 267.716†	21448.9	0.244	mg/L	0.0067	0.244	mg/L	0.0067	2.75%
Cu 327.393†	39129.7	0.243	mg/L	0.0064	0.243	mg/L	0.0064	2.62%
Fe 239.562†	5506.5	2.09	mg/L	0.049	2.09	mg/L	0.049	2.34%
Mg 279.077†	14835.0	15.2	mg/L	0.39	15.2	mg/L	0.39	2.59%
Mn 257.610†	128485.5	0.258	mg/L	0.0078	0.258	mg/L	0.0078	3.03%
Mo 202.031†	7259.1	0.496	mg/L	0.0101	0.496	mg/L	0.0101	2.04%
Ni 231.604†	7548.9	0.243	mg/L	0.0078	0.243	mg/L	0.0078	3.23%
Pb 220.353†	1310.6	0.247	mg/L	0.0049	0.247	mg/L	0.0049	1.97%
Sb 206.836†	980.5	0.597	mg/L	0.0036	0.597	mg/L	0.0036	0.60%
Se 196.026†	134.5	0.192	mg/L	0.0033	0.192	mg/L	0.0033	1.73%
Si 251.611†	159408.4	5.69	mg/L	0.127	5.69	mg/L	0.127	2.22%
Sn 189.927†	-154.5	-0.0309	mg/L	0.00082	-0.0309	mg/L	0.00082	2.65%
Ti 334.940†	346179.6	0.494	mg/L	0.0056	0.494	mg/L	0.0056	1.14%
Tl 190.801†	357.9	0.242	mg/L	0.0014	0.242	mg/L	0.0014	0.57%
V 290.880†	78534.1	0.487	mg/L	0.0176	0.487	mg/L	0.0176	3.61%
Zn 206.200†	11473.5	0.486	mg/L	0.0157	0.486	mg/L	0.0157	3.22%
K 766.490†	34261.9	26.7	mg/L	0.51	26.7	mg/L	0.51	1.90%
Na 589.592†	508317.6	53.7	mg/L	0.26	53.7	mg/L	0.26	0.48%
Sr 407.771†	696956.2	0.759	mg/L	0.0045	0.759	mg/L	0.0045	0.60%
Li 670.784†	29911.3	0.502	mg/L	0.0114	0.502	mg/L	0.0114	2.28%
P 214.914†	-134.8	-0.146	mg/L	0.0372	-0.146	mg/L	0.0372	25.47%

Sequence No.: 10 **Autosampler Location: 23**
Sample ID: L1311016803DL WG451897-02 **Date Collected: 11/8/2013 10:24:10 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016803DL WG451897-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016803DL WG451897-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2322161.2						37538.28	1.62%
YRADIAL	151890.1						3643.43	2.40%
Ga 417.206	845161.9						18713.03	2.21%
GaRADIAL	42933.9						915.38	2.13%
Ag 328.068†	97.0	0.00130	mg/L	0.000318	0.00130	mg/L	0.000318	24.52%
Al 396.153†	9.8	-0.0298	mg/L	0.00291	-0.0298	mg/L	0.00291	9.76%
As 188.979†	-1.8	-0.00040	mg/L	0.002866	-0.00040	mg/L	0.002866	715.02%
Ba 233.527†	827.4	0.0126	mg/L	0.00019	0.0126	mg/L	0.00019	1.48%
Be 234.861†	83.6	0.00024	mg/L	0.000051	0.00024	mg/L	0.000051	21.43%
B 249.677†	782.1	0.0213	mg/L	0.00308	0.0213	mg/L	0.00308	14.48%
Ca 227.546†	926.3	5.75	mg/L	0.134	5.75	mg/L	0.134	2.33%
Cd 228.802†	-1.4	-0.00008	mg/L	0.000138	-0.00008	mg/L	0.000138	178.51%
Co 228.616†	-2.7	-0.00028	mg/L	0.000235	-0.00028	mg/L	0.000235	83.50%
Cr 267.716†	-0.2	0.00014	mg/L	0.000091	0.00014	mg/L	0.000091	67.52%
Cu 327.393†	343.5	0.00317	mg/L	0.000156	0.00317	mg/L	0.000156	4.91%
Fe 239.562†	38.0	0.00691	mg/L	0.002571	0.00691	mg/L	0.002571	37.22%

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Mg 279.077†	2198.8	2.23 mg/L	0.053	2.23 mg/L	0.053	2.39%
Mn 257.610†	695.8	-0.00041 mg/L	0.000049	-0.00041 mg/L	0.000049	11.90%
Mo 202.031†	8.2	0.00112 mg/L	0.000273	0.00112 mg/L	0.000273	24.38%
Ni 231.604†	-5.7	0.00001 mg/L	0.000164	0.00001 mg/L	0.000164	>999.9%
Pb 220.353†	17.2	0.00190 mg/L	0.000299	0.00190 mg/L	0.000299	15.69%
Sb 206.836†	-0.2	0.00011 mg/L	0.001421	0.00011 mg/L	0.001421	>999.9%
Se 196.026†	3.1	-0.00004 mg/L	0.005122	-0.00004 mg/L	0.005122	>999.9%
Si 251.611†	19174.0	0.698 mg/L	0.0172	0.698 mg/L	0.0172	2.46%
Sn 189.927†	-56.2	-0.0118 mg/L	0.00089	-0.0118 mg/L	0.00089	7.50%
Ti 334.940†	-746.9	-0.00097 mg/L	0.000099	-0.00097 mg/L	0.000099	10.21%
Tl 190.801†	4.4	-0.00012 mg/L	0.000928	-0.00012 mg/L	0.000928	757.03%
V 290.880†	217.9	0.00237 mg/L	0.001636	0.00237 mg/L	0.001636	68.91%
Zn 206.200†	30.5	0.00107 mg/L	0.000302	0.00107 mg/L	0.000302	28.21%
K 766.490†	679.1	0.516 mg/L	0.0230	0.516 mg/L	0.0230	4.45%
Na 589.592†	62382.1	6.53 mg/L	0.011	6.53 mg/L	0.011	0.17%
Sr 407.771†	56153.6	0.0623 mg/L	0.00203	0.0623 mg/L	0.00203	3.26%
Li 670.784†	61.9	-0.00269 mg/L	0.000362	-0.00269 mg/L	0.000362	13.43%
P 214.914†	-2.6	0.0143 mg/L	0.00223	0.0143 mg/L	0.00223	15.57%

Sequence No.: 11 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 10:27:09 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2272252.8						9228.94	0.41%
YRADIAL	158285.1						3262.09	2.06%
Ga 417.206	822254.9						11656.18	1.42%
GaRADIAL	43298.7						834.83	1.93%
Ag 328.068†	84111.8	0.395	mg/L	0.0028	0.395	mg/L	0.0028	0.71%
QC value within limits for Ag 328.068 Recovery = 98.66%								
Al 396.153†	26530.6	9.94	mg/L	0.034	9.94	mg/L	0.034	0.34%
QC value within limits for Al 396.153 Recovery = 99.44%								
As 188.979†	553.3	0.398	mg/L	0.0035	0.398	mg/L	0.0035	0.88%
QC value within limits for As 188.979 Recovery = 99.53%								
Ba 233.527†	68706.4	0.988	mg/L	0.0154	0.988	mg/L	0.0154	1.56%
QC value within limits for Ba 233.527 Recovery = 98.78%								
Be 234.861†	27589.8	0.0488	mg/L	0.00041	0.0488	mg/L	0.00041	0.85%
QC value within limits for Be 234.861 Recovery = 97.59%								
B 249.677†	24267.1	0.489	mg/L	0.0092	0.489	mg/L	0.0092	1.88%
QC value within limits for B 249.677 Recovery = 97.84%								
Ca 227.546†	1584.0	10.3	mg/L	0.10	10.3	mg/L	0.10	0.94%
QC value within limits for Ca 227.546 Recovery = 102.59%								
Cd 228.802†	1125.1	0.0483	mg/L	0.00046	0.0483	mg/L	0.00046	0.95%
QC value within limits for Cd 228.802 Recovery = 96.58%								
Co 228.616†	3688.4	0.198	mg/L	0.0022	0.198	mg/L	0.0022	1.13%
QC value within limits for Co 228.616 Recovery = 98.97%								
Cr 267.716†	43187.9	0.492	mg/L	0.0094	0.492	mg/L	0.0094	1.91%
QC value within limits for Cr 267.716 Recovery = 98.43%								
Cu 327.393†	79108.0	0.491	mg/L	0.0034	0.491	mg/L	0.0034	0.68%
QC value within limits for Cu 327.393 Recovery = 98.16%								
Fe 239.562†	10452.0	3.97	mg/L	0.022	3.97	mg/L	0.022	0.56%
QC value within limits for Fe 239.562 Recovery = 99.34%								
Mg 279.077†	9731.2	9.95	mg/L	0.022	9.95	mg/L	0.022	0.22%
QC value within limits for Mg 279.077 Recovery = 99.54%								
Mn 257.610†	250938.8	0.505	mg/L	0.0100	0.505	mg/L	0.0100	1.97%
QC value within limits for Mn 257.610 Recovery = 101.02%								
Mo 202.031†	14399.0	0.984	mg/L	0.0258	0.984	mg/L	0.0258	2.62%
QC value within limits for Mo 202.031 Recovery = 98.42%								
Ni 231.604†	15387.6	0.494	mg/L	0.0104	0.494	mg/L	0.0104	2.11%
QC value within limits for Ni 231.604 Recovery = 98.90%								
Pb 220.353†	2654.2	0.503	mg/L	0.0047	0.503	mg/L	0.0047	0.94%

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   QC value within limits for Pb 220.353  Recovery = 100.52%
Sb 206.836†            1940.4        1.18 mg/L        0.006        1.18 mg/L        0.006   0.55%
   QC value within limits for Sb 206.836  Recovery = 98.43%
Se 196.026†             277.3       0.401 mg/L       0.0143       0.401 mg/L       0.0143   3.56%
   QC value within limits for Se 196.026  Recovery = 100.24%
Si 251.611†          137836.2        4.92 mg/L        0.031        4.92 mg/L        0.031   0.63%
   QC value within limits for Si 251.611  Recovery = 98.35%
Sn 189.927†            5145.4       0.997 mg/L       0.0117       0.997 mg/L       0.0117   1.17%
   QC value within limits for Sn 189.927  Recovery = 99.65%
Ti 334.940†          705005.7       0.998 mg/L       0.0099       0.998 mg/L       0.0099   0.99%
   QC value within limits for Ti 334.940  Recovery = 99.76%
Tl 190.801†             761.4       0.518 mg/L       0.0026       0.518 mg/L       0.0026   0.50%
   QC value within limits for Tl 190.801  Recovery = 103.63%
V 290.880†           156930.3       0.973 mg/L       0.0229       0.973 mg/L       0.0229   2.36%
   QC value within limits for V 290.880  Recovery = 97.35%
Zn 206.200†           23733.1        1.01 mg/L        0.016        1.01 mg/L        0.016   1.60%
   QC value within limits for Zn 206.200  Recovery = 100.61%
K 766.490†            62725.8        49.3 mg/L         0.48        49.3 mg/L         0.48   0.98%
   QC value within limits for K 766.490  Recovery = 98.59%
Na 589.592†          462748.1        48.8 mg/L         1.14        48.8 mg/L         1.14   2.34%
   QC value within limits for Na 589.592  Recovery = 97.65%
Sr 407.771†          871067.3       0.950 mg/L       0.0260       0.950 mg/L       0.0260   2.74%
   QC value within limits for Sr 407.771  Recovery = 94.97%
Li 670.784†           59751.0        1.01 mg/L        0.002        1.01 mg/L        0.002   0.24%
   QC value within limits for Li 670.784  Recovery = 100.66%
P 214.914†             8029.0        9.75 mg/L        0.148        9.75 mg/L        0.148   1.52%
   QC value within limits for P 214.914  Recovery = 97.47%
All analyte(s) passed QC.

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Sequence No.: 12                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 11/8/2013 10:29:14 AM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     171.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units     Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029           2236751.2                                                    27710.57   1.24%
YRADIAL              154653.9                                                     2437.21   1.58%
Ga 417.206           796845.0                                                    11060.66   1.39%
GaRADIAL              42862.4                                                      439.74   1.03%
Ag 328.068†              14.8     0.00093 mg/L      0.000135     0.00093 mg/L      0.000135  14.56%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              19.0     -0.0264 mg/L       0.00188     -0.0264 mg/L       0.00188   7.12%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -2.8    -0.00123 mg/L      0.003005    -0.00123 mg/L      0.003005 243.39%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               0.0     0.00074 mg/L      0.000069     0.00074 mg/L      0.000069   9.24%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              21.1     0.00013 mg/L      0.000033     0.00013 mg/L      0.000033  25.14%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              444.3      0.0145 mg/L       0.00110      0.0145 mg/L       0.00110   7.61%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              12.4       0.110 mg/L        0.0338       0.110 mg/L        0.0338  30.77%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               2.0     0.00007 mg/L      0.000195     0.00007 mg/L      0.000195 265.48%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               0.2    -0.00012 mg/L      0.000122    -0.00012 mg/L      0.000122  98.52%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               7.3     0.00022 mg/L      0.000051     0.00022 mg/L      0.000051  22.85%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             308.8     0.00296 mg/L      0.000679     0.00296 mg/L      0.000679  22.96%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               9.2    -0.00403 mg/L      0.001036    -0.00403 mg/L      0.001036  25.71%
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   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              14.9    -0.00143 mg/L      0.010975    -0.00143 mg/L      0.010975 768.16%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              46.7    -0.00172 mg/L      0.000055    -0.00172 mg/L      0.000055   3.19%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              12.2     0.00139 mg/L      0.000037     0.00139 mg/L      0.000037   2.63%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -8.9    -0.00009 mg/L      0.000163    -0.00009 mg/L      0.000163 178.47%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -0.4    -0.00143 mg/L      0.000925    -0.00143 mg/L      0.000925  64.67%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               3.1     0.00209 mg/L      0.001348     0.00209 mg/L      0.001348  64.47%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               3.9     0.00104 mg/L      0.001775     0.00104 mg/L      0.001775 170.30%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              35.9      0.0153 mg/L       0.00049      0.0153 mg/L       0.00049   3.22%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -2.3    -0.00138 mg/L      0.000943    -0.00138 mg/L      0.000943  68.39%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -14.1    -0.00078 mg/L      0.000046    -0.00078 mg/L      0.000046   5.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.6    -0.00128 mg/L      0.004385    -0.00128 mg/L      0.004385 342.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              529.6     0.00437 mg/L      0.001099     0.00437 mg/L      0.001099  25.16%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -10.9    -0.00068 mg/L      0.000112    -0.00068 mg/L      0.000112  16.56%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -3.5    -0.00538 mg/L      0.015501    -0.00538 mg/L      0.015501 288.20%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             103.6     0.00246 mg/L      0.013852     0.00246 mg/L      0.013852 562.18%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             102.2     0.00148 mg/L      0.000132     0.00148 mg/L      0.000132   8.91%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              84.3    -0.00231 mg/L      0.000597    -0.00231 mg/L      0.000597  25.78%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                2.9      0.0210 mg/L       0.01528      0.0210 mg/L       0.01528  72.89%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 13 **Autosampler Location: 24**
Sample ID: L1311016805 **Date Collected: 11/8/2013 10:32:14 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016805

Analyte	**Back Pressure**	**Flow**
All	171.0 kPa	0.45 L/min

Mean Data: L1311016805

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
Y 371.029	2279553.5						24725.31	1.08%
YRADIAL	153839.1						939.84	0.61%
Ga 417.206	860964.0						12784.35	1.48%
GaRADIAL	44536.2						1234.12	2.77%
Ag 328.068†	300.5	0.00230	mg/L	0.000289	0.00230	mg/L	0.000289	12.54%
Al 396.153†	316.6	0.0862	mg/L	0.00413	0.0862	mg/L	0.00413	4.79%
As 188.979†	-9.5	-0.00507	mg/L	0.001214	-0.00507	mg/L	0.001214	23.94%
Ba 233.527†	2901.3	0.0424	mg/L	0.00041	0.0424	mg/L	0.00041	0.97%
Be 234.861†	117.6	0.00025	mg/L	0.000014	0.00025	mg/L	0.000014	5.54%
B 249.677†	1023.8	0.0261	mg/L	0.00130	0.0261	mg/L	0.00130	4.99%
Ca 227.546†	7669.8	47.3	mg/L	0.70	47.3	mg/L	0.70	1.48%
Cd 228.802†	0.2	0.00002	mg/L	0.000170	0.00002	mg/L	0.000170	777.79%
Co 228.616†	0.3	-0.00012	mg/L	0.000243	-0.00012	mg/L	0.000243	197.41%
Cr 267.716†	146.6	0.00179	mg/L	0.000235	0.00179	mg/L	0.000235	13.08%
Cu 327.393†	377.1	0.00339	mg/L	0.000692	0.00339	mg/L	0.000692	20.43%
Fe 239.562†	590.5	0.217	mg/L	0.0047	0.217	mg/L	0.0047	2.16%
Mg 279.077†	38381.5	39.3	mg/L	0.45	39.3	mg/L	0.45	1.16%

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Mn 257.610†	17866.3	0.0342	mg/L	0.00044	0.0342	mg/L	0.00044 1.28%
Mo 202.031†	31.7	0.00274	mg/L	0.000362	0.00274	mg/L	0.000362 13.22%
Ni 231.604†	-10.2	-0.00013	mg/L	0.000142	-0.00013	mg/L	0.000142 108.96%
Pb 220.353†	24.8	0.00333	mg/L	0.002208	0.00333	mg/L	0.002208 66.34%
Sb 206.836†	-3.1	-0.00165	mg/L	0.000980	-0.00165	mg/L	0.000980 59.40%
Se 196.026†	0.9	-0.00327	mg/L	0.004590	-0.00327	mg/L	0.004590 140.34%
Si 251.611†	71784.5	2.57	mg/L	0.039	2.57	mg/L	0.039 1.50%
Sn 189.927†	-207.2	-0.0411	mg/L	0.00115	-0.0411	mg/L	0.00115 2.79%
Ti 334.940†	-4092.6	0.00054	mg/L	0.000268	0.00054	mg/L	0.000268 49.75%
Tl 190.801†	-14.2	-0.0125	mg/L	0.00409	-0.0125	mg/L	0.00409 32.63%
V 290.880†	931.1	0.00580	mg/L	0.001100	0.00580	mg/L	0.001100 18.97%
Zn 206.200†	94.3	0.00377	mg/L	0.000171	0.00377	mg/L	0.000171 4.54%
K 766.490†	4842.3	3.74	mg/L	0.093	3.74	mg/L	0.093 2.49%
Na 589.592†	89128.8	9.34	mg/L	0.126	9.34	mg/L	0.126 1.35%
Sr 407.771†	210583.9	0.229	mg/L	0.0089	0.229	mg/L	0.0089 3.88%
Li 670.784†	179.7	-0.00070	mg/L	0.001023	-0.00070	mg/L	0.001023 145.74%
P 214.914†	21.3	0.0432	mg/L	0.00694	0.0432	mg/L	0.00694 16.06%

Sequence No.: 14 **Autosampler Location: 25**
Sample ID: L1311016807 **Date Collected: 11/8/2013 10:35:14 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016807

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311016807

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2275437.4						32186.15	1.41%
YRADIAL	150803.6						2537.21	1.68%
Ga 417.206	845983.2						15948.84	1.89%
GaRADIAL	43658.9						432.70	0.99%
Ag 328.068†	181.3	0.00171	mg/L	0.000376	0.00171	mg/L	0.000376	22.02%
Al 396.153†	154.8	0.0250	mg/L	0.00144	0.0250	mg/L	0.00144	5.75%
As 188.979†	-8.0	-0.00438	mg/L	0.002193	-0.00438	mg/L	0.002193	50.09%
Ba 233.527†	3983.5	0.0579	mg/L	0.00077	0.0579	mg/L	0.00077	1.33%
Be 234.861†	109.2	0.00025	mg/L	0.000039	0.00025	mg/L	0.000039	16.00%
B 249.677†	953.1	0.0247	mg/L	0.00146	0.0247	mg/L	0.00146	5.94%
Ca 227.546†	4589.6	28.3	mg/L	0.56	28.3	mg/L	0.56	1.97%
Cd 228.802†	-2.1	-0.00009	mg/L	0.000110	-0.00009	mg/L	0.000110	128.68%
Co 228.616†	2.1	-0.00004	mg/L	0.000164	-0.00004	mg/L	0.000164	433.80%
Cr 267.716†	197.9	0.00238	mg/L	0.000097	0.00238	mg/L	0.000097	4.06%
Cu 327.393†	515.1	0.00424	mg/L	0.000769	0.00424	mg/L	0.000769	18.14%
Fe 239.562†	487.5	0.178	mg/L	0.0021	0.178	mg/L	0.0021	1.20%
Mg 279.077†	12127.0	12.4	mg/L	0.33	12.4	mg/L	0.33	2.69%
Mn 257.610†	10177.7	0.0187	mg/L	0.00026	0.0187	mg/L	0.00026	1.40%
Mo 202.031†	19.0	0.00186	mg/L	0.000458	0.00186	mg/L	0.000458	24.58%
Ni 231.604†	13.4	0.00063	mg/L	0.000552	0.00063	mg/L	0.000552	87.94%
Pb 220.353†	28.6	0.00404	mg/L	0.000191	0.00404	mg/L	0.000191	4.74%
Sb 206.836†	-1.0	-0.00040	mg/L	0.001893	-0.00040	mg/L	0.001893	471.45%
Se 196.026†	-3.2	-0.00922	mg/L	0.003373	-0.00922	mg/L	0.003373	36.58%
Si 251.611†	95266.9	3.41	mg/L	0.034	3.41	mg/L	0.034	0.98%
Sn 189.927†	-154.4	-0.0309	mg/L	0.00131	-0.0309	mg/L	0.00131	4.25%
Ti 334.940†	-1727.3	0.00103	mg/L	0.000156	0.00103	mg/L	0.000156	15.11%
Tl 190.801†	-11.7	-0.0108	mg/L	0.00221	-0.0108	mg/L	0.00221	20.40%
V 290.880†	624.3	0.00460	mg/L	0.000443	0.00460	mg/L	0.000443	9.63%
Zn 206.200†	236.5	0.00978	mg/L	0.000320	0.00978	mg/L	0.000320	3.28%
K 766.490†	3696.3	2.84	mg/L	0.018	2.84	mg/L	0.018	0.64%
Na 589.592†	173819.0	18.3	mg/L	0.14	18.3	mg/L	0.14	0.75%
Sr 407.771†	307803.2	0.336	mg/L	0.0087	0.336	mg/L	0.0087	2.58%
Li 670.784†	426.1	0.00347	mg/L	0.000537	0.00347	mg/L	0.000537	15.50%
P 214.914†	10.7	0.0305	mg/L	0.01576	0.0305	mg/L	0.01576	51.74%

Sequence No.: 15 **Autosampler Location: 26**
Sample ID: L1311016809 **Date Collected: 11/8/2013 10:38:14 AM**

Approved: November 11, 2013

Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311016809

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311016809

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2229585.7						23497.80	1.05%
YRADIAL	150708.0						2437.03	1.62%
Ga 417.206	833258.3						11157.94	1.34%
GaRADIAL	43730.2						389.10	0.89%
Ag 328.068†	345.1	0.00249	mg/L	0.000602	0.00249	mg/L	0.000602	24.14%
Al 396.153†	163.0	0.0281	mg/L	0.00444	0.0281	mg/L	0.00444	15.82%
As 188.979†	-12.0	-0.00695	mg/L	0.002627	-0.00695	mg/L	0.002627	37.80%
Ba 233.527†	5161.0	0.0749	mg/L	0.00081	0.0749	mg/L	0.00081	1.08%
Be 234.861†	88.5	0.00021	mg/L	0.000050	0.00021	mg/L	0.000050	24.10%
B 249.677†	1839.4	0.0424	mg/L	0.00210	0.0424	mg/L	0.00210	4.94%
Ca 227.546†	6929.1	42.8	mg/L	0.56	42.8	mg/L	0.56	1.31%
Cd 228.802†	-0.4	0.00000	mg/L	0.000016	0.00000	mg/L	0.000016	>999.9%
Co 228.616†	-6.8	-0.00052	mg/L	0.000339	-0.00052	mg/L	0.000339	65.29%
Cr 267.716†	132.4	0.00164	mg/L	0.000087	0.00164	mg/L	0.000087	5.35%
Cu 327.393†	271.0	0.00273	mg/L	0.000406	0.00273	mg/L	0.000406	14.88%
Fe 239.562†	532.5	0.195	mg/L	0.0039	0.195	mg/L	0.0039	1.98%
Mg 279.077†	33884.5	34.6	mg/L	0.54	34.6	mg/L	0.54	1.55%
Mn 257.610†	9402.6	0.0172	mg/L	0.00046	0.0172	mg/L	0.00046	2.69%
Mo 202.031†	36.9	0.00309	mg/L	0.000369	0.00309	mg/L	0.000369	11.95%
Ni 231.604†	-13.7	-0.00024	mg/L	0.000562	-0.00024	mg/L	0.000562	231.69%
Pb 220.353†	15.4	0.00156	mg/L	0.000885	0.00156	mg/L	0.000885	56.90%
Sb 206.836†	-2.5	-0.00130	mg/L	0.003308	-0.00130	mg/L	0.003308	254.95%
Se 196.026†	1.5	-0.00242	mg/L	0.006086	-0.00242	mg/L	0.006086	251.46%
Si 251.611†	77445.2	2.78	mg/L	0.052	2.78	mg/L	0.052	1.86%
Sn 189.927†	-195.8	-0.0389	mg/L	0.00105	-0.0389	mg/L	0.00105	2.70%
Ti 334.940†	-3104.4	0.00125	mg/L	0.000204	0.00125	mg/L	0.000204	16.29%
Tl 190.801†	-11.2	-0.0105	mg/L	0.00497	-0.0105	mg/L	0.00497	47.22%
V 290.880†	1338.7	0.00845	mg/L	0.000956	0.00845	mg/L	0.000956	11.31%
Zn 206.200†	80.9	0.00320	mg/L	0.000414	0.00320	mg/L	0.000414	12.93%
K 766.490†	5607.6	4.30	mg/L	0.081	4.30	mg/L	0.081	1.88%
Na 589.592†	431491.4	45.5	mg/L	0.40	45.5	mg/L	0.40	0.88%
Sr 407.771†	272982.7	0.297	mg/L	0.0082	0.297	mg/L	0.0082	2.74%
Li 670.784†	658.6	0.00740	mg/L	0.001408	0.00740	mg/L	0.001408	19.04%
P 214.914†	3.8	0.0221	mg/L	0.00584	0.0221	mg/L	0.00584	26.42%

Sequence No.: 16 **Autosampler Location: 27**
Sample ID: L1311017001 **Date Collected: 11/8/2013 10:41:14 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311017001

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311017001

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2152476.9						23476.88	1.09%
YRADIAL	153251.5						1504.70	0.98%
Ga 417.206	845385.4						4888.65	0.58%
GaRADIAL	44050.9						543.08	1.23%
Ag 328.068†	1032.5	0.00533	mg/L	0.000706	0.00533	mg/L	0.000706	13.25%
Al 396.153†	50.1	-0.0148	mg/L	0.00856	-0.0148	mg/L	0.00856	57.83%
As 188.979†	-9.8	-0.00195	mg/L	0.001143	-0.00195	mg/L	0.001143	58.72%
Ba 233.527†	994.8	0.0150	mg/L	0.00039	0.0150	mg/L	0.00039	2.57%

Approved: November 11, 2013

Be 234.861†	116.0	0.00029	mg/L	0.000030	0.00029	mg/L	0.000030	10.66%
B 249.677†	11839.4	0.243	mg/L	0.0054	0.243	mg/L	0.0054	2.21%
Ca 227.546†	32420.1	200	mg/L	5.1	200	mg/L	5.1	2.55%
Cd 228.802†	2.6	0.00013	mg/L	0.000060	0.00013	mg/L	0.000060	47.74%
Co 228.616†	1.2	-0.00001	mg/L	0.000146	-0.00001	mg/L	0.000146	>999.9%
Cr 267.716†	174.9	0.00213	mg/L	0.000064	0.00213	mg/L	0.000064	3.00%
Cu 327.393†	46.5	0.00131	mg/L	0.000567	0.00131	mg/L	0.000567	43.20%
Fe 239.562†	187.9	0.0625	mg/L	0.00429	0.0625	mg/L	0.00429	6.87%
Mg 279.077†	75988.7	77.7	mg/L	1.29	77.7	mg/L	1.29	1.66%
Mn 257.610†	5621.0	0.00953	mg/L	0.000112	0.00953	mg/L	0.000112	1.17%
Mo 202.031†	53.5	0.00422	mg/L	0.000490	0.00422	mg/L	0.000490	11.61%
Ni 231.604†	46.0	0.00168	mg/L	0.000159	0.00168	mg/L	0.000159	9.48%
Pb 220.353†	16.5	0.00177	mg/L	0.002512	0.00177	mg/L	0.002512	142.18%
Sb 206.836†	-3.0	-0.00161	mg/L	0.002338	-0.00161	mg/L	0.002338	144.82%
Se 196.026†	-0.9	-0.00594	mg/L	0.003288	-0.00594	mg/L	0.003288	55.33%
Si 251.611†	13106.1	0.481	mg/L	0.0102	0.481	mg/L	0.0102	2.12%
Sn 189.927†	-320.7	-0.0631	mg/L	0.00091	-0.0631	mg/L	0.00091	1.44%
Ti 334.940†	-19907.9	0.00107	mg/L	0.000439	0.00107	mg/L	0.000439	40.96%
Tl 190.801†	-26.6	-0.0210	mg/L	0.01255	-0.0210	mg/L	0.01255	59.71%
V 290.880†	2185.3	0.0126	mg/L	0.00147	0.0126	mg/L	0.00147	11.66%
Zn 206.200†	37.1	0.00136	mg/L	0.000446	0.00136	mg/L	0.000446	32.75%
K 766.490†	13289.5	9.72	mg/L	0.252	9.72	mg/L	0.252	2.59%
Na 589.592†	5202325.8	596	mg/L	15.0	596	mg/L	15.0	2.52%
Sr 407.771†	1715357.9	1.86	mg/L	0.105	1.86	mg/L	0.105	5.65%
Li 670.784†	1876.1	0.0280	mg/L	0.00032	0.0280	mg/L	0.00032	1.14%
P 214.914†	24.9	0.0477	mg/L	0.01358	0.0477	mg/L	0.01358	28.48%

Sequence No.: 17 **Autosampler Location: 28**
Sample ID: L1311017002 **Date Collected: 11/8/2013 10:44:19 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311017002

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311017002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2055386.8						31497.80	1.53%
YRADIAL	148648.7						3141.48	2.11%
Ga 417.206	815909.7						14275.15	1.75%
GaRADIAL	43597.5						499.52	1.15%
Ag 328.068†	1229.3	0.00622	mg/L	0.000406	0.00622	mg/L	0.000406	6.53%
Al 396.153†	26.4	-0.0238	mg/L	0.00249	-0.0238	mg/L	0.00249	10.42%
As 188.979†	-6.6	0.00179	mg/L	0.000134	0.00179	mg/L	0.000134	7.47%
Ba 233.527†	99.5	0.00215	mg/L	0.000050	0.00215	mg/L	0.000050	2.31%
Be 234.861†	108.3	0.00025	mg/L	0.000068	0.00025	mg/L	0.000068	27.76%
B 249.677†	24330.6	0.494	mg/L	0.0057	0.494	mg/L	0.0057	1.14%
Ca 227.546†	42684.4	263	mg/L	0.8	263	mg/L	0.8	0.32%
Cd 228.802†	2.5	0.00011	mg/L	0.000267	0.00011	mg/L	0.000267	246.39%
Co 228.616†	0.1	-0.00004	mg/L	0.000193	-0.00004	mg/L	0.000193	471.53%
Cr 267.716†	190.0	0.00229	mg/L	0.000101	0.00229	mg/L	0.000101	4.39%
Cu 327.393†	-257.6	-0.00057	mg/L	0.000567	-0.00057	mg/L	0.000567	98.60%
Fe 239.562†	553.1	0.201	mg/L	0.0081	0.201	mg/L	0.0081	4.01%
Mg 279.077†	90953.9	93.0	mg/L	1.76	93.0	mg/L	1.76	1.89%
Mn 257.610†	41810.7	0.0825	mg/L	0.00093	0.0825	mg/L	0.00093	1.13%
Mo 202.031†	68.8	0.00528	mg/L	0.000692	0.00528	mg/L	0.000692	13.10%
Ni 231.604†	44.1	0.00162	mg/L	0.000389	0.00162	mg/L	0.000389	24.05%
Pb 220.353†	31.3	0.00452	mg/L	0.001923	0.00452	mg/L	0.001923	42.52%
Sb 206.836†	-4.3	-0.00238	mg/L	0.003204	-0.00238	mg/L	0.003204	134.53%
Se 196.026†	2.1	-0.00154	mg/L	0.010407	-0.00154	mg/L	0.010407	677.75%
Si 251.611†	39054.1	1.41	mg/L	0.012	1.41	mg/L	0.012	0.88%
Sn 189.927†	-342.6	-0.0673	mg/L	0.00351	-0.0673	mg/L	0.00351	5.21%
Ti 334.940†	-27457.1	-0.00011	mg/L	0.000713	-0.00011	mg/L	0.000713	664.61%
Tl 190.801†	-31.5	-0.0245	mg/L	0.00466	-0.0245	mg/L	0.00466	19.03%
V 290.880†	2374.1	0.0134	mg/L	0.00149	0.0134	mg/L	0.00149	11.13%
Zn 206.200†	11.6	0.00028	mg/L	0.000297	0.00028	mg/L	0.000297	106.66%

Approved: November 11, 2013

K 766.490†	23909.5	18.6	mg/L	0.32	18.6	mg/L	0.32	1.69%
Na 589.592†	Saturated2							
Sr 407.771†	2037361.6	2.21	mg/L	0.127	2.21	mg/L	0.127	5.73%
Li 670.784†	4860.4	0.0784	mg/L	0.00208	0.0784	mg/L	0.00208	2.65%
P 214.914†	23.8	0.0463	mg/L	0.01404	0.0463	mg/L	0.01404	30.29%

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Sequence No.: 18 **Autosampler Location: 29**
Sample ID: L1311017401 WG451648-02 **Date Collected: 11/8/2013 10:47:23 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311017401 WG451648-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311017401 WG451648-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2071697.1						8336.37	0.40%
YRADIAL	149985.4						2015.45	1.34%
Ga 417.206	796766.8						5451.65	0.68%
GaRADIAL	43794.7						1360.30	3.11%
Ag 328.068†	1333.1	0.00671	mg/L	0.000617	0.00671	mg/L	0.000617	9.20%
Al 396.153†	25.8	-0.0241	mg/L	0.00404	-0.0241	mg/L	0.00404	16.79%
As 188.979†	-14.3	-0.00367	mg/L	0.000667	-0.00367	mg/L	0.000667	18.18%
Ba 233.527†	108.4	0.00228	mg/L	0.000137	0.00228	mg/L	0.000137	6.01%
Be 234.861†	76.1	0.00019	mg/L	0.000008	0.00019	mg/L	0.000008	3.99%
B 249.677†	25150.6	0.511	mg/L	0.0031	0.511	mg/L	0.0031	0.60%
Ca 227.546†	43432.7	268	mg/L	2.1	268	mg/L	2.1	0.78%
Cd 228.802†	-0.6	0.00000	mg/L	0.000397	0.00000	mg/L	0.000397	>999.9%
Co 228.616†	-0.6	-0.00008	mg/L	0.000424	-0.00008	mg/L	0.000424	517.43%
Cr 267.716†	203.8	0.00245	mg/L	0.000255	0.00245	mg/L	0.000255	10.42%
Cu 327.393†	-225.7	-0.00038	mg/L	0.000172	-0.00038	mg/L	0.000172	45.58%
Fe 239.562†	552.2	0.201	mg/L	0.0013	0.201	mg/L	0.0013	0.65%
Mg 279.077†	92480.4	94.6	mg/L	1.41	94.6	mg/L	1.41	1.49%
Mn 257.610†	41263.3	0.0814	mg/L	0.00055	0.0814	mg/L	0.00055	0.68%
Mo 202.031†	75.6	0.00575	mg/L	0.000794	0.00575	mg/L	0.000794	13.81%
Ni 231.604†	53.7	0.00193	mg/L	0.000667	0.00193	mg/L	0.000667	34.54%
Pb 220.353†	26.3	0.00358	mg/L	0.002006	0.00358	mg/L	0.002006	56.06%
Sb 206.836†	-3.7	-0.00207	mg/L	0.001579	-0.00207	mg/L	0.001579	76.39%
Se 196.026†	2.5	-0.00088	mg/L	0.001765	-0.00088	mg/L	0.001765	201.30%
Si 251.611†	39897.5	1.44	mg/L	0.007	1.44	mg/L	0.007	0.50%
Sn 189.927†	-347.5	-0.0683	mg/L	0.00034	-0.0683	mg/L	0.00034	0.50%
Ti 334.940†	-27032.0	0.00119	mg/L	0.000342	0.00119	mg/L	0.000342	28.81%
Tl 190.801†	-37.9	-0.0287	mg/L	0.00238	-0.0287	mg/L	0.00238	8.27%
V 290.880†	2230.1	0.0124	mg/L	0.00217	0.0124	mg/L	0.00217	17.44%
Zn 206.200†	11.9	0.00029	mg/L	0.000201	0.00029	mg/L	0.000201	68.50%
K 766.490†	24213.8	18.9	mg/L	0.60	18.9	mg/L	0.60	3.18%
Na 589.592†	Saturated2							
Sr 407.771†	2007421.1	2.18	mg/L	0.060	2.18	mg/L	0.060	2.74%
Li 670.784†	4946.1	0.0799	mg/L	0.00169	0.0799	mg/L	0.00169	2.11%
P 214.914†	18.2	0.0395	mg/L	0.00315	0.0395	mg/L	0.00315	7.98%

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Sequence No.: 19 **Autosampler Location: 30**
Sample ID: L1311017401MS WG451648-07 **Date Collected: 11/8/2013 10:50:24 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311017401MS WG451648-07

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311017401MS WG451648-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2081909.3						20856.26	1.00%
YRADIAL	148211.4						1198.60	0.81%
Ga 417.206	793203.0						12421.51	1.57%
GaRADIAL	43474.0						214.92	0.49%
Ag 328.068†	40781.6	0.191	mg/L	0.0005	0.191	mg/L	0.0005	0.27%
Al 396.153†	12236.1	4.57	mg/L	0.082	4.57	mg/L	0.082	1.80%
As 188.979†	249.4	0.186	mg/L	0.0016	0.186	mg/L	0.0016	0.88%
Ba 233.527†	31533.0	0.454	mg/L	0.0062	0.454	mg/L	0.0062	1.37%
Be 234.861†	12600.5	0.0223	mg/L	0.00004	0.0223	mg/L	0.00004	0.17%
B 249.677†	71039.0	1.43	mg/L	0.005	1.43	mg/L	0.005	0.34%
Ca 227.546†	44056.0	272	mg/L	0.6	272	mg/L	0.6	0.23%
Cd 228.802†	513.8	0.0220	mg/L	0.00045	0.0220	mg/L	0.00045	2.06%
Co 228.616†	1664.7	0.0893	mg/L	0.00072	0.0893	mg/L	0.00072	0.80%
Cr 267.716†	19705.9	0.225	mg/L	0.0021	0.225	mg/L	0.0021	0.95%
Cu 327.393†	36181.2	0.225	mg/L	0.0005	0.225	mg/L	0.0005	0.24%
Fe 239.562†	5459.8	2.07	mg/L	0.032	2.07	mg/L	0.032	1.56%
Mg 279.077†	96184.5	98.4	mg/L	0.64	98.4	mg/L	0.64	0.65%
Mn 257.610†	153141.8	0.307	mg/L	0.0033	0.307	mg/L	0.0033	1.08%
Mo 202.031†	6991.5	0.478	mg/L	0.0029	0.478	mg/L	0.0029	0.62%
Ni 231.604†	7196.1	0.231	mg/L	0.0019	0.231	mg/L	0.0019	0.83%
Pb 220.353†	1177.8	0.222	mg/L	0.0002	0.222	mg/L	0.0002	0.10%
Sb 206.836†	904.6	0.551	mg/L	0.0043	0.551	mg/L	0.0043	0.78%
Se 196.026†	126.4	0.180	mg/L	0.0135	0.180	mg/L	0.0135	7.50%
Si 251.611†	103923.9	3.71	mg/L	0.019	3.71	mg/L	0.019	0.52%
Sn 189.927†	-339.1	-0.0667	mg/L	0.00241	-0.0667	mg/L	0.00241	3.61%
Ti 334.940†	306382.7	0.473	mg/L	0.0036	0.473	mg/L	0.0036	0.75%
Tl 190.801†	280.1	0.190	mg/L	0.0024	0.190	mg/L	0.0024	1.25%
V 290.880†	75080.9	0.464	mg/L	0.0097	0.464	mg/L	0.0097	2.08%
Zn 206.200†	10819.3	0.459	mg/L	0.0040	0.459	mg/L	0.0040	0.86%
K 766.490†	53729.1	42.2	mg/L	0.58	42.2	mg/L	0.58	1.39%
Na 589.592†	Saturated2							
Sr 407.771†	2448965.0	2.66	mg/L	0.021	2.66	mg/L	0.021	0.79%
Li 670.784†	32741.6	0.550	mg/L	0.0066	0.550	mg/L	0.0066	1.20%
P 214.914†	-111.9	-0.118	mg/L	0.0254	-0.118	mg/L	0.0254	21.52%

Sequence No.: 20 **Autosampler Location: 31**
Sample ID: L1311017901 **Date Collected: 11/8/2013 10:52:27 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311017901

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311017901

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318916.3						34132.88	1.47%
YRADIAL	157166.1						4870.72	3.10%
Ga 417.206	890942.2						10276.39	1.15%
GaRADIAL	45090.2						913.18	2.03%
Ag 328.068†	427.2	0.00314	mg/L	0.000027	0.00314	mg/L	0.000027	0.86%
Al 396.153†	72.7	-0.00641	mg/L	0.001563	-0.00641	mg/L	0.001563	24.40%
As 188.979†	-5.7	-0.00169	mg/L	0.003901	-0.00169	mg/L	0.003901	231.48%
Ba 233.527†	22152.8	0.319	mg/L	0.0048	0.319	mg/L	0.0048	1.52%
Be 234.861†	234.3	0.00033	mg/L	0.000028	0.00033	mg/L	0.000028	8.53%
B 249.677†	27295.5	0.553	mg/L	0.0085	0.553	mg/L	0.0085	1.53%
Ca 227.546†	11050.3	68.2	mg/L	1.27	68.2	mg/L	1.27	1.86%
Cd 228.802†	1.8	0.00011	mg/L	0.000174	0.00011	mg/L	0.000174	165.07%
Co 228.616†	132.7	0.00692	mg/L	0.000315	0.00692	mg/L	0.000315	4.55%
Cr 267.716†	82.5	0.00102	mg/L	0.000165	0.00102	mg/L	0.000165	16.21%
Cu 327.393†	18601.6	0.116	mg/L	0.0019	0.116	mg/L	0.0019	1.67%
Fe 239.562†	2228.8	0.841	mg/L	0.0256	0.841	mg/L	0.0256	3.04%
Mg 279.077†	7168.9	7.32	mg/L	0.220	7.32	mg/L	0.220	3.01%
Mn 257.610†	64034.6	0.127	mg/L	0.0018	0.127	mg/L	0.0018	1.42%
Mo 202.031†	113.3	0.00834	mg/L	0.000713	0.00834	mg/L	0.000713	8.55%
Ni 231.604†	78.8	0.00273	mg/L	0.000115	0.00273	mg/L	0.000115	4.21%

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Pb 220.353†	37.2	0.00559 mg/L	0.003608	0.00559 mg/L	0.003608	64.50%
Sb 206.836†	-7.0	-0.00405 mg/L	0.001921	-0.00405 mg/L	0.001921	47.47%
Se 196.026†	0.9	-0.00315 mg/L	0.003886	-0.00315 mg/L	0.003886	123.30%
Si 251.611†	240813.3	8.60 mg/L	0.034	8.60 mg/L	0.034	0.39%
Sn 189.927†	-249.4	-0.0493 mg/L	0.00135	-0.0493 mg/L	0.00135	2.73%
Ti 334.940†	-6323.5	0.00051 mg/L	0.001137	0.00051 mg/L	0.001137	222.45%
Tl 190.801†	-17.0	-0.0146 mg/L	0.00521	-0.0146 mg/L	0.00521	35.72%
V 290.880†	452.1	0.00354 mg/L	0.000779	0.00354 mg/L	0.000779	21.99%
Zn 206.200†	5784.1	0.244 mg/L	0.0036	0.244 mg/L	0.0036	1.49%
K 766.490†	3550.4	2.73 mg/L	0.085	2.73 mg/L	0.085	3.10%
Na 589.592†	197179.0	20.7 mg/L	0.28	20.7 mg/L	0.28	1.34%
Sr 407.771†	132341.9	0.143 mg/L	0.0040	0.143 mg/L	0.0040	2.79%
Li 670.784†	3502.9	0.0555 mg/L	0.00136	0.0555 mg/L	0.00136	2.45%
P 214.914†	-22.7	-0.0100 mg/L	0.00483	-0.0100 mg/L	0.00483	48.18%

Sequence No.: 21 **Autosampler Location: 32**
Sample ID: L1311019202 **Date Collected: 11/8/2013 10:55:28 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311019202

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019202

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2306606.6						25062.55	1.09%
YRADIAL	155062.8						4527.69	2.92%
Ga 417.206	862101.0						13744.92	1.59%
GaRADIAL	44660.1						763.28	1.71%
Ag 328.068†	249.9	0.00218	mg/L	0.000170	0.00218	mg/L	0.000170	7.81%
Al 396.153†	330.9	0.0917	mg/L	0.00493	0.0917	mg/L	0.00493	5.38%
As 188.979†	-4.3	-0.00160	mg/L	0.004437	-0.00160	mg/L	0.004437	277.18%
Ba 233.527†	2213.7	0.0325	mg/L	0.00035	0.0325	mg/L	0.00035	1.07%
Be 234.861†	133.0	0.00023	mg/L	0.000100	0.00023	mg/L	0.000100	43.54%
B 249.677†	4974.9	0.105	mg/L	0.0005	0.105	mg/L	0.0005	0.47%
Ca 227.546†	4896.6	30.3	mg/L	0.58	30.3	mg/L	0.58	1.92%
Cd 228.802†	-4.2	-0.00019	mg/L	0.000250	-0.00019	mg/L	0.000250	130.07%
Co 228.616†	9.4	0.00035	mg/L	0.000207	0.00035	mg/L	0.000207	59.10%
Cr 267.716†	122.2	0.00150	mg/L	0.000056	0.00150	mg/L	0.000056	3.74%
Cu 327.393†	598.3	0.00477	mg/L	0.000072	0.00477	mg/L	0.000072	1.51%
Fe 239.562†	1223.4	0.458	mg/L	0.0150	0.458	mg/L	0.0150	3.27%
Mg 279.077†	7617.2	7.78	mg/L	0.252	7.78	mg/L	0.252	3.24%
Mn 257.610†	44206.7	0.0874	mg/L	0.00060	0.0874	mg/L	0.00060	0.68%
Mo 202.031†	28.5	0.00253	mg/L	0.000615	0.00253	mg/L	0.000615	24.28%
Ni 231.604†	53.2	0.00191	mg/L	0.000237	0.00191	mg/L	0.000237	12.42%
Pb 220.353†	14.5	0.00133	mg/L	0.003074	0.00133	mg/L	0.003074	231.41%
Sb 206.836†	-0.5	-0.00005	mg/L	0.002763	-0.00005	mg/L	0.002763	>999.9%
Se 196.026†	1.9	-0.00170	mg/L	0.003244	-0.00170	mg/L	0.003244	190.28%
Si 251.611†	74340.7	2.66	mg/L	0.029	2.66	mg/L	0.029	1.08%
Sn 189.927†	-173.1	-0.0345	mg/L	0.00202	-0.0345	mg/L	0.00202	5.84%
Ti 334.940†	-525.1	0.00302	mg/L	0.000843	0.00302	mg/L	0.000843	27.92%
Tl 190.801†	-14.9	-0.0130	mg/L	0.00415	-0.0130	mg/L	0.00415	31.91%
V 290.880†	805.5	0.00580	mg/L	0.001300	0.00580	mg/L	0.001300	22.42%
Zn 206.200†	193.3	0.00793	mg/L	0.000038	0.00793	mg/L	0.000038	0.47%
K 766.490†	9519.0	7.35	mg/L	0.201	7.35	mg/L	0.201	2.74%
Na 589.592†	266437.8	28.0	mg/L	0.30	28.0	mg/L	0.30	1.06%
Sr 407.771†	132485.6	0.145	mg/L	0.0052	0.145	mg/L	0.0052	3.56%
Li 670.784†	159.6	-0.00104	mg/L	0.000227	-0.00104	mg/L	0.000227	21.80%
P 214.914†	51.8	0.0803	mg/L	0.02042	0.0803	mg/L	0.02042	25.43%

Sequence No.: 22 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 10:58:29 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2261421.4						41493.80	1.83%
YRADIAL	155664.3						1703.91	1.09%
Ga 417.206	821637.6						10668.98	1.30%
GaRADIAL	42794.1						497.59	1.16%
Ag 328.068†	87997.6	0.413	mg/L	0.0103	0.413	mg/L	0.0103	2.49%
QC value within limits for Ag 328.068 Recovery = 103.19%								
Al 396.153†	26718.3	10.0	mg/L	0.11	10.0	mg/L	0.11	1.12%
QC value within limits for Al 396.153 Recovery = 100.12%								
As 188.979†	564.4	0.406	mg/L	0.0042	0.406	mg/L	0.0042	1.03%
QC value within limits for As 188.979 Recovery = 101.48%								
Ba 233.527†	71759.4	1.03	mg/L	0.026	1.03	mg/L	0.026	2.54%
QC value within limits for Ba 233.527 Recovery = 103.17%								
Be 234.861†	28808.2	0.0510	mg/L	0.00123	0.0510	mg/L	0.00123	2.41%
QC value within limits for Be 234.861 Recovery = 101.94%								
B 249.677†	25876.3	0.521	mg/L	0.0139	0.521	mg/L	0.0139	2.67%
QC value within limits for B 249.677 Recovery = 104.29%								
Ca 227.546†	1626.2	10.5	mg/L	0.14	10.5	mg/L	0.14	1.34%
QC value within limits for Ca 227.546 Recovery = 105.40%								
Cd 228.802†	1155.5	0.0496	mg/L	0.00062	0.0496	mg/L	0.00062	1.26%
QC value within limits for Cd 228.802 Recovery = 99.21%								
Co 228.616†	3803.6	0.204	mg/L	0.0055	0.204	mg/L	0.0055	2.71%
QC value within limits for Co 228.616 Recovery = 102.09%								
Cr 267.716†	45170.8	0.515	mg/L	0.0131	0.515	mg/L	0.0131	2.55%
QC value within limits for Cr 267.716 Recovery = 102.95%								
Cu 327.393†	82791.1	0.514	mg/L	0.0142	0.514	mg/L	0.0142	2.77%
QC value within limits for Cu 327.393 Recovery = 102.71%								
Fe 239.562†	10646.0	4.05	mg/L	0.016	4.05	mg/L	0.016	0.40%
QC value within limits for Fe 239.562 Recovery = 101.19%								
Mg 279.077†	9952.5	10.2	mg/L	0.11	10.2	mg/L	0.11	1.07%
QC value within limits for Mg 279.077 Recovery = 101.82%								
Mn 257.610†	262620.8	0.529	mg/L	0.0152	0.529	mg/L	0.0152	2.87%
QC value within limits for Mn 257.610 Recovery = 105.74%								
Mo 202.031†	15087.4	1.03	mg/L	0.029	1.03	mg/L	0.029	2.85%
QC value within limits for Mo 202.031 Recovery = 103.12%								
Ni 231.604†	16169.0	0.520	mg/L	0.0141	0.520	mg/L	0.0141	2.71%
QC value within limits for Ni 231.604 Recovery = 103.92%								
Pb 220.353†	2722.7	0.516	mg/L	0.0132	0.516	mg/L	0.0132	2.56%
QC value within limits for Pb 220.353 Recovery = 103.12%								
Sb 206.836†	1990.4	1.21	mg/L	0.024	1.21	mg/L	0.024	1.97%
QC value within limits for Sb 206.836 Recovery = 100.97%								
Se 196.026†	282.1	0.408	mg/L	0.0064	0.408	mg/L	0.0064	1.56%
QC value within limits for Se 196.026 Recovery = 102.00%								
Si 251.611†	144228.0	5.14	mg/L	0.134	5.14	mg/L	0.134	2.61%
QC value within limits for Si 251.611 Recovery = 102.90%								
Sn 189.927†	5301.9	1.03	mg/L	0.027	1.03	mg/L	0.027	2.65%
QC value within limits for Sn 189.927 Recovery = 102.68%								
Ti 334.940†	716864.7	1.01	mg/L	0.014	1.01	mg/L	0.014	1.35%
QC value within limits for Ti 334.940 Recovery = 101.44%								
Tl 190.801†	783.0	0.533	mg/L	0.0111	0.533	mg/L	0.0111	2.07%
QC value within limits for Tl 190.801 Recovery = 106.56%								
V 290.880†	164130.6	1.02	mg/L	0.033	1.02	mg/L	0.033	3.23%
QC value within limits for V 290.880 Recovery = 101.81%								
Zn 206.200†	24674.7	1.05	mg/L	0.028	1.05	mg/L	0.028	2.68%
QC value within limits for Zn 206.200 Recovery = 104.61%								
K 766.490†	64133.9	50.4	mg/L	0.22	50.4	mg/L	0.22	0.43%
QC value within limits for K 766.490 Recovery = 100.83%								
Na 589.592†	481624.0	50.8	mg/L	1.32	50.8	mg/L	1.32	2.60%
QC value within limits for Na 589.592 Recovery = 101.66%								
Sr 407.771†	915061.5	0.998	mg/L	0.0294	0.998	mg/L	0.0294	2.95%
QC value within limits for Sr 407.771 Recovery = 99.76%								
Li 670.784†	60149.5	1.01	mg/L	0.009	1.01	mg/L	0.009	0.85%
QC value within limits for Li 670.784 Recovery = 101.34%								

Approved: November 11, 2013

P 214.914†	8302.1	10.1 mg/L	0.31	10.1 mg/L	0.31	3.10%

QC value within limits for P 214.914 Recovery = 100.78%
All analyte(s) passed QC.

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Sequence No.: 23 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 11:00:34 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2247385.6						20554.10	0.91%
YRADIAL	152419.0						2350.53	1.54%
Ga 417.206	793815.6						9577.83	1.21%
GaRADIAL	42235.4						939.16	2.22%
Ag 328.068†	53.4	0.00111	mg/L	0.000407	0.00111	mg/L	0.000407	36.80%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	24.3	-0.0244	mg/L	0.00276	-0.0244	mg/L	0.00276	11.32%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-3.9	-0.00205	mg/L	0.001522	-0.00205	mg/L	0.001522	74.36%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-4.3	0.00068	mg/L	0.000042	0.00068	mg/L	0.000042	6.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	8.2	0.00011	mg/L	0.000050	0.00011	mg/L	0.000050	46.58%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	704.0	0.0197	mg/L	0.00186	0.0197	mg/L	0.00186	9.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	8.5	0.0854	mg/L	0.04586	0.0854	mg/L	0.04586	53.70%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	0.9	0.00003	mg/L	0.000217	0.00003	mg/L	0.000217	750.36%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-4.7	-0.00039	mg/L	0.000116	-0.00039	mg/L	0.000116	29.90%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	20.5	0.00037	mg/L	0.000062	0.00037	mg/L	0.000062	16.79%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	263.3	0.00268	mg/L	0.000962	0.00268	mg/L	0.000962	35.93%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	5.5	-0.00542	mg/L	0.000494	-0.00542	mg/L	0.000494	9.11%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	19.0	0.00284	mg/L	0.007090	0.00284	mg/L	0.007090	249.51%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	26.3	-0.00176	mg/L	0.000038	-0.00176	mg/L	0.000038	2.17%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	10.6	0.00129	mg/L	0.000164	0.00129	mg/L	0.000164	12.77%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-22.4	-0.00052	mg/L	0.000090	-0.00052	mg/L	0.000090	17.09%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	6.9	-0.00005	mg/L	0.001504	-0.00005	mg/L	0.001504	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.5	0.00176	mg/L	0.001324	0.00176	mg/L	0.001324	75.40%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.0	-0.00306	mg/L	0.002876	-0.00306	mg/L	0.002876	94.12%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	103.0	0.0177	mg/L	0.00140	0.0177	mg/L	0.00140	7.92%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-1.7	-0.00127	mg/L	0.000661	-0.00127	mg/L	0.000661	52.19%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-45.9	-0.00083	mg/L	0.000122	-0.00083	mg/L	0.000122	14.71%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-1.1	-0.00373	mg/L	0.002403	-0.00373	mg/L	0.002403	64.35%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	440.9	0.00382	mg/L	0.001271	0.00382	mg/L	0.001271	33.30%
QC value within limits for V 290.880 Recovery = Not calculated								

Approved: November 11, 2013

Zn 206.200†	-13.9	-0.00080 mg/L	0.000244	-0.00080 mg/L	0.000244	30.45%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	48.2	0.0346 mg/L	0.04347	0.0346 mg/L	0.04347	125.77%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	612.0	0.0557 mg/L	0.04044	0.0557 mg/L	0.04044	72.55%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	86.3	0.00147 mg/L	0.000193	0.00147 mg/L	0.000193	13.13%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	34.6	-0.00316 mg/L	0.000916	-0.00316 mg/L	0.000916	29.04%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	0.7	0.0184 mg/L	0.00872	0.0184 mg/L	0.00872	47.51%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 24 **Autosampler Location: 33**
Sample ID: L1311019204 **Date Collected: 11/8/2013 11:03:34 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311019204

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019204

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2328096.1						18670.77	0.80%
YRADIAL	157426.7						2636.53	1.67%
Ga 417.206	881905.3						12957.79	1.47%
GaRADIAL	45523.3						262.12	0.58%
Ag 328.068†	224.0	0.00217	mg/L	0.000362	0.00217	mg/L	0.000362	16.67%
Al 396.153†	940.3	0.322	mg/L	0.0041	0.322	mg/L	0.0041	1.27%
As 188.979†	-3.9	-0.00129	mg/L	0.002570	-0.00129	mg/L	0.002570	199.75%
Ba 233.527†	2430.1	0.0356	mg/L	0.00029	0.0356	mg/L	0.00029	0.83%
Be 234.861†	262.3	0.00040	mg/L	0.000082	0.00040	mg/L	0.000082	20.57%
B 249.677†	4133.3	0.0883	mg/L	0.00240	0.0883	mg/L	0.00240	2.72%
Ca 227.546†	4738.9	29.3	mg/L	0.44	29.3	mg/L	0.44	1.52%
Cd 228.802†	-3.5	-0.00016	mg/L	0.000170	-0.00016	mg/L	0.000170	106.28%
Co 228.616†	13.9	0.00057	mg/L	0.000224	0.00057	mg/L	0.000224	39.07%
Cr 267.716†	132.5	0.00160	mg/L	0.000166	0.00160	mg/L	0.000166	10.36%
Cu 327.393†	1533.0	0.0106	mg/L	0.00037	0.0106	mg/L	0.00037	3.50%
Fe 239.562†	1968.5	0.742	mg/L	0.0177	0.742	mg/L	0.0177	2.39%
Mg 279.077†	7684.1	7.84	mg/L	0.190	7.84	mg/L	0.190	2.42%
Mn 257.610†	56759.1	0.113	mg/L	0.0021	0.113	mg/L	0.0021	1.89%
Mo 202.031†	37.5	0.00316	mg/L	0.000815	0.00316	mg/L	0.000815	25.79%
Ni 231.604†	123.9	0.00418	mg/L	0.000434	0.00418	mg/L	0.000434	10.38%
Pb 220.353†	29.9	0.00426	mg/L	0.000443	0.00426	mg/L	0.000443	10.40%
Sb 206.836†	0.3	0.00044	mg/L	0.000857	0.00044	mg/L	0.000857	195.62%
Se 196.026†	1.0	-0.00305	mg/L	0.001702	-0.00305	mg/L	0.001702	55.77%
Si 251.611†	89199.1	3.19	mg/L	0.087	3.19	mg/L	0.087	2.71%
Sn 189.927†	-159.7	-0.0319	mg/L	0.00140	-0.0319	mg/L	0.00140	4.39%
Ti 334.940†	4389.3	0.00982	mg/L	0.000531	0.00982	mg/L	0.000531	5.41%
Tl 190.801†	-8.8	-0.00886	mg/L	0.004295	-0.00886	mg/L	0.004295	48.46%
V 290.880†	944.0	0.00661	mg/L	0.001206	0.00661	mg/L	0.001206	18.25%
Zn 206.200†	690.2	0.0289	mg/L	0.00063	0.0289	mg/L	0.00063	2.17%
K 766.490†	10860.8	8.40	mg/L	0.205	8.40	mg/L	0.205	2.44%
Na 589.592†	270191.6	28.4	mg/L	0.03	28.4	mg/L	0.03	0.10%
Sr 407.771†	132041.0	0.144	mg/L	0.0055	0.144	mg/L	0.0055	3.79%
Li 670.784†	168.8	-0.00089	mg/L	0.000195	-0.00089	mg/L	0.000195	21.98%
P 214.914†	199.0	0.259	mg/L	0.0052	0.259	mg/L	0.0052	2.03%

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Sequence No.: 25 **Autosampler Location: 34**
Sample ID: L1311019901 **Date Collected: 11/8/2013 11:06:35 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: L1311019901

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019901

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2280016.4						34027.08	1.49%
YRADIAL	156953.3						2139.78	1.36%
Ga 417.206	861343.3						4740.72	0.55%
GaRADIAL	44471.0						452.40	1.02%
Ag 328.068†	-87.6	0.00185	mg/L	0.000378	0.00185	mg/L	0.000378	20.37%
Al 396.153†	2336.0	0.851	mg/L	0.0057	0.851	mg/L	0.0057	0.66%
As 188.979†	-3.9	-0.00104	mg/L	0.001957	-0.00104	mg/L	0.001957	189.03%
Ba 233.527†	3894.2	0.0564	mg/L	0.00076	0.0564	mg/L	0.00076	1.35%
Be 234.861†	570.9	0.00032	mg/L	0.000032	0.00032	mg/L	0.000032	9.95%
B 249.677†	9654.2	0.198	mg/L	0.0024	0.198	mg/L	0.0024	1.23%
Ca 227.546†	2235.4	13.9	mg/L	0.14	13.9	mg/L	0.14	1.03%
Cd 228.802†	6.0	0.00027	mg/L	0.000144	0.00027	mg/L	0.000144	53.73%
Co 228.616†	21.6	0.00093	mg/L	0.000396	0.00093	mg/L	0.000396	42.85%
Cr 267.716†	458.9	0.00517	mg/L	0.000198	0.00517	mg/L	0.000198	3.82%
Cu 327.393†	6170.2	0.0394	mg/L	0.00051	0.0394	mg/L	0.00051	1.28%
Fe 239.562†	8956.2	3.40	mg/L	0.040	3.40	mg/L	0.040	1.18%
Mg 279.077†	3759.8	3.83	mg/L	0.034	3.83	mg/L	0.034	0.90%
Mn 257.610†	52368.2	0.104	mg/L	0.0008	0.104	mg/L	0.0008	0.73%
Mo 202.031†	61.1	0.00480	mg/L	0.000597	0.00480	mg/L	0.000597	12.43%
Ni 231.604†	187.3	0.00622	mg/L	0.000351	0.00622	mg/L	0.000351	5.65%
Pb 220.353†	21.1	0.00257	mg/L	0.000886	0.00257	mg/L	0.000886	34.46%
Sb 206.836†	-2.4	-0.00117	mg/L	0.002684	-0.00117	mg/L	0.002684	228.58%
Se 196.026†	3.1	0.00055	mg/L	0.001800	0.00055	mg/L	0.001800	326.46%
Si 251.611†	183202.8	6.55	mg/L	0.031	6.55	mg/L	0.031	0.47%
Sn 189.927†	-88.4	-0.0181	mg/L	0.00101	-0.0181	mg/L	0.00101	5.58%
Ti 334.940†	1475.7	0.00338	mg/L	0.000074	0.00338	mg/L	0.000074	2.19%
Tl 190.801†	-2.8	-0.00492	mg/L	0.003696	-0.00492	mg/L	0.003696	75.12%
V 290.880†	553.4	0.00384	mg/L	0.001719	0.00384	mg/L	0.001719	44.81%
Zn 206.200†	34844.9	1.47	mg/L	0.006	1.47	mg/L	0.006	0.37%
K 766.490†	11484.4	8.86	mg/L	0.100	8.86	mg/L	0.100	1.13%
Na 589.592†	503610.9	53.2	mg/L	0.08	53.2	mg/L	0.08	0.15%
Sr 407.771†	72545.4	0.0799	mg/L	0.00120	0.0799	mg/L	0.00120	1.50%
Li 670.784†	181.3	-0.00067	mg/L	0.000458	-0.00067	mg/L	0.000458	67.97%
P 214.914†	3538.0	4.30	mg/L	0.072	4.30	mg/L	0.072	1.67%

Sequence No.: 26 **Autosampler Location: 35**
Sample ID: L1311019902 **Date Collected: 11/8/2013 11:08:39 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311019902

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019902

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2279195.3						49753.35	2.18%
YRADIAL	155695.2						3045.04	1.96%
Ga 417.206	868540.6						21510.19	2.48%
GaRADIAL	44039.4						919.75	2.09%
Ag 328.068†	98.4	0.00240	mg/L	0.000351	0.00240	mg/L	0.000351	14.65%
Al 396.153†	2802.7	1.03	mg/L	0.036	1.03	mg/L	0.036	3.55%
As 188.979†	-9.7	-0.00541	mg/L	0.000276	-0.00541	mg/L	0.000276	5.10%
Ba 233.527†	4881.5	0.0706	mg/L	0.00141	0.0706	mg/L	0.00141	1.99%
Be 234.861†	576.0	0.00051	mg/L	0.000066	0.00051	mg/L	0.000066	13.08%
B 249.677†	7548.0	0.156	mg/L	0.0043	0.156	mg/L	0.0043	2.75%
Ca 227.546†	2252.7	14.0	mg/L	0.37	14.0	mg/L	0.37	2.64%
Cd 228.802†	4.0	0.00020	mg/L	0.000151	0.00020	mg/L	0.000151	75.69%

Approved: November 11, 2013

Co 228.616†	19.0	0.00080 mg/L	0.000207	0.00080 mg/L	0.000207	25.95%
Cr 267.716†	324.5	0.00366 mg/L	0.000188	0.00366 mg/L	0.000188	5.15%
Cu 327.393†	7180.9	0.0455 mg/L	0.00172	0.0455 mg/L	0.00172	3.77%
Fe 239.562†	6967.0	2.65 mg/L	0.025	2.65 mg/L	0.025	0.95%
Mg 279.077†	3765.1	3.83 mg/L	0.032	3.83 mg/L	0.032	0.83%
Mn 257.610†	48630.1	0.0964 mg/L	0.00289	0.0964 mg/L	0.00289	3.00%
Mo 202.031†	68.8	0.00532 mg/L	0.000291	0.00532 mg/L	0.000291	5.46%
Ni 231.604†	142.8	0.00479 mg/L	0.000498	0.00479 mg/L	0.000498	10.40%
Pb 220.353†	32.3	0.00474 mg/L	0.000580	0.00474 mg/L	0.000580	12.23%
Sb 206.836†	-2.0	-0.00091 mg/L	0.004790	-0.00091 mg/L	0.004790	527.23%
Se 196.026†	3.3	0.00073 mg/L	0.001076	0.00073 mg/L	0.001076	147.62%
Si 251.611†	176034.9	6.29 mg/L	0.040	6.29 mg/L	0.040	0.63%
Sn 189.927†	-82.6	-0.0169 mg/L	0.00007	-0.0169 mg/L	0.00007	0.43%
Ti 334.940†	3083.0	0.00567 mg/L	0.000711	0.00567 mg/L	0.000711	12.53%
Tl 190.801†	-5.5	-0.00666 mg/L	0.007203	-0.00666 mg/L	0.007203	108.15%
V 290.880†	326.2	0.00256 mg/L	0.002955	0.00256 mg/L	0.002955	115.61%
Zn 206.200†	5947.1	0.251 mg/L	0.0058	0.251 mg/L	0.0058	2.31%
K 766.490†	12078.7	9.31 mg/L	0.200	9.31 mg/L	0.200	2.14%
Na 589.592†	566313.4	59.8 mg/L	0.46	59.8 mg/L	0.46	0.77%
Sr 407.771†	72465.0	0.0798 mg/L	0.00068	0.0798 mg/L	0.00068	0.86%
Li 670.784†	172.5	-0.00082 mg/L	0.001304	-0.00082 mg/L	0.001304	158.49%
P 214.914†	4426.1	5.38 mg/L	0.139	5.38 mg/L	0.139	2.57%

Sequence No.: 27
Sample ID: L1311019903
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 36
Date Collected: 11/8/2013 11:10:47 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311019903

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019903

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2297781.8						23433.26	1.02%
YRADIAL	157873.7						1813.76	1.15%
Ga 417.206	879527.7						23668.83	2.69%
GaRADIAL	45014.9						217.80	0.48%
Ag 328.068†	140.8	0.00247	mg/L	0.000438	0.00247	mg/L	0.000438	17.73%
Al 396.153†	2297.3	0.836	mg/L	0.0226	0.836	mg/L	0.0226	2.70%
As 188.979†	-2.6	-0.00031	mg/L	0.002491	-0.00031	mg/L	0.002491	796.14%
Ba 233.527†	4144.8	0.0601	mg/L	0.00035	0.0601	mg/L	0.00035	0.58%
Be 234.861†	498.3	0.00044	mg/L	0.000186	0.00044	mg/L	0.000186	42.46%
B 249.677†	7648.9	0.158	mg/L	0.0052	0.158	mg/L	0.0052	3.26%
Ca 227.546†	2275.2	14.1	mg/L	0.37	14.1	mg/L	0.37	2.60%
Cd 228.802†	7.8	0.00034	mg/L	0.000156	0.00034	mg/L	0.000156	45.51%
Co 228.616†	26.6	0.00122	mg/L	0.000223	0.00122	mg/L	0.000223	18.29%
Cr 267.716†	333.2	0.00378	mg/L	0.000049	0.00378	mg/L	0.000049	1.30%
Cu 327.393†	8196.3	0.0518	mg/L	0.00154	0.0518	mg/L	0.00154	2.97%
Fe 239.562†	6209.3	2.36	mg/L	0.055	2.36	mg/L	0.055	2.31%
Mg 279.077†	3844.9	3.92	mg/L	0.082	3.92	mg/L	0.082	2.10%
Mn 257.610†	49455.2	0.0981	mg/L	0.00199	0.0981	mg/L	0.00199	2.02%
Mo 202.031†	90.6	0.00680	mg/L	0.000577	0.00680	mg/L	0.000577	8.48%
Ni 231.604†	127.7	0.00430	mg/L	0.000255	0.00430	mg/L	0.000255	5.94%
Pb 220.353†	38.3	0.00586	mg/L	0.001991	0.00586	mg/L	0.001991	33.98%
Sb 206.836†	-0.7	-0.00014	mg/L	0.000694	-0.00014	mg/L	0.000694	486.07%
Se 196.026†	2.6	-0.00035	mg/L	0.002650	-0.00035	mg/L	0.002650	748.08%
Si 251.611†	183391.0	6.55	mg/L	0.093	6.55	mg/L	0.093	1.42%
Sn 189.927†	-84.4	-0.0173	mg/L	0.00057	-0.0173	mg/L	0.00057	3.27%
Ti 334.940†	3378.6	0.00611	mg/L	0.000259	0.00611	mg/L	0.000259	4.23%
Tl 190.801†	-9.7	-0.00950	mg/L	0.006215	-0.00950	mg/L	0.006215	65.43%
V 290.880†	274.1	0.00228	mg/L	0.002924	0.00228	mg/L	0.002924	128.33%
Zn 206.200†	11080.7	0.467	mg/L	0.0058	0.467	mg/L	0.0058	1.24%
K 766.490†	12700.6	9.79	mg/L	0.259	9.79	mg/L	0.259	2.65%
Na 589.592†	647110.4	68.5	mg/L	0.38	68.5	mg/L	0.38	0.56%
Sr 407.771†	75809.5	0.0835	mg/L	0.00054	0.0835	mg/L	0.00054	0.65%
Li 670.784†	227.8	0.00011	mg/L	0.000465	0.00011	mg/L	0.000465	416.56%

Approved: November 11, 2013

P 214.914†	4635.2	5.63	mg/L	0.054	5.63	mg/L	0.054	0.96%

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Sequence No.: 28 **Autosampler Location: 37**
Sample ID: L1311019904 **Date Collected: 11/8/2013 11:12:50 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311019904

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019904

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2320649.6						48539.85	2.09%
YRADIAL	156977.0						4236.98	2.70%
Ga 417.206	885590.1						32225.54	3.64%
GaRADIAL	44615.7						852.55	1.91%
Ag 328.068†	28.9	0.00189	mg/L	0.000693	0.00189	mg/L	0.000693	36.62%
Al 396.153†	1605.6	0.574	mg/L	0.0206	0.574	mg/L	0.0206	3.59%
As 188.979†	-2.4	-0.00020	mg/L	0.002389	-0.00020	mg/L	0.002389	>999.9%
Ba 233.527†	3910.4	0.0567	mg/L	0.00126	0.0567	mg/L	0.00126	2.22%
Be 234.861†	447.1	0.00038	mg/L	0.000073	0.00038	mg/L	0.000073	19.25%
B 249.677†	6390.8	0.133	mg/L	0.0078	0.133	mg/L	0.0078	5.85%
Ca 227.546†	2285.5	14.2	mg/L	0.50	14.2	mg/L	0.50	3.54%
Cd 228.802†	5.3	0.00023	mg/L	0.000151	0.00023	mg/L	0.000151	65.02%
Co 228.616†	34.5	0.00165	mg/L	0.000207	0.00165	mg/L	0.000207	12.50%
Cr 267.716†	348.6	0.00397	mg/L	0.000337	0.00397	mg/L	0.000337	8.50%
Cu 327.393†	7195.7	0.0456	mg/L	0.00206	0.0456	mg/L	0.00206	4.52%
Fe 239.562†	5837.7	2.22	mg/L	0.070	2.22	mg/L	0.070	3.16%
Mg 279.077†	3749.3	3.82	mg/L	0.121	3.82	mg/L	0.121	3.17%
Mn 257.610†	46186.0	0.0915	mg/L	0.00204	0.0915	mg/L	0.00204	2.23%
Mo 202.031†	81.3	0.00616	mg/L	0.000418	0.00616	mg/L	0.000418	6.79%
Ni 231.604†	147.7	0.00494	mg/L	0.000684	0.00494	mg/L	0.000684	13.84%
Pb 220.353†	23.0	0.00295	mg/L	0.001469	0.00295	mg/L	0.001469	49.77%
Sb 206.836†	-0.5	-0.00003	mg/L	0.001240	-0.00003	mg/L	0.001240	>999.9%
Se 196.026†	0.7	-0.00315	mg/L	0.002723	-0.00315	mg/L	0.002723	86.34%
Si 251.611†	176172.6	6.30	mg/L	0.085	6.30	mg/L	0.085	1.36%
Sn 189.927†	-91.0	-0.0186	mg/L	0.00024	-0.0186	mg/L	0.00024	1.27%
Ti 334.940†	1104.9	0.00291	mg/L	0.000368	0.00291	mg/L	0.000368	12.65%
Tl 190.801†	-3.8	-0.00558	mg/L	0.001729	-0.00558	mg/L	0.001729	30.98%
V 290.880†	299.0	0.00246	mg/L	0.001142	0.00246	mg/L	0.001142	46.42%
Zn 206.200†	13749.8	0.580	mg/L	0.0059	0.580	mg/L	0.0059	1.02%
K 766.490†	12552.3	9.67	mg/L	0.175	9.67	mg/L	0.175	1.81%
Na 589.592†	641060.4	67.8	mg/L	0.63	67.8	mg/L	0.63	0.93%
Sr 407.771†	72521.0	0.0799	mg/L	0.00089	0.0799	mg/L	0.00089	1.11%
Li 670.784†	182.5	-0.00065	mg/L	0.000964	-0.00065	mg/L	0.000964	147.46%
P 214.914†	4331.6	5.27	mg/L	0.095	5.27	mg/L	0.095	1.80%

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Sequence No.: 29 **Autosampler Location: 38**
Sample ID: L1311020201 **Date Collected: 11/8/2013 11:14:53 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020201

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020201

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2377707.7						29586.27	1.24%
YRADIAL	158379.4						602.29	0.38%
Ga 417.206	898274.3						4619.66	0.51%

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GaRADIAL	44512.5				172.13	0.39%
Ag 328.068†	-48.4	0.00168 mg/L	0.000246	0.00168 mg/L	0.000246	14.67%
Al 396.153†	702.5	0.233 mg/L	0.0067	0.233 mg/L	0.0067	2.90%
As 188.979†	-7.4	-0.00383 mg/L	0.002208	-0.00383 mg/L	0.002208	57.65%
Ba 233.527†	1932.1	0.0283 mg/L	0.00047	0.0283 mg/L	0.00047	1.66%
Be 234.861†	504.2	0.00040 mg/L	0.000046	0.00040 mg/L	0.000046	11.64%
B 249.677†	6205.9	0.129 mg/L	0.0013	0.129 mg/L	0.0013	1.00%
Ca 227.546†	1323.1	8.26 mg/L	0.108	8.26 mg/L	0.108	1.31%
Cd 228.802†	-2.3	-0.00009 mg/L	0.000203	-0.00009 mg/L	0.000203	233.25%
Co 228.616†	19.5	0.00084 mg/L	0.000247	0.00084 mg/L	0.000247	29.40%
Cr 267.716†	85.1	0.00091 mg/L	0.000185	0.00091 mg/L	0.000185	20.30%
Cu 327.393†	6068.3	0.0387 mg/L	0.00051	0.0387 mg/L	0.00051	1.31%
Fe 239.562†	6688.1	2.54 mg/L	0.049	2.54 mg/L	0.049	1.95%
Mg 279.077†	2942.3	2.99 mg/L	0.020	2.99 mg/L	0.020	0.67%
Mn 257.610†	27100.6	0.0530 mg/L	0.00168	0.0530 mg/L	0.00168	3.17%
Mo 202.031†	14.4	0.00160 mg/L	0.000493	0.00160 mg/L	0.000493	30.90%
Ni 231.604†	49.7	0.00179 mg/L	0.000148	0.00179 mg/L	0.000148	8.28%
Pb 220.353†	14.3	0.00128 mg/L	0.001557	0.00128 mg/L	0.001557	122.03%
Sb 206.836†	-2.2	-0.00102 mg/L	0.000718	-0.00102 mg/L	0.000718	70.36%
Se 196.026†	-3.4	-0.00910 mg/L	0.003363	-0.00910 mg/L	0.003363	36.94%
Si 251.611†	162825.3	5.82 mg/L	0.030	5.82 mg/L	0.030	0.52%
Sn 189.927†	-59.9	-0.0125 mg/L	0.00009	-0.0125 mg/L	0.00009	0.69%
Ti 334.940†	-121.8	0.00028 mg/L	0.000194	0.00028 mg/L	0.000194	68.72%
Tl 190.801†	-3.6	-0.00544 mg/L	0.006819	-0.00544 mg/L	0.006819	125.23%
V 290.880†	-31.3	0.00038 mg/L	0.003420	0.00038 mg/L	0.003420	900.27%
Zn 206.200†	1734.1	0.0729 mg/L	0.00216	0.0729 mg/L	0.00216	2.96%
K 766.490†	10458.0	8.08 mg/L	0.104	8.08 mg/L	0.104	1.29%
Na 589.592†	318220.4	33.5 mg/L	0.08	33.5 mg/L	0.08	0.23%
Sr 407.771†	43735.5	0.0487 mg/L	0.00012	0.0487 mg/L	0.00012	0.24%
Li 670.784†	-27.8	-0.00421 mg/L	0.000667	-0.00421 mg/L	0.000667	15.85%
P 214.914†	2293.3	2.80 mg/L	0.100	2.80 mg/L	0.100	3.58%

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Sequence No.: 30 **Autosampler Location: 39**
Sample ID: L1311020401 **Date Collected: 11/8/2013 11:17:00 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020401

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020401

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2208154.0						9239.47	0.42%
YRADIAL	155210.7						5789.69	3.73%
Ga 417.206	875006.2						8275.70	0.95%
GaRADIAL	45735.1						512.98	1.12%
Ag 328.068†	1150.9	0.00564	mg/L	0.000333	0.00564	mg/L	0.000333	5.91%
Al 396.153†	41.5	-0.0181	mg/L	0.00282	-0.0181	mg/L	0.00282	15.62%
As 188.979†	-12.6	-0.00332	mg/L	0.004046	-0.00332	mg/L	0.004046	121.83%
Ba 233.527†	1070.0	0.0161	mg/L	0.00020	0.0161	mg/L	0.00020	1.26%
Be 234.861†	153.4	0.00035	mg/L	0.000049	0.00035	mg/L	0.000049	14.14%
B 249.677†	7983.9	0.166	mg/L	0.0018	0.166	mg/L	0.0018	1.06%
Ca 227.546†	36904.2	228	mg/L	1.1	228	mg/L	1.1	0.50%
Cd 228.802†	-8.6	-0.00036	mg/L	0.000243	-0.00036	mg/L	0.000243	68.07%
Co 228.616†	8.3	0.00039	mg/L	0.000313	0.00039	mg/L	0.000313	80.84%
Cr 267.716†	201.3	0.00243	mg/L	0.000128	0.00243	mg/L	0.000128	5.29%
Cu 327.393†	-22.0	0.00089	mg/L	0.000168	0.00089	mg/L	0.000168	18.98%
Fe 239.562†	333.0	0.117	mg/L	0.0046	0.117	mg/L	0.0046	3.94%
Mg 279.077†	134388.1	137	mg/L	3.5	137	mg/L	3.5	2.55%
Mn 257.610†	42850.3	0.0846	mg/L	0.00122	0.0846	mg/L	0.00122	1.45%
Mo 202.031†	59.5	0.00465	mg/L	0.000804	0.00465	mg/L	0.000804	17.31%
Ni 231.604†	86.9	0.00299	mg/L	0.000473	0.00299	mg/L	0.000473	15.80%
Pb 220.353†	25.9	0.00351	mg/L	0.000898	0.00351	mg/L	0.000898	25.61%
Sb 206.836†	-3.5	-0.00190	mg/L	0.002265	-0.00190	mg/L	0.002265	118.91%
Se 196.026†	-0.5	-0.00534	mg/L	0.004829	-0.00534	mg/L	0.004829	90.34%
Si 251.611†	49333.0	1.77	mg/L	0.018	1.77	mg/L	0.018	1.01%

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Sn 189.927†	-329.0	-0.0647 mg/L	0.00076	-0.0647 mg/L	0.00076	1.17%
Ti 334.940†	-24342.6	-0.00105 mg/L	0.000611	-0.00105 mg/L	0.000611	58.10%
Tl 190.801†	-22.8	-0.0187 mg/L	0.00221	-0.0187 mg/L	0.00221	11.85%
V 290.880†	2211.2	0.0112 mg/L	0.00221	0.0112 mg/L	0.00221	19.72%
Zn 206.200†	16.1	0.00048 mg/L	0.000254	0.00048 mg/L	0.000254	53.23%
K 766.490†	6964.8	5.34 mg/L	0.133	5.34 mg/L	0.133	2.49%
Na 589.592†	560547.1	59.2 mg/L	0.91	59.2 mg/L	0.91	1.53%
Sr 407.771†	2847530.5	3.10 mg/L	0.196	3.10 mg/L	0.196	6.33%
Li 670.784†	1656.5	0.0243 mg/L	0.00116	0.0243 mg/L	0.00116	4.78%
P 214.914†	14.8	0.0355 mg/L	0.00544	0.0355 mg/L	0.00544	15.33%

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Sequence No.: 31 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 11:20:08 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2301288.2						16133.31	0.70%
YRADIAL	163312.1						2818.22	1.73%
Ga 417.206	834785.3						7190.80	0.86%
GaRADIAL	44637.3						647.01	1.45%
Ag 328.068†	85678.5	0.402	mg/L	0.0054	0.402	mg/L	0.0054	1.34%
QC value within limits for Ag 328.068 Recovery = 100.49%								
Al 396.153†	26700.2	10.0	mg/L	0.11	10.0	mg/L	0.11	1.14%
QC value within limits for Al 396.153 Recovery = 100.07%								
As 188.979†	558.8	0.402	mg/L	0.0011	0.402	mg/L	0.0011	0.28%
QC value within limits for As 188.979 Recovery = 100.51%								
Ba 233.527†	70244.1	1.01	mg/L	0.024	1.01	mg/L	0.024	2.39%
QC value within limits for Ba 233.527 Recovery = 100.99%								
Be 234.861†	28167.7	0.0498	mg/L	0.00087	0.0498	mg/L	0.00087	1.75%
QC value within limits for Be 234.861 Recovery = 99.65%								
B 249.677†	24953.6	0.503	mg/L	0.0146	0.503	mg/L	0.0146	2.91%
QC value within limits for B 249.677 Recovery = 100.58%								
Ca 227.546†	1617.6	10.5	mg/L	0.05	10.5	mg/L	0.05	0.51%
QC value within limits for Ca 227.546 Recovery = 104.78%								
Cd 228.802†	1145.2	0.0492	mg/L	0.00042	0.0492	mg/L	0.00042	0.86%
QC value within limits for Cd 228.802 Recovery = 98.34%								
Co 228.616†	3774.5	0.203	mg/L	0.0013	0.203	mg/L	0.0013	0.63%
QC value within limits for Co 228.616 Recovery = 101.30%								
Cr 267.716†	44216.6	0.504	mg/L	0.0101	0.504	mg/L	0.0101	2.01%
QC value within limits for Cr 267.716 Recovery = 100.77%								
Cu 327.393†	80682.0	0.501	mg/L	0.0097	0.501	mg/L	0.0097	1.95%
QC value within limits for Cu 327.393 Recovery = 100.10%								
Fe 239.562†	10578.2	4.02	mg/L	0.035	4.02	mg/L	0.035	0.87%
QC value within limits for Fe 239.562 Recovery = 100.54%								
Mg 279.077†	10062.8	10.3	mg/L	0.22	10.3	mg/L	0.22	2.13%
QC value within limits for Mg 279.077 Recovery = 102.94%								
Mn 257.610†	257195.6	0.518	mg/L	0.0138	0.518	mg/L	0.0138	2.66%
QC value within limits for Mn 257.610 Recovery = 103.55%								
Mo 202.031†	14731.8	1.01	mg/L	0.023	1.01	mg/L	0.023	2.31%
QC value within limits for Mo 202.031 Recovery = 100.69%								
Ni 231.604†	15821.7	0.508	mg/L	0.0111	0.508	mg/L	0.0111	2.19%
QC value within limits for Ni 231.604 Recovery = 101.69%								
Pb 220.353†	2694.0	0.510	mg/L	0.0020	0.510	mg/L	0.0020	0.39%
QC value within limits for Pb 220.353 Recovery = 102.03%								
Sb 206.836†	1969.6	1.20	mg/L	0.014	1.20	mg/L	0.014	1.14%
QC value within limits for Sb 206.836 Recovery = 99.91%								
Se 196.026†	279.1	0.404	mg/L	0.0096	0.404	mg/L	0.0096	2.39%
QC value within limits for Se 196.026 Recovery = 100.90%								
Si 251.611†	141723.6	5.06	mg/L	0.099	5.06	mg/L	0.099	1.96%
QC value within limits for Si 251.611 Recovery = 101.12%								
Sn 189.927†	5277.2	1.02	mg/L	0.009	1.02	mg/L	0.009	0.84%

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   QC value within limits for Sn 189.927  Recovery = 102.21%
Ti 334.940†          709150.1       1.00 mg/L        0.012        1.00 mg/L        0.012   1.15%
   QC value within limits for Ti 334.940  Recovery = 100.35%
Tl 190.801†             766.0      0.521 mg/L       0.0033       0.521 mg/L       0.0033   0.63%
   QC value within limits for Tl 190.801  Recovery = 104.26%
V 290.880†           160740.1      0.997 mg/L       0.0311       0.997 mg/L       0.0311   3.12%
   QC value within limits for V 290.880  Recovery = 99.71%
Zn 206.200†           24286.4       1.03 mg/L        0.019        1.03 mg/L        0.019   1.82%
   QC value within limits for Zn 206.200  Recovery = 102.96%
K 766.490†            63996.3       50.3 mg/L         0.43        50.3 mg/L         0.43   0.85%
   QC value within limits for K 766.490  Recovery = 100.62%
Na 589.592†          474552.8       50.1 mg/L         0.57        50.1 mg/L         0.57   1.15%
   QC value within limits for Na 589.592  Recovery = 100.16%
Sr 407.771†          900338.3      0.982 mg/L       0.0145       0.982 mg/L       0.0145   1.47%
   QC value within limits for Sr 407.771  Recovery = 98.16%
Li 670.784†           60145.4       1.01 mg/L        0.007        1.01 mg/L        0.007   0.69%
   QC value within limits for Li 670.784  Recovery = 101.33%
P 214.914†             8232.2       9.99 mg/L        0.077        9.99 mg/L        0.077   0.77%
   QC value within limits for P 214.914  Recovery = 99.93%
All analyte(s) passed QC.

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Sequence No.: 32                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 11/8/2013 11:22:13 AM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     171.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029           2299680.8                                                    40852.81   1.78%
YRADIAL              155712.3                                                     3601.16   2.31%
Ga 417.206           818057.0                                                    14808.10   1.81%
GaRADIAL              42966.0                                                      922.07   2.15%
Ag 328.068†              52.6     0.00110 mg/L      0.000333     0.00110 mg/L      0.000333  30.29%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              22.0     -0.0252 mg/L       0.00365     -0.0252 mg/L       0.00365  14.44%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               0.7     0.00132 mg/L      0.004511     0.00132 mg/L      0.004511 341.43%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               3.2     0.00079 mg/L      0.000129     0.00079 mg/L      0.000129  16.40%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              55.1     0.00019 mg/L      0.000029     0.00019 mg/L      0.000029  15.13%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              362.0      0.0129 mg/L       0.00113      0.0129 mg/L       0.00113   8.80%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               9.8      0.0940 mg/L       0.02562      0.0940 mg/L       0.02562  27.26%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -1.2    -0.00008 mg/L      0.000205    -0.00008 mg/L      0.000205 259.93%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -3.7    -0.00034 mg/L      0.000431    -0.00034 mg/L      0.000431 128.53%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               0.9     0.00015 mg/L      0.000024     0.00015 mg/L      0.000024  15.79%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             160.0     0.00204 mg/L      0.000208     0.00204 mg/L      0.000208  10.19%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               7.6    -0.00462 mg/L      0.000524    -0.00462 mg/L      0.000524  11.34%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              25.9     0.00983 mg/L      0.002852     0.00983 mg/L      0.002852  29.01%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              49.0    -0.00171 mg/L      0.000043    -0.00171 mg/L      0.000043   2.50%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               9.3     0.00119 mg/L      0.000396     0.00119 mg/L      0.000396  33.23%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -0.4     0.00018 mg/L      0.000255     0.00018 mg/L      0.000255 141.42%
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   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -3.0    -0.00192 mg/L      0.001958    -0.00192 mg/L      0.001958 102.03%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               2.7     0.00187 mg/L      0.001886     0.00187 mg/L      0.001886 100.71%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.1    -0.00293 mg/L      0.002511    -0.00293 mg/L      0.002511  85.62%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             448.9      0.0300 mg/L       0.00136      0.0300 mg/L       0.00136   4.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -10.1    -0.00290 mg/L      0.000945    -0.00290 mg/L      0.000945  32.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -28.0    -0.00080 mg/L      0.000129    -0.00080 mg/L      0.000129  16.11%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.0    -0.00165 mg/L      0.007086    -0.00165 mg/L      0.007086 429.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              294.0     0.00291 mg/L      0.002326     0.00291 mg/L      0.002326  80.05%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -13.5    -0.00079 mg/L      0.000286    -0.00079 mg/L      0.000286  36.35%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               29.6      0.0202 mg/L       0.01276      0.0202 mg/L       0.01276  63.26%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             765.4      0.0718 mg/L       0.03635      0.0718 mg/L       0.03635  50.62%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             232.0     0.00163 mg/L      0.000151     0.00163 mg/L      0.000151   9.32%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              32.4    -0.00319 mg/L      0.002203    -0.00319 mg/L      0.002203  69.03%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                6.3      0.0252 mg/L       0.00622      0.0252 mg/L       0.00622  24.72%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.
```

Approved: November 11, 2013

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Analysis Begun

Start Time: 11/8/2013 11:27:31 AM **Plasma On Time: 11/8/2013 6:59:30 AM**
Logged In Analyst: peicp2 **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N4011401 **Autosampler Model: Cetac**

Sample Information File: C:\pe\peicp2\Sample Information\FRIDAY1.sif
Batch ID:
Results Data Set: 110813H3R
Results Library: C:\pe\peicp2\Results\results1.mdb

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Sequence No.: 1 **Autosampler Location: 40**
Sample ID: PBW 1B WG451658-03 **Date Collected: 11/8/2013 11:27:33 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 1B WG451658-03

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: PBW 1B WG451658-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2259555.8						12248.36	0.54%
YRADIAL	160539.8						1645.93	1.03%
Ga 417.206	803852.5						10553.03	1.31%
GaRADIAL	42286.5						1449.62	3.43%
Ag 328.068†	206.1	0.00181	mg/L	0.000417	0.00181	mg/L	0.000417	23.06%
Al 396.153†	-0.2	-0.0336	mg/L	0.00173	-0.0336	mg/L	0.00173	5.15%
As 188.979†	-4.1	-0.00221	mg/L	0.000519	-0.00221	mg/L	0.000519	23.43%
Ba 233.527†	3.0	0.00079	mg/L	0.000020	0.00079	mg/L	0.000020	2.54%
Be 234.861†	21.0	0.00013	mg/L	0.000032	0.00013	mg/L	0.000032	24.92%
B 249.677†	21.7	0.00602	mg/L	0.000601	0.00602	mg/L	0.000601	9.99%
Ca 227.546†	7.2	0.0777	mg/L	0.05221	0.0777	mg/L	0.05221	67.21%
Cd 228.802†	-0.2	-0.00002	mg/L	0.000140	-0.00002	mg/L	0.000140	728.61%
Co 228.616†	-2.3	-0.00026	mg/L	0.000458	-0.00026	mg/L	0.000458	177.30%
Cr 267.716†	10.2	0.00025	mg/L	0.000173	0.00025	mg/L	0.000173	68.46%
Cu 327.393†	169.6	0.00210	mg/L	0.000784	0.00210	mg/L	0.000784	37.37%
Fe 239.562†	10.0	-0.00374	mg/L	0.000857	-0.00374	mg/L	0.000857	22.88%
Mg 279.077†	14.6	-0.00166	mg/L	0.001500	-0.00166	mg/L	0.001500	90.34%
Mn 257.610†	243.5	-0.00132	mg/L	0.000030	-0.00132	mg/L	0.000030	2.23%
Mo 202.031†	-1.8	0.00043	mg/L	0.000453	0.00043	mg/L	0.000453	104.61%
Ni 231.604†	-10.1	-0.00013	mg/L	0.000346	-0.00013	mg/L	0.000346	269.49%
Pb 220.353†	-14.1	-0.00403	mg/L	0.001118	-0.00403	mg/L	0.001118	27.72%
Sb 206.836†	0.3	0.00038	mg/L	0.001987	0.00038	mg/L	0.001987	517.25%
Se 196.026†	2.3	-0.00127	mg/L	0.004346	-0.00127	mg/L	0.004346	342.87%
Si 251.611†	323.3	0.0256	mg/L	0.00089	0.0256	mg/L	0.00089	3.47%
Sn 189.927†	-9.6	-0.00279	mg/L	0.001225	-0.00279	mg/L	0.001225	43.85%
Ti 334.940†	-163.5	-0.00099	mg/L	0.000376	-0.00099	mg/L	0.000376	37.78%
Tl 190.801†	-4.5	-0.00602	mg/L	0.003595	-0.00602	mg/L	0.003595	59.68%
V 290.880†	-2.4	0.00107	mg/L	0.001914	0.00107	mg/L	0.001914	179.28%
Zn 206.200†	33.2	0.00119	mg/L	0.000321	0.00119	mg/L	0.000321	27.05%
K 766.490†	12.4	0.00691	mg/L	0.045316	0.00691	mg/L	0.045316	655.84%
Na 589.592†	114.0	0.00356	mg/L	0.015059	0.00356	mg/L	0.015059	422.98%
Sr 407.771†	-11.7	0.00136	mg/L	0.000040	0.00136	mg/L	0.000040	2.92%
Li 670.784†	-34.4	-0.00432	mg/L	0.000677	-0.00432	mg/L	0.000677	15.65%
P 214.914†	-20.7	-0.00758	mg/L	0.017029	-0.00758	mg/L	0.017029	224.66%

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Sequence No.: 2 **Autosampler Location: 41**
Sample ID: LCSW 1B WG451658-04 **Date Collected: 11/8/2013 11:30:34 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Sheri L. Pabgard

Nebulizer Parameters: LCSW 1B WG451658-04

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: LCSW 1B WG451658-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2317310.8						37253.90	1.61%
YRADIAL	159304.5						392.27	0.25%
Ga 417.206	841968.1						24032.03	2.85%
GaRADIAL	44980.1						403.24	0.90%
Ag 328.068†	41407.1	0.195	mg/L	0.0041	0.195	mg/L	0.0041	2.09%
Al 396.153†	12345.0	4.61	mg/L	0.095	4.61	mg/L	0.095	2.07%
As 188.979†	258.3	0.186	mg/L	0.0020	0.186	mg/L	0.0020	1.07%
Ba 233.527†	33274.6	0.479	mg/L	0.0097	0.479	mg/L	0.0097	2.02%
Be 234.861†	13141.5	0.0233	mg/L	0.00048	0.0233	mg/L	0.00048	2.05%
B 249.677†	46870.8	0.945	mg/L	0.0203	0.945	mg/L	0.0203	2.15%
Ca 227.546†	752.3	4.90	mg/L	0.064	4.90	mg/L	0.064	1.30%
Cd 228.802†	533.1	0.0229	mg/L	0.00050	0.0229	mg/L	0.00050	2.19%
Co 228.616†	1796.7	0.0964	mg/L	0.00218	0.0964	mg/L	0.00218	2.26%
Cr 267.716†	20983.9	0.239	mg/L	0.0043	0.239	mg/L	0.0043	1.81%
Cu 327.393†	38724.3	0.241	mg/L	0.0062	0.241	mg/L	0.0062	2.57%
Fe 239.562†	5008.9	1.90	mg/L	0.063	1.90	mg/L	0.063	3.33%
Mg 279.077†	4674.2	4.77	mg/L	0.124	4.77	mg/L	0.124	2.60%
Mn 257.610†	122451.3	0.246	mg/L	0.0053	0.246	mg/L	0.0053	2.14%
Mo 202.031†	7022.4	0.480	mg/L	0.0115	0.480	mg/L	0.0115	2.40%
Ni 231.604†	7542.6	0.242	mg/L	0.0037	0.242	mg/L	0.0037	1.53%
Pb 220.353†	1284.7	0.243	mg/L	0.0032	0.243	mg/L	0.0032	1.34%
Sb 206.836†	932.2	0.568	mg/L	0.0145	0.568	mg/L	0.0145	2.55%
Se 196.026†	130.2	0.186	mg/L	0.0072	0.186	mg/L	0.0072	3.88%
Si 251.611†	66910.6	2.39	mg/L	0.043	2.39	mg/L	0.043	1.82%
Sn 189.927†	2600.1	0.503	mg/L	0.0091	0.503	mg/L	0.0091	1.81%
Ti 334.940†	336594.0	0.476	mg/L	0.0062	0.476	mg/L	0.0062	1.29%
Tl 190.801†	369.2	0.250	mg/L	0.0060	0.250	mg/L	0.0060	2.39%
V 290.880†	75956.2	0.472	mg/L	0.0127	0.472	mg/L	0.0127	2.70%
Zn 206.200†	11377.6	0.482	mg/L	0.0112	0.482	mg/L	0.0112	2.33%
K 766.490†	29521.4	23.0	mg/L	0.54	23.0	mg/L	0.54	2.33%
Na 589.592†	223040.3	23.4	mg/L	0.16	23.4	mg/L	0.16	0.67%
Sr 407.771†	439355.0	0.480	mg/L	0.0013	0.480	mg/L	0.0013	0.28%
Li 670.784†	27850.3	0.467	mg/L	0.0140	0.467	mg/L	0.0140	2.99%
P 214.914†	-151.0	-0.165	mg/L	0.0308	-0.165	mg/L	0.0308	18.63%

Sequence No.: 3
Sample ID: L1310174804 WG451658-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 11/8/2013 11:32:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1310174804 WG451658-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1310174804 WG451658-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2331592.4						35358.95	1.52%
YRADIAL	157903.8						2095.43	1.33%
Ga 417.206	852523.1						12476.67	1.46%
GaRADIAL	44487.8						472.41	1.06%
Ag 328.068†	35.5	0.00112	mg/L	0.000414	0.00112	mg/L	0.000414	37.00%
Al 396.153†	227.3	0.0526	mg/L	0.00318	0.0526	mg/L	0.00318	6.05%
As 188.979†	-1.6	-0.00031	mg/L	0.000926	-0.00031	mg/L	0.000926	300.86%
Ba 233.527†	685.2	0.0106	mg/L	0.00007	0.0106	mg/L	0.00007	0.64%
Be 234.861†	100.4	0.00022	mg/L	0.000028	0.00022	mg/L	0.000028	12.85%
B 249.677†	636.5	0.0183	mg/L	0.00206	0.0183	mg/L	0.00206	11.30%
Ca 227.546†	301.7	1.90	mg/L	0.071	1.90	mg/L	0.071	3.73%
Cd 228.802†	-4.9	-0.00023	mg/L	0.000129	-0.00023	mg/L	0.000129	55.28%
Co 228.616†	2.2	-0.00003	mg/L	0.000110	-0.00003	mg/L	0.000110	351.06%

Approved: November 11, 2013

Cr 267.716†	31.9	0.00048 mg/L	0.000170	0.00048 mg/L	0.000170	35.03%
Cu 327.393†	267.1	0.00271 mg/L	0.000556	0.00271 mg/L	0.000556	20.50%
Fe 239.562†	643.0	0.237 mg/L	0.0049	0.237 mg/L	0.0049	2.05%
Mg 279.077†	816.2	0.818 mg/L	0.0162	0.818 mg/L	0.0162	1.98%
Mn 257.610†	9431.7	0.0172 mg/L	0.00028	0.0172 mg/L	0.00028	1.60%
Mo 202.031†	3.5	0.00080 mg/L	0.000568	0.00080 mg/L	0.000568	70.62%
Ni 231.604†	3.3	0.00030 mg/L	0.000025	0.00030 mg/L	0.000025	8.20%
Pb 220.353†	4.3	-0.00055 mg/L	0.000979	-0.00055 mg/L	0.000979	178.09%
Sb 206.836†	2.0	0.00143 mg/L	0.002599	0.00143 mg/L	0.002599	181.94%
Se 196.026†	0.3	-0.00405 mg/L	0.001500	-0.00405 mg/L	0.001500	37.00%
Si 251.611†	116024.4	4.15 mg/L	0.059	4.15 mg/L	0.059	1.42%
Sn 189.927†	-22.5	-0.00531 mg/L	0.000754	-0.00531 mg/L	0.000754	14.21%
Ti 334.940†	621.8	0.00039 mg/L	0.000144	0.00039 mg/L	0.000144	37.04%
Tl 190.801†	0.1	-0.00293 mg/L	0.001687	-0.00293 mg/L	0.001687	57.68%
V 290.880†	485.0	0.00403 mg/L	0.002954	0.00403 mg/L	0.002954	73.32%
Zn 206.200†	72.0	0.00281 mg/L	0.000168	0.00281 mg/L	0.000168	5.96%
K 766.490†	621.2	0.477 mg/L	0.0160	0.477 mg/L	0.0160	3.36%
Na 589.592†	14406.3	1.50 mg/L	0.016	1.50 mg/L	0.016	1.07%
Sr 407.771†	12397.1	0.0148 mg/L	0.00046	0.0148 mg/L	0.00046	3.12%
Li 670.784†	95.3	-0.00213 mg/L	0.001310	-0.00213 mg/L	0.001310	61.54%
P 214.914†	3.2	0.0214 mg/L	0.00947	0.0214 mg/L	0.00947	44.33%

Sequence No.: 4 **Autosampler Location: 43**
Sample ID: L1310174805MS WG451658-05 **Date Collected: 11/8/2013 11:35:38 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1310174805MS WG451658-05

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1310174805MS WG451658-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2303121.2						54798.73	2.38%
YRADIAL	153931.3						4948.19	3.21%
Ga 417.206	838238.0						10258.07	1.22%
GaRADIAL	43829.6						1061.21	2.42%
Ag 328.068†	42630.0	0.201	mg/L	0.0060	0.201	mg/L	0.0060	3.01%
Al 396.153†	13303.3	4.97	mg/L	0.152	4.97	mg/L	0.152	3.07%
As 188.979†	265.5	0.191	mg/L	0.0019	0.191	mg/L	0.0019	1.01%
Ba 233.527†	34777.2	0.500	mg/L	0.0223	0.500	mg/L	0.0223	4.46%
Be 234.861†	13583.2	0.0240	mg/L	0.00082	0.0240	mg/L	0.00082	3.40%
B 249.677†	48981.6	0.987	mg/L	0.0406	0.987	mg/L	0.0406	4.11%
Ca 227.546†	1067.2	6.85	mg/L	0.073	6.85	mg/L	0.073	1.06%
Cd 228.802†	544.4	0.0234	mg/L	0.00030	0.0234	mg/L	0.00030	1.27%
Co 228.616†	1831.2	0.0982	mg/L	0.00313	0.0982	mg/L	0.00313	3.19%
Cr 267.716†	21663.0	0.247	mg/L	0.0098	0.247	mg/L	0.0098	3.98%
Cu 327.393†	39834.1	0.248	mg/L	0.0081	0.248	mg/L	0.0081	3.26%
Fe 239.562†	6108.4	2.32	mg/L	0.097	2.32	mg/L	0.097	4.19%
Mg 279.077†	5769.0	5.89	mg/L	0.273	5.89	mg/L	0.273	4.62%
Mn 257.610†	143986.3	0.289	mg/L	0.0144	0.289	mg/L	0.0144	4.99%
Mo 202.031†	7220.9	0.494	mg/L	0.0177	0.494	mg/L	0.0177	3.59%
Ni 231.604†	7738.5	0.249	mg/L	0.0112	0.249	mg/L	0.0112	4.51%
Pb 220.353†	1307.9	0.247	mg/L	0.0082	0.247	mg/L	0.0082	3.32%
Sb 206.836†	948.2	0.577	mg/L	0.0111	0.577	mg/L	0.0111	1.93%
Se 196.026†	133.2	0.190	mg/L	0.0030	0.190	mg/L	0.0030	1.60%
Si 251.611†	177141.8	6.32	mg/L	0.020	6.32	mg/L	0.020	0.31%
Sn 189.927†	2514.8	0.487	mg/L	0.0158	0.487	mg/L	0.0158	3.25%
Ti 334.940†	341773.5	0.484	mg/L	0.0036	0.484	mg/L	0.0036	0.74%
Tl 190.801†	371.2	0.251	mg/L	0.0035	0.251	mg/L	0.0035	1.39%
V 290.880†	78558.7	0.488	mg/L	0.0295	0.488	mg/L	0.0295	6.04%
Zn 206.200†	11645.1	0.494	mg/L	0.0240	0.494	mg/L	0.0240	4.86%
K 766.490†	31675.6	24.7	mg/L	0.77	24.7	mg/L	0.77	3.13%
Na 589.592†	240790.2	25.3	mg/L	0.12	25.3	mg/L	0.12	0.48%
Sr 407.771†	462143.0	0.504	mg/L	0.0025	0.504	mg/L	0.0025	0.49%
Li 670.784†	29268.9	0.491	mg/L	0.0159	0.491	mg/L	0.0159	3.24%
P 214.914†	-141.2	-0.154	mg/L	0.0368	-0.154	mg/L	0.0368	23.97%

Approved: November 11, 2013

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Sequence No.: 5 **Autosampler Location: 44**
Sample ID: L1310174806SD WG451658-06 **Date Collected: 11/8/2013 11:37:42 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1310174806SD WG451658-06

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1310174806SD WG451658-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318721.7						3331.54	0.14%
YRADIAL	154640.4						1988.46	1.29%
Ga 417.206	845928.3						16569.42	1.96%
GaRADIAL	43536.2						358.77	0.82%
Ag 328.068†	42327.3	0.199	mg/L	0.0011	0.199	mg/L	0.0011	0.56%
Al 396.153†	13318.0	4.98	mg/L	0.085	4.98	mg/L	0.085	1.71%
As 188.979†	268.2	0.193	mg/L	0.0042	0.193	mg/L	0.0042	2.15%
Ba 233.527†	34606.7	0.498	mg/L	0.0105	0.498	mg/L	0.0105	2.10%
Be 234.861†	13512.3	0.0239	mg/L	0.00027	0.0239	mg/L	0.00027	1.13%
B 249.677†	49589.2	1.000	mg/L	0.0074	1.000	mg/L	0.0074	0.74%
Ca 227.546†	1064.0	6.83	mg/L	0.011	6.83	mg/L	0.011	0.16%
Cd 228.802†	540.4	0.0232	mg/L	0.00031	0.0232	mg/L	0.00031	1.34%
Co 228.616†	1827.2	0.0980	mg/L	0.00172	0.0980	mg/L	0.00172	1.75%
Cr 267.716†	21443.8	0.244	mg/L	0.0047	0.244	mg/L	0.0047	1.90%
Cu 327.393†	39619.5	0.246	mg/L	0.0016	0.246	mg/L	0.0016	0.67%
Fe 239.562†	6070.9	2.30	mg/L	0.060	2.30	mg/L	0.060	2.60%
Mg 279.077†	5689.4	5.81	mg/L	0.174	5.81	mg/L	0.174	2.99%
Mn 257.610†	143046.9	0.287	mg/L	0.0069	0.287	mg/L	0.0069	2.41%
Mo 202.031†	7198.8	0.492	mg/L	0.0100	0.492	mg/L	0.0100	2.03%
Ni 231.604†	7690.9	0.247	mg/L	0.0054	0.247	mg/L	0.0054	2.19%
Pb 220.353†	1313.1	0.248	mg/L	0.0031	0.248	mg/L	0.0031	1.23%
Sb 206.836†	946.2	0.576	mg/L	0.0077	0.576	mg/L	0.0077	1.34%
Se 196.026†	131.3	0.188	mg/L	0.0095	0.188	mg/L	0.0095	5.05%
Si 251.611†	177146.2	6.32	mg/L	0.035	6.32	mg/L	0.035	0.55%
Sn 189.927†	2367.0	0.458	mg/L	0.0073	0.458	mg/L	0.0073	1.60%
Ti 334.940†	344558.1	0.487	mg/L	0.0113	0.487	mg/L	0.0113	2.31%
Tl 190.801†	369.4	0.250	mg/L	0.0051	0.250	mg/L	0.0051	2.03%
V 290.880†	77996.6	0.484	mg/L	0.0169	0.484	mg/L	0.0169	3.49%
Zn 206.200†	11636.3	0.493	mg/L	0.0095	0.493	mg/L	0.0095	1.93%
K 766.490†	31447.9	24.5	mg/L	0.43	24.5	mg/L	0.43	1.75%
Na 589.592†	242021.0	25.4	mg/L	0.03	25.4	mg/L	0.03	0.13%
Sr 407.771†	453324.0	0.495	mg/L	0.0028	0.495	mg/L	0.0028	0.56%
Li 670.784†	29416.0	0.494	mg/L	0.0090	0.494	mg/L	0.0090	1.81%
P 214.914†	-140.8	-0.153	mg/L	0.0331	-0.153	mg/L	0.0331	21.59%

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Sequence No.: 6 **Autosampler Location: 45**
Sample ID: L1311010002 0.1 **Date Collected: 11/8/2013 11:39:47 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311010002 0.1

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311010002 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2309304.1						12349.41	0.53%
YRADIAL	159979.6						3652.77	2.28%
Ga 417.206	856840.2						11090.72	1.29%
GaRADIAL	44574.7						908.75	2.04%

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Ag 328.068†	-2038.7	0.00182 mg/L	0.000022	0.00182 mg/L	0.000022	1.22%
Al 396.153†	12394.1	4.66 mg/L	0.030	4.66 mg/L	0.030	0.64%
As 188.979†	12.3	0.0170 mg/L	0.00425	0.0170 mg/L	0.00425	24.94%
Ba 233.527†	4672.3	0.0655 mg/L	0.00050	0.0655 mg/L	0.00050	0.76%
Be 234.861†	3559.0	0.00062 mg/L	0.000043	0.00062 mg/L	0.000043	6.90%
B 249.677†	3061.3	0.0563 mg/L	0.00583	0.0563 mg/L	0.00583	10.36%
Ca 227.546†	14015.6	87.1 mg/L	2.19	87.1 mg/L	2.19	2.51%
Cd 228.802†	5.8	0.00030 mg/L	0.000315	0.00030 mg/L	0.000315	105.39%
Co 228.616†	204.1	0.0101 mg/L	0.00046	0.0101 mg/L	0.00046	4.57%
Cr 267.716†	1486.5	0.0152 mg/L	0.00008	0.0152 mg/L	0.00008	0.51%
Cu 327.393†	3493.0	0.0241 mg/L	0.00062	0.0241 mg/L	0.00062	2.55%
Fe 239.562†	65289.1	24.9 mg/L	0.14	24.9 mg/L	0.14	0.57%
Mg 279.077†	32349.7	33.1 mg/L	0.24	33.1 mg/L	0.24	0.72%
Mn 257.610†	127918.0	0.258 mg/L	0.0063	0.258 mg/L	0.0063	2.43%
Mo 202.031†	156.6	0.0117 mg/L	0.00098	0.0117 mg/L	0.00098	8.41%
Ni 231.604†	1174.2	0.0379 mg/L	0.00065	0.0379 mg/L	0.00065	1.71%
Pb 220.353†	82.0	0.0138 mg/L	0.00092	0.0138 mg/L	0.00092	6.69%
Sb 206.836†	-7.4	-0.00345 mg/L	0.001298	-0.00345 mg/L	0.001298	37.59%
Se 196.026†	-4.2	-0.00561 mg/L	0.003128	-0.00561 mg/L	0.003128	55.75%
Si 251.611†	140269.3	5.01 mg/L	0.136	5.01 mg/L	0.136	2.72%
Sn 189.927†	-255.3	-0.0504 mg/L	0.00083	-0.0504 mg/L	0.00083	1.65%
Ti 334.940†	25865.2	0.0488 mg/L	0.00147	0.0488 mg/L	0.00147	3.01%
Tl 190.801†	-16.8	-0.0138 mg/L	0.00372	-0.0138 mg/L	0.00372	26.94%
V 290.880†	2710.5	0.0128 mg/L	0.00192	0.0128 mg/L	0.00192	15.00%
Zn 206.200†	1981.6	0.0822 mg/L	0.00121	0.0822 mg/L	0.00121	1.47%
K 766.490†	1371.8	1.05 mg/L	0.020	1.05 mg/L	0.020	1.93%
Na 589.592†	89912.0	9.43 mg/L	0.046	9.43 mg/L	0.046	0.49%
Sr 407.771†	64207.8	0.0685 mg/L	0.00053	0.0685 mg/L	0.00053	0.78%
Li 670.784†	468.3	0.00418 mg/L	0.001261	0.00418 mg/L	0.001261	30.16%
P 214.914†	176.4	0.231 mg/L	0.0131	0.231 mg/L	0.0131	5.66%

Sequence No.: 7
Sample ID: L1311010003 0.2
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 11/8/2013 11:41:48 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311010003 0.2

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311010003 0.2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2281133.9						55042.51	2.41%
YRADIAL	156168.3						1274.31	0.82%
Ga 417.206	846232.0						20819.26	2.46%
GaRADIAL	43891.7						328.53	0.75%
Ag 328.068†	-1372.2	0.00238	mg/L	0.000844	0.00238	mg/L	0.000844	35.47%
Al 396.153†	13106.4	4.93	mg/L	0.014	4.93	mg/L	0.014	0.28%
As 188.979†	-2.0	0.00548	mg/L	0.001580	0.00548	mg/L	0.001580	28.82%
Ba 233.527†	4381.7	0.0619	mg/L	0.00170	0.0619	mg/L	0.00170	2.74%
Be 234.861†	2762.2	0.00062	mg/L	0.000162	0.00062	mg/L	0.000162	26.35%
B 249.677†	2254.8	0.0426	mg/L	0.00243	0.0426	mg/L	0.00243	5.70%
Ca 227.546†	15907.3	98.6	mg/L	1.50	98.6	mg/L	1.50	1.52%
Cd 228.802†	3.2	0.00020	mg/L	0.000094	0.00020	mg/L	0.000094	47.29%
Co 228.616†	105.6	0.00494	mg/L	0.000224	0.00494	mg/L	0.000224	4.53%
Cr 267.716†	5010.2	0.0558	mg/L	0.00172	0.0558	mg/L	0.00172	3.08%
Cu 327.393†	2963.1	0.0205	mg/L	0.00037	0.0205	mg/L	0.00037	1.79%
Fe 239.562†	49600.1	18.9	mg/L	0.08	18.9	mg/L	0.08	0.40%
Mg 279.077†	41655.2	42.6	mg/L	0.06	42.6	mg/L	0.06	0.13%
Mn 257.610†	150960.9	0.304	mg/L	0.0045	0.304	mg/L	0.0045	1.49%
Mo 202.031†	242.3	0.0175	mg/L	0.00058	0.0175	mg/L	0.00058	3.32%
Ni 231.604†	1043.8	0.0337	mg/L	0.00064	0.0337	mg/L	0.00064	1.90%
Pb 220.353†	69.8	0.0117	mg/L	0.00216	0.0117	mg/L	0.00216	18.47%
Sb 206.836†	-2.4	-0.00095	mg/L	0.002837	-0.00095	mg/L	0.002837	297.84%
Se 196.026†	-5.6	-0.00881	mg/L	0.004556	-0.00881	mg/L	0.004556	51.72%
Si 251.611†	246608.3	8.81	mg/L	0.085	8.81	mg/L	0.085	0.96%
Sn 189.927†	-269.9	-0.0533	mg/L	0.00153	-0.0533	mg/L	0.00153	2.87%

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Ti 334.940†	45434.1	0.0782 mg/L	0.00085	0.0782 mg/L	0.00085	1.08%
Tl 190.801†	-14.0	-0.0117 mg/L	0.00242	-0.0117 mg/L	0.00242	20.80%
V 290.880†	2758.1	0.0139 mg/L	0.00407	0.0139 mg/L	0.00407	29.32%
Zn 206.200†	1960.2	0.0820 mg/L	0.00215	0.0820 mg/L	0.00215	2.62%
K 766.490†	3699.3	2.84 mg/L	0.025	2.84 mg/L	0.025	0.90%
Na 589.592†	195581.2	20.5 mg/L	0.31	20.5 mg/L	0.31	1.51%
Sr 407.771†	163343.3	0.176 mg/L	0.0021	0.176 mg/L	0.0021	1.22%
Li 670.784†	901.9	0.0115 mg/L	0.00023	0.0115 mg/L	0.00023	1.98%
P 214.914†	171.9	0.226 mg/L	0.0196	0.226 mg/L	0.0196	8.68%

Sequence No.: 8 **Autosampler Location: 47**
Sample ID: L1311010003PS WG451808-03 **Date Collected: 11/8/2013 11:43:52 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311010003PS WG451808-03

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311010003PS WG451808-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2248272.3						15806.18	0.70%
YRADIAL	152857.8						1685.99	1.10%
Ga 417.206	832350.3						6351.28	0.76%
GaRADIAL	43491.4						158.95	0.37%
Ag 328.068†	40825.6	0.200	mg/L	0.0019	0.200	mg/L	0.0019	0.97%
Al 396.153†	26450.3	9.95	mg/L	0.041	9.95	mg/L	0.041	0.42%
As 188.979†	275.7	0.205	mg/L	0.0046	0.205	mg/L	0.0046	2.27%
Ba 233.527†	38711.0	0.555	mg/L	0.0018	0.555	mg/L	0.0018	0.33%
Be 234.861†	16572.7	0.0249	mg/L	0.00028	0.0249	mg/L	0.00028	1.13%
B 249.677†	51778.9	1.04	mg/L	0.013	1.04	mg/L	0.013	1.26%
Ca 227.546†	17210.2	107	mg/L	1.0	107	mg/L	1.0	0.96%
Cd 228.802†	550.7	0.0237	mg/L	0.00046	0.0237	mg/L	0.00046	1.93%
Co 228.616†	1903.9	0.101	mg/L	0.0011	0.101	mg/L	0.0011	1.04%
Cr 267.716†	26492.0	0.300	mg/L	0.0034	0.300	mg/L	0.0034	1.13%
Cu 327.393†	41007.6	0.256	mg/L	0.0021	0.256	mg/L	0.0021	0.81%
Fe 239.562†	55815.4	21.3	mg/L	0.10	21.3	mg/L	0.10	0.47%
Mg 279.077†	47180.2	48.2	mg/L	0.17	48.2	mg/L	0.17	0.35%
Mn 257.610†	280989.6	0.566	mg/L	0.0030	0.566	mg/L	0.0030	0.53%
Mo 202.031†	7668.4	0.525	mg/L	0.0033	0.525	mg/L	0.0033	0.63%
Ni 231.604†	8808.6	0.283	mg/L	0.0025	0.283	mg/L	0.0025	0.87%
Pb 220.353†	1381.0	0.261	mg/L	0.0037	0.261	mg/L	0.0037	1.42%
Sb 206.836†	976.1	0.595	mg/L	0.0006	0.595	mg/L	0.0006	0.10%
Se 196.026†	133.4	0.194	mg/L	0.0044	0.194	mg/L	0.0044	2.25%
Si 251.611†	323093.2	11.5	mg/L	0.07	11.5	mg/L	0.07	0.63%
Sn 189.927†	-267.0	-0.0527	mg/L	0.00166	-0.0527	mg/L	0.00166	3.16%
Ti 334.940†	407458.5	0.591	mg/L	0.0030	0.591	mg/L	0.0030	0.51%
Tl 190.801†	353.7	0.240	mg/L	0.0048	0.240	mg/L	0.0048	1.99%
V 290.880†	81862.6	0.504	mg/L	0.0044	0.504	mg/L	0.0044	0.88%
Zn 206.200†	13403.2	0.567	mg/L	0.0024	0.567	mg/L	0.0024	0.43%
K 766.490†	35487.9	27.7	mg/L	0.20	27.7	mg/L	0.20	0.73%
Na 589.592†	432239.5	45.6	mg/L	1.47	45.6	mg/L	1.47	3.23%
Sr 407.771†	630981.2	0.685	mg/L	0.0251	0.685	mg/L	0.0251	3.66%
Li 670.784†	30403.7	0.510	mg/L	0.0042	0.510	mg/L	0.0042	0.81%
P 214.914†	65.4	0.0967	mg/L	0.02964	0.0967	mg/L	0.02964	30.65%

Sequence No.: 9 **Autosampler Location: 48**
Sample ID: L1311010003DL WG451808-04 **Date Collected: 11/8/2013 11:45:55 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311010003DL WG451808-04

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311010003DL WG451808-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311995.9						28451.98	1.23%
YRADIAL	158341.0						2110.66	1.33%
Ga 417.206	841913.8						13263.55	1.58%
GaRADIAL	43444.1						414.04	0.95%
Ag 328.068†	-131.5	0.00183	mg/L	0.000122	0.00183	mg/L	0.000122	6.66%
Al 396.153†	2630.4	0.963	mg/L	0.0253	0.963	mg/L	0.0253	2.63%
As 188.979†	-4.6	-0.00133	mg/L	0.002520	-0.00133	mg/L	0.002520	189.83%
Ba 233.527†	921.3	0.0136	mg/L	0.00029	0.0136	mg/L	0.00029	2.10%
Be 234.861†	667.6	0.00040	mg/L	0.000065	0.00040	mg/L	0.000065	16.18%
B 249.677†	1759.7	0.0393	mg/L	0.00750	0.0393	mg/L	0.00750	19.09%
Ca 227.546†	3235.1	20.1	mg/L	0.32	20.1	mg/L	0.32	1.60%
Cd 228.802†	1.4	0.00007	mg/L	0.000079	0.00007	mg/L	0.000079	112.29%
Co 228.616†	24.7	0.00107	mg/L	0.000329	0.00107	mg/L	0.000329	30.64%
Cr 267.716†	1064.3	0.0120	mg/L	0.00011	0.0120	mg/L	0.00011	0.96%
Cu 327.393†	888.5	0.00677	mg/L	0.001067	0.00677	mg/L	0.001067	15.76%
Fe 239.562†	9954.0	3.78	mg/L	0.059	3.78	mg/L	0.059	1.57%
Mg 279.077†	8412.1	8.59	mg/L	0.094	8.59	mg/L	0.094	1.10%
Mn 257.610†	30619.5	0.0602	mg/L	0.00077	0.0602	mg/L	0.00077	1.27%
Mo 202.031†	56.5	0.00449	mg/L	0.000408	0.00449	mg/L	0.000408	9.10%
Ni 231.604†	224.4	0.00741	mg/L	0.000495	0.00741	mg/L	0.000495	6.68%
Pb 220.353†	19.5	0.00230	mg/L	0.001142	0.00230	mg/L	0.001142	49.63%
Sb 206.836†	-3.9	-0.00213	mg/L	0.002952	-0.00213	mg/L	0.002952	138.67%
Se 196.026†	-0.2	-0.00415	mg/L	0.004601	-0.00415	mg/L	0.004601	110.79%
Si 251.611†	49925.0	1.79	mg/L	0.021	1.79	mg/L	0.021	1.18%
Sn 189.927†	-142.9	-0.0286	mg/L	0.00107	-0.0286	mg/L	0.00107	3.74%
Ti 334.940†	8900.7	0.0148	mg/L	0.00005	0.0148	mg/L	0.00005	0.35%
Tl 190.801†	-2.1	-0.00425	mg/L	0.004765	-0.00425	mg/L	0.004765	112.09%
V 290.880†	526.6	0.00349	mg/L	0.003136	0.00349	mg/L	0.003136	89.98%
Zn 206.200†	440.5	0.0183	mg/L	0.00013	0.0183	mg/L	0.00013	0.74%
K 766.490†	759.1	0.581	mg/L	0.0781	0.581	mg/L	0.0781	13.45%
Na 589.592†	39860.5	4.17	mg/L	0.028	4.17	mg/L	0.028	0.68%
Sr 407.771†	33008.7	0.0367	mg/L	0.00040	0.0367	mg/L	0.00040	1.09%
Li 670.784†	253.9	0.00055	mg/L	0.000678	0.00055	mg/L	0.000678	122.62%
P 214.914†	19.6	0.0413	mg/L	0.02386	0.0413	mg/L	0.02386	57.81%

Sequence No.: 10 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 11:47:54 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2315627.4						28455.13	1.23%
YRADIAL	158221.5						1472.02	0.93%
Ga 417.206	836059.3						18348.41	2.19%
GaRADIAL	43508.7						235.16	0.54%
Ag 328.068†	85144.9	0.399	mg/L	0.0084	0.399	mg/L	0.0084	2.11%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153†	26429.8	9.90	mg/L	0.070	9.90	mg/L	0.070	0.71%
QC value within limits for Al 396.153 Recovery = 99.05%								
As 188.979†	554.9	0.399	mg/L	0.0095	0.399	mg/L	0.0095	2.37%
QC value within limits for As 188.979 Recovery = 99.80%								
Ba 233.527†	69365.0	0.997	mg/L	0.0150	0.997	mg/L	0.0150	1.51%
QC value within limits for Ba 233.527 Recovery = 99.72%								
Be 234.861†	28122.9	0.0497	mg/L	0.00092	0.0497	mg/L	0.00092	1.85%
QC value within limits for Be 234.861 Recovery = 99.49%								
B 249.677†	25118.2	0.506	mg/L	0.0092	0.506	mg/L	0.0092	1.81%
QC value within limits for B 249.677 Recovery = 101.25%								

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Ca 227.546†	1591.7	10.3 mg/L	0.25	10.3 mg/L	0.25	2.40%
QC value within limits for Ca 227.546 Recovery = 103.13%						
Cd 228.802†	1131.6	0.0486 mg/L	0.00120	0.0486 mg/L	0.00120	2.47%
QC value within limits for Cd 228.802 Recovery = 97.15%						
Co 228.616†	3719.3	0.200 mg/L	0.0021	0.200 mg/L	0.0021	1.07%
QC value within limits for Co 228.616 Recovery = 99.81%						
Cr 267.716†	43611.7	0.497 mg/L	0.0072	0.497 mg/L	0.0072	1.44%
QC value within limits for Cr 267.716 Recovery = 99.40%						
Cu 327.393†	80263.7	0.498 mg/L	0.0118	0.498 mg/L	0.0118	2.36%
QC value within limits for Cu 327.393 Recovery = 99.59%						
Fe 239.562†	10517.8	4.00 mg/L	0.018	4.00 mg/L	0.018	0.45%
QC value within limits for Fe 239.562 Recovery = 99.97%						
Mg 279.077†	9808.4	10.0 mg/L	0.04	10.0 mg/L	0.04	0.42%
QC value within limits for Mg 279.077 Recovery = 100.34%						
Mn 257.610†	253151.2	0.510 mg/L	0.0093	0.510 mg/L	0.0093	1.83%
QC value within limits for Mn 257.610 Recovery = 101.91%						
Mo 202.031†	14595.0	0.998 mg/L	0.0139	0.998 mg/L	0.0139	1.39%
QC value within limits for Mo 202.031 Recovery = 99.76%						
Ni 231.604†	15635.8	0.502 mg/L	0.0073	0.502 mg/L	0.0073	1.46%
QC value within limits for Ni 231.604 Recovery = 100.49%						
Pb 220.353†	2660.9	0.504 mg/L	0.0057	0.504 mg/L	0.0057	1.13%
QC value within limits for Pb 220.353 Recovery = 100.77%						
Sb 206.836†	1956.6	1.19 mg/L	0.024	1.19 mg/L	0.024	2.02%
QC value within limits for Sb 206.836 Recovery = 99.26%						
Se 196.026†	274.0	0.396 mg/L	0.0108	0.396 mg/L	0.0108	2.72%
QC value within limits for Se 196.026 Recovery = 99.04%						
Si 251.611†	140121.9	5.00 mg/L	0.096	5.00 mg/L	0.096	1.93%
QC value within limits for Si 251.611 Recovery = 99.98%						
Sn 189.927†	5172.6	1.00 mg/L	0.013	1.00 mg/L	0.013	1.27%
QC value within limits for Sn 189.927 Recovery = 100.18%						
Ti 334.940†	706968.0	1.00 mg/L	0.011	1.00 mg/L	0.011	1.06%
QC value within limits for Ti 334.940 Recovery = 100.04%						
Tl 190.801†	771.3	0.525 mg/L	0.0070	0.525 mg/L	0.0070	1.34%
QC value within limits for Tl 190.801 Recovery = 104.96%						
V 290.880†	158192.1	0.981 mg/L	0.0221	0.981 mg/L	0.0221	2.25%
QC value within limits for V 290.880 Recovery = 98.13%						
Zn 206.200†	23923.1	1.01 mg/L	0.013	1.01 mg/L	0.013	1.31%
QC value within limits for Zn 206.200 Recovery = 101.42%						
K 766.490†	64089.3	50.4 mg/L	0.22	50.4 mg/L	0.22	0.43%
QC value within limits for K 766.490 Recovery = 100.77%						
Na 589.592†	469548.4	49.5 mg/L	0.96	49.5 mg/L	0.96	1.93%
QC value within limits for Na 589.592 Recovery = 99.09%						
Sr 407.771†	900863.1	0.982 mg/L	0.0302	0.982 mg/L	0.0302	3.08%
QC value within limits for Sr 407.771 Recovery = 98.21%						
Li 670.784†	59783.2	1.01 mg/L	0.004	1.01 mg/L	0.004	0.36%
QC value within limits for Li 670.784 Recovery = 100.72%						
P 214.914†	8112.0	9.85 mg/L	0.095	9.85 mg/L	0.095	0.97%
QC value within limits for P 214.914 Recovery = 98.48%						

All analyte(s) passed QC.

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Sequence No.: 11 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 11:49:59 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2283485.8						35797.77	1.57%
YRADIAL	149979.5						3828.91	2.55%
Ga 417.206	812224.9						14217.12	1.75%
GaRADIAL	41909.1						740.27	1.77%
Ag 328.068†	77.0	0.00122	mg/L	0.000362	0.00122	mg/L	0.000362	29.77%
QC value within limits for Ag 328.068 Recovery = Not calculated								

Approved: November 11, 2013

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Al 396.153†              31.0     -0.0219 mg/L       0.00297     -0.0219 mg/L       0.00297  13.61%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               2.7     0.00277 mg/L      0.001957     0.00277 mg/L      0.001957  70.57%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -5.2     0.00067 mg/L      0.000042     0.00067 mg/L      0.000042   6.27%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              28.2     0.00014 mg/L      0.000064     0.00014 mg/L      0.000064  45.19%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              670.3      0.0191 mg/L       0.00156      0.0191 mg/L       0.00156   8.19%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              12.7       0.112 mg/L        0.0409       0.112 mg/L        0.0409  36.59%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -6.1    -0.00030 mg/L      0.000242    -0.00030 mg/L      0.000242  79.49%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -2.7    -0.00028 mg/L      0.000167    -0.00028 mg/L      0.000167  59.15%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               1.7     0.00016 mg/L      0.000071     0.00016 mg/L      0.000071  44.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             297.6     0.00289 mg/L      0.000428     0.00289 mg/L      0.000428  14.82%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               8.9    -0.00416 mg/L      0.002156    -0.00416 mg/L      0.002156  51.86%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              14.6    -0.00166 mg/L      0.003875    -0.00166 mg/L      0.003875 233.84%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              62.4    -0.00169 mg/L      0.000023    -0.00169 mg/L      0.000023   1.36%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              15.8     0.00164 mg/L      0.000293     0.00164 mg/L      0.000293  17.88%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†             -13.1    -0.00023 mg/L      0.000224    -0.00023 mg/L      0.000224  99.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               1.8    -0.00102 mg/L      0.001099    -0.00102 mg/L      0.001099 107.88%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               1.3     0.00102 mg/L      0.002842     0.00102 mg/L      0.002842 279.90%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.3    -0.00266 mg/L      0.012230    -0.00266 mg/L      0.012230 460.01%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             130.1      0.0187 mg/L       0.00088      0.0187 mg/L       0.00088   4.73%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -7.8    -0.00246 mg/L      0.000956    -0.00246 mg/L      0.000956  38.91%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -147.5    -0.00097 mg/L      0.000030    -0.00097 mg/L      0.000030   3.15%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.4    -0.00326 mg/L      0.003096    -0.00326 mg/L      0.003096  94.91%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              467.4     0.00398 mg/L      0.002236     0.00398 mg/L      0.002236  56.17%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -13.8    -0.00080 mg/L      0.000269    -0.00080 mg/L      0.000269  33.68%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               23.7      0.0156 mg/L       0.01500      0.0156 mg/L       0.01500  96.02%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             730.2      0.0681 mg/L       0.09200      0.0681 mg/L       0.09200 135.05%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              58.1     0.00144 mg/L      0.000114     0.00144 mg/L      0.000114   7.92%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              36.4    -0.00312 mg/L      0.000683    -0.00312 mg/L      0.000683  21.85%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                2.8      0.0209 mg/L       0.01244      0.0209 mg/L       0.01244  59.42%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 12                                    Autosampler Location: 49
Sample ID: PBW R5 WG451705-03                       Date Collected: 11/8/2013 11:52:59 AM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: PBW R5 WG451705-03
Analyte                 Back Pressure    Flow
All                   171.0 kPa         0.45 L/min
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Approved: November 11, 2013

Mean Data: PBW R5 WG451705-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2310975.5						53215.65	2.30%
YRADIAL	152971.5						1471.81	0.96%
Ga 417.206	824759.9						24357.67	2.95%
GaRADIAL	42790.3						892.57	2.09%
Ag 328.068†	87.3	0.00126	mg/L	0.000207	0.00126	mg/L	0.000207	16.37%
Al 396.153†	-7.6	-0.0364	mg/L	0.00208	-0.0364	mg/L	0.00208	5.73%
As 188.979†	-1.5	-0.00029	mg/L	0.002730	-0.00029	mg/L	0.002730	925.55%
Ba 233.527†	4.0	0.00080	mg/L	0.000153	0.00080	mg/L	0.000153	19.10%
Be 234.861†	37.0	0.00016	mg/L	0.000080	0.00016	mg/L	0.000080	50.84%
B 249.677†	301.9	0.0117	mg/L	0.00098	0.0117	mg/L	0.00098	8.44%
Ca 227.546†	13.6	0.117	mg/L	0.0441	0.117	mg/L	0.0441	37.66%
Cd 228.802†	-2.6	-0.00013	mg/L	0.000246	-0.00013	mg/L	0.000246	186.55%
Co 228.616†	-2.0	-0.00024	mg/L	0.000418	-0.00024	mg/L	0.000418	171.20%
Cr 267.716†	-1.4	0.00012	mg/L	0.000250	0.00012	mg/L	0.000250	203.88%
Cu 327.393†	292.5	0.00286	mg/L	0.000507	0.00286	mg/L	0.000507	17.76%
Fe 239.562†	14.1	-0.00217	mg/L	0.001097	-0.00217	mg/L	0.001097	50.51%
Mg 279.077†	19.0	0.00277	mg/L	0.007777	0.00277	mg/L	0.007777	280.49%
Mn 257.610†	219.8	-0.00137	mg/L	0.000089	-0.00137	mg/L	0.000089	6.50%
Mo 202.031†	-1.3	0.00047	mg/L	0.000308	0.00047	mg/L	0.000308	65.19%
Ni 231.604†	-13.7	-0.00024	mg/L	0.000354	-0.00024	mg/L	0.000354	145.02%
Pb 220.353†	6.6	-0.00011	mg/L	0.000649	-0.00011	mg/L	0.000649	591.62%
Sb 206.836†	-0.4	-0.00003	mg/L	0.000423	-0.00003	mg/L	0.000423	>999.9%
Se 196.026†	-2.3	-0.00791	mg/L	0.006669	-0.00791	mg/L	0.006669	84.34%
Si 251.611†	110.0	0.0180	mg/L	0.00073	0.0180	mg/L	0.00073	4.08%
Sn 189.927†	-7.0	-0.00230	mg/L	0.001031	-0.00230	mg/L	0.001031	44.75%
Ti 334.940†	-45.9	-0.00082	mg/L	0.000053	-0.00082	mg/L	0.000053	6.41%
Tl 190.801†	-0.6	-0.00340	mg/L	0.002765	-0.00340	mg/L	0.002765	81.27%
V 290.880†	414.1	0.00365	mg/L	0.001530	0.00365	mg/L	0.001530	41.90%
Zn 206.200†	31.2	0.00110	mg/L	0.000079	0.00110	mg/L	0.000079	7.21%
K 766.490†	-44.6	-0.0372	mg/L	0.03418	-0.0372	mg/L	0.03418	91.91%
Na 589.592†	124.5	0.00466	mg/L	0.002295	0.00466	mg/L	0.002295	49.28%
Sr 407.771†	-18.6	0.00135	mg/L	0.000052	0.00135	mg/L	0.000052	3.82%
Li 670.784†	-8.8	-0.00389	mg/L	0.000371	-0.00389	mg/L	0.000371	9.54%
P 214.914†	8.7	0.0280	mg/L	0.00721	0.0280	mg/L	0.00721	25.76%

Sequence No.: 13
Sample ID: LCSW R5 WG451705-04
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 11/8/2013 11:55:59 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW R5 WG451705-04

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: LCSW R5 WG451705-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2310776.2						11073.01	0.48%
YRADIAL	158839.1						2069.26	1.30%
Ga 417.206	845473.4						4842.47	0.57%
GaRADIAL	45013.7						469.56	1.04%
Ag 328.068†	41638.1	0.196	mg/L	0.0016	0.196	mg/L	0.0016	0.83%
Al 396.153†	12296.3	4.59	mg/L	0.107	4.59	mg/L	0.107	2.32%
As 188.979†	261.1	0.188	mg/L	0.0047	0.188	mg/L	0.0047	2.52%
Ba 233.527†	33741.3	0.485	mg/L	0.0082	0.485	mg/L	0.0082	1.69%
Be 234.861†	13191.5	0.0234	mg/L	0.00029	0.0234	mg/L	0.00029	1.25%
B 249.677†	47475.3	0.957	mg/L	0.0191	0.957	mg/L	0.0191	1.99%
Ca 227.546†	761.1	4.95	mg/L	0.081	4.95	mg/L	0.081	1.64%
Cd 228.802†	536.1	0.0230	mg/L	0.00020	0.0230	mg/L	0.00020	0.89%
Co 228.616†	1819.5	0.0976	mg/L	0.00161	0.0976	mg/L	0.00161	1.65%
Cr 267.716†	21244.9	0.242	mg/L	0.0029	0.242	mg/L	0.0029	1.22%
Cu 327.393†	39052.1	0.243	mg/L	0.0032	0.243	mg/L	0.0032	1.31%
Fe 239.562†	5071.7	1.92	mg/L	0.036	1.92	mg/L	0.036	1.85%
Mg 279.077†	4678.6	4.78	mg/L	0.083	4.78	mg/L	0.083	1.74%

Approved: November 11, 2013

Mn 257.610†	123852.6	0.248	mg/L	0.0051	0.248	mg/L	0.0051	2.06%
Mo 202.031†	7086.4	0.485	mg/L	0.0095	0.485	mg/L	0.0095	1.95%
Ni 231.604†	7662.6	0.246	mg/L	0.0031	0.246	mg/L	0.0031	1.27%
Pb 220.353†	1310.7	0.247	mg/L	0.0017	0.247	mg/L	0.0017	0.68%
Sb 206.836†	949.2	0.578	mg/L	0.0047	0.578	mg/L	0.0047	0.82%
Se 196.026†	131.9	0.188	mg/L	0.0125	0.188	mg/L	0.0125	6.64%
Si 251.611†	67155.6	2.40	mg/L	0.032	2.40	mg/L	0.032	1.32%
Sn 189.927†	-26.0	-0.00597	mg/L	0.000753	-0.00597	mg/L	0.000753	12.61%
Ti 334.940†	336144.1	0.475	mg/L	0.0066	0.475	mg/L	0.0066	1.38%
Tl 190.801†	365.8	0.247	mg/L	0.0082	0.247	mg/L	0.0082	3.31%
V 290.880†	77376.9	0.481	mg/L	0.0147	0.481	mg/L	0.0147	3.05%
Zn 206.200†	11594.3	0.491	mg/L	0.0078	0.491	mg/L	0.0078	1.59%
K 766.490†	29586.3	23.0	mg/L	0.57	23.0	mg/L	0.57	2.48%
Na 589.592†	220980.2	23.2	mg/L	0.16	23.2	mg/L	0.16	0.68%
Sr 407.771†	436622.8	0.477	mg/L	0.0086	0.477	mg/L	0.0086	1.80%
Li 670.784†	27759.4	0.466	mg/L	0.0112	0.466	mg/L	0.0112	2.41%
P 214.914†	-139.5	-0.152	mg/L	0.0359	-0.152	mg/L	0.0359	23.70%

Sequence No.: 14 **Autosampler Location: 51**
Sample ID: L1311019801 **Date Collected: 11/8/2013 11:58:02 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311019801

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311019801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2377556.2						14288.11	0.60%
YRADIAL	164550.9						4226.04	2.57%
Ga 417.206	920760.6						7236.43	0.79%
GaRADIAL	47513.9						1091.82	2.30%
Ag 328.068†	145.0	0.00177	mg/L	0.000375	0.00177	mg/L	0.000375	21.24%
Al 396.153†	413.2	0.123	mg/L	0.0030	0.123	mg/L	0.0030	2.41%
As 188.979†	-8.4	-0.00483	mg/L	0.003847	-0.00483	mg/L	0.003847	79.63%
Ba 233.527†	1751.9	0.0258	mg/L	0.00018	0.0258	mg/L	0.00018	0.69%
Be 234.861†	299.9	0.00050	mg/L	0.000073	0.00050	mg/L	0.000073	14.64%
B 249.677†	4539.9	0.0965	mg/L	0.00229	0.0965	mg/L	0.00229	2.37%
Ca 227.546†	2900.7	17.9	mg/L	0.16	17.9	mg/L	0.16	0.91%
Cd 228.802†	8.3	0.00038	mg/L	0.000238	0.00038	mg/L	0.000238	63.26%
Co 228.616†	5.3	0.00013	mg/L	0.000333	0.00013	mg/L	0.000333	251.58%
Cr 267.716†	316.1	0.00371	mg/L	0.000154	0.00371	mg/L	0.000154	4.14%
Cu 327.393†	6235.3	0.0396	mg/L	0.00052	0.0396	mg/L	0.00052	1.31%
Fe 239.562†	1632.7	0.614	mg/L	0.0161	0.614	mg/L	0.0161	2.62%
Mg 279.077†	6402.0	6.53	mg/L	0.180	6.53	mg/L	0.180	2.75%
Mn 257.610†	77937.5	0.155	mg/L	0.0025	0.155	mg/L	0.0025	1.62%
Mo 202.031†	52.6	0.00420	mg/L	0.000228	0.00420	mg/L	0.000228	5.44%
Ni 231.604†	112.0	0.00380	mg/L	0.000411	0.00380	mg/L	0.000411	10.83%
Pb 220.353†	27.0	0.00366	mg/L	0.001380	0.00366	mg/L	0.001380	37.68%
Sb 206.836†	-2.1	-0.00107	mg/L	0.001599	-0.00107	mg/L	0.001599	149.32%
Se 196.026†	6.8	0.00535	mg/L	0.008837	0.00535	mg/L	0.008837	165.30%
Si 251.611†	158933.2	5.68	mg/L	0.038	5.68	mg/L	0.038	0.66%
Sn 189.927†	-103.3	-0.0210	mg/L	0.00132	-0.0210	mg/L	0.00132	6.28%
Ti 334.940†	351.4	0.00241	mg/L	0.000609	0.00241	mg/L	0.000609	25.27%
Tl 190.801†	-7.7	-0.00826	mg/L	0.000348	-0.00826	mg/L	0.000348	4.21%
V 290.880†	1478.9	0.00998	mg/L	0.000604	0.00998	mg/L	0.000604	6.05%
Zn 206.200†	6933.8	0.292	mg/L	0.0051	0.292	mg/L	0.0051	1.73%
K 766.490†	45120.7	35.3	mg/L	1.06	35.3	mg/L	1.06	2.99%
Na 589.592†	581795.5	61.5	mg/L	0.37	61.5	mg/L	0.37	0.61%
Sr 407.771†	71233.8	0.0784	mg/L	0.00339	0.0784	mg/L	0.00339	4.32%
Li 670.784†	163.7	-0.00097	mg/L	0.000236	-0.00097	mg/L	0.000236	24.31%
P 214.914†	11176.8	13.6	mg/L	0.15	13.6	mg/L	0.15	1.09%

Sequence No.: 15 **Autosampler Location: 52**
Sample ID: L1311020802 WG451705-01 **Date Collected: 11/8/2013 12:01:03 PM**

Approved: November 11, 2013

Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020802 WG451705-01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020802 WG451705-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2273299.9						68293.51	3.00%
YRADIAL	156432.4						1255.94	0.80%
Ga 417.206	890239.2						43559.04	4.89%
GaRADIAL	45362.6						552.15	1.22%
Ag 328.068†	441.4	0.00270	mg/L	0.000406	0.00270	mg/L	0.000406	15.08%
Al 396.153†	-2.5	-0.0347	mg/L	0.00244	-0.0347	mg/L	0.00244	7.03%
As 188.979†	-11.4	-0.00623	mg/L	0.002361	-0.00623	mg/L	0.002361	37.91%
Ba 233.527†	809.1	0.0124	mg/L	0.00050	0.0124	mg/L	0.00050	4.03%
Be 234.861†	141.3	0.00034	mg/L	0.000105	0.00034	mg/L	0.000105	31.35%
B 249.677†	8168.5	0.170	mg/L	0.0087	0.170	mg/L	0.0087	5.15%
Ca 227.546†	9388.1	57.9	mg/L	3.25	57.9	mg/L	3.25	5.61%
Cd 228.802†	-0.1	0.00001	mg/L	0.000223	0.00001	mg/L	0.000223	>999.9%
Co 228.616†	3.0	0.00004	mg/L	0.000301	0.00004	mg/L	0.000301	675.17%
Cr 267.716†	91.1	0.00117	mg/L	0.000064	0.00117	mg/L	0.000064	5.44%
Cu 327.393†	287.0	0.00282	mg/L	0.000888	0.00282	mg/L	0.000888	31.51%
Fe 239.562†	160.2	0.0530	mg/L	0.00024	0.0530	mg/L	0.00024	0.45%
Mg 279.077†	23942.3	24.5	mg/L	0.33	24.5	mg/L	0.33	1.34%
Mn 257.610†	18601.0	0.0357	mg/L	0.00047	0.0357	mg/L	0.00047	1.31%
Mo 202.031†	46.2	0.00372	mg/L	0.000038	0.00372	mg/L	0.000038	1.02%
Ni 231.604†	50.4	0.00182	mg/L	0.000384	0.00182	mg/L	0.000384	21.10%
Pb 220.353†	24.6	0.00329	mg/L	0.001027	0.00329	mg/L	0.001027	31.26%
Sb 206.836†	-4.0	-0.00223	mg/L	0.001192	-0.00223	mg/L	0.001192	53.52%
Se 196.026†	3.3	0.00029	mg/L	0.003457	0.00029	mg/L	0.003457	>999.9%
Si 251.611†	35286.4	1.27	mg/L	0.055	1.27	mg/L	0.055	4.32%
Sn 189.927†	-234.5	-0.0464	mg/L	0.00130	-0.0464	mg/L	0.00130	2.79%
Ti 334.940†	-5849.7	-0.00036	mg/L	0.001558	-0.00036	mg/L	0.001558	436.87%
Tl 190.801†	-19.4	-0.0160	mg/L	0.00230	-0.0160	mg/L	0.00230	14.32%
V 290.880†	1581.8	0.0103	mg/L	0.00077	0.0103	mg/L	0.00077	7.51%
Zn 206.200†	37.4	0.00137	mg/L	0.000086	0.00137	mg/L	0.000086	6.26%
K 766.490†	6277.3	4.53	mg/L	0.082	4.53	mg/L	0.082	1.81%
Na 589.592†	3028751.7	333	mg/L	6.8	333	mg/L	6.8	2.04%
Sr 407.771†	1124839.6	1.22	mg/L	0.051	1.22	mg/L	0.051	4.19%
Li 670.784†	1090.3	0.0147	mg/L	0.00072	0.0147	mg/L	0.00072	4.89%
P 214.914†	26.4	0.0495	mg/L	0.00841	0.0495	mg/L	0.00841	16.98%

Sequence No.: 16 **Autosampler Location: 53**
Sample ID: L1311020802DU WG451705-05 **Date Collected: 11/8/2013 12:04:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020802DU WG451705-05

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020802DU WG451705-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2195352.7						35484.33	1.62%
YRADIAL	151061.4						3743.48	2.48%
Ga 417.206	838747.8						13364.99	1.59%
GaRADIAL	43819.3						339.75	0.78%
Ag 328.068†	257.9	0.00185	mg/L	0.000453	0.00185	mg/L	0.000453	24.53%
Al 396.153†	1.4	-0.0333	mg/L	0.00149	-0.0333	mg/L	0.00149	4.48%
As 188.979†	-9.5	-0.00487	mg/L	0.000709	-0.00487	mg/L	0.000709	14.56%
Ba 233.527†	780.8	0.0120	mg/L	0.00018	0.0120	mg/L	0.00018	1.49%

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Be 234.861†	67.0	0.00020 mg/L	0.000010	0.00020 mg/L	0.000010	5.02%
B 249.677†	7895.5	0.164 mg/L	0.0021	0.164 mg/L	0.0021	1.26%
Ca 227.546†	9133.5	56.4 mg/L	0.56	56.4 mg/L	0.56	0.99%
Cd 228.802†	0.8	0.00004 mg/L	0.000027	0.00004 mg/L	0.000027	63.17%
Co 228.616†	-6.7	-0.00047 mg/L	0.000474	-0.00047 mg/L	0.000474	99.92%
Cr 267.716†	78.1	0.00103 mg/L	0.000104	0.00103 mg/L	0.000104	10.09%
Cu 327.393†	184.1	0.00218 mg/L	0.000624	0.00218 mg/L	0.000624	28.61%
Fe 239.562†	147.9	0.0483 mg/L	0.00217	0.0483 mg/L	0.00217	4.49%
Mg 279.077†	22738.6	23.2 mg/L	0.18	23.2 mg/L	0.18	0.78%
Mn 257.610†	17324.3	0.0331 mg/L	0.00041	0.0331 mg/L	0.00041	1.23%
Mo 202.031†	57.5	0.00449 mg/L	0.000411	0.00449 mg/L	0.000411	9.14%
Ni 231.604†	24.8	0.00100 mg/L	0.000252	0.00100 mg/L	0.000252	25.18%
Pb 220.353†	14.9	0.00145 mg/L	0.002534	0.00145 mg/L	0.002534	174.48%
Sb 206.836†	-3.7	-0.00206 mg/L	0.001823	-0.00206 mg/L	0.001823	88.38%
Se 196.026†	0.9	-0.00327 mg/L	0.006122	-0.00327 mg/L	0.006122	187.29%
Si 251.611†	33861.6	1.22 mg/L	0.018	1.22 mg/L	0.018	1.46%
Sn 189.927†	-232.2	-0.0459 mg/L	0.00156	-0.0459 mg/L	0.00156	3.40%
Ti 334.940†	-6156.9	-0.00103 mg/L	0.000326	-0.00103 mg/L	0.000326	31.76%
Tl 190.801†	-28.1	-0.0218 mg/L	0.00909	-0.0218 mg/L	0.00909	41.64%
V 290.880†	1381.8	0.00904 mg/L	0.000729	0.00904 mg/L	0.000729	8.07%
Zn 206.200†	53.7	0.00205 mg/L	0.000108	0.00205 mg/L	0.000108	5.27%
K 766.490†	5934.9	4.28 mg/L	0.055	4.28 mg/L	0.055	1.29%
Na 589.592†	2912565.8	320 mg/L	3.8	320 mg/L	3.8	1.18%
Sr 407.771†	1088494.7	1.19 mg/L	0.031	1.19 mg/L	0.031	2.65%
Li 670.784†	1064.9	0.0143 mg/L	0.00116	0.0143 mg/L	0.00116	8.11%
P 214.914†	31.4	0.0555 mg/L	0.00544	0.0555 mg/L	0.00544	9.81%

Sequence No.: 17 **Autosampler Location: 54**
Sample ID: L1311020802MS WG451705-06 **Date Collected: 11/8/2013 12:07:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020802MS WG451705-06

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311020802MS WG451705-06

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	2214222.9				23070.19	1.04%
YRADIAL	154482.6				1370.63	0.89%
Ga 417.206	834786.5				7849.87	0.94%
GaRADIAL	43597.0				688.25	1.58%
Ag 328.068†	41091.5	0.193 mg/L	0.0023	0.193 mg/L	0.0023	1.19%
Al 396.153†	12803.2	4.78 mg/L	0.197	4.78 mg/L	0.197	4.13%
As 188.979†	259.4	0.188 mg/L	0.0019	0.188 mg/L	0.0019	1.02%
Ba 233.527†	34151.9	0.491 mg/L	0.0105	0.491 mg/L	0.0105	2.13%
Be 234.861†	13239.7	0.0235 mg/L	0.00021	0.0235 mg/L	0.00021	0.91%
B 249.677†	56069.3	1.13 mg/L	0.020	1.13 mg/L	0.020	1.78%
Ca 227.546†	10250.1	63.5 mg/L	0.49	63.5 mg/L	0.49	0.78%
Cd 228.802†	517.9	0.0222 mg/L	0.00048	0.0222 mg/L	0.00048	2.17%
Co 228.616†	1804.6	0.0968 mg/L	0.00166	0.0968 mg/L	0.00166	1.72%
Cr 267.716†	21103.6	0.241 mg/L	0.0037	0.241 mg/L	0.0037	1.56%
Cu 327.393†	38495.4	0.239 mg/L	0.0035	0.239 mg/L	0.0035	1.46%
Fe 239.562†	5246.6	1.99 mg/L	0.072	1.99 mg/L	0.072	3.60%
Mg 279.077†	27355.0	28.0 mg/L	1.01	28.0 mg/L	1.01	3.60%
Mn 257.610†	141813.4	0.285 mg/L	0.0068	0.285 mg/L	0.0068	2.39%
Mo 202.031†	7263.0	0.497 mg/L	0.0083	0.497 mg/L	0.0083	1.68%
Ni 231.604†	7554.7	0.243 mg/L	0.0043	0.243 mg/L	0.0043	1.78%
Pb 220.353†	1269.0	0.240 mg/L	0.0041	0.240 mg/L	0.0041	1.71%
Sb 206.836†	928.1	0.565 mg/L	0.0055	0.565 mg/L	0.0055	0.97%
Se 196.026†	134.7	0.192 mg/L	0.0091	0.192 mg/L	0.0091	4.74%
Si 251.611†	102109.9	3.65 mg/L	0.050	3.65 mg/L	0.050	1.36%
Sn 189.927†	-211.5	-0.0419 mg/L	0.00106	-0.0419 mg/L	0.00106	2.53%
Ti 334.940†	337247.4	0.486 mg/L	0.0061	0.486 mg/L	0.0061	1.27%
Tl 190.801†	325.1	0.220 mg/L	0.0027	0.220 mg/L	0.0027	1.21%
V 290.880†	80056.1	0.497 mg/L	0.0141	0.497 mg/L	0.0141	2.84%
Zn 206.200†	11446.1	0.485 mg/L	0.0111	0.485 mg/L	0.0111	2.29%

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K 766.490†	36914.4	28.5	mg/L	0.31	28.5	mg/L	0.31	1.08%
Na 589.592†	3159562.0	349	mg/L	5.4	349	mg/L	5.4	1.56%
Sr 407.771†	1496118.1	1.63	mg/L	0.011	1.63	mg/L	0.011	0.65%
Li 670.784†	29430.3	0.494	mg/L	0.0217	0.494	mg/L	0.0217	4.39%
P 214.914†	-100.7	-0.105	mg/L	0.0327	-0.105	mg/L	0.0327	31.30%

Sequence No.: 18 **Autosampler Location: 55**
Sample ID: L1311020804 **Date Collected: 11/8/2013 12:09:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020804

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020804

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2229983.1						68150.77	3.06%
YRADIAL	152955.5						3217.19	2.10%
Ga 417.206	868232.9						27869.80	3.21%
GaRADIAL	44565.9						166.72	0.37%
Ag 328.068†	592.5	0.00328	mg/L	0.000257	0.00328	mg/L	0.000257	7.84%
Al 396.153†	60.9	-0.0108	mg/L	0.00137	-0.0108	mg/L	0.00137	12.78%
As 188.979†	-10.6	-0.00451	mg/L	0.003163	-0.00451	mg/L	0.003163	70.14%
Ba 233.527†	1330.9	0.0199	mg/L	0.00055	0.0199	mg/L	0.00055	2.77%
Be 234.861†	112.4	0.00029	mg/L	0.000050	0.00029	mg/L	0.000050	17.26%
B 249.677†	8996.0	0.186	mg/L	0.0076	0.186	mg/L	0.0076	4.10%
Ca 227.546†	17652.1	109	mg/L	3.7	109	mg/L	3.7	3.41%
Cd 228.802†	-2.4	-0.00009	mg/L	0.000139	-0.00009	mg/L	0.000139	148.74%
Co 228.616†	1.1	-0.00004	mg/L	0.000532	-0.00004	mg/L	0.000532	>999.9%
Cr 267.716†	89.4	0.00116	mg/L	0.000117	0.00116	mg/L	0.000117	10.08%
Cu 327.393†	94.2	0.00162	mg/L	0.000451	0.00162	mg/L	0.000451	27.90%
Fe 239.562†	110.6	0.0342	mg/L	0.00119	0.0342	mg/L	0.00119	3.47%
Mg 279.077†	19432.5	19.9	mg/L	0.28	19.9	mg/L	0.28	1.43%
Mn 257.610†	16833.3	0.0321	mg/L	0.00103	0.0321	mg/L	0.00103	3.22%
Mo 202.031†	65.3	0.00503	mg/L	0.000416	0.00503	mg/L	0.000416	8.28%
Ni 231.604†	43.0	0.00159	mg/L	0.000223	0.00159	mg/L	0.000223	14.09%
Pb 220.353†	19.3	0.00228	mg/L	0.001470	0.00228	mg/L	0.001470	64.46%
Sb 206.836†	-3.3	-0.00180	mg/L	0.002014	-0.00180	mg/L	0.002014	111.58%
Se 196.026†	-3.9	-0.0103	mg/L	0.00596	-0.0103	mg/L	0.00596	57.71%
Si 251.611†	23502.0	0.852	mg/L	0.0243	0.852	mg/L	0.0243	2.86%
Sn 189.927†	-279.7	-0.0552	mg/L	0.00100	-0.0552	mg/L	0.00100	1.81%
Ti 334.940†	-11833.2	-0.00117	mg/L	0.000246	-0.00117	mg/L	0.000246	20.95%
Tl 190.801†	-26.2	-0.0207	mg/L	0.00169	-0.0207	mg/L	0.00169	8.15%
V 290.880†	1231.6	0.00820	mg/L	0.001706	0.00820	mg/L	0.001706	20.81%
Zn 206.200†	58.5	0.00226	mg/L	0.000235	0.00226	mg/L	0.000235	10.38%
K 766.490†	5858.9	4.25	mg/L	0.099	4.25	mg/L	0.099	2.33%
Na 589.592†	2623034.2	287	mg/L	5.4	287	mg/L	5.4	1.89%
Sr 407.771†	1614185.0	1.76	mg/L	0.091	1.76	mg/L	0.091	5.16%
Li 670.784†	1484.4	0.0214	mg/L	0.00068	0.0214	mg/L	0.00068	3.21%
P 214.914†	25.5	0.0484	mg/L	0.00959	0.0484	mg/L	0.00959	19.82%

Sequence No.: 19 **Autosampler Location: 56**
Sample ID: L1311020809 **Date Collected: 11/8/2013 12:12:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020809

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020809

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2211882.0						12151.17	0.55%
YRADIAL	153090.7						4959.86	3.24%
Ga 417.206	861744.0						2905.12	0.34%
GaRADIAL	44772.1						813.77	1.82%
Ag 328.068†	544.6	0.00341	mg/L	0.000198	0.00341	mg/L	0.000198	5.81%
Al 396.153†	80.1	-0.00338	mg/L	0.003235	-0.00338	mg/L	0.003235	95.59%
As 188.979†	-9.1	-0.00315	mg/L	0.007328	-0.00315	mg/L	0.007328	232.56%
Ba 233.527†	1432.4	0.0212	mg/L	0.00008	0.0212	mg/L	0.00008	0.38%
Be 234.861†	179.4	0.00020	mg/L	0.000088	0.00020	mg/L	0.000088	44.53%
B 249.677†	8928.3	0.185	mg/L	0.0038	0.185	mg/L	0.0038	2.03%
Ca 227.546†	18265.2	113	mg/L	1.7	113	mg/L	1.7	1.49%
Cd 228.802†	-2.9	-0.00012	mg/L	0.000153	-0.00012	mg/L	0.000153	130.09%
Co 228.616†	4.4	0.00011	mg/L	0.000192	0.00011	mg/L	0.000192	170.26%
Cr 267.716†	89.4	0.00108	mg/L	0.000046	0.00108	mg/L	0.000046	4.25%
Cu 327.393†	51.6	0.00141	mg/L	0.000283	0.00141	mg/L	0.000283	20.12%
Fe 239.562†	2514.0	0.950	mg/L	0.0388	0.950	mg/L	0.0388	4.08%
Mg 279.077†	19847.8	20.3	mg/L	0.90	20.3	mg/L	0.90	4.45%
Mn 257.610†	35773.1	0.0704	mg/L	0.00100	0.0704	mg/L	0.00100	1.42%
Mo 202.031†	68.8	0.00529	mg/L	0.000611	0.00529	mg/L	0.000611	11.55%
Ni 231.604†	51.6	0.00186	mg/L	0.000240	0.00186	mg/L	0.000240	12.90%
Pb 220.353†	30.3	0.00432	mg/L	0.000862	0.00432	mg/L	0.000862	19.97%
Sb 206.836†	-3.2	-0.00170	mg/L	0.002465	-0.00170	mg/L	0.002465	144.82%
Se 196.026†	-2.7	-0.00836	mg/L	0.005583	-0.00836	mg/L	0.005583	66.77%
Si 251.611†	28254.5	1.02	mg/L	0.015	1.02	mg/L	0.015	1.49%
Sn 189.927†	-291.6	-0.0575	mg/L	0.00086	-0.0575	mg/L	0.00086	1.50%
Ti 334.940†	-12084.0	-0.00096	mg/L	0.000101	-0.00096	mg/L	0.000101	10.52%
Tl 190.801†	-23.1	-0.0186	mg/L	0.00246	-0.0186	mg/L	0.00246	13.17%
V 290.880†	1596.6	0.0103	mg/L	0.00038	0.0103	mg/L	0.00038	3.71%
Zn 206.200†	80.5	0.00314	mg/L	0.000397	0.00314	mg/L	0.000397	12.65%
K 766.490†	5963.2	4.33	mg/L	0.179	4.33	mg/L	0.179	4.15%
Na 589.592†	2676379.8	293	mg/L	10.3	293	mg/L	10.3	3.50%
Sr 407.771†	1768906.1	1.92	mg/L	0.114	1.92	mg/L	0.114	5.91%
Li 670.784†	1569.5	0.0228	mg/L	0.00073	0.0228	mg/L	0.00073	3.19%
P 214.914†	23.3	0.0457	mg/L	0.02060	0.0457	mg/L	0.02060	45.10%

Sequence No.: 20 **Autosampler Location: 57**
Sample ID: L1311020809PS WG451989-01 **Date Collected: 11/8/2013 12:15:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020809PS WG451989-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020809PS WG451989-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2200988.5						52603.88	2.39%
YRADIAL	151802.5						1616.31	1.06%
Ga 417.206	836808.8						15546.04	1.86%
GaRADIAL	42938.8						355.34	0.83%
Ag 328.068†	40795.0	0.192	mg/L	0.0041	0.192	mg/L	0.0041	2.13%
Al 396.153†	13076.6	4.88	mg/L	0.021	4.88	mg/L	0.021	0.42%
As 188.979†	257.6	0.188	mg/L	0.0079	0.188	mg/L	0.0079	4.21%
Ba 233.527†	34963.6	0.503	mg/L	0.0132	0.503	mg/L	0.0132	2.62%
Be 234.861†	13379.6	0.0235	mg/L	0.00041	0.0235	mg/L	0.00041	1.74%
B 249.677†	55755.4	1.12	mg/L	0.027	1.12	mg/L	0.027	2.37%
Ca 227.546†	17365.4	107	mg/L	1.8	107	mg/L	1.8	1.70%
Cd 228.802†	529.8	0.0228	mg/L	0.00043	0.0228	mg/L	0.00043	1.89%
Co 228.616†	1812.6	0.0972	mg/L	0.00311	0.0972	mg/L	0.00311	3.20%
Cr 267.716†	20976.0	0.239	mg/L	0.0059	0.239	mg/L	0.0059	2.48%
Cu 327.393†	38136.2	0.237	mg/L	0.0051	0.237	mg/L	0.0051	2.16%
Fe 239.562†	7360.5	2.80	mg/L	0.033	2.80	mg/L	0.033	1.17%
Mg 279.077†	22222.8	22.7	mg/L	0.17	22.7	mg/L	0.17	0.77%
Mn 257.610†	154817.1	0.311	mg/L	0.0081	0.311	mg/L	0.0081	2.60%
Mo 202.031†	7462.3	0.510	mg/L	0.0146	0.510	mg/L	0.0146	2.86%
Ni 231.604†	7873.1	0.253	mg/L	0.0068	0.253	mg/L	0.0068	2.68%

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Pb 220.353†	1307.2	0.247 mg/L	0.0073	0.247 mg/L	0.0073	2.94%
Sb 206.836†	943.3	0.574 mg/L	0.0153	0.574 mg/L	0.0153	2.66%
Se 196.026†	126.2	0.180 mg/L	0.0099	0.180 mg/L	0.0099	5.51%
Si 251.611†	91959.7	3.29 mg/L	0.063	3.29 mg/L	0.063	1.91%
Sn 189.927†	-273.7	-0.0540 mg/L	0.00139	-0.0540 mg/L	0.00139	2.57%
Ti 334.940†	343346.3	0.501 mg/L	0.0115	0.501 mg/L	0.0115	2.29%
Tl 190.801†	325.9	0.221 mg/L	0.0030	0.221 mg/L	0.0030	1.35%
V 290.880†	79169.0	0.491 mg/L	0.0160	0.491 mg/L	0.0160	3.26%
Zn 206.200†	11791.7	0.500 mg/L	0.0137	0.500 mg/L	0.0137	2.75%
K 766.490†	36436.0	28.2 mg/L	0.29	28.2 mg/L	0.29	1.02%
Na 589.592†	2686032.8	294 mg/L	5.9	294 mg/L	5.9	2.02%
Sr 407.771†	2007777.8	2.18 mg/L	0.058	2.18 mg/L	0.058	2.64%
Li 670.784†	30678.5	0.515 mg/L	0.0030	0.515 mg/L	0.0030	0.57%
P 214.914†	-113.4	-0.120 mg/L	0.0436	-0.120 mg/L	0.0436	36.34%

Sequence No.: 21 **Autosampler Location: 58**
Sample ID: L1311020809DL WG451989-02 **Date Collected: 11/8/2013 12:17:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020809DL WG451989-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020809DL WG451989-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2324585.7						29230.03	1.26%
YRADIAL	153761.5						2014.51	1.31%
Ga 417.206	875667.8						11953.14	1.37%
GaRADIAL	44768.6						947.48	2.12%
Ag 328.068†	247.3	0.00201	mg/L	0.000476	0.00201	mg/L	0.000476	23.64%
Al 396.153†	22.7	-0.0250	mg/L	0.00190	-0.0250	mg/L	0.00190	7.61%
As 188.979†	-5.8	-0.00292	mg/L	0.002154	-0.00292	mg/L	0.002154	73.77%
Ba 233.527†	285.5	0.00483	mg/L	0.000191	0.00483	mg/L	0.000191	3.96%
Be 234.861†	151.5	0.00032	mg/L	0.000043	0.00032	mg/L	0.000043	13.38%
B 249.677†	2550.7	0.0567	mg/L	0.00383	0.0567	mg/L	0.00383	6.75%
Ca 227.546†	3585.6	22.2	mg/L	0.37	22.2	mg/L	0.37	1.67%
Cd 228.802†	-2.2	-0.00010	mg/L	0.000215	-0.00010	mg/L	0.000215	217.29%
Co 228.616†	-4.6	-0.00038	mg/L	0.000113	-0.00038	mg/L	0.000113	29.86%
Cr 267.716†	25.5	0.00041	mg/L	0.000023	0.00041	mg/L	0.000023	5.68%
Cu 327.393†	275.1	0.00276	mg/L	0.000327	0.00276	mg/L	0.000327	11.85%
Fe 239.562†	516.9	0.189	mg/L	0.0046	0.189	mg/L	0.0046	2.41%
Mg 279.077†	4052.2	4.13	mg/L	0.067	4.13	mg/L	0.067	1.63%
Mn 257.610†	7215.8	0.0128	mg/L	0.00045	0.0128	mg/L	0.00045	3.51%
Mo 202.031†	23.7	0.00218	mg/L	0.000361	0.00218	mg/L	0.000361	16.55%
Ni 231.604†	12.8	0.00061	mg/L	0.000191	0.00061	mg/L	0.000191	31.38%
Pb 220.353†	18.8	0.00218	mg/L	0.001834	0.00218	mg/L	0.001834	83.92%
Sb 206.836†	0.4	0.00045	mg/L	0.001005	0.00045	mg/L	0.001005	221.14%
Se 196.026†	-2.1	-0.00760	mg/L	0.004955	-0.00760	mg/L	0.004955	65.24%
Si 251.611†	5688.3	0.217	mg/L	0.0083	0.217	mg/L	0.0083	3.83%
Sn 189.927†	-146.5	-0.0293	mg/L	0.00125	-0.0293	mg/L	0.00125	4.25%
Ti 334.940†	-2575.0	-0.00109	mg/L	0.000210	-0.00109	mg/L	0.000210	19.17%
Tl 190.801†	-10.4	-0.00996	mg/L	0.001336	-0.00996	mg/L	0.001336	13.41%
V 290.880†	607.2	0.00471	mg/L	0.001057	0.00471	mg/L	0.001057	22.43%
Zn 206.200†	19.8	0.00061	mg/L	0.000125	0.00061	mg/L	0.000125	20.49%
K 766.490†	1271.7	0.925	mg/L	0.0240	0.925	mg/L	0.0240	2.59%
Na 589.592†	537248.8	56.7	mg/L	0.39	56.7	mg/L	0.39	0.68%
Sr 407.771†	351113.3	0.383	mg/L	0.0135	0.383	mg/L	0.0135	3.53%
Li 670.784†	345.1	0.00209	mg/L	0.001777	0.00209	mg/L	0.001777	84.83%
P 214.914†	10.2	0.0299	mg/L	0.00924	0.0299	mg/L	0.00924	30.93%

Sequence No.: 22 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 12:20:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	2331821.2				43124.23	1.85%
YRADIAL	161504.9				2570.74	1.59%
Ga 417.206	852140.4				24854.11	2.92%
GaRADIAL	44671.5				562.21	1.26%
Ag 328.068†	83718.4	0.393 mg/L	0.0111	0.393 mg/L	0.0111	2.82%
QC value within limits for Ag 328.068 Recovery = 98.20%						
Al 396.153†	26498.5	9.93 mg/L	0.102	9.93 mg/L	0.102	1.03%
QC value within limits for Al 396.153 Recovery = 99.31%						
As 188.979†	549.4	0.395 mg/L	0.0140	0.395 mg/L	0.0140	3.55%
QC value within limits for As 188.979 Recovery = 98.80%						
Ba 233.527†	69108.9	0.994 mg/L	0.0290	0.994 mg/L	0.0290	2.92%
QC value within limits for Ba 233.527 Recovery = 99.36%						
Be 234.861†	27632.7	0.0489 mg/L	0.00140	0.0489 mg/L	0.00140	2.86%
QC value within limits for Be 234.861 Recovery = 97.74%						
B 249.677†	24419.6	0.492 mg/L	0.0135	0.492 mg/L	0.0135	2.73%
QC value within limits for B 249.677 Recovery = 98.45%						
Ca 227.546†	1576.0	10.2 mg/L	0.34	10.2 mg/L	0.34	3.30%
QC value within limits for Ca 227.546 Recovery = 102.14%						
Cd 228.802†	1116.0	0.0479 mg/L	0.00197	0.0479 mg/L	0.00197	4.10%
QC value within limits for Cd 228.802 Recovery = 95.80%						
Co 228.616†	3707.1	0.199 mg/L	0.0035	0.199 mg/L	0.0035	1.78%
QC value within limits for Co 228.616 Recovery = 99.48%						
Cr 267.716†	43558.3	0.496 mg/L	0.0145	0.496 mg/L	0.0145	2.92%
QC value within limits for Cr 267.716 Recovery = 99.27%						
Cu 327.393†	78829.7	0.489 mg/L	0.0135	0.489 mg/L	0.0135	2.77%
QC value within limits for Cu 327.393 Recovery = 97.82%						
Fe 239.562†	10508.8	4.00 mg/L	0.044	4.00 mg/L	0.044	1.11%
QC value within limits for Fe 239.562 Recovery = 99.88%						
Mg 279.077†	9836.1	10.1 mg/L	0.12	10.1 mg/L	0.12	1.19%
QC value within limits for Mg 279.077 Recovery = 100.62%						
Mn 257.610†	252327.1	0.508 mg/L	0.0152	0.508 mg/L	0.0152	2.99%
QC value within limits for Mn 257.610 Recovery = 101.58%						
Mo 202.031†	14548.8	0.994 mg/L	0.0287	0.994 mg/L	0.0287	2.88%
QC value within limits for Mo 202.031 Recovery = 99.44%						
Ni 231.604†	15581.0	0.501 mg/L	0.0163	0.501 mg/L	0.0163	3.26%
QC value within limits for Ni 231.604 Recovery = 100.14%						
Pb 220.353†	2656.3	0.503 mg/L	0.0090	0.503 mg/L	0.0090	1.80%
QC value within limits for Pb 220.353 Recovery = 100.60%						
Sb 206.836†	1922.6	1.17 mg/L	0.035	1.17 mg/L	0.035	3.00%
QC value within limits for Sb 206.836 Recovery = 97.53%						
Se 196.026†	276.0	0.399 mg/L	0.0122	0.399 mg/L	0.0122	3.04%
QC value within limits for Se 196.026 Recovery = 99.78%						
Si 251.611†	137599.0	4.91 mg/L	0.141	4.91 mg/L	0.141	2.87%
QC value within limits for Si 251.611 Recovery = 98.18%						
Sn 189.927†	5162.5	1.000 mg/L	0.0202	1.000 mg/L	0.0202	2.02%
QC value within limits for Sn 189.927 Recovery = 99.98%						
Ti 334.940†	705364.5	0.998 mg/L	0.0096	0.998 mg/L	0.0096	0.96%
QC value within limits for Ti 334.940 Recovery = 99.81%						
Tl 190.801†	764.8	0.520 mg/L	0.0122	0.520 mg/L	0.0122	2.34%
QC value within limits for Tl 190.801 Recovery = 104.08%						
V 290.880†	158168.2	0.981 mg/L	0.0324	0.981 mg/L	0.0324	3.31%
QC value within limits for V 290.880 Recovery = 98.11%						
Zn 206.200†	23864.8	1.01 mg/L	0.034	1.01 mg/L	0.034	3.38%
QC value within limits for Zn 206.200 Recovery = 101.17%						
K 766.490†	63679.5	50.1 mg/L	0.59	50.1 mg/L	0.59	1.17%
QC value within limits for K 766.490 Recovery = 100.11%						
Na 589.592†	467735.3	49.4 mg/L	0.23	49.4 mg/L	0.23	0.47%
QC value within limits for Na 589.592 Recovery = 98.71%						
Sr 407.771†	913470.9	0.996 mg/L	0.0064	0.996 mg/L	0.0064	0.64%
QC value within limits for Sr 407.771 Recovery = 99.59%						
Li 670.784†	59432.2	1.00 mg/L	0.006	1.00 mg/L	0.006	0.58%
QC value within limits for Li 670.784 Recovery = 100.13%						

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P 214.914† 8094.2 9.83 mg/L 0.203 9.83 mg/L 0.203 2.07%
QC value within limits for P 214.914 Recovery = 98.26%
All analyte(s) passed QC.

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Sequence No.: 23 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 12:22:47 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2337235.3						42206.83	1.81%
YRADIAL	157477.1						3148.01	2.00%
Ga 417.206	834147.0						12576.28	1.51%
GaRADIAL	43687.4						645.56	1.48%
Ag 328.068†	166.8	0.00163	mg/L	0.000095	0.00163	mg/L	0.000095	5.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	28.3	-0.0228	mg/L	0.00352	-0.0228	mg/L	0.00352	15.43%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	0.9	0.00141	mg/L	0.004001	0.00141	mg/L	0.004001	282.91%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-4.9	0.00067	mg/L	0.000143	0.00067	mg/L	0.000143	21.24%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	48.6	0.00018	mg/L	0.000051	0.00018	mg/L	0.000051	28.72%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	594.1	0.0175	mg/L	0.00096	0.0175	mg/L	0.00096	5.49%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	15.7	0.130	mg/L	0.0160	0.130	mg/L	0.0160	12.27%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-4.0	-0.00020	mg/L	0.000199	-0.00020	mg/L	0.000199	97.49%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-6.2	-0.00047	mg/L	0.000233	-0.00047	mg/L	0.000233	49.80%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	6.3	0.00021	mg/L	0.000175	0.00021	mg/L	0.000175	82.91%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	293.6	0.00286	mg/L	0.000098	0.00286	mg/L	0.000098	3.43%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	6.3	-0.00515	mg/L	0.001093	-0.00515	mg/L	0.001093	21.21%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	13.0	-0.00329	mg/L	0.003999	-0.00329	mg/L	0.003999	121.63%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	57.0	-0.00170	mg/L	0.000018	-0.00170	mg/L	0.000018	1.03%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	5.8	0.00096	mg/L	0.000136	0.00096	mg/L	0.000136	14.25%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-10.0	-0.00013	mg/L	0.000457	-0.00013	mg/L	0.000457	358.81%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-2.2	-0.00177	mg/L	0.000501	-0.00177	mg/L	0.000501	28.25%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.0	0.00080	mg/L	0.002026	0.00080	mg/L	0.002026	252.79%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.7	-0.00358	mg/L	0.003199	-0.00358	mg/L	0.003199	89.27%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	123.7	0.0184	mg/L	0.00161	0.0184	mg/L	0.00161	8.74%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-7.6	-0.00241	mg/L	0.001169	-0.00241	mg/L	0.001169	48.46%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-74.2	-0.00086	mg/L	0.000051	-0.00086	mg/L	0.000051	5.87%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-0.4	-0.00330	mg/L	0.003353	-0.00330	mg/L	0.003353	101.57%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	403.2	0.00358	mg/L	0.000390	0.00358	mg/L	0.000390	10.88%
QC value within limits for V 290.880 Recovery = Not calculated								

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Zn 206.200†	-21.8	-0.00114 mg/L	0.000084	-0.00114 mg/L	0.000084	7.43%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	26.6	0.0178 mg/L	0.03493	0.0178 mg/L	0.03493	195.96%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	788.8	0.0743 mg/L	0.04671	0.0743 mg/L	0.04671	62.89%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	104.1	0.00148 mg/L	0.000068	0.00148 mg/L	0.000068	4.61%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	45.8	-0.00297 mg/L	0.001059	-0.00297 mg/L	0.001059	35.71%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	12.1	0.0322 mg/L	0.01886	0.0322 mg/L	0.01886	58.65%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 24 **Autosampler Location: 59**
Sample ID: L1311020811 **Date Collected: 11/8/2013 12:25:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020811

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020811

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2239464.3						28257.93	1.26%
YRADIAL	154948.3						2135.11	1.38%
Ga 417.206	875095.7						8618.97	0.98%
GaRADIAL	45145.4						1162.69	2.58%
Ag 328.068†	730.8	0.00390	mg/L	0.000782	0.00390	mg/L	0.000782	20.05%
Al 396.153†	44.7	-0.0170	mg/L	0.00234	-0.0170	mg/L	0.00234	13.80%
As 188.979†	-12.7	-0.00592	mg/L	0.005079	-0.00592	mg/L	0.005079	85.83%
Ba 233.527†	1579.7	0.0234	mg/L	0.00006	0.0234	mg/L	0.00006	0.27%
Be 234.861†	131.3	0.00031	mg/L	0.000038	0.00031	mg/L	0.000038	12.16%
B 249.677†	7781.1	0.162	mg/L	0.0024	0.162	mg/L	0.0024	1.46%
Ca 227.546†	18831.9	116	mg/L	1.7	116	mg/L	1.7	1.44%
Cd 228.802†	-10.1	-0.00043	mg/L	0.000101	-0.00043	mg/L	0.000101	23.67%
Co 228.616†	-1.8	-0.00020	mg/L	0.000321	-0.00020	mg/L	0.000321	163.06%
Cr 267.716†	111.6	0.00141	mg/L	0.000105	0.00141	mg/L	0.000105	7.45%
Cu 327.393†	153.8	0.00199	mg/L	0.000480	0.00199	mg/L	0.000480	24.18%
Fe 239.562†	182.1	0.0613	mg/L	0.00161	0.0613	mg/L	0.00161	2.62%
Mg 279.077†	24365.3	24.9	mg/L	0.32	24.9	mg/L	0.32	1.29%
Mn 257.610†	8099.3	0.0145	mg/L	0.00038	0.0145	mg/L	0.00038	2.63%
Mo 202.031†	76.8	0.00581	mg/L	0.000699	0.00581	mg/L	0.000699	12.02%
Ni 231.604†	41.8	0.00155	mg/L	0.000514	0.00155	mg/L	0.000514	33.25%
Pb 220.353†	23.6	0.00311	mg/L	0.001655	0.00311	mg/L	0.001655	53.16%
Sb 206.836†	-3.6	-0.00196	mg/L	0.003980	-0.00196	mg/L	0.003980	203.18%
Se 196.026†	-2.3	-0.00794	mg/L	0.007038	-0.00794	mg/L	0.007038	88.64%
Si 251.611†	40635.0	1.46	mg/L	0.024	1.46	mg/L	0.024	1.65%
Sn 189.927†	-291.4	-0.0574	mg/L	0.00103	-0.0574	mg/L	0.00103	1.79%
Ti 334.940†	-12445.1	-0.00095	mg/L	0.000633	-0.00095	mg/L	0.000633	66.92%
Tl 190.801†	-26.7	-0.0210	mg/L	0.00097	-0.0210	mg/L	0.00097	4.63%
V 290.880†	1385.9	0.00902	mg/L	0.000546	0.00902	mg/L	0.000546	6.05%
Zn 206.200†	75.4	0.00297	mg/L	0.000369	0.00297	mg/L	0.000369	12.41%
K 766.490†	5230.7	3.78	mg/L	0.146	3.78	mg/L	0.146	3.86%
Na 589.592†	2513274.4	274	mg/L	4.9	274	mg/L	4.9	1.79%
Sr 407.771†	1780924.5	1.94	mg/L	0.055	1.94	mg/L	0.055	2.85%
Li 670.784†	1349.4	0.0191	mg/L	0.00085	0.0191	mg/L	0.00085	4.45%
P 214.914†	34.2	0.0589	mg/L	0.00694	0.0589	mg/L	0.00694	11.78%

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Sequence No.: 25 **Autosampler Location: 60**
Sample ID: L1311020813 **Date Collected: 11/8/2013 12:28:51 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: L1311020813

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020813

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2300780.3						15085.61	0.66%
YRADIAL	159765.1						1554.39	0.97%
Ga 417.206	884340.8						7688.20	0.87%
GaRADIAL	45314.3						689.09	1.52%
Ag 328.068†	459.0	0.00283	mg/L	0.000594	0.00283	mg/L	0.000594	21.02%
Al 396.153†	54.8	-0.0130	mg/L	0.00156	-0.0130	mg/L	0.00156	12.02%
As 188.979†	-7.6	-0.00307	mg/L	0.001724	-0.00307	mg/L	0.001724	56.15%
Ba 233.527†	2442.0	0.0358	mg/L	0.00021	0.0358	mg/L	0.00021	0.60%
Be 234.861†	95.2	0.00026	mg/L	0.000053	0.00026	mg/L	0.000053	20.75%
B 249.677†	4427.7	0.0945	mg/L	0.00230	0.0945	mg/L	0.00230	2.43%
Ca 227.546†	12513.9	77.2	mg/L	2.17	77.2	mg/L	2.17	2.80%
Cd 228.802†	-3.5	-0.00015	mg/L	0.000148	-0.00015	mg/L	0.000148	98.72%
Co 228.616†	-6.8	-0.00048	mg/L	0.000364	-0.00048	mg/L	0.000364	75.29%
Cr 267.716†	82.5	0.00108	mg/L	0.000013	0.00108	mg/L	0.000013	1.17%
Cu 327.393†	206.0	0.00231	mg/L	0.000663	0.00231	mg/L	0.000663	28.65%
Fe 239.562†	93.2	0.0276	mg/L	0.00185	0.0276	mg/L	0.00185	6.70%
Mg 279.077†	16747.2	17.1	mg/L	0.28	17.1	mg/L	0.28	1.66%
Mn 257.610†	4524.8	0.00732	mg/L	0.000068	0.00732	mg/L	0.000068	0.93%
Mo 202.031†	53.8	0.00424	mg/L	0.000561	0.00424	mg/L	0.000561	13.24%
Ni 231.604†	-5.1	0.00004	mg/L	0.000373	0.00004	mg/L	0.000373	>999.9%
Pb 220.353†	22.5	0.00289	mg/L	0.001445	0.00289	mg/L	0.001445	49.95%
Sb 206.836†	-3.2	-0.00172	mg/L	0.002197	-0.00172	mg/L	0.002197	127.53%
Se 196.026†	-0.5	-0.00525	mg/L	0.005043	-0.00525	mg/L	0.005043	96.06%
Si 251.611†	51629.7	1.85	mg/L	0.044	1.85	mg/L	0.044	2.37%
Sn 189.927†	-252.3	-0.0498	mg/L	0.00211	-0.0498	mg/L	0.00211	4.23%
Ti 334.940†	-8389.7	-0.00106	mg/L	0.000444	-0.00106	mg/L	0.000444	42.07%
Tl 190.801†	-19.4	-0.0160	mg/L	0.00453	-0.0160	mg/L	0.00453	28.21%
V 290.880†	1200.9	0.00808	mg/L	0.001378	0.00808	mg/L	0.001378	17.06%
Zn 206.200†	17.2	0.00052	mg/L	0.000151	0.00052	mg/L	0.000151	29.17%
K 766.490†	3813.2	2.84	mg/L	0.107	2.84	mg/L	0.107	3.76%
Na 589.592†	1065406.1	113	mg/L	0.9	113	mg/L	0.9	0.76%
Sr 407.771†	845530.9	0.920	mg/L	0.0391	0.920	mg/L	0.0391	4.25%
Li 670.784†	580.3	0.00607	mg/L	0.000162	0.00607	mg/L	0.000162	2.66%
P 214.914†	41.5	0.0678	mg/L	0.00899	0.0678	mg/L	0.00899	13.26%

Sequence No.: 26 **Autosampler Location: 61**
Sample ID: L1311020815 **Date Collected: 11/8/2013 12:31:55 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020815

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020815

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2298338.5						56655.36	2.47%
YRADIAL	156430.8						5001.99	3.20%
Ga 417.206	874306.6						25874.79	2.96%
GaRADIAL	44477.5						560.42	1.26%
Ag 328.068†	395.3	0.00263	mg/L	0.000066	0.00263	mg/L	0.000066	2.51%
Al 396.153†	113.1	0.00908	mg/L	0.002351	0.00908	mg/L	0.002351	25.88%
As 188.979†	-10.1	-0.00521	mg/L	0.002247	-0.00521	mg/L	0.002247	43.17%
Ba 233.527†	3213.9	0.0469	mg/L	0.00055	0.0469	mg/L	0.00055	1.17%
Be 234.861†	114.0	0.00029	mg/L	0.000121	0.00029	mg/L	0.000121	42.12%
B 249.677†	2635.5	0.0585	mg/L	0.00163	0.0585	mg/L	0.00163	2.78%
Ca 227.546†	10160.6	62.7	mg/L	1.47	62.7	mg/L	1.47	2.35%
Cd 228.802†	-7.2	-0.00031	mg/L	0.000077	-0.00031	mg/L	0.000077	24.93%

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Co 228.616†	-9.1	-0.00061 mg/L	0.000434	-0.00061 mg/L	0.000434	70.61%
Cr 267.716†	112.9	0.00142 mg/L	0.000388	0.00142 mg/L	0.000388	27.27%
Cu 327.393†	233.8	0.00249 mg/L	0.000069	0.00249 mg/L	0.000069	2.76%
Fe 239.562†	117.2	0.0368 mg/L	0.00055	0.0368 mg/L	0.00055	1.50%
Mg 279.077†	12767.8	13.0 mg/L	0.28	13.0 mg/L	0.28	2.18%
Mn 257.610†	3015.8	0.00427 mg/L	0.000483	0.00427 mg/L	0.000483	11.30%
Mo 202.031†	50.3	0.00400 mg/L	0.000817	0.00400 mg/L	0.000817	20.44%
Ni 231.604†	3.8	0.00032 mg/L	0.000819	0.00032 mg/L	0.000819	253.33%
Pb 220.353†	25.9	0.00356 mg/L	0.002038	0.00356 mg/L	0.002038	57.29%
Sb 206.836†	0.3	0.00038 mg/L	0.001888	0.00038 mg/L	0.001888	494.97%
Se 196.026†	-1.2	-0.00638 mg/L	0.006539	-0.00638 mg/L	0.006539	102.47%
Si 251.611†	71269.1	2.55 mg/L	0.061	2.55 mg/L	0.061	2.40%
Sn 189.927†	-233.9	-0.0463 mg/L	0.00168	-0.0463 mg/L	0.00168	3.64%
Ti 334.940†	-6490.7	-0.00055 mg/L	0.000229	-0.00055 mg/L	0.000229	41.81%
Tl 190.801†	-20.1	-0.0165 mg/L	0.00432	-0.0165 mg/L	0.00432	26.19%
V 290.880†	943.3	0.00659 mg/L	0.001217	0.00659 mg/L	0.001217	18.48%
Zn 206.200†	48.9	0.00186 mg/L	0.001225	0.00186 mg/L	0.001225	65.96%
K 766.490†	3053.3	2.32 mg/L	0.056	2.32 mg/L	0.056	2.40%
Na 589.592†	403407.4	42.5 mg/L	1.42	42.5 mg/L	1.42	3.35%
Sr 407.771†	403925.0	0.439 mg/L	0.0290	0.439 mg/L	0.0290	6.61%
Li 670.784†	175.0	-0.00078 mg/L	0.000487	-0.00078 mg/L	0.000487	62.38%
P 214.914†	48.5	0.0762 mg/L	0.00414	0.0762 mg/L	0.00414	5.43%

Sequence No.: 27 **Autosampler Location: 62**
Sample ID: L1311020817 **Date Collected: 11/8/2013 12:34:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020817

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020817

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2225306.6						35591.53	1.60%
YRADIAL	152633.6						2202.68	1.44%
Ga 417.206	865466.2						11338.82	1.31%
GaRADIAL	44693.5						728.47	1.63%
Ag 328.068†	673.2	0.00364	mg/L	0.000979	0.00364	mg/L	0.000979	26.92%
Al 396.153†	58.2	-0.0118	mg/L	0.00185	-0.0118	mg/L	0.00185	15.68%
As 188.979†	-17.7	-0.00950	mg/L	0.005848	-0.00950	mg/L	0.005848	61.58%
Ba 233.527†	1608.6	0.0238	mg/L	0.00036	0.0238	mg/L	0.00036	1.50%
Be 234.861†	87.8	0.00024	mg/L	0.000030	0.00024	mg/L	0.000030	12.68%
B 249.677†	7540.2	0.157	mg/L	0.0053	0.157	mg/L	0.0053	3.39%
Ca 227.546†	18904.1	117	mg/L	3.4	117	mg/L	3.4	2.92%
Cd 228.802†	-5.6	-0.00021	mg/L	0.000131	-0.00021	mg/L	0.000131	63.09%
Co 228.616†	-3.3	-0.00028	mg/L	0.000081	-0.00028	mg/L	0.000081	29.06%
Cr 267.716†	100.7	0.00128	mg/L	0.000140	0.00128	mg/L	0.000140	10.92%
Cu 327.393†	121.3	0.00178	mg/L	0.000740	0.00178	mg/L	0.000740	41.49%
Fe 239.562†	186.2	0.0629	mg/L	0.00061	0.0629	mg/L	0.00061	0.97%
Mg 279.077†	24721.5	25.3	mg/L	0.19	25.3	mg/L	0.19	0.76%
Mn 257.610†	10584.1	0.0195	mg/L	0.00051	0.0195	mg/L	0.00051	2.60%
Mo 202.031†	69.4	0.00531	mg/L	0.000235	0.00531	mg/L	0.000235	4.43%
Ni 231.604†	20.8	0.00087	mg/L	0.000224	0.00087	mg/L	0.000224	25.71%
Pb 220.353†	23.2	0.00302	mg/L	0.001427	0.00302	mg/L	0.001427	47.27%
Sb 206.836†	-2.7	-0.00145	mg/L	0.002385	-0.00145	mg/L	0.002385	164.33%
Se 196.026†	2.6	-0.00078	mg/L	0.002638	-0.00078	mg/L	0.002638	337.20%
Si 251.611†	42621.4	1.53	mg/L	0.040	1.53	mg/L	0.040	2.63%
Sn 189.927†	-297.1	-0.0585	mg/L	0.00099	-0.0585	mg/L	0.00099	1.70%
Ti 334.940†	-12594.6	-0.00109	mg/L	0.000326	-0.00109	mg/L	0.000326	29.84%
Tl 190.801†	-28.4	-0.0221	mg/L	0.00151	-0.0221	mg/L	0.00151	6.83%
V 290.880†	1553.7	0.0101	mg/L	0.00184	0.0101	mg/L	0.00184	18.35%
Zn 206.200†	33.8	0.00122	mg/L	0.000226	0.00122	mg/L	0.000226	18.59%
K 766.490†	5221.5	3.77	mg/L	0.118	3.77	mg/L	0.118	3.12%
Na 589.592†	2477802.0	270	mg/L	6.4	270	mg/L	6.4	2.39%
Sr 407.771†	1779341.2	1.94	mg/L	0.087	1.94	mg/L	0.087	4.52%
Li 670.784†	1310.4	0.0184	mg/L	0.00077	0.0184	mg/L	0.00077	4.17%

Approved: November 11, 2013

P 214.914†	28.7	0.0522 mg/L	0.00493	0.0522 mg/L	0.00493	9.44%

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Sequence No.: 28 **Autosampler Location: 63**
Sample ID: L1311020820 WG451705-02 **Date Collected: 11/8/2013 12:38:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020820 WG451705-02

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311020820 WG451705-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2271912.2						47602.67	2.10%
YRADIAL	157222.8						3546.73	2.26%
Ga 417.206	855601.2						22722.93	2.66%
GaRADIAL	44566.0						703.72	1.58%
Ag 328.068†	313.9	0.00226	mg/L	0.000648	0.00226	mg/L	0.000648	28.70%
Al 396.153†	63.8	-0.00958	mg/L	0.001971	-0.00958	mg/L	0.001971	20.59%
As 188.979†	-6.7	-0.00279	mg/L	0.000742	-0.00279	mg/L	0.000742	26.61%
Ba 233.527†	2918.4	0.0427	mg/L	0.00056	0.0427	mg/L	0.00056	1.30%
Be 234.861†	62.6	0.00020	mg/L	0.000055	0.00020	mg/L	0.000055	27.85%
B 249.677†	2394.7	0.0537	mg/L	0.00028	0.0537	mg/L	0.00028	0.53%
Ca 227.546†	9597.8	59.2	mg/L	1.26	59.2	mg/L	1.26	2.12%
Cd 228.802†	-1.4	-0.00006	mg/L	0.000429	-0.00006	mg/L	0.000429	697.17%
Co 228.616†	-7.8	-0.00055	mg/L	0.000163	-0.00055	mg/L	0.000163	29.71%
Cr 267.716†	66.2	0.00089	mg/L	0.000080	0.00089	mg/L	0.000080	9.01%
Cu 327.393†	222.1	0.00242	mg/L	0.000495	0.00242	mg/L	0.000495	20.47%
Fe 239.562†	99.4	0.0301	mg/L	0.00090	0.0301	mg/L	0.00090	3.00%
Mg 279.077†	11480.4	11.7	mg/L	0.09	11.7	mg/L	0.09	0.81%
Mn 257.610†	2634.7	0.00351	mg/L	0.000101	0.00351	mg/L	0.000101	2.88%
Mo 202.031†	44.6	0.00361	mg/L	0.000349	0.00361	mg/L	0.000349	9.66%
Ni 231.604†	-1.0	0.00017	mg/L	0.000689	0.00017	mg/L	0.000689	406.28%
Pb 220.353†	17.6	0.00198	mg/L	0.000258	0.00198	mg/L	0.000258	13.03%
Sb 206.836†	-4.6	-0.00257	mg/L	0.001881	-0.00257	mg/L	0.001881	73.23%
Se 196.026†	1.0	-0.00314	mg/L	0.006365	-0.00314	mg/L	0.006365	202.43%
Si 251.611†	66943.0	2.40	mg/L	0.035	2.40	mg/L	0.035	1.46%
Sn 189.927†	-239.5	-0.0474	mg/L	0.00031	-0.0474	mg/L	0.00031	0.65%
Ti 334.940†	-6277.6	-0.00077	mg/L	0.000276	-0.00077	mg/L	0.000276	35.94%
Tl 190.801†	-24.6	-0.0195	mg/L	0.00490	-0.0195	mg/L	0.00490	25.16%
V 290.880†	1020.7	0.00710	mg/L	0.001890	0.00710	mg/L	0.001890	26.62%
Zn 206.200†	30.8	0.00109	mg/L	0.000198	0.00109	mg/L	0.000198	18.20%
K 766.490†	2761.2	2.10	mg/L	0.014	2.10	mg/L	0.014	0.67%
Na 589.592†	364974.1	38.4	mg/L	0.16	38.4	mg/L	0.16	0.41%
Sr 407.771†	364887.3	0.397	mg/L	0.0159	0.397	mg/L	0.0159	4.01%
Li 670.784†	129.7	-0.00155	mg/L	0.000581	-0.00155	mg/L	0.000581	37.56%
P 214.914†	34.9	0.0598	mg/L	0.01221	0.0598	mg/L	0.01221	20.43%

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Sequence No.: 29 **Autosampler Location: 64**
Sample ID: L1311020820MS WG451705-07 **Date Collected: 11/8/2013 12:41:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020820MS WG451705-07

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020820MS WG451705-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2287622.0						29020.69	1.27%
YRADIAL	153850.3						829.66	0.54%
Ga 417.206	851979.1						17131.94	2.01%

Approved: November 11, 2013

GaRADIAL	44167.6					139.03	0.31%
Ag 328.068†	39855.6	0.187	mg/L	0.0041	0.187 mg/L	0.0041	2.19%
Al 396.153†	13049.2	4.87	mg/L	0.115	4.87 mg/L	0.115	2.37%
As 188.979†	250.8	0.182	mg/L	0.0051	0.182 mg/L	0.0051	2.79%
Ba 233.527†	35469.8	0.510	mg/L	0.0048	0.510 mg/L	0.0048	0.93%
Be 234.861†	12959.1	0.0229	mg/L	0.00032	0.0229 mg/L	0.00032	1.40%
B 249.677†	48431.8	0.977	mg/L	0.0188	0.977 mg/L	0.0188	1.92%
Ca 227.546†	11480.1	71.1	mg/L	1.27	71.1 mg/L	1.27	1.78%
Cd 228.802†	509.9	0.0219	mg/L	0.00075	0.0219 mg/L	0.00075	3.44%
Co 228.616†	1741.9	0.0934	mg/L	0.00171	0.0934 mg/L	0.00171	1.83%
Cr 267.716†	20652.3	0.235	mg/L	0.0035	0.235 mg/L	0.0035	1.49%
Cu 327.393†	36145.1	0.225	mg/L	0.0047	0.225 mg/L	0.0047	2.09%
Fe 239.562†	5326.8	2.02	mg/L	0.047	2.02 mg/L	0.047	2.33%
Mg 279.077†	18020.3	18.4	mg/L	0.36	18.4 mg/L	0.36	1.95%
Mn 257.610†	121418.9	0.243	mg/L	0.0025	0.243 mg/L	0.0025	1.04%
Mo 202.031†	7241.5	0.495	mg/L	0.0075	0.495 mg/L	0.0075	1.52%
Ni 231.604†	7464.1	0.240	mg/L	0.0036	0.240 mg/L	0.0036	1.50%
Pb 220.353†	1268.3	0.239	mg/L	0.0047	0.239 mg/L	0.0047	1.96%
Sb 206.836†	923.7	0.562	mg/L	0.0088	0.562 mg/L	0.0088	1.57%
Se 196.026†	136.0	0.194	mg/L	0.0080	0.194 mg/L	0.0080	4.12%
Si 251.611†	135349.5	4.83	mg/L	0.094	4.83 mg/L	0.094	1.94%
Sn 189.927†	-218.0	-0.0432	mg/L	0.00157	-0.0432 mg/L	0.00157	3.64%
Ti 334.940†	333353.3	0.481	mg/L	0.0066	0.481 mg/L	0.0066	1.37%
Tl 190.801†	343.1	0.232	mg/L	0.0107	0.232 mg/L	0.0107	4.62%
V 290.880†	75774.7	0.470	mg/L	0.0042	0.470 mg/L	0.0042	0.90%
Zn 206.200†	11252.8	0.477	mg/L	0.0066	0.477 mg/L	0.0066	1.39%
K 766.490†	33846.8	26.4	mg/L	0.13	26.4 mg/L	0.13	0.50%
Na 589.592†	619114.7	65.5	mg/L	0.33	65.5 mg/L	0.33	0.50%
Sr 407.771†	847506.2	0.922	mg/L	0.0099	0.922 mg/L	0.0099	1.08%
Li 670.784†	29069.7	0.488	mg/L	0.0125	0.488 mg/L	0.0125	2.55%
P 214.914†	-91.6	-0.0935	mg/L	0.02866	-0.0935 mg/L	0.02866	30.66%

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Sequence No.: 30 **Autosampler Location: 65**
Sample ID: L1311020822 **Date Collected: 11/8/2013 12:43:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020822

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020822

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2252141.0						47888.57	2.13%
YRADIAL	151423.3						4364.56	2.88%
Ga 417.206	855567.2						19455.22	2.27%
GaRADIAL	42950.0						873.62	2.03%
Ag 328.068†	432.0	0.00281	mg/L	0.000412	0.00281	mg/L	0.000412	14.70%
Al 396.153†	105.0	0.00600	mg/L	0.002633	0.00600	mg/L	0.002633	43.87%
As 188.979†	-9.2	-0.00433	mg/L	0.002976	-0.00433	mg/L	0.002976	68.80%
Ba 233.527†	3346.5	0.0488	mg/L	0.00093	0.0488	mg/L	0.00093	1.91%
Be 234.861†	75.0	0.00022	mg/L	0.000059	0.00022	mg/L	0.000059	26.92%
B 249.677†	2713.4	0.0601	mg/L	0.00381	0.0601	mg/L	0.00381	6.34%
Ca 227.546†	11616.3	71.7	mg/L	1.99	71.7	mg/L	1.99	2.77%
Cd 228.802†	-4.2	-0.00018	mg/L	0.000205	-0.00018	mg/L	0.000205	115.88%
Co 228.616†	-8.7	-0.00059	mg/L	0.000247	-0.00059	mg/L	0.000247	41.71%
Cr 267.716†	89.8	0.00116	mg/L	0.000054	0.00116	mg/L	0.000054	4.61%
Cu 327.393†	257.5	0.00263	mg/L	0.000313	0.00263	mg/L	0.000313	11.89%
Fe 239.562†	112.1	0.0349	mg/L	0.00139	0.0349	mg/L	0.00139	3.98%
Mg 279.077†	13788.2	14.1	mg/L	0.11	14.1	mg/L	0.11	0.75%
Mn 257.610†	4313.5	0.00689	mg/L	0.000329	0.00689	mg/L	0.000329	4.77%
Mo 202.031†	54.0	0.00425	mg/L	0.000824	0.00425	mg/L	0.000824	19.41%
Ni 231.604†	-7.8	-0.00005	mg/L	0.000592	-0.00005	mg/L	0.000592	>999.9%
Pb 220.353†	27.3	0.00382	mg/L	0.001623	0.00382	mg/L	0.001623	42.49%
Sb 206.836†	-2.6	-0.00134	mg/L	0.001122	-0.00134	mg/L	0.001122	83.51%
Se 196.026†	1.8	-0.00195	mg/L	0.003423	-0.00195	mg/L	0.003423	175.96%
Si 251.611†	79899.0	2.86	mg/L	0.081	2.86	mg/L	0.081	2.83%

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Sn 189.927†	-259.8	-0.0513	mg/L	0.00093	-0.0513	mg/L	0.00093	1.82%
Ti 334.940†	-7264.7	-0.00030	mg/L	0.000700	-0.00030	mg/L	0.000700	236.38%
Tl 190.801†	-19.7	-0.0162	mg/L	0.00596	-0.0162	mg/L	0.00596	36.76%
V 290.880†	1110.4	0.00760	mg/L	0.001422	0.00760	mg/L	0.001422	18.72%
Zn 206.200†	14.5	0.00040	mg/L	0.000146	0.00040	mg/L	0.000146	36.26%
K 766.490†	2825.6	2.14	mg/L	0.060	2.14	mg/L	0.060	2.80%
Na 589.592†	389779.5	41.1	mg/L	0.88	41.1	mg/L	0.88	2.14%
Sr 407.771†	370095.5	0.402	mg/L	0.0199	0.402	mg/L	0.0199	4.94%
Li 670.784†	74.6	-0.00248	mg/L	0.002003	-0.00248	mg/L	0.002003	80.82%
P 214.914†	56.0	0.0854	mg/L	0.01504	0.0854	mg/L	0.01504	17.61%

Sequence No.: 31 **Autosampler Location: 66**
Sample ID: L1311020824 **Date Collected: 11/8/2013 12:46:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020824

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020824

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2302868.0						22259.28	0.97%
YRADIAL	157019.2						1983.01	1.26%
Ga 417.206	888053.1						8117.09	0.91%
GaRADIAL	44595.4						1330.17	2.98%
Ag 328.068†	302.7	0.00219	mg/L	0.000289	0.00219	mg/L	0.000289	13.22%
Al 396.153†	73.5	-0.00588	mg/L	0.002843	-0.00588	mg/L	0.002843	48.38%
As 188.979†	-8.7	-0.00421	mg/L	0.001466	-0.00421	mg/L	0.001466	34.80%
Ba 233.527†	2859.9	0.0418	mg/L	0.00049	0.0418	mg/L	0.00049	1.16%
Be 234.861†	144.8	0.00034	mg/L	0.000042	0.00034	mg/L	0.000042	12.29%
B 249.677†	2991.9	0.0657	mg/L	0.00289	0.0657	mg/L	0.00289	4.40%
Ca 227.546†	9934.7	61.3	mg/L	1.52	61.3	mg/L	1.52	2.47%
Cd 228.802†	-9.4	-0.00041	mg/L	0.000130	-0.00041	mg/L	0.000130	31.87%
Co 228.616†	-1.5	-0.00020	mg/L	0.000310	-0.00020	mg/L	0.000310	151.65%
Cr 267.716†	71.4	0.00095	mg/L	0.000183	0.00095	mg/L	0.000183	19.25%
Cu 327.393†	248.3	0.00258	mg/L	0.000444	0.00258	mg/L	0.000444	17.22%
Fe 239.562†	86.2	0.0250	mg/L	0.00102	0.0250	mg/L	0.00102	4.09%
Mg 279.077†	13703.6	14.0	mg/L	0.09	14.0	mg/L	0.09	0.63%
Mn 257.610†	2331.8	0.00289	mg/L	0.000065	0.00289	mg/L	0.000065	2.23%
Mo 202.031†	39.0	0.00322	mg/L	0.000396	0.00322	mg/L	0.000396	12.29%
Ni 231.604†	-4.2	0.00007	mg/L	0.000596	0.00007	mg/L	0.000596	898.34%
Pb 220.353†	19.7	0.00238	mg/L	0.002949	0.00238	mg/L	0.002949	123.96%
Sb 206.836†	-2.8	-0.00150	mg/L	0.003234	-0.00150	mg/L	0.003234	215.63%
Se 196.026†	3.3	0.00030	mg/L	0.007227	0.00030	mg/L	0.007227	>999.9%
Si 251.611†	58618.0	2.10	mg/L	0.040	2.10	mg/L	0.040	1.89%
Sn 189.927†	-243.9	-0.0482	mg/L	0.00129	-0.0482	mg/L	0.00129	2.67%
Ti 334.940†	-6806.3	-0.00120	mg/L	0.000262	-0.00120	mg/L	0.000262	21.79%
Tl 190.801†	-22.5	-0.0181	mg/L	0.00394	-0.0181	mg/L	0.00394	21.74%
V 290.880†	1067.8	0.00734	mg/L	0.001521	0.00734	mg/L	0.001521	20.73%
Zn 206.200†	56.1	0.00216	mg/L	0.000271	0.00216	mg/L	0.000271	12.54%
K 766.490†	3181.3	2.42	mg/L	0.042	2.42	mg/L	0.042	1.75%
Na 589.592†	430390.0	45.4	mg/L	2.09	45.4	mg/L	2.09	4.60%
Sr 407.771†	448830.1	0.488	mg/L	0.0107	0.488	mg/L	0.0107	2.20%
Li 670.784†	209.2	-0.00020	mg/L	0.000531	-0.00020	mg/L	0.000531	262.55%
P 214.914†	37.4	0.0628	mg/L	0.01084	0.0628	mg/L	0.01084	17.25%

Sequence No.: 32 **Autosampler Location: 67**
Sample ID: L1311020826 **Date Collected: 11/8/2013 12:49:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020826

Analyte	Back Pressure	Flow

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All	170.0 kPa	0.45 L/min

Mean Data: L1311020826

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2308942.3						28954.84	1.25%
YRADIAL	158969.7						198.64	0.12%
Ga 417.206	886327.3						13690.27	1.54%
GaRADIAL	45113.9						983.74	2.18%
Ag 328.068†	384.5	0.00258	mg/L	0.000350	0.00258	mg/L	0.000350	13.57%
Al 396.153†	31.2	-0.0219	mg/L	0.00220	-0.0219	mg/L	0.00220	10.08%
As 188.979†	-11.9	-0.00655	mg/L	0.000998	-0.00655	mg/L	0.000998	15.24%
Ba 233.527†	3088.2	0.0451	mg/L	0.00061	0.0451	mg/L	0.00061	1.36%
Be 234.861†	158.0	0.00037	mg/L	0.000051	0.00037	mg/L	0.000051	13.84%
B 249.677†	2533.5	0.0565	mg/L	0.00245	0.0565	mg/L	0.00245	4.33%
Ca 227.546†	9841.6	60.7	mg/L	1.33	60.7	mg/L	1.33	2.18%
Cd 228.802†	-7.1	-0.00029	mg/L	0.000095	-0.00029	mg/L	0.000095	32.20%
Co 228.616†	-5.2	-0.00040	mg/L	0.000184	-0.00040	mg/L	0.000184	45.37%
Cr 267.716†	54.9	0.00076	mg/L	0.000141	0.00076	mg/L	0.000141	18.47%
Cu 327.393†	93.4	0.00162	mg/L	0.000520	0.00162	mg/L	0.000520	32.09%
Fe 239.562†	56.9	0.0139	mg/L	0.00036	0.0139	mg/L	0.00036	2.60%
Mg 279.077†	11754.0	12.0	mg/L	0.08	12.0	mg/L	0.08	0.66%
Mn 257.610†	1830.1	0.00188	mg/L	0.000073	0.00188	mg/L	0.000073	3.86%
Mo 202.031†	36.0	0.00302	mg/L	0.000462	0.00302	mg/L	0.000462	15.30%
Ni 231.604†	-8.3	-0.00007	mg/L	0.000316	-0.00007	mg/L	0.000316	475.84%
Pb 220.353†	29.0	0.00413	mg/L	0.001600	0.00413	mg/L	0.001600	38.73%
Sb 206.836†	-3.6	-0.00195	mg/L	0.001462	-0.00195	mg/L	0.001462	74.82%
Se 196.026†	0.6	-0.00376	mg/L	0.005500	-0.00376	mg/L	0.005500	146.19%
Si 251.611†	72507.1	2.60	mg/L	0.057	2.60	mg/L	0.057	2.20%
Sn 189.927†	-250.3	-0.0495	mg/L	0.00240	-0.0495	mg/L	0.00240	4.85%
Ti 334.940†	-6933.9	-0.00147	mg/L	0.000211	-0.00147	mg/L	0.000211	14.35%
Tl 190.801†	-17.6	-0.0148	mg/L	0.00169	-0.0148	mg/L	0.00169	11.37%
V 290.880†	982.8	0.00686	mg/L	0.002159	0.00686	mg/L	0.002159	31.46%
Zn 206.200†	22.5	0.00074	mg/L	0.000533	0.00074	mg/L	0.000533	72.22%
K 766.490†	2884.2	2.19	mg/L	0.063	2.19	mg/L	0.063	2.88%
Na 589.592†	385726.9	40.6	mg/L	1.00	40.6	mg/L	1.00	2.45%
Sr 407.771†	371802.0	0.404	mg/L	0.0143	0.404	mg/L	0.0143	3.53%
Li 670.784†	168.2	-0.00090	mg/L	0.000480	-0.00090	mg/L	0.000480	53.58%
P 214.914†	49.1	0.0770	mg/L	0.01126	0.0770	mg/L	0.01126	14.63%

Sequence No.: 33 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 12:52:22 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2296507.8						50349.88	2.19%
YRADIAL	160267.9						1236.71	0.77%
Ga 417.206	841680.0						9901.51	1.18%
GaRADIAL	44416.4						503.85	1.13%
Ag 328.068†	83808.9	0.393	mg/L	0.0064	0.393	mg/L	0.0064	1.62%
QC value within limits for Ag 328.068 Recovery = 98.31%								
Al 396.153†	26707.2	10.0	mg/L	0.11	10.0	mg/L	0.11	1.14%
QC value within limits for Al 396.153 Recovery = 100.10%								
As 188.979†	551.4	0.397	mg/L	0.0073	0.397	mg/L	0.0073	1.85%
QC value within limits for As 188.979 Recovery = 99.18%								
Ba 233.527†	69483.3	0.999	mg/L	0.0258	0.999	mg/L	0.0258	2.59%
QC value within limits for Ba 233.527 Recovery = 99.89%								
Be 234.861†	27513.9	0.0486	mg/L	0.00049	0.0486	mg/L	0.00049	1.01%
QC value within limits for Be 234.861 Recovery = 97.30%								
B 249.677†	24253.8	0.489	mg/L	0.0124	0.489	mg/L	0.0124	2.53%

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   QC value within limits for B 249.677  Recovery = 97.78%
Ca 227.546†            1585.6        10.3 mg/L          0.16        10.3 mg/L          0.16   1.51%
   QC value within limits for Ca 227.546  Recovery = 102.73%
Cd 228.802†            1106.2      0.0475 mg/L       0.00084      0.0475 mg/L       0.00084   1.77%
   QC value within limits for Cd 228.802  Recovery = 94.94%
Co 228.616†            3753.2       0.201 mg/L        0.0062       0.201 mg/L        0.0062   3.10%
   QC value within limits for Co 228.616  Recovery = 100.71%
Cr 267.716†           43430.6       0.495 mg/L        0.0118       0.495 mg/L        0.0118   2.39%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 327.393†           79294.0       0.492 mg/L        0.0071       0.492 mg/L        0.0071   1.44%
   QC value within limits for Cu 327.393  Recovery = 98.39%
Fe 239.562†           10605.7        4.03 mg/L         0.027        4.03 mg/L         0.027   0.67%
   QC value within limits for Fe 239.562  Recovery = 100.81%
Mg 279.077†            9883.1        10.1 mg/L          0.06        10.1 mg/L          0.06   0.60%
   QC value within limits for Mg 279.077  Recovery = 101.10%
Mn 257.610†          253928.1       0.511 mg/L        0.0129       0.511 mg/L        0.0129   2.53%
   QC value within limits for Mn 257.610  Recovery = 102.23%
Mo 202.031†           14512.1       0.992 mg/L        0.0207       0.992 mg/L        0.0207   2.09%
   QC value within limits for Mo 202.031  Recovery = 99.19%
Ni 231.604†           15536.3       0.499 mg/L        0.0143       0.499 mg/L        0.0143   2.87%
   QC value within limits for Ni 231.604  Recovery = 99.85%
Pb 220.353†            2684.6       0.508 mg/L        0.0171       0.508 mg/L        0.0171   3.37%
   QC value within limits for Pb 220.353  Recovery = 101.67%
Sb 206.836†            1928.6        1.17 mg/L         0.020        1.17 mg/L         0.020   1.74%
   QC value within limits for Sb 206.836  Recovery = 97.84%
Se 196.026†             273.9       0.396 mg/L        0.0103       0.396 mg/L        0.0103   2.59%
   QC value within limits for Se 196.026  Recovery = 99.03%
Si 251.611†          138334.2        4.94 mg/L         0.074        4.94 mg/L         0.074   1.51%
   QC value within limits for Si 251.611  Recovery = 98.70%
Sn 189.927†            5199.8        1.01 mg/L         0.033        1.01 mg/L         0.033   3.23%
   QC value within limits for Sn 189.927  Recovery = 100.70%
Ti 334.940†          708275.5        1.00 mg/L         0.009        1.00 mg/L         0.009   0.88%
   QC value within limits for Ti 334.940  Recovery = 100.22%
Tl 190.801†             759.8       0.517 mg/L        0.0115       0.517 mg/L        0.0115   2.23%
   QC value within limits for Tl 190.801  Recovery = 103.43%
V 290.880†           159732.8       0.991 mg/L        0.0286       0.991 mg/L        0.0286   2.89%
   QC value within limits for V 290.880  Recovery = 99.08%
Zn 206.200†           23720.3        1.01 mg/L         0.022        1.01 mg/L         0.022   2.23%
   QC value within limits for Zn 206.200  Recovery = 100.56%
K 766.490†            64718.2        50.9 mg/L          0.52        50.9 mg/L          0.52   1.02%
   QC value within limits for K 766.490  Recovery = 101.77%
Na 589.592†          478775.3        50.5 mg/L          1.22        50.5 mg/L          1.22   2.42%
   QC value within limits for Na 589.592  Recovery = 101.05%
Sr 407.771†          942585.9        1.03 mg/L         0.023        1.03 mg/L         0.023   2.29%
   QC value within limits for Sr 407.771  Recovery = 102.76%
Li 670.784†           60009.5        1.01 mg/L         0.011        1.01 mg/L         0.011   1.06%
   QC value within limits for Li 670.784  Recovery = 101.10%
P 214.914†             8162.4        9.91 mg/L         0.339        9.91 mg/L         0.339   3.42%
   QC value within limits for P 214.914  Recovery = 99.09%
All analyte(s) passed QC.

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Sequence No.: 34                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 11/8/2013 12:54:27 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     171.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029           2341140.0                                                    56715.51   2.42%
YRADIAL              156601.9                                                     2302.92   1.47%
Ga 417.206           838682.3                                                    22458.98   2.68%
GaRADIAL              43643.2                                                      981.29   2.25%
Ag 328.068†             -58.1     0.00059 mg/L      0.000768     0.00059 mg/L      0.000768 130.68%
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   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              15.2     -0.0278 mg/L      0.00247     -0.0278 mg/L      0.00247   8.90%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               1.2     0.00169 mg/L     0.001719     0.00169 mg/L     0.001719 101.84%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -1.5     0.00072 mg/L     0.000035     0.00072 mg/L     0.000035   4.91%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              64.7     0.00021 mg/L     0.000049     0.00021 mg/L     0.000049  23.76%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              312.8      0.0119 mg/L      0.00165      0.0119 mg/L      0.00165  13.93%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              13.9       0.120 mg/L       0.0448       0.120 mg/L       0.0448  37.44%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -2.3    -0.00013 mg/L     0.000058    -0.00013 mg/L     0.000058  43.83%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -9.1    -0.00063 mg/L     0.000140    -0.00063 mg/L     0.000140  22.31%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -2.7     0.00011 mg/L     0.000117     0.00011 mg/L     0.000117 108.08%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             289.5     0.00284 mg/L     0.000297     0.00284 mg/L     0.000297  10.46%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               7.5    -0.00468 mg/L     0.001172    -0.00468 mg/L     0.001172  25.02%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              13.5    -0.00284 mg/L     0.006262    -0.00284 mg/L     0.006262 220.55%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              42.4    -0.00173 mg/L     0.000062    -0.00173 mg/L     0.000062   3.57%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.4     0.00092 mg/L     0.000118     0.00092 mg/L     0.000118  12.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -8.8    -0.00009 mg/L     0.000009    -0.00009 mg/L     0.000009  10.18%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               2.0    -0.00097 mg/L     0.000844    -0.00097 mg/L     0.000844  87.06%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               1.3     0.00098 mg/L     0.002789     0.00098 mg/L     0.002789 284.69%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.4    -0.00254 mg/L     0.001809    -0.00254 mg/L     0.001809  71.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              92.8      0.0173 mg/L      0.00267      0.0173 mg/L      0.00267  15.39%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.5    -0.00123 mg/L     0.001268    -0.00123 mg/L     0.001268 103.06%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -68.9    -0.00085 mg/L     0.000033    -0.00085 mg/L     0.000033   3.88%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.1    -0.00306 mg/L     0.002052    -0.00306 mg/L     0.002052  67.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              387.8     0.00349 mg/L     0.001124     0.00349 mg/L     0.001124  32.24%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -22.2    -0.00115 mg/L     0.000180    -0.00115 mg/L     0.000180  15.63%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                8.3     0.00376 mg/L     0.046724     0.00376 mg/L     0.046724 >999.9%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             290.4      0.0220 mg/L      0.02069      0.0220 mg/L      0.02069  93.88%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              54.9     0.00143 mg/L     0.000098     0.00143 mg/L     0.000098   6.83%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              42.9    -0.00301 mg/L     0.001931    -0.00301 mg/L     0.001931  64.05%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†               14.0      0.0344 mg/L      0.00264      0.0344 mg/L      0.00264   7.66%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 35                                  Autosampler Location: 68
Sample ID: L1311020828                            Date Collected: 11/8/2013 12:57:27 PM
Analyst: KHR                                      Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: L1311020828
Analyte                 Back Pressure    Flow
All                   171.0 kPa         0.45 L/min
```

Approved: November 11, 2013

Mean Data: L1311020828

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2292459.6						26126.43	1.14%
YRADIAL	157712.9						5826.52	3.69%
Ga 417.206	874956.8						2839.80	0.32%
GaRADIAL	45062.4						867.45	1.92%
Ag 328.068†	407.3	0.00269	mg/L	0.000128	0.00269	mg/L	0.000128	4.75%
Al 396.153†	37.2	-0.0196	mg/L	0.00219	-0.0196	mg/L	0.00219	11.15%
As 188.979†	-15.7	-0.00930	mg/L	0.003924	-0.00930	mg/L	0.003924	42.18%
Ba 233.527†	3220.9	0.0470	mg/L	0.00049	0.0470	mg/L	0.00049	1.04%
Be 234.861†	118.3	0.00030	mg/L	0.000031	0.00030	mg/L	0.000031	10.34%
B 249.677†	2471.2	0.0552	mg/L	0.00119	0.0552	mg/L	0.00119	2.16%
Ca 227.546†	9992.7	61.7	mg/L	0.17	61.7	mg/L	0.17	0.27%
Cd 228.802†	-5.0	-0.00019	mg/L	0.000061	-0.00019	mg/L	0.000061	31.99%
Co 228.616†	-9.9	-0.00066	mg/L	0.000179	-0.00066	mg/L	0.000179	27.19%
Cr 267.716†	56.5	0.00078	mg/L	0.000173	0.00078	mg/L	0.000173	22.13%
Cu 327.393†	164.2	0.00206	mg/L	0.000103	0.00206	mg/L	0.000103	5.01%
Fe 239.562†	58.5	0.0145	mg/L	0.00124	0.0145	mg/L	0.00124	8.56%
Mg 279.077†	11369.5	11.6	mg/L	0.14	11.6	mg/L	0.14	1.20%
Mn 257.610†	3038.4	0.00432	mg/L	0.000077	0.00432	mg/L	0.000077	1.78%
Mo 202.031†	39.8	0.00328	mg/L	0.000353	0.00328	mg/L	0.000353	10.78%
Ni 231.604†	-13.5	-0.00023	mg/L	0.000301	-0.00023	mg/L	0.000301	129.68%
Pb 220.353†	18.9	0.00223	mg/L	0.000481	0.00223	mg/L	0.000481	21.54%
Sb 206.836†	-2.1	-0.00104	mg/L	0.000609	-0.00104	mg/L	0.000609	58.50%
Se 196.026†	-2.4	-0.00804	mg/L	0.006961	-0.00804	mg/L	0.006961	86.63%
Si 251.611†	83444.8	2.99	mg/L	0.005	2.99	mg/L	0.005	0.16%
Sn 189.927†	-246.6	-0.0488	mg/L	0.00165	-0.0488	mg/L	0.00165	3.38%
Ti 334.940†	-6965.0	-0.00137	mg/L	0.000224	-0.00137	mg/L	0.000224	16.33%
Tl 190.801†	-24.5	-0.0194	mg/L	0.00414	-0.0194	mg/L	0.00414	21.32%
V 290.880†	1170.1	0.00804	mg/L	0.001535	0.00804	mg/L	0.001535	19.10%
Zn 206.200†	6.0	0.00004	mg/L	0.000297	0.00004	mg/L	0.000297	712.48%
K 766.490†	2928.7	2.23	mg/L	0.055	2.23	mg/L	0.055	2.46%
Na 589.592†	332057.0	35.0	mg/L	0.36	35.0	mg/L	0.36	1.02%
Sr 407.771†	351338.5	0.382	mg/L	0.0124	0.382	mg/L	0.0124	3.25%
Li 670.784†	171.5	-0.00084	mg/L	0.001280	-0.00084	mg/L	0.001280	152.30%
P 214.914†	59.7	0.0899	mg/L	0.00814	0.0899	mg/L	0.00814	9.06%

Sequence No.: 36 **Autosampler Location: 69**
Sample ID: L1311020830 **Date Collected: 11/8/2013 1:00:31 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020830

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020830

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2316625.5						40414.34	1.74%
YRADIAL	157092.0						2854.70	1.82%
Ga 417.206	886766.2						18375.99	2.07%
GaRADIAL	45009.8						672.42	1.49%
Ag 328.068†	412.0	0.00272	mg/L	0.000301	0.00272	mg/L	0.000301	11.07%
Al 396.153†	-2.4	-0.0346	mg/L	0.00152	-0.0346	mg/L	0.00152	4.38%
As 188.979†	-10.5	-0.00536	mg/L	0.003907	-0.00536	mg/L	0.003907	72.93%
Ba 233.527†	3576.1	0.0521	mg/L	0.00094	0.0521	mg/L	0.00094	1.81%
Be 234.861†	122.1	0.00031	mg/L	0.000044	0.00031	mg/L	0.000044	14.18%
B 249.677†	2215.0	0.0501	mg/L	0.00086	0.0501	mg/L	0.00086	1.71%
Ca 227.546†	11245.5	69.4	mg/L	0.24	69.4	mg/L	0.24	0.35%
Cd 228.802†	-3.1	-0.00012	mg/L	0.000131	-0.00012	mg/L	0.000131	106.99%
Co 228.616†	-8.0	-0.00056	mg/L	0.000418	-0.00056	mg/L	0.000418	74.82%
Cr 267.716†	64.2	0.00087	mg/L	0.000027	0.00087	mg/L	0.000027	3.11%
Cu 327.393†	240.5	0.00253	mg/L	0.000458	0.00253	mg/L	0.000458	18.14%
Fe 239.562†	49.1	0.0109	mg/L	0.00178	0.0109	mg/L	0.00178	16.31%

Approved: November 11, 2013

Mg 279.077†	12544.8	12.8	mg/L	0.12	12.8	mg/L	0.12	0.91%
Mn 257.610†	4242.6	0.00675	mg/L	0.000066	0.00675	mg/L	0.000066	0.98%
Mo 202.031†	39.6	0.00327	mg/L	0.000787	0.00327	mg/L	0.000787	24.08%
Ni 231.604†	4.7	0.00035	mg/L	0.000172	0.00035	mg/L	0.000172	49.25%
Pb 220.353†	16.0	0.00167	mg/L	0.001174	0.00167	mg/L	0.001174	70.22%
Sb 206.836†	-1.7	-0.00080	mg/L	0.001253	-0.00080	mg/L	0.001253	157.49%
Se 196.026†	-0.5	-0.00533	mg/L	0.003957	-0.00533	mg/L	0.003957	74.27%
Si 251.611†	87913.3	3.15	mg/L	0.022	3.15	mg/L	0.022	0.69%
Sn 189.927†	-256.9	-0.0507	mg/L	0.00189	-0.0507	mg/L	0.00189	3.72%
Ti 334.940†	-8052.7	-0.00175	mg/L	0.000204	-0.00175	mg/L	0.000204	11.64%
Tl 190.801†	-14.6	-0.0128	mg/L	0.00350	-0.0128	mg/L	0.00350	27.31%
V 290.880†	1029.8	0.00713	mg/L	0.000897	0.00713	mg/L	0.000897	12.58%
Zn 206.200†	43.5	0.00163	mg/L	0.000318	0.00163	mg/L	0.000318	19.54%
K 766.490†	3059.5	2.33	mg/L	0.087	2.33	mg/L	0.087	3.73%
Na 589.592†	323797.1	34.1	mg/L	1.18	34.1	mg/L	1.18	3.46%
Sr 407.771†	297460.6	0.323	mg/L	0.0166	0.323	mg/L	0.0166	5.14%
Li 670.784†	104.0	-0.00198	mg/L	0.001415	-0.00198	mg/L	0.001415	71.41%
P 214.914†	72.7	0.106	mg/L	0.0053	0.106	mg/L	0.0053	4.97%

Sequence No.: 37 **Autosampler Location: 70**
Sample ID: L1311022002 **Date Collected: 11/8/2013 1:03:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311022002

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311022002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2306628.5						35484.73	1.54%
YRADIAL	155639.1						3727.19	2.39%
Ga 417.206	899402.6						16325.06	1.82%
GaRADIAL	45711.0						956.85	2.09%
Ag 328.068†	619.1	0.00326	mg/L	0.000205	0.00326	mg/L	0.000205	6.28%
Al 396.153†	-6.5	-0.0362	mg/L	0.00037	-0.0362	mg/L	0.00037	1.02%
As 188.979†	-15.7	-0.00812	mg/L	0.000116	-0.00812	mg/L	0.000116	1.43%
Ba 233.527†	2406.4	0.0353	mg/L	0.00060	0.0353	mg/L	0.00060	1.70%
Be 234.861†	172.7	0.00036	mg/L	0.000035	0.00036	mg/L	0.000035	9.56%
B 249.677†	4502.4	0.0959	mg/L	0.00056	0.0959	mg/L	0.00056	0.58%
Ca 227.546†	18045.7	111	mg/L	1.7	111	mg/L	1.7	1.56%
Cd 228.802†	-7.8	-0.00031	mg/L	0.000288	-0.00031	mg/L	0.000288	92.90%
Co 228.616†	1.4	-0.00004	mg/L	0.000395	-0.00004	mg/L	0.000395	>999.9%
Cr 267.716†	114.7	0.00143	mg/L	0.000395	0.00143	mg/L	0.000395	27.70%
Cu 327.393†	-18.2	0.00093	mg/L	0.000068	0.00093	mg/L	0.000068	7.28%
Fe 239.562†	662.8	0.244	mg/L	0.0081	0.244	mg/L	0.0081	3.33%
Mg 279.077†	44693.7	45.7	mg/L	0.75	45.7	mg/L	0.75	1.64%
Mn 257.610†	105470.4	0.211	mg/L	0.0019	0.211	mg/L	0.0019	0.88%
Mo 202.031†	51.4	0.00412	mg/L	0.000298	0.00412	mg/L	0.000298	7.24%
Ni 231.604†	34.2	0.00130	mg/L	0.000181	0.00130	mg/L	0.000181	13.91%
Pb 220.353†	24.8	0.00320	mg/L	0.000384	0.00320	mg/L	0.000384	12.01%
Sb 206.836†	-1.6	-0.00076	mg/L	0.004269	-0.00076	mg/L	0.004269	558.07%
Se 196.026†	-1.8	-0.00729	mg/L	0.002010	-0.00729	mg/L	0.002010	27.59%
Si 251.611†	79243.2	2.84	mg/L	0.037	2.84	mg/L	0.037	1.29%
Sn 189.927†	-279.5	-0.0551	mg/L	0.00171	-0.0551	mg/L	0.00171	3.10%
Ti 334.940†	-12637.8	-0.00195	mg/L	0.000342	-0.00195	mg/L	0.000342	17.58%
Tl 190.801†	-27.0	-0.0214	mg/L	0.00165	-0.0214	mg/L	0.00165	7.73%
V 290.880†	1442.8	0.00880	mg/L	0.000191	0.00880	mg/L	0.000191	2.16%
Zn 206.200†	26.0	0.00088	mg/L	0.000124	0.00088	mg/L	0.000124	14.14%
K 766.490†	10340.5	8.01	mg/L	0.198	8.01	mg/L	0.198	2.47%
Na 589.592†	69792.9	7.31	mg/L	0.035	7.31	mg/L	0.035	0.47%
Sr 407.771†	2601562.4	2.83	mg/L	0.140	2.83	mg/L	0.140	4.96%
Li 670.784†	1779.4	0.0263	mg/L	0.00143	0.0263	mg/L	0.00143	5.44%
P 214.914†	19.6	0.0412	mg/L	0.00147	0.0412	mg/L	0.00147	3.57%

Sequence No.: 38 **Autosampler Location: 71**

Approved: November 11, 2013

Sample ID: L1311022004 **Date Collected: 11/8/2013 1:06:40 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311022004

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311022004

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2366198.8						15022.63	0.63%
YRADIAL	161500.0						826.27	0.51%
Ga 417.206	888789.8						8110.09	0.91%
GaRADIAL	46043.0						743.90	1.62%
Ag 328.068†	108.0	0.00151	mg/L	0.000267	0.00151	mg/L	0.000267	17.67%
Al 396.153†	318.8	0.0872	mg/L	0.00184	0.0872	mg/L	0.00184	2.11%
As 188.979†	-7.2	-0.00394	mg/L	0.001673	-0.00394	mg/L	0.001673	42.49%
Ba 233.527†	1760.6	0.0260	mg/L	0.00029	0.0260	mg/L	0.00029	1.11%
Be 234.861†	157.5	0.00028	mg/L	0.000009	0.00028	mg/L	0.000009	3.33%
B 249.677†	494.6	0.0153	mg/L	0.00041	0.0153	mg/L	0.00041	2.66%
Ca 227.546†	2802.1	17.3	mg/L	0.23	17.3	mg/L	0.23	1.32%
Cd 228.802†	-2.1	-0.00009	mg/L	0.000136	-0.00009	mg/L	0.000136	150.61%
Co 228.616†	-4.8	-0.00041	mg/L	0.000326	-0.00041	mg/L	0.000326	79.06%
Cr 267.716†	57.0	0.00076	mg/L	0.000193	0.00076	mg/L	0.000193	25.48%
Cu 327.393†	278.9	0.00280	mg/L	0.000495	0.00280	mg/L	0.000495	17.70%
Fe 239.562†	1125.9	0.421	mg/L	0.0002	0.421	mg/L	0.0002	0.06%
Mg 279.077†	7936.6	8.10	mg/L	0.037	8.10	mg/L	0.037	0.46%
Mn 257.610†	33285.4	0.0654	mg/L	0.00089	0.0654	mg/L	0.00089	1.36%
Mo 202.031†	7.3	0.00108	mg/L	0.000224	0.00108	mg/L	0.000224	20.71%
Ni 231.604†	-5.8	0.00001	mg/L	0.000306	0.00001	mg/L	0.000306	>999.9%
Pb 220.353†	6.6	-0.00015	mg/L	0.002252	-0.00015	mg/L	0.002252	>999.9%
Sb 206.836†	-0.7	-0.00020	mg/L	0.001828	-0.00020	mg/L	0.001828	935.66%
Se 196.026†	-3.0	-0.00885	mg/L	0.005325	-0.00885	mg/L	0.005325	60.16%
Si 251.611†	54395.8	1.95	mg/L	0.033	1.95	mg/L	0.033	1.68%
Sn 189.927†	-126.4	-0.0255	mg/L	0.00066	-0.0255	mg/L	0.00066	2.58%
Ti 334.940†	-394.8	0.00126	mg/L	0.000085	0.00126	mg/L	0.000085	6.75%
Tl 190.801†	-8.1	-0.00845	mg/L	0.006918	-0.00845	mg/L	0.006918	81.90%
V 290.880†	708.0	0.00519	mg/L	0.000070	0.00519	mg/L	0.000070	1.35%
Zn 206.200†	76.9	0.00301	mg/L	0.000271	0.00301	mg/L	0.000271	9.00%
K 766.490†	2299.4	1.78	mg/L	0.023	1.78	mg/L	0.023	1.30%
Na 589.592†	19775.6	2.06	mg/L	0.044	2.06	mg/L	0.044	2.11%
Sr 407.771†	93355.0	0.102	mg/L	0.0011	0.102	mg/L	0.0011	1.03%
Li 670.784†	20.8	-0.00339	mg/L	0.000238	-0.00339	mg/L	0.000238	7.04%
P 214.914†	36.9	0.0622	mg/L	0.01142	0.0622	mg/L	0.01142	18.38%

Sequence No.: 39 **Autosampler Location: 72**
Sample ID: L1311022006 **Date Collected: 11/8/2013 1:09:40 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311022006

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311022006

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2312910.2						28948.35	1.25%
YRADIAL	155989.8						2316.73	1.49%
Ga 417.206	887025.3						14214.93	1.60%
GaRADIAL	45551.1						944.92	2.07%
Ag 328.068†	367.5	0.00248	mg/L	0.000144	0.00248	mg/L	0.000144	5.82%
Al 396.153†	129.8	0.0155	mg/L	0.00080	0.0155	mg/L	0.00080	5.15%
As 188.979†	-9.1	-0.00450	mg/L	0.002082	-0.00450	mg/L	0.002082	46.30%

Approved: November 11, 2013

Ba 233.527†	2150.1	0.0316	mg/L	0.00035	0.0316	mg/L	0.00035	1.11%
Be 234.861†	142.1	0.00031	mg/L	0.000037	0.00031	mg/L	0.000037	12.08%
B 249.677†	1583.1	0.0373	mg/L	0.00174	0.0373	mg/L	0.00174	4.67%
Ca 227.546†	9300.2	57.4	mg/L	0.16	57.4	mg/L	0.16	0.28%
Cd 228.802†	-7.8	-0.00033	mg/L	0.000198	-0.00033	mg/L	0.000198	59.34%
Co 228.616†	5.1	0.00014	mg/L	0.000385	0.00014	mg/L	0.000385	266.05%
Cr 267.716†	97.4	0.00124	mg/L	0.000223	0.00124	mg/L	0.000223	18.04%
Cu 327.393†	112.2	0.00175	mg/L	0.000197	0.00175	mg/L	0.000197	11.30%
Fe 239.562†	500.4	0.182	mg/L	0.0022	0.182	mg/L	0.0022	1.22%
Mg 279.077†	35031.5	35.8	mg/L	0.32	35.8	mg/L	0.32	0.90%
Mn 257.610†	31943.4	0.0626	mg/L	0.00039	0.0626	mg/L	0.00039	0.63%
Mo 202.031†	32.4	0.00279	mg/L	0.000331	0.00279	mg/L	0.000331	11.85%
Ni 231.604†	137.9	0.00463	mg/L	0.000359	0.00463	mg/L	0.000359	7.74%
Pb 220.353†	26.8	0.00367	mg/L	0.001975	0.00367	mg/L	0.001975	53.76%
Sb 206.836†	-1.3	-0.00055	mg/L	0.003794	-0.00055	mg/L	0.003794	694.29%
Se 196.026†	-0.5	-0.00524	mg/L	0.004409	-0.00524	mg/L	0.004409	84.18%
Si 251.611†	72739.2	2.61	mg/L	0.022	2.61	mg/L	0.022	0.84%
Sn 189.927†	-230.3	-0.0456	mg/L	0.00088	-0.0456	mg/L	0.00088	1.94%
Ti 334.940†	-5829.1	-0.00041	mg/L	0.000304	-0.00041	mg/L	0.000304	74.29%
Tl 190.801†	-14.8	-0.0130	mg/L	0.00495	-0.0130	mg/L	0.00495	37.96%
V 290.880†	1234.5	0.00778	mg/L	0.001961	0.00778	mg/L	0.001961	25.21%
Zn 206.200†	196.8	0.00809	mg/L	0.000442	0.00809	mg/L	0.000442	5.47%
K 766.490†	6545.4	5.05	mg/L	0.115	5.05	mg/L	0.115	2.28%
Na 589.592†	230737.0	24.3	mg/L	0.58	24.3	mg/L	0.58	2.38%
Sr 407.771†	769643.9	0.838	mg/L	0.0255	0.838	mg/L	0.0255	3.04%
Li 670.784†	837.9	0.0104	mg/L	0.00122	0.0104	mg/L	0.00122	11.73%
P 214.914†	26.0	0.0489	mg/L	0.01445	0.0489	mg/L	0.01445	29.52%

Sequence No.: 40 **Autosampler Location: 73**
Sample ID: L1311022008 **Date Collected: 11/8/2013 1:12:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311022008

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311022008

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2345556.0						55824.01	2.38%
YRADIAL	159039.8						3436.08	2.16%
Ga 417.206	862603.4						20038.00	2.32%
GaRADIAL	45020.7						1064.56	2.36%
Ag 328.068†	31.2	0.00104	mg/L	0.000413	0.00104	mg/L	0.000413	39.73%
Al 396.153†	135.6	0.0178	mg/L	0.00171	0.0178	mg/L	0.00171	9.59%
As 188.979†	-2.1	-0.00061	mg/L	0.001986	-0.00061	mg/L	0.001986	323.92%
Ba 233.527†	1060.6	0.0160	mg/L	0.00032	0.0160	mg/L	0.00032	2.02%
Be 234.861†	76.7	0.00021	mg/L	0.000098	0.00021	mg/L	0.000098	47.20%
B 249.677†	527.0	0.0161	mg/L	0.00020	0.0161	mg/L	0.00020	1.24%
Ca 227.546†	743.4	4.62	mg/L	0.110	4.62	mg/L	0.110	2.39%
Cd 228.802†	-2.3	-0.00012	mg/L	0.000143	-0.00012	mg/L	0.000143	120.00%
Co 228.616†	-12.1	-0.00080	mg/L	0.000403	-0.00080	mg/L	0.000403	50.63%
Cr 267.716†	28.2	0.00045	mg/L	0.000103	0.00045	mg/L	0.000103	22.57%
Cu 327.393†	178.3	0.00216	mg/L	0.000343	0.00216	mg/L	0.000343	15.88%
Fe 239.562†	252.9	0.0888	mg/L	0.00322	0.0888	mg/L	0.00322	3.63%
Mg 279.077†	2620.4	2.66	mg/L	0.061	2.66	mg/L	0.061	2.30%
Mn 257.610†	4743.3	0.00776	mg/L	0.000182	0.00776	mg/L	0.000182	2.35%
Mo 202.031†	1.4	0.00066	mg/L	0.000404	0.00066	mg/L	0.000404	61.43%
Ni 231.604†	-8.5	-0.00008	mg/L	0.000419	-0.00008	mg/L	0.000419	537.80%
Pb 220.353†	4.5	-0.00050	mg/L	0.002409	-0.00050	mg/L	0.002409	483.26%
Sb 206.836†	-0.0	0.00019	mg/L	0.001318	0.00019	mg/L	0.001318	693.12%
Se 196.026†	-0.2	-0.00479	mg/L	0.003061	-0.00479	mg/L	0.003061	63.90%
Si 251.611†	83615.2	3.00	mg/L	0.034	3.00	mg/L	0.034	1.14%
Sn 189.927†	-48.9	-0.0104	mg/L	0.00060	-0.0104	mg/L	0.00060	5.71%
Ti 334.940†	287.8	0.00032	mg/L	0.000245	0.00032	mg/L	0.000245	75.48%
Tl 190.801†	-4.7	-0.00613	mg/L	0.004394	-0.00613	mg/L	0.004394	71.71%
V 290.880†	719.4	0.00546	mg/L	0.001727	0.00546	mg/L	0.001727	31.63%

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Zn 206.200†	45.3	0.00169 mg/L	0.000265	0.00169 mg/L	0.000265	15.66%
K 766.490†	1913.0	1.48 mg/L	0.083	1.48 mg/L	0.083	5.64%
Na 589.592†	15778.2	1.65 mg/L	0.024	1.65 mg/L	0.024	1.49%
Sr 407.771†	24270.6	0.0277 mg/L	0.00064	0.0277 mg/L	0.00064	2.30%
Li 670.784†	43.1	-0.00301 mg/L	0.000626	-0.00301 mg/L	0.000626	20.79%
P 214.914†	14.9	0.0355 mg/L	0.01207	0.0355 mg/L	0.01207	34.02%

Sequence No.: 41 **Autosampler Location: 74**
Sample ID: L1311022010 **Date Collected: 11/8/2013 1:15:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311022010

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311022010

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2354506.2						13623.28	0.58%
YRADIAL	157349.4						5540.42	3.52%
Ga 417.206	885654.6						6310.24	0.71%
GaRADIAL	44626.3						626.21	1.40%
Ag 328.068†	39.7	0.00109	mg/L	0.000070	0.00109	mg/L	0.000070	6.47%
Al 396.153†	141.1	0.0199	mg/L	0.00336	0.0199	mg/L	0.00336	16.89%
As 188.979†	-1.5	-0.00021	mg/L	0.005469	-0.00021	mg/L	0.005469	>999.9%
Ba 233.527†	1117.8	0.0168	mg/L	0.00014	0.0168	mg/L	0.00014	0.82%
Be 234.861†	110.0	0.00026	mg/L	0.000056	0.00026	mg/L	0.000056	21.34%
B 249.677†	467.8	0.0149	mg/L	0.00033	0.0149	mg/L	0.00033	2.22%
Ca 227.546†	721.4	4.49	mg/L	0.075	4.49	mg/L	0.075	1.66%
Cd 228.802†	-7.4	-0.00035	mg/L	0.000125	-0.00035	mg/L	0.000125	36.04%
Co 228.616†	-7.8	-0.00057	mg/L	0.000167	-0.00057	mg/L	0.000167	29.42%
Cr 267.716†	9.3	0.00024	mg/L	0.000051	0.00024	mg/L	0.000051	21.50%
Cu 327.393†	240.3	0.00254	mg/L	0.000205	0.00254	mg/L	0.000205	8.06%
Fe 239.562†	300.3	0.107	mg/L	0.0019	0.107	mg/L	0.0019	1.80%
Mg 279.077†	2584.1	2.63	mg/L	0.098	2.63	mg/L	0.098	3.75%
Mn 257.610†	5902.3	0.0101	mg/L	0.00035	0.0101	mg/L	0.00035	3.50%
Mo 202.031†	-1.6	0.00046	mg/L	0.000425	0.00046	mg/L	0.000425	93.28%
Ni 231.604†	10.0	0.00052	mg/L	0.000125	0.00052	mg/L	0.000125	24.30%
Pb 220.353†	13.9	0.00127	mg/L	0.002297	0.00127	mg/L	0.002297	180.15%
Sb 206.836†	-0.5	-0.00010	mg/L	0.002252	-0.00010	mg/L	0.002252	>999.9%
Se 196.026†	1.0	-0.00307	mg/L	0.006558	-0.00307	mg/L	0.006558	213.91%
Si 251.611†	80371.1	2.88	mg/L	0.068	2.88	mg/L	0.068	2.37%
Sn 189.927†	-50.3	-0.0107	mg/L	0.00135	-0.0107	mg/L	0.00135	12.63%
Ti 334.940†	298.8	0.00032	mg/L	0.000504	0.00032	mg/L	0.000504	157.40%
Tl 190.801†	-3.0	-0.00499	mg/L	0.005318	-0.00499	mg/L	0.005318	106.58%
V 290.880†	621.7	0.00485	mg/L	0.002177	0.00485	mg/L	0.002177	44.86%
Zn 206.200†	94.7	0.00378	mg/L	0.000162	0.00378	mg/L	0.000162	4.30%
K 766.490†	1940.3	1.50	mg/L	0.059	1.50	mg/L	0.059	3.92%
Na 589.592†	15902.4	1.66	mg/L	0.012	1.66	mg/L	0.012	0.69%
Sr 407.771†	22640.1	0.0259	mg/L	0.00087	0.0259	mg/L	0.00087	3.34%
Li 670.784†	11.8	-0.00354	mg/L	0.000943	-0.00354	mg/L	0.000943	26.65%
P 214.914†	25.1	0.0479	mg/L	0.01584	0.0479	mg/L	0.01584	33.04%

Sequence No.: 42 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 1:18:44 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Approved: November 11, 2013

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2315053.7						11131.10	0.48%
YRADIAL	164019.6						5690.86	3.47%
Ga 417.206	852235.3						13615.69	1.60%
GaRADIAL	45282.0						1508.80	3.33%
Ag 328.068†	84315.6	0.396	mg/L	0.0066	0.396	mg/L	0.0066	1.66%
QC value within limits for Ag 328.068 Recovery = 98.91%								
Al 396.153†	26622.0	9.98	mg/L	0.113	9.98	mg/L	0.113	1.13%
QC value within limits for Al 396.153 Recovery = 99.77%								
As 188.979†	549.2	0.395	mg/L	0.0035	0.395	mg/L	0.0035	0.90%
QC value within limits for As 188.979 Recovery = 98.75%								
Ba 233.527†	70118.8	1.01	mg/L	0.004	1.01	mg/L	0.004	0.41%
QC value within limits for Ba 233.527 Recovery = 100.81%								
Be 234.861†	27729.0	0.0490	mg/L	0.00096	0.0490	mg/L	0.00096	1.96%
QC value within limits for Be 234.861 Recovery = 98.09%								
B 249.677†	24138.1	0.487	mg/L	0.0037	0.487	mg/L	0.0037	0.76%
QC value within limits for B 249.677 Recovery = 97.32%								
Ca 227.546†	1581.5	10.3	mg/L	0.12	10.3	mg/L	0.12	1.21%
QC value within limits for Ca 227.546 Recovery = 102.55%								
Cd 228.802†	1108.2	0.0476	mg/L	0.00111	0.0476	mg/L	0.00111	2.33%
QC value within limits for Cd 228.802 Recovery = 95.14%								
Co 228.616†	3761.7	0.202	mg/L	0.0012	0.202	mg/L	0.0012	0.59%
QC value within limits for Co 228.616 Recovery = 100.96%								
Cr 267.716†	43970.6	0.501	mg/L	0.0058	0.501	mg/L	0.0058	1.15%
QC value within limits for Cr 267.716 Recovery = 100.22%								
Cu 327.393†	79474.6	0.493	mg/L	0.0099	0.493	mg/L	0.0099	2.00%
QC value within limits for Cu 327.393 Recovery = 98.61%								
Fe 239.562†	10543.4	4.01	mg/L	0.056	4.01	mg/L	0.056	1.40%
QC value within limits for Fe 239.562 Recovery = 100.21%								
Mg 279.077†	9810.7	10.0	mg/L	0.15	10.0	mg/L	0.15	1.46%
QC value within limits for Mg 279.077 Recovery = 100.36%								
Mn 257.610†	256621.9	0.517	mg/L	0.0015	0.517	mg/L	0.0015	0.30%
QC value within limits for Mn 257.610 Recovery = 103.31%								
Mo 202.031†	14737.2	1.01	mg/L	0.013	1.01	mg/L	0.013	1.26%
QC value within limits for Mo 202.031 Recovery = 100.73%								
Ni 231.604†	15848.8	0.509	mg/L	0.0026	0.509	mg/L	0.0026	0.51%
QC value within limits for Ni 231.604 Recovery = 101.86%								
Pb 220.353†	2690.0	0.509	mg/L	0.0026	0.509	mg/L	0.0026	0.50%
QC value within limits for Pb 220.353 Recovery = 101.88%								
Sb 206.836†	1930.0	1.17	mg/L	0.018	1.17	mg/L	0.018	1.50%
QC value within limits for Sb 206.836 Recovery = 97.91%								
Se 196.026†	274.2	0.396	mg/L	0.0038	0.396	mg/L	0.0038	0.95%
QC value within limits for Se 196.026 Recovery = 99.11%								
Si 251.611†	139300.6	4.97	mg/L	0.067	4.97	mg/L	0.067	1.34%
QC value within limits for Si 251.611 Recovery = 99.39%								
Sn 189.927†	5203.4	1.01	mg/L	0.002	1.01	mg/L	0.002	0.22%
QC value within limits for Sn 189.927 Recovery = 100.77%								
Ti 334.940†	701973.5	0.993	mg/L	0.0043	0.993	mg/L	0.0043	0.43%
QC value within limits for Ti 334.940 Recovery = 99.33%								
Tl 190.801†	769.9	0.524	mg/L	0.0044	0.524	mg/L	0.0044	0.84%
QC value within limits for Tl 190.801 Recovery = 104.75%								
V 290.880†	161483.9	1.00	mg/L	0.008	1.00	mg/L	0.008	0.76%
QC value within limits for V 290.880 Recovery = 100.17%								
Zn 206.200†	23970.9	1.02	mg/L	0.003	1.02	mg/L	0.003	0.28%
QC value within limits for Zn 206.200 Recovery = 101.62%								
K 766.490†	64422.1	50.7	mg/L	0.76	50.7	mg/L	0.76	1.49%
QC value within limits for K 766.490 Recovery = 101.30%								
Na 589.592†	459401.9	48.5	mg/L	1.18	48.5	mg/L	1.18	2.44%
QC value within limits for Na 589.592 Recovery = 96.93%								
Sr 407.771†	898386.2	0.979	mg/L	0.0317	0.979	mg/L	0.0317	3.23%
QC value within limits for Sr 407.771 Recovery = 97.95%								
Li 670.784†	59915.5	1.01	mg/L	0.009	1.01	mg/L	0.009	0.90%
QC value within limits for Li 670.784 Recovery = 100.94%								
P 214.914†	8204.9	9.96	mg/L	0.102	9.96	mg/L	0.102	1.02%
QC value within limits for P 214.914 Recovery = 99.60%								

All analyte(s) passed QC.

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Sequence No.: 43 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 1:20:49 PM**
Analyst: **Data Type: Original**

Approved: November 11, 2013

Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2336767.5						43266.25	1.85%
YRADIAL	155479.8						1591.02	1.02%
Ga 417.206	836842.3						15036.16	1.80%
GaRADIAL	43442.0						748.13	1.72%
Ag 328.068†	25.1	0.00098	mg/L	0.000792	0.00098	mg/L	0.000792	81.10%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	11.9	-0.0291	mg/L	0.00266	-0.0291	mg/L	0.00266	9.16%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-2.6	-0.00110	mg/L	0.001761	-0.00110	mg/L	0.001761	159.84%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-9.5	0.00060	mg/L	0.000121	0.00060	mg/L	0.000121	20.05%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	50.5	0.00018	mg/L	0.000037	0.00018	mg/L	0.000037	20.46%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	108.7	0.00777	mg/L	0.000946	0.00777	mg/L	0.000946	12.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	9.0	0.0889	mg/L	0.04178	0.0889	mg/L	0.04178	46.98%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-1.2	-0.00007	mg/L	0.000026	-0.00007	mg/L	0.000026	36.98%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-14.3	-0.00090	mg/L	0.000156	-0.00090	mg/L	0.000156	17.21%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	6.3	0.00021	mg/L	0.000106	0.00021	mg/L	0.000106	50.11%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	107.4	0.00171	mg/L	0.000454	0.00171	mg/L	0.000454	26.47%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	5.3	-0.00552	mg/L	0.000603	-0.00552	mg/L	0.000603	10.94%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	13.0	-0.00333	mg/L	0.003485	-0.00333	mg/L	0.003485	104.79%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	22.6	-0.00177	mg/L	0.000002	-0.00177	mg/L	0.000002	0.10%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	10.1	0.00125	mg/L	0.000215	0.00125	mg/L	0.000215	17.22%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-12.2	-0.00020	mg/L	0.000029	-0.00020	mg/L	0.000029	14.77%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-3.0	-0.00192	mg/L	0.001747	-0.00192	mg/L	0.001747	90.99%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	4.2	0.00276	mg/L	0.001996	0.00276	mg/L	0.001996	72.40%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.9	-0.00591	mg/L	0.004994	-0.00591	mg/L	0.004994	84.46%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	23.0	0.0149	mg/L	0.00078	0.0149	mg/L	0.00078	5.22%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-5.5	-0.00200	mg/L	0.001653	-0.00200	mg/L	0.001653	82.83%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-74.6	-0.00087	mg/L	0.000233	-0.00087	mg/L	0.000233	26.89%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-3.1	-0.00509	mg/L	0.006159	-0.00509	mg/L	0.006159	120.97%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	549.2	0.00449	mg/L	0.000171	0.00449	mg/L	0.000171	3.82%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-27.9	-0.00139	mg/L	0.000211	-0.00139	mg/L	0.000211	15.17%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-28.1	-0.0245	mg/L	0.02463	-0.0245	mg/L	0.02463	100.68%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	418.2	0.0354	mg/L	0.05956	0.0354	mg/L	0.05956	168.11%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	37.8	0.00141	mg/L	0.000133	0.00141	mg/L	0.000133	9.41%
QC value within limits for Sr 407.771 Recovery = Not calculated								

Approved: November 11, 2013

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Li 670.784†                41.2    -0.00304 mg/L      0.000778    -0.00304 mg/L      0.000778  25.57%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                  9.2      0.0286 mg/L       0.00684      0.0286 mg/L       0.00684  23.90%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.
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Approved: November 11, 2013

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Analysis Begun

Start Time: 11/8/2013 1:25:17 PM **Plasma On Time: 11/8/2013 6:59:30 AM**
Logged In Analyst: peicp2 **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N4011401 **Autosampler Model: Cetac**

Sample Information File: C:\pe\peicp2\Sample Information\FRIDAY1.sif
Batch ID:
Results Data Set: 110813H3R
Results Library: C:\pe\peicp2\Results\results1.mdb

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Method Loaded
Method Name: 200.7-6010-3015 ASX **Method Last Saved: 11/8/2013 10:02:49 AM**
IEC File: PLUS-P.iec **SMT File:**
Method Description: STANDARD

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Sequence No.: 1 **Autosampler Location: 101**
Sample ID: LLCCV **Date Collected: 11/8/2013 1:25:19 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LLCCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2365365.3						38984.49	1.65%
YRADIAL	163400.3						3996.62	2.45%
Ga 417.206	839772.0						18483.24	2.20%
GaRADIAL	43172.3						806.70	1.87%
Ag 328.068†	66.0	0.00119	mg/L	0.000330	0.00119	mg/L	0.000330	27.63%
Al 396.153†	443.7	0.135	mg/L	0.0020	0.135	mg/L	0.0020	1.47%
As 188.979†	0.1	0.00090	mg/L	0.004065	0.00090	mg/L	0.004065	451.69%
Ba 233.527†	-7.6	0.00062	mg/L	0.000124	0.00062	mg/L	0.000124	19.91%
Be 234.861†	996.6	0.00185	mg/L	0.000057	0.00185	mg/L	0.000057	3.10%
B 249.677†	-98.8	0.00358	mg/L	0.000134	0.00358	mg/L	0.000134	3.73%
Ca 227.546†	70.7	0.471	mg/L	0.0358	0.471	mg/L	0.0358	7.60%
Cd 228.802†	-8.7	-0.00041	mg/L	0.000241	-0.00041	mg/L	0.000241	58.87%
Co 228.616†	-5.3	-0.00043	mg/L	0.000449	-0.00043	mg/L	0.000449	105.59%
Cr 267.716†	0.3	0.00014	mg/L	0.000199	0.00014	mg/L	0.000199	142.33%
Cu 327.393†	98.9	0.00167	mg/L	0.000358	0.00167	mg/L	0.000358	21.50%
Fe 239.562†	207.4	0.0715	mg/L	0.00118	0.0715	mg/L	0.00118	1.65%
Mg 279.077†	422.3	0.415	mg/L	0.0172	0.415	mg/L	0.0172	4.13%
Mn 257.610†	46.7	-0.00171	mg/L	0.000027	-0.00171	mg/L	0.000027	1.60%
Mo 202.031†	-6.7	0.00010	mg/L	0.000331	0.00010	mg/L	0.000331	316.61%
Ni 231.604†	-2.2	0.00012	mg/L	0.000173	0.00012	mg/L	0.000173	138.99%
Pb 220.353†	5.3	-0.00033	mg/L	0.000432	-0.00033	mg/L	0.000432	131.95%
Sb 206.836†	-5.4	-0.00308	mg/L	0.001608	-0.00308	mg/L	0.001608	52.17%
Se 196.026†	-3.8	-0.0101	mg/L	0.00464	-0.0101	mg/L	0.00464	46.05%
Si 251.611†	64.2	0.0163	mg/L	0.00094	0.0163	mg/L	0.00094	5.77%
Sn 189.927†	1775.3	0.343	mg/L	0.0016	0.343	mg/L	0.0016	0.48%
Ti 334.940†	-170.3	-0.00095	mg/L	0.000201	-0.00095	mg/L	0.000201	21.21%
Tl 190.801†	0.8	-0.00249	mg/L	0.004312	-0.00249	mg/L	0.004312	173.10%
V 290.880†	176.7	0.00215	mg/L	0.002142	0.00215	mg/L	0.002142	99.40%
Zn 206.200†	7.5	0.00010	mg/L	0.000138	0.00010	mg/L	0.000138	145.08%
K 766.490†	1122.0	0.865	mg/L	0.0322	0.865	mg/L	0.0322	3.73%
Na 589.592†	4206.1	0.432	mg/L	0.0256	0.432	mg/L	0.0256	5.92%
Sr 407.771†	1.1	0.00136	mg/L	0.000066	0.00136	mg/L	0.000066	4.83%
Li 670.784†	5.4	-0.00365	mg/L	0.000866	-0.00365	mg/L	0.000866	23.74%
P 214.914†	-1.8	0.0152	mg/L	0.01743	0.0152	mg/L	0.01743	114.33%

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Sequence No.: 2 **Autosampler Location: 75**

Approved: November 11, 2013

Sample ID: PBW 47 WG451993-02 **Date Collected: 11/8/2013 1:28:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 47 WG451993-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: PBW 47 WG451993-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2301070.1						60378.25	2.62%
YRADIAL	155698.7						1109.22	0.71%
Ga 417.206	819747.7						19643.43	2.40%
GaRADIAL	43588.6						578.27	1.33%
Ag 328.068†	-62.6	0.00057	mg/L	0.000333	0.00057	mg/L	0.000333	58.50%
Al 396.153†	1.8	-0.0328	mg/L	0.00290	-0.0328	mg/L	0.00290	8.84%
As 188.979†	-0.1	0.00076	mg/L	0.002783	0.00076	mg/L	0.002783	367.00%
Ba 233.527†	-18.0	0.00048	mg/L	0.000050	0.00048	mg/L	0.000050	10.43%
Be 234.861†	-6.0	0.00008	mg/L	0.000070	0.00008	mg/L	0.000070	86.52%
B 249.677†	-151.4	0.00255	mg/L	0.000360	0.00255	mg/L	0.000360	14.13%
Ca 227.546†	10.7	0.0992	mg/L	0.04821	0.0992	mg/L	0.04821	48.62%
Cd 228.802†	-3.6	-0.00018	mg/L	0.000236	-0.00018	mg/L	0.000236	127.72%
Co 228.616†	-7.8	-0.00056	mg/L	0.000185	-0.00056	mg/L	0.000185	32.95%
Cr 267.716†	21.2	0.00038	mg/L	0.000308	0.00038	mg/L	0.000308	81.02%
Cu 327.393†	107.6	0.00172	mg/L	0.000250	0.00172	mg/L	0.000250	14.54%
Fe 239.562†	12.4	-0.00281	mg/L	0.001491	-0.00281	mg/L	0.001491	53.11%
Mg 279.077†	11.3	-0.00515	mg/L	0.005848	-0.00515	mg/L	0.005848	113.53%
Mn 257.610†	103.0	-0.00161	mg/L	0.000017	-0.00161	mg/L	0.000017	1.05%
Mo 202.031†	-13.8	-0.00038	mg/L	0.000423	-0.00038	mg/L	0.000423	110.30%
Ni 231.604†	-21.9	-0.00051	mg/L	0.000377	-0.00051	mg/L	0.000377	74.05%
Pb 220.353†	8.2	0.00019	mg/L	0.001361	0.00019	mg/L	0.001361	720.65%
Sb 206.836†	1.8	0.00129	mg/L	0.000796	0.00129	mg/L	0.000796	61.85%
Se 196.026†	0.1	-0.00443	mg/L	0.005753	-0.00443	mg/L	0.005753	129.73%
Si 251.611†	273.8	0.0238	mg/L	0.00202	0.0238	mg/L	0.00202	8.47%
Sn 189.927†	-10.4	-0.00295	mg/L	0.001508	-0.00295	mg/L	0.001508	51.05%
Ti 334.940†	-2.2	-0.00076	mg/L	0.000347	-0.00076	mg/L	0.000347	45.46%
Tl 190.801†	-2.9	-0.00490	mg/L	0.004025	-0.00490	mg/L	0.004025	82.13%
V 290.880†	517.3	0.00429	mg/L	0.001429	0.00429	mg/L	0.001429	33.29%
Zn 206.200†	41.4	0.00153	mg/L	0.000173	0.00153	mg/L	0.000173	11.30%
K 766.490†	8.7	0.00405	mg/L	0.025470	0.00405	mg/L	0.025470	628.67%
Na 589.592†	22.2	-0.00607	mg/L	0.009751	-0.00607	mg/L	0.009751	160.77%
Sr 407.771†	-45.1	0.00132	mg/L	0.000023	0.00132	mg/L	0.000023	1.77%
Li 670.784†	-25.5	-0.00417	mg/L	0.001006	-0.00417	mg/L	0.001006	24.13%
P 214.914†	14.6	0.0352	mg/L	0.00878	0.0352	mg/L	0.00878	24.96%

Sequence No.: 3 **Autosampler Location: 76**
Sample ID: LCSW 47 WG451993-03 **Date Collected: 11/8/2013 1:31:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 47 WG451993-03

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: LCSW 47 WG451993-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2336780.3						45222.86	1.94%
YRADIAL	158295.0						3410.75	2.15%
Ga 417.206	863929.2						7174.77	0.83%
GaRADIAL	45352.8						843.59	1.86%
Ag 328.068†	41246.5	0.194	mg/L	0.0017	0.194	mg/L	0.0017	0.88%
Al 396.153†	12679.0	4.73	mg/L	0.153	4.73	mg/L	0.153	3.22%
As 188.979†	262.8	0.189	mg/L	0.0026	0.189	mg/L	0.0026	1.36%

Approved: November 11, 2013

Ba 233.527†	33955.9	0.489 mg/L	0.0110	0.489 mg/L	0.0110	2.26%
Be 234.861†	13161.6	0.0233 mg/L	0.00027	0.0233 mg/L	0.00027	1.17%
B 249.677†	48070.4	0.969 mg/L	0.0115	0.969 mg/L	0.0115	1.18%
Ca 227.546†	753.3	4.91 mg/L	0.058	4.91 mg/L	0.058	1.18%
Cd 228.802†	521.1	0.0223 mg/L	0.00025	0.0223 mg/L	0.00025	1.13%
Co 228.616†	1832.6	0.0983 mg/L	0.00205	0.0983 mg/L	0.00205	2.09%
Cr 267.716†	21289.1	0.243 mg/L	0.0046	0.243 mg/L	0.0046	1.88%
Cu 327.393†	38593.9	0.240 mg/L	0.0028	0.240 mg/L	0.0028	1.18%
Fe 239.562†	5229.5	1.98 mg/L	0.071	1.98 mg/L	0.071	3.55%
Mg 279.077†	4831.5	4.93 mg/L	0.200	4.93 mg/L	0.200	4.06%
Mn 257.610†	125468.0	0.252 mg/L	0.0058	0.252 mg/L	0.0058	2.31%
Mo 202.031†	7130.0	0.488 mg/L	0.0092	0.488 mg/L	0.0092	1.89%
Ni 231.604†	7753.0	0.249 mg/L	0.0052	0.249 mg/L	0.0052	2.08%
Pb 220.353†	1303.4	0.246 mg/L	0.0048	0.246 mg/L	0.0048	1.93%
Sb 206.836†	917.6	0.559 mg/L	0.0054	0.559 mg/L	0.0054	0.96%
Se 196.026†	127.9	0.182 mg/L	0.0048	0.182 mg/L	0.0048	2.65%
Si 251.611†	67447.9	2.41 mg/L	0.019	2.41 mg/L	0.019	0.79%
Sn 189.927†	2620.0	0.507 mg/L	0.0109	0.507 mg/L	0.0109	2.15%
Ti 334.940†	341805.2	0.483 mg/L	0.0065	0.483 mg/L	0.0065	1.34%
Tl 190.801†	367.8	0.249 mg/L	0.0068	0.249 mg/L	0.0068	2.74%
V 290.880†	78451.8	0.487 mg/L	0.0137	0.487 mg/L	0.0137	2.82%
Zn 206.200†	11564.9	0.490 mg/L	0.0103	0.490 mg/L	0.0103	2.10%
K 766.490†	30553.7	23.8 mg/L	0.83	23.8 mg/L	0.83	3.47%
Na 589.592†	224550.5	23.6 mg/L	0.12	23.6 mg/L	0.12	0.53%
Sr 407.771†	457291.4	0.499 mg/L	0.0070	0.499 mg/L	0.0070	1.41%
Li 670.784†	28416.8	0.477 mg/L	0.0178	0.477 mg/L	0.0178	3.74%
P 214.914†	4152.4	5.05 mg/L	0.130	5.05 mg/L	0.130	2.58%

Sequence No.: 4 **Autosampler Location: 77**
Sample ID: L1311036803 WG451993-01 **Date Collected: 11/8/2013 1:33:24 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036803 WG451993-01

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311036803 WG451993-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2064286.9						8158.97	0.40%
YRADIAL	149805.1						807.04	0.54%
Ga 417.206	850367.9						410.34	0.05%
GaRADIAL	44651.2						907.08	2.03%
Ag 328.068†	1644.1	0.00648	mg/L	0.000865	0.00648	mg/L	0.000865	13.35%
Al 396.153†	-29.8	-0.0453	mg/L	0.00294	-0.0453	mg/L	0.00294	6.50%
As 188.979†	-4.3	0.00477	mg/L	0.007856	0.00477	mg/L	0.007856	164.54%
Ba 233.527†	797.2	0.0122	mg/L	0.00023	0.0122	mg/L	0.00023	1.93%
Be 234.861†	-3.4	0.00084	mg/L	0.000029	0.00084	mg/L	0.000029	3.45%
B 249.677†	41080.4	0.831	mg/L	0.0080	0.831	mg/L	0.0080	0.96%
Ca 227.546†	52107.3	321	mg/L	2.5	321	mg/L	2.5	0.79%
Cd 228.802†	-8.6	-0.00038	mg/L	0.000257	-0.00038	mg/L	0.000257	66.90%
Co 228.616†	29.8	0.00159	mg/L	0.000342	0.00159	mg/L	0.000342	21.55%
Cr 267.716†	367.4	0.00431	mg/L	0.000095	0.00431	mg/L	0.000095	2.20%
Cu 327.393†	-217.0	-0.00039	mg/L	0.000189	-0.00039	mg/L	0.000189	49.01%
Fe 239.562†	761.6	0.275	mg/L	0.0005	0.275	mg/L	0.0005	0.20%
Mg 279.077†	362887.2	371	mg/L	2.7	371	mg/L	2.7	0.72%
Mn 257.610†	4038068.1	8.14	mg/L	0.025	8.14	mg/L	0.025	0.30%
Mo 202.031†	116.6	0.0102	mg/L	0.00042	0.0102	mg/L	0.00042	4.08%
Ni 231.604†	349.6	0.0114	mg/L	0.00035	0.0114	mg/L	0.00035	3.06%
Pb 220.353†	29.0	-0.00076	mg/L	0.003217	-0.00076	mg/L	0.003217	423.52%
Sb 206.836†	-6.6	-0.00379	mg/L	0.001150	-0.00379	mg/L	0.001150	30.30%
Se 196.026†	8.4	0.00532	mg/L	0.006767	0.00532	mg/L	0.006767	127.28%
Si 251.611†	130761.0	4.68	mg/L	0.041	4.68	mg/L	0.041	0.87%
Sn 189.927†	-325.7	-0.0641	mg/L	0.00111	-0.0641	mg/L	0.00111	1.74%
Ti 334.940†	-36052.9	-0.00355	mg/L	0.000314	-0.00355	mg/L	0.000314	8.86%
Tl 190.801†	-23.7	-0.0275	mg/L	0.00278	-0.0275	mg/L	0.00278	10.12%
V 290.880†	3875.2	0.0154	mg/L	0.00025	0.0154	mg/L	0.00025	1.65%

Approved: November 11, 2013

Zn 206.200†	69.4	0.00273 mg/L	0.000535	0.00273 mg/L	0.000535	19.58%
K 766.490†	28997.9	22.6 mg/L	0.39	22.6 mg/L	0.39	1.72%
Na 589.592†	Saturated2					
Sr 407.771†	5127725.4	5.58 mg/L	0.145	5.58 mg/L	0.145	2.60%
Li 670.784†	26417.4	0.443 mg/L	0.0034	0.443 mg/L	0.0034	0.77%
P 214.914†	298.2	0.379 mg/L	0.0124	0.379 mg/L	0.0124	3.27%

Sequence No.: 5 **Autosampler Location: 78**
Sample ID: L1311036806MS WG451993-04 **Date Collected: 11/8/2013 1:36:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036806MS WG451993-04

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311036806MS WG451993-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2126807.5						33205.91	1.56%
YRADIAL	157810.8						1960.44	1.24%
Ga 417.206	846592.5						19192.52	2.27%
GaRADIAL	45581.2						265.87	0.58%
Ag 328.068†	39913.4	0.187	mg/L	0.0019	0.187	mg/L	0.0019	1.01%
Al 396.153†	12359.1	4.61	mg/L	0.024	4.61	mg/L	0.024	0.52%
As 188.979†	248.8	0.184	mg/L	0.0080	0.184	mg/L	0.0080	4.31%
Ba 233.527†	33760.1	0.486	mg/L	0.0016	0.486	mg/L	0.0016	0.33%
Be 234.861†	12618.5	0.0227	mg/L	0.00007	0.0227	mg/L	0.00007	0.30%
B 249.677†	72967.2	1.47	mg/L	0.014	1.47	mg/L	0.014	0.92%
Ca 227.546†	37614.4	232	mg/L	1.2	232	mg/L	1.2	0.53%
Cd 228.802†	485.0	0.0208	mg/L	0.00047	0.0208	mg/L	0.00047	2.27%
Co 228.616†	1733.8	0.0930	mg/L	0.00169	0.0930	mg/L	0.00169	1.82%
Cr 267.716†	20380.2	0.232	mg/L	0.0001	0.232	mg/L	0.0001	0.05%
Cu 327.393†	36388.7	0.226	mg/L	0.0024	0.226	mg/L	0.0024	1.06%
Fe 239.562†	7911.2	3.00	mg/L	0.030	3.00	mg/L	0.030	1.00%
Mg 279.077†	194093.2	199	mg/L	4.1	199	mg/L	4.1	2.07%
Mn 257.610†	3279661.3	6.61	mg/L	0.067	6.61	mg/L	0.067	1.01%
Mo 202.031†	7205.0	0.494	mg/L	0.0091	0.494	mg/L	0.0091	1.84%
Ni 231.604†	7410.9	0.238	mg/L	0.0036	0.238	mg/L	0.0036	1.53%
Pb 220.353†	1186.7	0.220	mg/L	0.0020	0.220	mg/L	0.0020	0.92%
Sb 206.836†	859.6	0.523	mg/L	0.0128	0.523	mg/L	0.0128	2.45%
Se 196.026†	136.9	0.194	mg/L	0.0069	0.194	mg/L	0.0069	3.56%
Si 251.611†	327920.8	11.7	mg/L	0.05	11.7	mg/L	0.05	0.44%
Sn 189.927†	2207.0	0.427	mg/L	0.0073	0.427	mg/L	0.0073	1.71%
Ti 334.940†	323242.1	0.491	mg/L	0.0013	0.491	mg/L	0.0013	0.26%
Tl 190.801†	288.6	0.189	mg/L	0.0067	0.189	mg/L	0.0067	3.55%
V 290.880†	79902.5	0.491	mg/L	0.0080	0.491	mg/L	0.0080	1.63%
Zn 206.200†	10689.7	0.453	mg/L	0.0065	0.453	mg/L	0.0065	1.44%
K 766.490†	48891.0	37.5	mg/L	0.43	37.5	mg/L	0.43	1.15%
Na 589.592†	6767419.6	802	mg/L	17.9	802	mg/L	17.9	2.23%
Sr 407.771†	3267686.5	3.55	mg/L	0.095	3.55	mg/L	0.095	2.69%
Li 670.784†	42659.6	0.718	mg/L	0.0021	0.718	mg/L	0.0021	0.30%
P 214.914†	7396.5	8.98	mg/L	0.159	8.98	mg/L	0.159	1.77%

Sequence No.: 6 **Autosampler Location: 79**
Sample ID: L1311036807SD WG451993-05 **Date Collected: 11/8/2013 1:38:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036807SD WG451993-05

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036807SD WG451993-05

Approved: November 11, 2013

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2201913.5						31898.93	1.45%
YRADIAL	161662.0						6302.65	3.90%
Ga 417.206	865822.6						14001.75	1.62%
GaRADIAL	46065.8						1679.79	3.65%
Ag 328.068†	39135.3	0.184	mg/L	0.0050	0.184	mg/L	0.0050	2.75%
Al 396.153†	12533.2	4.68	mg/L	0.044	4.68	mg/L	0.044	0.93%
As 188.979†	256.8	0.189	mg/L	0.0045	0.189	mg/L	0.0045	2.36%
Ba 233.527†	33547.5	0.483	mg/L	0.0146	0.483	mg/L	0.0146	3.03%
Be 234.861†	12666.0	0.0226	mg/L	0.00064	0.0226	mg/L	0.00064	2.84%
B 249.677†	65192.1	1.31	mg/L	0.040	1.31	mg/L	0.040	3.03%
Ca 227.546†	27234.0	168	mg/L	4.1	168	mg/L	4.1	2.42%
Cd 228.802†	489.2	0.0210	mg/L	0.00066	0.0210	mg/L	0.00066	3.14%
Co 228.616†	1763.3	0.0946	mg/L	0.00111	0.0946	mg/L	0.00111	1.17%
Cr 267.716†	20315.9	0.231	mg/L	0.0059	0.231	mg/L	0.0059	2.57%
Cu 327.393†	36149.7	0.225	mg/L	0.0064	0.225	mg/L	0.0064	2.86%
Fe 239.562†	9295.5	3.53	mg/L	0.029	3.53	mg/L	0.029	0.81%
Mg 279.077†	111551.1	114	mg/L	0.5	114	mg/L	0.5	0.46%
Mn 257.610†	2608987.4	5.26	mg/L	0.078	5.26	mg/L	0.078	1.49%
Mo 202.031†	7367.2	0.505	mg/L	0.0106	0.505	mg/L	0.0106	2.10%
Ni 231.604†	7488.8	0.241	mg/L	0.0047	0.241	mg/L	0.0047	1.94%
Pb 220.353†	1224.2	0.228	mg/L	0.0071	0.228	mg/L	0.0071	3.11%
Sb 206.836†	876.9	0.534	mg/L	0.0121	0.534	mg/L	0.0121	2.26%
Se 196.026†	134.8	0.191	mg/L	0.0062	0.191	mg/L	0.0062	3.23%
Si 251.611†	384432.0	13.7	mg/L	0.42	13.7	mg/L	0.42	3.03%
Sn 189.927†	2311.6	0.447	mg/L	0.0072	0.447	mg/L	0.0072	1.62%
Ti 334.940†	326777.2	0.487	mg/L	0.0140	0.487	mg/L	0.0140	2.89%
Tl 190.801†	304.8	0.202	mg/L	0.0070	0.202	mg/L	0.0070	3.47%
V 290.880†	78337.4	0.483	mg/L	0.0185	0.483	mg/L	0.0185	3.83%
Zn 206.200†	10918.3	0.463	mg/L	0.0091	0.463	mg/L	0.0091	1.97%
K 766.490†	42257.6	32.6	mg/L	0.20	32.6	mg/L	0.20	0.63%
Na 589.592†	4316351.7	486	mg/L	27.3	486	mg/L	27.3	5.60%
Sr 407.771†	2035860.3	2.21	mg/L	0.129	2.21	mg/L	0.129	5.85%
Li 670.784†	37204.7	0.625	mg/L	0.0042	0.625	mg/L	0.0042	0.67%
P 214.914†	7946.1	9.65	mg/L	0.236	9.65	mg/L	0.236	2.44%

Sequence No.: 7 **Autosampler Location: 80**
Sample ID: L1311037101 0.2 **Date Collected: 11/8/2013 1:40:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311037101 0.2

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311037101 0.2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2115917.2						27887.39	1.32%
YRADIAL	159105.1						4447.85	2.80%
Ga 417.206	827486.2						2720.16	0.33%
GaRADIAL	44438.0						1163.07	2.62%
Ag 328.068†	-878.9	0.00315	mg/L	0.000490	0.00315	mg/L	0.000490	15.57%
Al 396.153†	-0.0	-0.0322	mg/L	0.01196	-0.0322	mg/L	0.01196	37.14%
As 188.979†	-15.0	-0.00371	mg/L	0.011635	-0.00371	mg/L	0.011635	313.89%
Ba 233.527†	10395.0	0.149	mg/L	0.0005	0.149	mg/L	0.0005	0.32%
Be 234.861†	2086.0	0.00027	mg/L	0.000110	0.00027	mg/L	0.000110	40.83%
B 249.677†	27911.3	0.560	mg/L	0.0072	0.560	mg/L	0.0072	1.29%
Ca 227.546†	21320.2	132	mg/L	1.9	132	mg/L	1.9	1.44%
Cd 228.802†	1.4	0.00014	mg/L	0.000026	0.00014	mg/L	0.000026	18.37%
Co 228.616†	14.5	0.00025	mg/L	0.000720	0.00025	mg/L	0.000720	284.70%
Cr 267.716†	209.4	0.00131	mg/L	0.000173	0.00131	mg/L	0.000173	13.21%
Cu 327.393†	1354.4	0.0102	mg/L	0.00085	0.0102	mg/L	0.00085	8.33%
Fe 239.562†	39934.3	15.2	mg/L	0.15	15.2	mg/L	0.15	0.99%
Mg 279.077†	18264.6	18.7	mg/L	0.16	18.7	mg/L	0.16	0.86%
Mn 257.610†	144632.5	0.291	mg/L	0.0021	0.291	mg/L	0.0021	0.73%
Mo 202.031†	100.4	0.00772	mg/L	0.001351	0.00772	mg/L	0.001351	17.51%

Approved: November 11, 2013

Ni 231.604†	70.5	0.00247	mg/L	0.000534	0.00247	mg/L	0.000534	21.66%
Pb 220.353†	33.0	0.00422	mg/L	0.000715	0.00422	mg/L	0.000715	16.92%
Sb 206.836†	-6.0	-0.00291	mg/L	0.003275	-0.00291	mg/L	0.003275	112.64%
Se 196.026†	-5.2	-0.00925	mg/L	0.004066	-0.00925	mg/L	0.004066	43.97%
Si 251.611†	11387.2	0.420	mg/L	0.0092	0.420	mg/L	0.0092	2.20%
Sn 189.927†	-300.1	-0.0591	mg/L	0.00178	-0.0591	mg/L	0.00178	3.01%
Ti 334.940†	-13783.0	-0.00054	mg/L	0.000732	-0.00054	mg/L	0.000732	136.44%
Tl 190.801†	-28.2	-0.0223	mg/L	0.00667	-0.0223	mg/L	0.00667	29.92%
V 290.880†	1738.2	0.00881	mg/L	0.003041	0.00881	mg/L	0.003041	34.53%
Zn 206.200†	150.8	0.00534	mg/L	0.000277	0.00534	mg/L	0.000277	5.19%
K 766.490†	9163.8	7.11	mg/L	0.109	7.11	mg/L	0.109	1.53%
Na 589.592†	Saturated2							
Sr 407.771†	Saturated2							
Li 670.784†	41341.4	0.695	mg/L	0.0081	0.695	mg/L	0.0081	1.17%
P 214.914†	21.3	0.0433	mg/L	0.01755	0.0433	mg/L	0.01755	40.50%

Sequence No.: 8 **Autosampler Location: 81**
Sample ID: L1311038301 **Date Collected: 11/8/2013 1:42:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311038301

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311038301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2335580.3						26495.19	1.13%
YRADIAL	160119.4						1964.64	1.23%
Ga 417.206	893995.0						2723.63	0.30%
GaRADIAL	45675.9						634.28	1.39%
Ag 328.068†	531.4	0.00327	mg/L	0.000294	0.00327	mg/L	0.000294	8.97%
Al 396.153†	-1.0	-0.0341	mg/L	0.00244	-0.0341	mg/L	0.00244	7.16%
As 188.979†	-10.6	-0.00533	mg/L	0.003733	-0.00533	mg/L	0.003733	70.06%
Ba 233.527†	5412.9	0.0785	mg/L	0.00100	0.0785	mg/L	0.00100	1.27%
Be 234.861†	110.6	0.00029	mg/L	0.000017	0.00029	mg/L	0.000017	6.04%
B 249.677†	1659.4	0.0389	mg/L	0.00200	0.0389	mg/L	0.00200	5.14%
Ca 227.546†	11795.1	72.8	mg/L	1.81	72.8	mg/L	1.81	2.49%
Cd 228.802†	-1.0	-0.00003	mg/L	0.000186	-0.00003	mg/L	0.000186	573.53%
Co 228.616†	-8.3	-0.00058	mg/L	0.000228	-0.00058	mg/L	0.000228	39.54%
Cr 267.716†	84.2	0.00110	mg/L	0.000119	0.00110	mg/L	0.000119	10.83%
Cu 327.393†	217.1	0.00238	mg/L	0.000245	0.00238	mg/L	0.000245	10.30%
Fe 239.562†	25.9	0.00200	mg/L	0.000153	0.00200	mg/L	0.000153	7.69%
Mg 279.077†	16590.7	17.0	mg/L	0.18	17.0	mg/L	0.18	1.04%
Mn 257.610†	4795.4	0.00786	mg/L	0.000216	0.00786	mg/L	0.000216	2.75%
Mo 202.031†	40.5	0.00332	mg/L	0.000339	0.00332	mg/L	0.000339	10.19%
Ni 231.604†	-21.6	-0.00049	mg/L	0.000217	-0.00049	mg/L	0.000217	43.83%
Pb 220.353†	22.1	0.00282	mg/L	0.001710	0.00282	mg/L	0.001710	60.63%
Sb 206.836†	-0.4	-0.00005	mg/L	0.000799	-0.00005	mg/L	0.000799	>999.9%
Se 196.026†	1.6	-0.00224	mg/L	0.010904	-0.00224	mg/L	0.010904	485.80%
Si 251.611†	99987.9	3.58	mg/L	0.084	3.58	mg/L	0.084	2.35%
Sn 189.927†	-248.6	-0.0491	mg/L	0.00118	-0.0491	mg/L	0.00118	2.40%
Ti 334.940†	-8352.9	-0.00167	mg/L	0.000239	-0.00167	mg/L	0.000239	14.29%
Tl 190.801†	-17.0	-0.0145	mg/L	0.00332	-0.0145	mg/L	0.00332	22.96%
V 290.880†	873.0	0.00605	mg/L	0.000975	0.00605	mg/L	0.000975	16.10%
Zn 206.200†	1.5	-0.00014	mg/L	0.000249	-0.00014	mg/L	0.000249	172.90%
K 766.490†	1673.9	1.28	mg/L	0.048	1.28	mg/L	0.048	3.74%
Na 589.592†	91541.1	9.60	mg/L	0.267	9.60	mg/L	0.267	2.78%
Sr 407.771†	267623.1	0.291	mg/L	0.0109	0.291	mg/L	0.0109	3.74%
Li 670.784†	346.7	0.00212	mg/L	0.000188	0.00212	mg/L	0.000188	8.84%
P 214.914†	20.0	0.0418	mg/L	0.00781	0.0418	mg/L	0.00781	18.70%

Sequence No.: 9 **Autosampler Location: 82**
Sample ID: L1311038302 **Date Collected: 11/8/2013 1:45:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: November 11, 2013

Dilution: Sample Prep Vol:

Nebulizer Parameters: L1311038302

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311038302

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2349096.8						27187.15	1.16%
YRADIAL	156650.1						4902.42	3.13%
Ga 417.206	889359.4						12755.05	1.43%
GaRADIAL	45776.0						592.28	1.29%
Ag 328.068†	305.1	0.00227	mg/L	0.000206	0.00227	mg/L	0.000206	9.09%
Al 396.153†	363.6	0.104	mg/L	0.0084	0.104	mg/L	0.0084	8.05%
As 188.979†	-14.4	-0.00875	mg/L	0.001202	-0.00875	mg/L	0.001202	13.73%
Ba 233.527†	5911.7	0.0857	mg/L	0.00108	0.0857	mg/L	0.00108	1.26%
Be 234.861†	117.8	0.00028	mg/L	0.000053	0.00028	mg/L	0.000053	19.12%
B 249.677†	1784.2	0.0414	mg/L	0.00042	0.0414	mg/L	0.00042	1.01%
Ca 227.546†	7002.3	43.2	mg/L	0.49	43.2	mg/L	0.49	1.14%
Cd 228.802†	-5.6	-0.00022	mg/L	0.000077	-0.00022	mg/L	0.000077	35.21%
Co 228.616†	1.7	-0.00006	mg/L	0.000568	-0.00006	mg/L	0.000568	910.16%
Cr 267.716†	86.4	0.00112	mg/L	0.000200	0.00112	mg/L	0.000200	17.87%
Cu 327.393†	650.6	0.00507	mg/L	0.000098	0.00507	mg/L	0.000098	1.92%
Fe 239.562†	331.3	0.118	mg/L	0.0048	0.118	mg/L	0.0048	4.05%
Mg 279.077†	15322.7	15.7	mg/L	0.08	15.7	mg/L	0.08	0.51%
Mn 257.610†	18321.2	0.0352	mg/L	0.00071	0.0352	mg/L	0.00071	2.01%
Mo 202.031†	32.2	0.00277	mg/L	0.000187	0.00277	mg/L	0.000187	6.75%
Ni 231.604†	-13.4	-0.00023	mg/L	0.000366	-0.00023	mg/L	0.000366	157.80%
Pb 220.353†	24.7	0.00331	mg/L	0.002445	0.00331	mg/L	0.002445	73.97%
Sb 206.836†	-5.2	-0.00298	mg/L	0.001647	-0.00298	mg/L	0.001647	55.34%
Se 196.026†	2.5	-0.00092	mg/L	0.004245	-0.00092	mg/L	0.004245	463.45%
Si 251.611†	111517.4	3.99	mg/L	0.090	3.99	mg/L	0.090	2.25%
Sn 189.927†	-202.8	-0.0402	mg/L	0.00170	-0.0402	mg/L	0.00170	4.23%
Ti 334.940†	-2373.8	0.00235	mg/L	0.001780	0.00235	mg/L	0.001780	75.71%
Tl 190.801†	-23.0	-0.0184	mg/L	0.00436	-0.0184	mg/L	0.00436	23.69%
V 290.880†	843.1	0.00588	mg/L	0.000653	0.00588	mg/L	0.000653	11.09%
Zn 206.200†	77.6	0.00306	mg/L	0.000386	0.00306	mg/L	0.000386	12.61%
K 766.490†	1745.9	1.34	mg/L	0.022	1.34	mg/L	0.022	1.67%
Na 589.592†	44141.6	4.62	mg/L	0.081	4.62	mg/L	0.081	1.75%
Sr 407.771†	268755.8	0.293	mg/L	0.0062	0.293	mg/L	0.0062	2.13%
Li 670.784†	271.6	0.00085	mg/L	0.001137	0.00085	mg/L	0.001137	133.41%
P 214.914†	19.5	0.0411	mg/L	0.00870	0.0411	mg/L	0.00870	21.16%

Sequence No.: 10 **Autosampler Location: 83**
Sample ID: L1311038302PS WG452043-01 **Date Collected: 11/8/2013 1:48:57 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311038302PS WG452043-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311038302PS WG452043-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2292955.2						10733.42	0.47%
YRADIAL	156405.4						3228.75	2.06%
Ga 417.206	849034.7						10524.42	1.24%
GaRADIAL	44784.3						654.85	1.46%
Ag 328.068†	41772.2	0.196	mg/L	0.0030	0.196	mg/L	0.0030	1.51%
Al 396.153†	13462.4	5.03	mg/L	0.108	5.03	mg/L	0.108	2.15%
As 188.979†	263.1	0.190	mg/L	0.0007	0.190	mg/L	0.0007	0.38%
Ba 233.527†	39546.7	0.569	mg/L	0.0018	0.569	mg/L	0.0018	0.31%
Be 234.861†	13605.1	0.0241	mg/L	0.00052	0.0241	mg/L	0.00052	2.15%
B 249.677†	50001.2	1.01	mg/L	0.014	1.01	mg/L	0.014	1.38%

Approved: November 11, 2013

Ca 227.546†	7300.6	45.3	mg/L	0.95	45.3	mg/L	0.95	2.09%
Cd 228.802†	528.3	0.0227	mg/L	0.00076	0.0227	mg/L	0.00076	3.35%
Co 228.616†	1809.8	0.0970	mg/L	0.00135	0.0970	mg/L	0.00135	1.40%
Cr 267.716†	21788.8	0.248	mg/L	0.0031	0.248	mg/L	0.0031	1.25%
Cu 327.393†	37892.0	0.236	mg/L	0.0042	0.236	mg/L	0.0042	1.77%
Fe 239.562†	5640.2	2.14	mg/L	0.046	2.14	mg/L	0.046	2.17%
Mg 279.077†	18679.7	19.1	mg/L	0.37	19.1	mg/L	0.37	1.93%
Mn 257.610†	142342.7	0.286	mg/L	0.0014	0.286	mg/L	0.0014	0.50%
Mo 202.031†	7508.7	0.514	mg/L	0.0046	0.514	mg/L	0.0046	0.90%
Ni 231.604†	7700.4	0.248	mg/L	0.0019	0.248	mg/L	0.0019	0.76%
Pb 220.353†	1322.3	0.250	mg/L	0.0032	0.250	mg/L	0.0032	1.30%
Sb 206.836†	954.5	0.581	mg/L	0.0098	0.581	mg/L	0.0098	1.69%
Se 196.026†	140.6	0.201	mg/L	0.0095	0.201	mg/L	0.0095	4.71%
Si 251.611†	170716.1	6.09	mg/L	0.113	6.09	mg/L	0.113	1.85%
Sn 189.927†	2692.2	0.521	mg/L	0.0065	0.521	mg/L	0.0065	1.25%
Ti 334.940†	358564.2	0.513	mg/L	0.0064	0.513	mg/L	0.0064	1.24%
Tl 190.801†	351.5	0.238	mg/L	0.0064	0.238	mg/L	0.0064	2.70%
V 290.880†	80027.0	0.497	mg/L	0.0029	0.497	mg/L	0.0029	0.59%
Zn 206.200†	11843.3	0.502	mg/L	0.0053	0.502	mg/L	0.0053	1.06%
K 766.490†	32940.4	25.7	mg/L	0.51	25.7	mg/L	0.51	2.00%
Na 589.592†	272268.8	28.6	mg/L	0.41	28.6	mg/L	0.41	1.42%
Sr 407.771†	712440.1	0.776	mg/L	0.0041	0.776	mg/L	0.0041	0.53%
Li 670.784†	29519.7	0.495	mg/L	0.0098	0.495	mg/L	0.0098	1.98%
P 214.914†	4327.3	5.26	mg/L	0.071	5.26	mg/L	0.071	1.35%

Sequence No.: 11 **Autosampler Location: 84**
Sample ID: L1311038302DL WG452043-02 **Date Collected: 11/8/2013 1:51:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311038302DL WG452043-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311038302DL WG452043-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2334620.7						37854.70	1.62%
YRADIAL	157900.2						8251.65	5.23%
Ga 417.206	845405.3						20821.05	2.46%
GaRADIAL	44862.4						1267.98	2.83%
Ag 328.068†	65.3	0.00116	mg/L	0.000200	0.00116	mg/L	0.000200	17.24%
Al 396.153†	65.8	-0.00865	mg/L	0.002893	-0.00865	mg/L	0.002893	33.42%
As 188.979†	-1.5	-0.00013	mg/L	0.000882	-0.00013	mg/L	0.000882	676.52%
Ba 233.527†	1154.7	0.0173	mg/L	0.00015	0.0173	mg/L	0.00015	0.89%
Be 234.861†	57.1	0.00019	mg/L	0.000036	0.00019	mg/L	0.000036	19.19%
B 249.677†	1164.7	0.0290	mg/L	0.00152	0.0290	mg/L	0.00152	5.24%
Ca 227.546†	1407.5	8.72	mg/L	0.192	8.72	mg/L	0.192	2.21%
Cd 228.802†	-5.6	-0.00027	mg/L	0.000231	-0.00027	mg/L	0.000231	86.80%
Co 228.616†	-4.1	-0.00036	mg/L	0.000251	-0.00036	mg/L	0.000251	69.20%
Cr 267.716†	24.4	0.00042	mg/L	0.000046	0.00042	mg/L	0.000046	11.07%
Cu 327.393†	376.9	0.00338	mg/L	0.000365	0.00338	mg/L	0.000365	10.82%
Fe 239.562†	67.8	0.0182	mg/L	0.00112	0.0182	mg/L	0.00112	6.17%
Mg 279.077†	3104.2	3.16	mg/L	0.166	3.16	mg/L	0.166	5.24%
Mn 257.610†	4040.8	0.00634	mg/L	0.000140	0.00634	mg/L	0.000140	2.22%
Mo 202.031†	8.1	0.00111	mg/L	0.000566	0.00111	mg/L	0.000566	50.85%
Ni 231.604†	-15.6	-0.00030	mg/L	0.000368	-0.00030	mg/L	0.000368	121.23%
Pb 220.353†	19.9	0.00241	mg/L	0.000670	0.00241	mg/L	0.000670	27.86%
Sb 206.836†	-1.3	-0.00059	mg/L	0.003293	-0.00059	mg/L	0.003293	554.70%
Se 196.026†	4.2	0.00158	mg/L	0.004667	0.00158	mg/L	0.004667	294.54%
Si 251.611†	22946.5	0.832	mg/L	0.0278	0.832	mg/L	0.0278	3.34%
Sn 189.927†	-71.3	-0.0148	mg/L	0.00066	-0.0148	mg/L	0.00066	4.44%
Ti 334.940†	-739.6	-0.00051	mg/L	0.000194	-0.00051	mg/L	0.000194	37.72%
Tl 190.801†	-8.2	-0.00846	mg/L	0.001527	-0.00846	mg/L	0.001527	18.04%
V 290.880†	736.5	0.00557	mg/L	0.001423	0.00557	mg/L	0.001423	25.57%
Zn 206.200†	52.9	0.00202	mg/L	0.000069	0.00202	mg/L	0.000069	3.41%
K 766.490†	301.9	0.230	mg/L	0.0432	0.230	mg/L	0.0432	18.80%
Na 589.592†	9346.4	0.971	mg/L	0.0182	0.971	mg/L	0.0182	1.87%

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Sr 407.771†	52336.3	0.0581 mg/L	0.00218	0.0581 mg/L	0.00218	3.75%
Li 670.784†	21.5	-0.00338 mg/L	0.000766	-0.00338 mg/L	0.000766	22.70%
P 214.914†	13.8	0.0342 mg/L	0.01280	0.0342 mg/L	0.01280	37.40%

Sequence No.: 12 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 1:54:01 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2310863.6						21824.41	0.94%
YRADIAL	159068.4						2696.28	1.70%
Ga 417.206	851352.8						19388.66	2.28%
GaRADIAL	44457.9						454.85	1.02%
Ag 328.068†	84487.5	0.396	mg/L	0.0118	0.396	mg/L	0.0118	2.99%
QC value within limits for Ag 328.068 Recovery = 99.11%								
Al 396.153†	26753.3	10.0	mg/L	0.07	10.0	mg/L	0.07	0.66%
QC value within limits for Al 396.153 Recovery = 100.27%								
As 188.979†	544.3	0.391	mg/L	0.0035	0.391	mg/L	0.0035	0.90%
QC value within limits for As 188.979 Recovery = 97.87%								
Ba 233.527†	70485.9	1.01	mg/L	0.013	1.01	mg/L	0.013	1.32%
QC value within limits for Ba 233.527 Recovery = 101.33%								
Be 234.861†	27763.8	0.0491	mg/L	0.00121	0.0491	mg/L	0.00121	2.46%
QC value within limits for Be 234.861 Recovery = 98.21%								
B 249.677†	24908.9	0.502	mg/L	0.0109	0.502	mg/L	0.0109	2.17%
QC value within limits for B 249.677 Recovery = 100.42%								
Ca 227.546†	1566.9	10.2	mg/L	0.19	10.2	mg/L	0.19	1.88%
QC value within limits for Ca 227.546 Recovery = 101.64%								
Cd 228.802†	1093.2	0.0469	mg/L	0.00122	0.0469	mg/L	0.00122	2.60%
QC value within limits for Cd 228.802 Recovery = 93.84%								
Co 228.616†	3749.8	0.201	mg/L	0.0005	0.201	mg/L	0.0005	0.23%
QC value within limits for Co 228.616 Recovery = 100.64%								
Cr 267.716†	44001.1	0.501	mg/L	0.0097	0.501	mg/L	0.0097	1.94%
QC value within limits for Cr 267.716 Recovery = 100.29%								
Cu 327.393†	79958.3	0.496	mg/L	0.0160	0.496	mg/L	0.0160	3.23%
QC value within limits for Cu 327.393 Recovery = 99.21%								
Fe 239.562†	10609.1	4.03	mg/L	0.016	4.03	mg/L	0.016	0.41%
QC value within limits for Fe 239.562 Recovery = 100.84%								
Mg 279.077†	9928.4	10.2	mg/L	0.06	10.2	mg/L	0.06	0.61%
QC value within limits for Mg 279.077 Recovery = 101.57%								
Mn 257.610†	258015.4	0.519	mg/L	0.0061	0.519	mg/L	0.0061	1.18%
QC value within limits for Mn 257.610 Recovery = 103.88%								
Mo 202.031†	14758.7	1.01	mg/L	0.016	1.01	mg/L	0.016	1.60%
QC value within limits for Mo 202.031 Recovery = 100.88%								
Ni 231.604†	15756.4	0.506	mg/L	0.0051	0.506	mg/L	0.0051	1.01%
QC value within limits for Ni 231.604 Recovery = 101.27%								
Pb 220.353†	2683.4	0.508	mg/L	0.0029	0.508	mg/L	0.0029	0.58%
QC value within limits for Pb 220.353 Recovery = 101.63%								
Sb 206.836†	1915.7	1.17	mg/L	0.020	1.17	mg/L	0.020	1.75%
QC value within limits for Sb 206.836 Recovery = 97.18%								
Se 196.026†	271.7	0.393	mg/L	0.0042	0.393	mg/L	0.0042	1.08%
QC value within limits for Se 196.026 Recovery = 98.20%								
Si 251.611†	139552.9	4.98	mg/L	0.114	4.98	mg/L	0.114	2.28%
QC value within limits for Si 251.611 Recovery = 99.57%								
Sn 189.927†	5208.1	1.01	mg/L	0.003	1.01	mg/L	0.003	0.31%
QC value within limits for Sn 189.927 Recovery = 100.87%								
Ti 334.940†	705962.7	0.999	mg/L	0.0055	0.999	mg/L	0.0055	0.55%
QC value within limits for Ti 334.940 Recovery = 99.90%								
Tl 190.801†	768.8	0.523	mg/L	0.0064	0.523	mg/L	0.0064	1.23%
QC value within limits for Tl 190.801 Recovery = 104.64%								
V 290.880†	162480.4	1.01	mg/L	0.008	1.01	mg/L	0.008	0.79%
QC value within limits for V 290.880 Recovery = 100.79%								

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Zn 206.200†	24165.0	1.02 mg/L	0.010	1.02 mg/L	0.010	1.02%
QC value within limits for Zn 206.200 Recovery = 102.44%						
K 766.490†	64500.1	50.7 mg/L	0.23	50.7 mg/L	0.23	0.46%
QC value within limits for K 766.490 Recovery = 101.42%						
Na 589.592†	471194.8	49.7 mg/L	0.91	49.7 mg/L	0.91	1.83%
QC value within limits for Na 589.592 Recovery = 99.44%						
Sr 407.771†	941862.0	1.03 mg/L	0.024	1.03 mg/L	0.024	2.32%
QC value within limits for Sr 407.771 Recovery = 102.68%						
Li 670.784†	59780.5	1.01 mg/L	0.003	1.01 mg/L	0.003	0.34%
QC value within limits for Li 670.784 Recovery = 100.71%						
P 214.914†	8175.7	9.92 mg/L	0.027	9.92 mg/L	0.027	0.28%
QC value within limits for P 214.914 Recovery = 99.25%						

All analyte(s) passed QC.

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Sequence No.: 13 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 11/8/2013 1:56:06 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2358484.5						40204.07	1.70%
YRADIAL	158286.5						2814.96	1.78%
Ga 417.206	844646.5						18523.21	2.19%
GaRADIAL	44196.0						1451.91	3.29%
Ag 328.068†	23.1	0.00096	mg/L	0.000516	0.00096	mg/L	0.000516	53.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	20.2	-0.0259	mg/L	0.00217	-0.0259	mg/L	0.00217	8.39%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-0.3	0.00059	mg/L	0.001826	0.00059	mg/L	0.001826	310.39%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	6.4	0.00083	mg/L	0.000350	0.00083	mg/L	0.000350	41.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	77.7	0.00023	mg/L	0.000043	0.00023	mg/L	0.000043	18.55%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	631.5	0.0183	mg/L	0.00111	0.0183	mg/L	0.00111	6.08%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	15.7	0.131	mg/L	0.0498	0.131	mg/L	0.0498	38.13%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-3.8	-0.00019	mg/L	0.000086	-0.00019	mg/L	0.000086	44.67%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-2.4	-0.00026	mg/L	0.000180	-0.00026	mg/L	0.000180	68.25%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	9.4	0.00025	mg/L	0.000168	0.00025	mg/L	0.000168	68.45%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	299.4	0.00290	mg/L	0.000897	0.00290	mg/L	0.000897	30.97%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	3.9	-0.00607	mg/L	0.002171	-0.00607	mg/L	0.002171	35.80%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	21.6	0.00544	mg/L	0.005893	0.00544	mg/L	0.005893	108.25%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	449.6	-0.00091	mg/L	0.000991	-0.00091	mg/L	0.000991	109.33%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	12.5	0.00141	mg/L	0.000154	0.00141	mg/L	0.000154	10.90%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-4.2	0.00006	mg/L	0.000504	0.00006	mg/L	0.000504	829.22%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.4	0.00004	mg/L	0.000451	0.00004	mg/L	0.000451	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	3.8	0.00250	mg/L	0.003354	0.00250	mg/L	0.003354	133.93%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-0.6	-0.00549	mg/L	0.000417	-0.00549	mg/L	0.000417	7.61%
QC value within limits for Se 196.026 Recovery = Not calculated								

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Si 251.611†	119.3	0.0183 mg/L	0.00499	0.0183 mg/L	0.00499	27.30%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-3.0	-0.00153 mg/L	0.001064	-0.00153 mg/L	0.001064	69.71%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-163.4	-0.00099 mg/L	0.000114	-0.00099 mg/L	0.000114	11.53%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.1	-0.00311 mg/L	0.002407	-0.00311 mg/L	0.002407	77.47%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	338.5	0.00318 mg/L	0.002515	0.00318 mg/L	0.002515	79.04%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	-19.7	-0.00105 mg/L	0.000169	-0.00105 mg/L	0.000169	16.13%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	160.7	0.121 mg/L	0.1244	0.121 mg/L	0.1244	102.80%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	7195.2	0.746 mg/L	1.1237	0.746 mg/L	1.1237	150.69%
QC value greater than the upper limit for Na 589.592 Recovery = Not calculated						
Sr 407.771†	7733.6	0.00979 mg/L	0.014026	0.00979 mg/L	0.014026	143.22%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	213.5	-0.00013 mg/L	0.002360	-0.00013 mg/L	0.002360	>999.9%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	17.3	0.0384 mg/L	0.00843	0.0384 mg/L	0.00843	21.96%
QC value within limits for P 214.914 Recovery = Not calculated						

QC Failed. Continue with analysis.

Sequence No.: 14 **Autosampler Location: 85**
Sample ID: L1311032001 **Date Collected: 11/8/2013 1:59:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032001

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311032001

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2376411.8						23845.72	1.00%
YRADIAL	159254.5						3362.98	2.11%
Ga 417.206	899382.6						8237.90	0.92%
GaRADIAL	45388.3						776.74	1.71%
Ag 328.068†	117.6	0.00173	mg/L	0.000387	0.00173	mg/L	0.000387	22.34%
Al 396.153†	5.6	-0.0314	mg/L	0.00057	-0.0314	mg/L	0.00057	1.80%
As 188.979†	-11.8	-0.00670	mg/L	0.003121	-0.00670	mg/L	0.003121	46.58%
Ba 233.527†	727.4	0.0111	mg/L	0.00009	0.0111	mg/L	0.00009	0.85%
Be 234.861†	277.7	0.00040	mg/L	0.000061	0.00040	mg/L	0.000061	15.21%
B 249.677†	618.1	0.0177	mg/L	0.00075	0.0177	mg/L	0.00075	4.27%
Ca 227.546†	6895.1	42.6	mg/L	0.38	42.6	mg/L	0.38	0.88%
Cd 228.802†	-2.2	-0.00008	mg/L	0.000035	-0.00008	mg/L	0.000035	45.17%
Co 228.616†	-5.4	-0.00044	mg/L	0.000149	-0.00044	mg/L	0.000149	34.10%
Cr 267.716†	56.6	0.00072	mg/L	0.000124	0.00072	mg/L	0.000124	17.32%
Cu 327.393†	304.8	0.00297	mg/L	0.000262	0.00297	mg/L	0.000262	8.81%
Fe 239.562†	2163.6	0.817	mg/L	0.0199	0.817	mg/L	0.0199	2.44%
Mg 279.077†	5929.9	6.05	mg/L	0.171	6.05	mg/L	0.171	2.83%
Mn 257.610†	38539.8	0.0760	mg/L	0.00157	0.0760	mg/L	0.00157	2.07%
Mo 202.031†	24.2	0.00224	mg/L	0.000248	0.00224	mg/L	0.000248	11.07%
Ni 231.604†	-8.0	-0.00006	mg/L	0.000224	-0.00006	mg/L	0.000224	383.88%
Pb 220.353†	28.2	0.00391	mg/L	0.003003	0.00391	mg/L	0.003003	76.85%
Sb 206.836†	-1.4	-0.00059	mg/L	0.002809	-0.00059	mg/L	0.002809	472.90%
Se 196.026†	1.8	-0.00180	mg/L	0.002531	-0.00180	mg/L	0.002531	140.35%
Si 251.611†	76303.4	2.73	mg/L	0.047	2.73	mg/L	0.047	1.72%
Sn 189.927†	-199.5	-0.0396	mg/L	0.00171	-0.0396	mg/L	0.00171	4.32%
Ti 334.940†	-4078.0	-0.00016	mg/L	0.000608	-0.00016	mg/L	0.000608	385.75%
Tl 190.801†	-18.6	-0.0155	mg/L	0.00413	-0.0155	mg/L	0.00413	26.61%
V 290.880†	542.3	0.00415	mg/L	0.000664	0.00415	mg/L	0.000664	16.00%
Zn 206.200†	135.1	0.00545	mg/L	0.000100	0.00545	mg/L	0.000100	1.84%
K 766.490†	890.4	0.684	mg/L	0.0184	0.684	mg/L	0.0184	2.69%
Na 589.592†	23852.8	2.49	mg/L	0.021	2.49	mg/L	0.021	0.82%
Sr 407.771†	45717.4	0.0498	mg/L	0.00149	0.0498	mg/L	0.00149	2.98%

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Li 670.784†	32.0	-0.00320	mg/L	0.000147	-0.00320	mg/L	0.000147 4.61%
P 214.914†	19.7	0.0414	mg/L	0.00452	0.0414	mg/L	0.00452 10.92%

Sequence No.: 15 **Autosampler Location: 86**
Sample ID: L1311032003 **Date Collected: 11/8/2013 2:02:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032003

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311032003

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2354603.4						19655.46	0.83%
YRADIAL	159006.6						6164.32	3.88%
Ga 417.206	891643.0						10285.12	1.15%
GaRADIAL	46090.4						569.28	1.24%
Ag 328.068†	221.5	0.00228	mg/L	0.000285	0.00228	mg/L	0.000285	12.54%
Al 396.153†	46.0	-0.0161	mg/L	0.00302	-0.0161	mg/L	0.00302	18.74%
As 188.979†	-9.1	-0.00462	mg/L	0.003954	-0.00462	mg/L	0.003954	85.55%
Ba 233.527†	810.6	0.0123	mg/L	0.00004	0.0123	mg/L	0.00004	0.31%
Be 234.861†	251.9	0.00032	mg/L	0.000082	0.00032	mg/L	0.000082	25.53%
B 249.677†	601.3	0.0173	mg/L	0.00024	0.0173	mg/L	0.00024	1.38%
Ca 227.546†	7493.4	46.3	mg/L	0.51	46.3	mg/L	0.51	1.10%
Cd 228.802†	-5.4	-0.00023	mg/L	0.000099	-0.00023	mg/L	0.000099	43.53%
Co 228.616†	-11.4	-0.00076	mg/L	0.000184	-0.00076	mg/L	0.000184	24.22%
Cr 267.716†	60.3	0.00075	mg/L	0.000086	0.00075	mg/L	0.000086	11.50%
Cu 327.393†	239.6	0.00258	mg/L	0.000497	0.00258	mg/L	0.000497	19.25%
Fe 239.562†	2554.1	0.965	mg/L	0.0373	0.965	mg/L	0.0373	3.87%
Mg 279.077†	6481.5	6.61	mg/L	0.266	6.61	mg/L	0.266	4.03%
Mn 257.610†	39949.1	0.0788	mg/L	0.00169	0.0788	mg/L	0.00169	2.14%
Mo 202.031†	30.4	0.00267	mg/L	0.000444	0.00267	mg/L	0.000444	16.64%
Ni 231.604†	-13.2	-0.00022	mg/L	0.000438	-0.00022	mg/L	0.000438	196.38%
Pb 220.353†	23.7	0.00306	mg/L	0.001877	0.00306	mg/L	0.001877	61.32%
Sb 206.836†	-0.4	-0.00001	mg/L	0.000492	-0.00001	mg/L	0.000492	>999.9%
Se 196.026†	-2.8	-0.00848	mg/L	0.003676	-0.00848	mg/L	0.003676	43.36%
Si 251.611†	82079.4	2.94	mg/L	0.069	2.94	mg/L	0.069	2.34%
Sn 189.927†	-217.8	-0.0432	mg/L	0.00124	-0.0432	mg/L	0.00124	2.88%
Ti 334.940†	-4634.2	-0.00039	mg/L	0.000581	-0.00039	mg/L	0.000581	148.79%
Tl 190.801†	-17.8	-0.0150	mg/L	0.00332	-0.0150	mg/L	0.00332	22.07%
V 290.880†	768.4	0.00551	mg/L	0.001728	0.00551	mg/L	0.001728	31.35%
Zn 206.200†	65.8	0.00251	mg/L	0.000265	0.00251	mg/L	0.000265	10.54%
K 766.490†	880.7	0.676	mg/L	0.0308	0.676	mg/L	0.0308	4.55%
Na 589.592†	27504.5	2.87	mg/L	0.022	2.87	mg/L	0.022	0.75%
Sr 407.771†	50674.6	0.0551	mg/L	0.00185	0.0551	mg/L	0.00185	3.36%
Li 670.784†	24.3	-0.00333	mg/L	0.000172	-0.00333	mg/L	0.000172	5.17%
P 214.914†	22.8	0.0451	mg/L	0.01052	0.0451	mg/L	0.01052	23.31%

Sequence No.: 16 **Autosampler Location: 87**
Sample ID: L1311032005 **Date Collected: 11/8/2013 2:05:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032005

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311032005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2320903.3						15757.88	0.68%
YRADIAL	159094.1						7589.25	4.77%

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Ga 417.206	877692.8					4238.09	0.48%
GaRADIAL	45263.3					1138.82	2.52%
Ag 328.068†	263.5	0.00246	mg/L	0.000560	0.00246 mg/L	0.000560	22.79%
Al 396.153†	46.5	-0.0159	mg/L	0.00137	-0.0159 mg/L	0.00137	8.60%
As 188.979†	-9.1	-0.00468	mg/L	0.002798	-0.00468 mg/L	0.002798	59.78%
Ba 233.527†	785.0	0.0119	mg/L	0.00001	0.0119 mg/L	0.00001	0.08%
Be 234.861†	232.4	0.00030	mg/L	0.000044	0.00030 mg/L	0.000044	14.80%
B 249.677†	465.4	0.0145	mg/L	0.00009	0.0145 mg/L	0.00009	0.63%
Ca 227.546†	6988.8	43.2	mg/L	0.45	43.2 mg/L	0.45	1.04%
Cd 228.802†	-4.4	-0.00018	mg/L	0.000238	-0.00018 mg/L	0.000238	130.09%
Co 228.616†	-7.3	-0.00054	mg/L	0.000396	-0.00054 mg/L	0.000396	72.90%
Cr 267.716†	60.6	0.00076	mg/L	0.000319	0.00076 mg/L	0.000319	42.16%
Cu 327.393†	221.3	0.00247	mg/L	0.000792	0.00247 mg/L	0.000792	32.11%
Fe 239.562†	2460.7	0.930	mg/L	0.0437	0.930 mg/L	0.0437	4.70%
Mg 279.077†	6212.1	6.34	mg/L	0.323	6.34 mg/L	0.323	5.10%
Mn 257.610†	39215.3	0.0773	mg/L	0.00088	0.0773 mg/L	0.00088	1.14%
Mo 202.031†	29.3	0.00259	mg/L	0.000262	0.00259 mg/L	0.000262	10.10%
Ni 231.604†	-12.7	-0.00021	mg/L	0.000075	-0.00021 mg/L	0.000075	35.92%
Pb 220.353†	30.9	0.00443	mg/L	0.002392	0.00443 mg/L	0.002392	54.01%
Sb 206.836†	-1.7	-0.00079	mg/L	0.001386	-0.00079 mg/L	0.001386	174.65%
Se 196.026†	-2.5	-0.00799	mg/L	0.008395	-0.00799 mg/L	0.008395	105.01%
Si 251.611†	81659.9	2.93	mg/L	0.006	2.93 mg/L	0.006	0.20%
Sn 189.927†	-206.5	-0.0410	mg/L	0.00085	-0.0410 mg/L	0.00085	2.07%
Ti 334.940†	-3947.6	0.00011	mg/L	0.000667	0.00011 mg/L	0.000667	587.56%
Tl 190.801†	-12.4	-0.0114	mg/L	0.00275	-0.0114 mg/L	0.00275	24.14%
V 290.880†	810.7	0.00579	mg/L	0.001139	0.00579 mg/L	0.001139	19.67%
Zn 206.200†	63.2	0.00241	mg/L	0.000400	0.00241 mg/L	0.000400	16.61%
K 766.490†	892.6	0.686	mg/L	0.0395	0.686 mg/L	0.0395	5.76%
Na 589.592†	24482.5	2.56	mg/L	0.021	2.56 mg/L	0.021	0.84%
Sr 407.771†	48368.7	0.0527	mg/L	0.00187	0.0527 mg/L	0.00187	3.56%
Li 670.784†	-5.0	-0.00383	mg/L	0.000180	-0.00383 mg/L	0.000180	4.69%
P 214.914†	25.0	0.0478	mg/L	0.00861	0.0478 mg/L	0.00861	18.01%

Sequence No.: 17 **Autosampler Location: 88**
Sample ID: L1311032007 **Date Collected: 11/8/2013 2:08:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032007

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311032007

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2369056.8						4307.77	0.18%
YRADIAL	158548.6						5933.60	3.74%
Ga 417.206	885475.3						7443.83	0.84%
GaRADIAL	44286.1						1407.73	3.18%
Ag 328.068†	113.9	0.00231	mg/L	0.000422	0.00231	mg/L	0.000422	18.24%
Al 396.153†	132.0	0.0166	mg/L	0.00730	0.0166	mg/L	0.00730	44.05%
As 188.979†	-9.8	-0.00479	mg/L	0.004473	-0.00479	mg/L	0.004473	93.28%
Ba 233.527†	946.7	0.0141	mg/L	0.00010	0.0141	mg/L	0.00010	0.69%
Be 234.861†	454.3	0.00038	mg/L	0.000160	0.00038	mg/L	0.000160	42.06%
B 249.677†	493.7	0.0145	mg/L	0.00058	0.0145	mg/L	0.00058	3.97%
Ca 227.546†	7471.7	46.2	mg/L	0.43	46.2	mg/L	0.43	0.92%
Cd 228.802†	0.1	0.00002	mg/L	0.000266	0.00002	mg/L	0.000266	>999.9%
Co 228.616†	-1.8	-0.00028	mg/L	0.000407	-0.00028	mg/L	0.000407	144.57%
Cr 267.716†	68.3	0.00074	mg/L	0.000026	0.00074	mg/L	0.000026	3.57%
Cu 327.393†	121.7	0.00193	mg/L	0.000291	0.00193	mg/L	0.000291	15.08%
Fe 239.562†	5960.6	2.26	mg/L	0.102	2.26	mg/L	0.102	4.53%
Mg 279.077†	6265.6	6.39	mg/L	0.316	6.39	mg/L	0.316	4.94%
Mn 257.610†	56045.2	0.111	mg/L	0.0027	0.111	mg/L	0.0027	2.44%
Mo 202.031†	31.8	0.00279	mg/L	0.000274	0.00279	mg/L	0.000274	9.82%
Ni 231.604†	-5.0	0.00004	mg/L	0.000204	0.00004	mg/L	0.000204	548.62%
Pb 220.353†	26.0	0.00343	mg/L	0.001368	0.00343	mg/L	0.001368	39.88%
Sb 206.836†	-1.1	-0.00039	mg/L	0.001971	-0.00039	mg/L	0.001971	504.50%
Se 196.026†	0.8	-0.00294	mg/L	0.009076	-0.00294	mg/L	0.009076	308.57%

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Si 251.611†	90674.0	3.25	mg/L	0.055	3.25	mg/L	0.055	1.71%
Sn 189.927†	-212.9	-0.0422	mg/L	0.00089	-0.0422	mg/L	0.00089	2.11%
Ti 334.940†	-4096.3	0.00035	mg/L	0.000362	0.00035	mg/L	0.000362	103.35%
Tl 190.801†	-9.9	-0.00975	mg/L	0.000905	-0.00975	mg/L	0.000905	9.28%
V 290.880†	464.1	0.00341	mg/L	0.002123	0.00341	mg/L	0.002123	62.21%
Zn 206.200†	87.1	0.00334	mg/L	0.000126	0.00334	mg/L	0.000126	3.76%
K 766.490†	915.7	0.703	mg/L	0.0321	0.703	mg/L	0.0321	4.56%
Na 589.592†	24989.1	2.61	mg/L	0.062	2.61	mg/L	0.062	2.37%
Sr 407.771†	47369.1	0.0515	mg/L	0.00141	0.0515	mg/L	0.00141	2.73%
Li 670.784†	53.7	-0.00283	mg/L	0.000473	-0.00283	mg/L	0.000473	16.70%
P 214.914†	-0.6	0.0168	mg/L	0.01364	0.0168	mg/L	0.01364	81.40%

Sequence No.: 18 **Autosampler Location: 89**
Sample ID: L1311032009 **Date Collected: 11/8/2013 2:10:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032009

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311032009

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2388431.2						21280.67	0.89%
YRADIAL	156647.0						3133.00	2.00%
Ga 417.206	903921.1						2100.89	0.23%
GaRADIAL	44739.2						135.54	0.30%
Ag 328.068†	188.1	0.00211	mg/L	0.000284	0.00211	mg/L	0.000284	13.48%
Al 396.153†	-5.3	-0.0356	mg/L	0.00080	-0.0356	mg/L	0.00080	2.24%
As 188.979†	-5.8	-0.00230	mg/L	0.002765	-0.00230	mg/L	0.002765	120.13%
Ba 233.527†	792.5	0.0120	mg/L	0.00005	0.0120	mg/L	0.00005	0.42%
Be 234.861†	171.2	0.00019	mg/L	0.000081	0.00019	mg/L	0.000081	43.51%
B 249.677†	374.6	0.0127	mg/L	0.00015	0.0127	mg/L	0.00015	1.17%
Ca 227.546†	6927.8	42.8	mg/L	0.18	42.8	mg/L	0.18	0.41%
Cd 228.802†	-5.4	-0.00024	mg/L	0.000281	-0.00024	mg/L	0.000281	117.12%
Co 228.616†	-7.0	-0.00052	mg/L	0.000359	-0.00052	mg/L	0.000359	68.93%
Cr 267.716†	55.2	0.00069	mg/L	0.000100	0.00069	mg/L	0.000100	14.49%
Cu 327.393†	186.4	0.00225	mg/L	0.000492	0.00225	mg/L	0.000492	21.85%
Fe 239.562†	2468.9	0.933	mg/L	0.0294	0.933	mg/L	0.0294	3.15%
Mg 279.077†	6251.5	6.38	mg/L	0.211	6.38	mg/L	0.211	3.31%
Mn 257.610†	39167.3	0.0772	mg/L	0.00082	0.0772	mg/L	0.00082	1.06%
Mo 202.031†	28.0	0.00250	mg/L	0.000197	0.00250	mg/L	0.000197	7.86%
Ni 231.604†	-9.2	-0.00010	mg/L	0.000343	-0.00010	mg/L	0.000343	358.27%
Pb 220.353†	26.3	0.00355	mg/L	0.001619	0.00355	mg/L	0.001619	45.59%
Sb 206.836†	-2.8	-0.00145	mg/L	0.001524	-0.00145	mg/L	0.001524	105.03%
Se 196.026†	-0.3	-0.00489	mg/L	0.003759	-0.00489	mg/L	0.003759	76.92%
Si 251.611†	80295.2	2.88	mg/L	0.010	2.88	mg/L	0.010	0.35%
Sn 189.927†	-211.4	-0.0419	mg/L	0.00168	-0.0419	mg/L	0.00168	4.02%
Ti 334.940†	-4881.9	-0.00126	mg/L	0.000082	-0.00126	mg/L	0.000082	6.48%
Tl 190.801†	-14.7	-0.0129	mg/L	0.00894	-0.0129	mg/L	0.00894	69.10%
V 290.880†	638.4	0.00472	mg/L	0.001086	0.00472	mg/L	0.001086	23.01%
Zn 206.200†	40.8	0.00146	mg/L	0.000084	0.00146	mg/L	0.000084	5.73%
K 766.490†	838.2	0.644	mg/L	0.0147	0.644	mg/L	0.0147	2.28%
Na 589.592†	24112.3	2.52	mg/L	0.031	2.52	mg/L	0.031	1.24%
Sr 407.771†	47678.8	0.0519	mg/L	0.00156	0.0519	mg/L	0.00156	3.00%
Li 670.784†	17.8	-0.00344	mg/L	0.000171	-0.00344	mg/L	0.000171	4.96%
P 214.914†	11.3	0.0312	mg/L	0.00609	0.0312	mg/L	0.00609	19.51%

Sequence No.: 19 **Autosampler Location: 90**
Sample ID: L1311032011 **Date Collected: 11/8/2013 2:13:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311032011

Approved: November 11, 2013

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: L1311032011

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2382868.5						18672.28	0.78%
YRADIAL	162099.9						5375.44	3.32%
Ga 417.206	905520.1						12327.44	1.36%
GaRADIAL	46186.1						523.20	1.13%
Ag 328.068†	245.0	0.00236	mg/L	0.000222	0.00236	mg/L	0.000222	9.39%
Al 396.153†	-2.0	-0.0343	mg/L	0.00074	-0.0343	mg/L	0.00074	2.14%
As 188.979†	-12.4	-0.00702	mg/L	0.002817	-0.00702	mg/L	0.002817	40.12%
Ba 233.527†	780.8	0.0119	mg/L	0.00005	0.0119	mg/L	0.00005	0.41%
Be 234.861†	245.5	0.00032	mg/L	0.000157	0.00032	mg/L	0.000157	48.48%
B 249.677†	338.0	0.0120	mg/L	0.00016	0.0120	mg/L	0.00016	1.30%
Ca 227.546†	7246.8	44.8	mg/L	0.52	44.8	mg/L	0.52	1.15%
Cd 228.802†	-8.0	-0.00033	mg/L	0.000016	-0.00033	mg/L	0.000016	4.78%
Co 228.616†	-5.6	-0.00045	mg/L	0.000285	-0.00045	mg/L	0.000285	63.87%
Cr 267.716†	54.9	0.00069	mg/L	0.000079	0.00069	mg/L	0.000079	11.39%
Cu 327.393†	131.1	0.00191	mg/L	0.000460	0.00191	mg/L	0.000460	24.12%
Fe 239.562†	2397.9	0.906	mg/L	0.0233	0.906	mg/L	0.0233	2.57%
Mg 279.077†	6410.7	6.54	mg/L	0.201	6.54	mg/L	0.201	3.08%
Mn 257.610†	39204.7	0.0773	mg/L	0.00087	0.0773	mg/L	0.00087	1.13%
Mo 202.031†	28.8	0.00256	mg/L	0.000036	0.00256	mg/L	0.000036	1.40%
Ni 231.604†	-17.0	-0.00035	mg/L	0.000028	-0.00035	mg/L	0.000028	8.02%
Pb 220.353†	25.6	0.00341	mg/L	0.002179	0.00341	mg/L	0.002179	63.98%
Sb 206.836†	-1.8	-0.00088	mg/L	0.002647	-0.00088	mg/L	0.002647	301.22%
Se 196.026†	2.1	-0.00140	mg/L	0.003883	-0.00140	mg/L	0.003883	277.89%
Si 251.611†	83195.3	2.98	mg/L	0.017	2.98	mg/L	0.017	0.56%
Sn 189.927†	-210.5	-0.0418	mg/L	0.00036	-0.0418	mg/L	0.00036	0.87%
Ti 334.940†	-5166.6	-0.00137	mg/L	0.000188	-0.00137	mg/L	0.000188	13.74%
Tl 190.801†	-15.5	-0.0135	mg/L	0.00489	-0.0135	mg/L	0.00489	36.26%
V 290.880†	766.2	0.00551	mg/L	0.000903	0.00551	mg/L	0.000903	16.39%
Zn 206.200†	36.7	0.00129	mg/L	0.000085	0.00129	mg/L	0.000085	6.58%
K 766.490†	871.7	0.669	mg/L	0.0287	0.669	mg/L	0.0287	4.28%
Na 589.592†	25117.5	2.62	mg/L	0.019	2.62	mg/L	0.019	0.71%
Sr 407.771†	49735.8	0.0541	mg/L	0.00138	0.0541	mg/L	0.00138	2.56%
Li 670.784†	21.3	-0.00338	mg/L	0.000079	-0.00338	mg/L	0.000079	2.34%
P 214.914†	12.2	0.0323	mg/L	0.00589	0.0323	mg/L	0.00589	18.25%

Sequence No.: 20
Sample ID: L1311033701
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 91
Date Collected: 11/8/2013 2:16:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311033701

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311033701

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2326412.6						31826.19	1.37%
YRADIAL	154004.9						653.08	0.42%
Ga 417.206	893385.9						15251.00	1.71%
GaRADIAL	45886.2						717.37	1.56%
Ag 328.068†	452.4	0.00294	mg/L	0.000846	0.00294	mg/L	0.000846	28.77%
Al 396.153†	158.9	0.0264	mg/L	0.00217	0.0264	mg/L	0.00217	8.21%
As 188.979†	-9.7	-0.00486	mg/L	0.001825	-0.00486	mg/L	0.001825	37.55%
Ba 233.527†	5686.7	0.0824	mg/L	0.00099	0.0824	mg/L	0.00099	1.20%
Be 234.861†	164.3	0.00035	mg/L	0.000033	0.00035	mg/L	0.000033	9.55%
B 249.677†	729.6	0.0202	mg/L	0.00041	0.0202	mg/L	0.00041	2.05%
Ca 227.546†	10224.6	63.1	mg/L	0.45	63.1	mg/L	0.45	0.72%
Cd 228.802†	-9.2	-0.00040	mg/L	0.000230	-0.00040	mg/L	0.000230	58.31%
Co 228.616†	-10.5	-0.00071	mg/L	0.000228	-0.00071	mg/L	0.000228	32.21%
Cr 267.716†	341.9	0.00402	mg/L	0.000081	0.00402	mg/L	0.000081	2.01%

Approved: November 11, 2013

Cu 327.393†	229.2	0.00247 mg/L	0.000360	0.00247 mg/L	0.000360	14.57%
Fe 239.562†	465.4	0.170 mg/L	0.0031	0.170 mg/L	0.0031	1.84%
Mg 279.077†	10616.3	10.8 mg/L	0.11	10.8 mg/L	0.11	1.02%
Mn 257.610†	1093.7	0.00041 mg/L	0.000055	0.00041 mg/L	0.000055	13.67%
Mo 202.031†	57.8	0.00451 mg/L	0.000933	0.00451 mg/L	0.000933	20.70%
Ni 231.604†	-3.2	0.00010 mg/L	0.000175	0.00010 mg/L	0.000175	177.81%
Pb 220.353†	27.2	0.00379 mg/L	0.002023	0.00379 mg/L	0.002023	53.40%
Sb 206.836†	-0.3	-0.00001 mg/L	0.002829	-0.00001 mg/L	0.002829	>999.9%
Se 196.026†	-0.4	-0.00518 mg/L	0.001493	-0.00518 mg/L	0.001493	28.80%
Si 251.611†	405614.9	14.5 mg/L	0.13	14.5 mg/L	0.13	0.91%
Sn 189.927†	-238.2	-0.0471 mg/L	0.00116	-0.0471 mg/L	0.00116	2.47%
Ti 334.940†	-5517.3	0.00089 mg/L	0.000498	0.00089 mg/L	0.000498	56.19%
Tl 190.801†	-21.4	-0.0173 mg/L	0.00587	-0.0173 mg/L	0.00587	33.90%
V 290.880†	1493.2	0.0100 mg/L	0.00086	0.0100 mg/L	0.00086	8.55%
Zn 206.200†	77.9	0.00310 mg/L	0.000058	0.00310 mg/L	0.000058	1.89%
K 766.490†	3660.5	2.81 mg/L	0.085	2.81 mg/L	0.085	3.02%
Na 589.592†	242616.5	25.5 mg/L	0.21	25.5 mg/L	0.21	0.82%
Sr 407.771†	475233.1	0.517 mg/L	0.0120	0.517 mg/L	0.0120	2.33%
Li 670.784†	575.9	0.00600 mg/L	0.000375	0.00600 mg/L	0.000375	6.25%
P 214.914†	35.8	0.0609 mg/L	0.01500	0.0609 mg/L	0.01500	24.66%

Sequence No.: 21 **Autosampler Location: 92**
Sample ID: L1311033702 **Date Collected: 11/8/2013 2:19:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311033702

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311033702

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2333973.5						26870.48	1.15%
YRADIAL	154623.7						1827.93	1.18%
Ga 417.206	884383.1						12630.84	1.43%
GaRADIAL	45599.8						676.83	1.48%
Ag 328.068†	192.4	0.00177	mg/L	0.000005	0.00177	mg/L	0.000005	0.29%
Al 396.153†	316.1	0.0860	mg/L	0.00284	0.0860	mg/L	0.00284	3.31%
As 188.979†	-6.5	-0.00302	mg/L	0.000783	-0.00302	mg/L	0.000783	25.96%
Ba 233.527†	3825.7	0.0557	mg/L	0.00088	0.0557	mg/L	0.00088	1.59%
Be 234.861†	114.2	0.00026	mg/L	0.000020	0.00026	mg/L	0.000020	7.71%
B 249.677†	583.3	0.0172	mg/L	0.00078	0.0172	mg/L	0.00078	4.55%
Ca 227.546†	6744.0	41.6	mg/L	1.37	41.6	mg/L	1.37	3.29%
Cd 228.802†	-5.7	-0.00026	mg/L	0.000221	-0.00026	mg/L	0.000221	86.65%
Co 228.616†	-7.5	-0.00055	mg/L	0.000537	-0.00055	mg/L	0.000537	97.85%
Cr 267.716†	185.0	0.00224	mg/L	0.000053	0.00224	mg/L	0.000053	2.38%
Cu 327.393†	98.2	0.00167	mg/L	0.000600	0.00167	mg/L	0.000600	36.00%
Fe 239.562†	456.1	0.166	mg/L	0.0053	0.166	mg/L	0.0053	3.19%
Mg 279.077†	6809.7	6.95	mg/L	0.150	6.95	mg/L	0.150	2.16%
Mn 257.610†	2481.7	0.00320	mg/L	0.000124	0.00320	mg/L	0.000124	3.88%
Mo 202.031†	44.5	0.00360	mg/L	0.000619	0.00360	mg/L	0.000619	17.19%
Ni 231.604†	-8.8	-0.00008	mg/L	0.000512	-0.00008	mg/L	0.000512	629.86%
Pb 220.353†	19.3	0.00231	mg/L	0.001737	0.00231	mg/L	0.001737	75.23%
Sb 206.836†	-2.3	-0.00119	mg/L	0.001339	-0.00119	mg/L	0.001339	112.70%
Se 196.026†	-2.0	-0.00750	mg/L	0.006531	-0.00750	mg/L	0.006531	87.09%
Si 251.611†	459383.9	16.4	mg/L	0.10	16.4	mg/L	0.10	0.59%
Sn 189.927†	-211.1	-0.0419	mg/L	0.00178	-0.0419	mg/L	0.00178	4.24%
Ti 334.940†	-2422.1	0.00204	mg/L	0.000228	0.00204	mg/L	0.000228	11.14%
Tl 190.801†	-22.6	-0.0181	mg/L	0.00424	-0.0181	mg/L	0.00424	23.48%
V 290.880†	1481.9	0.0101	mg/L	0.00064	0.0101	mg/L	0.00064	6.39%
Zn 206.200†	13.5	0.00036	mg/L	0.000115	0.00036	mg/L	0.000115	31.82%
K 766.490†	3264.8	2.51	mg/L	0.120	2.51	mg/L	0.120	4.79%
Na 589.592†	188057.9	19.8	mg/L	0.36	19.8	mg/L	0.36	1.82%
Sr 407.771†	307801.7	0.335	mg/L	0.0196	0.335	mg/L	0.0196	5.85%
Li 670.784†	512.9	0.00493	mg/L	0.001142	0.00493	mg/L	0.001142	23.15%
P 214.914†	26.8	0.0500	mg/L	0.00923	0.0500	mg/L	0.00923	18.45%

Approved: November 11, 2013

Sequence No.: 22 **Autosampler Location: 93**
Sample ID: L1311033703 **Date Collected: 11/8/2013 2:22:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311033703

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311033703

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2303042.2						48492.87	2.11%
YRADIAL	154318.6						3849.91	2.49%
Ga 417.206	900775.6						16703.15	1.85%
GaRADIAL	46299.0						857.42	1.85%
Ag 328.068†	829.1	0.00475	mg/L	0.000298	0.00475	mg/L	0.000298	6.27%
Al 396.153†	1571.1	0.561	mg/L	0.0215	0.561	mg/L	0.0215	3.84%
As 188.979†	-16.2	-0.00769	mg/L	0.001999	-0.00769	mg/L	0.001999	25.99%
Ba 233.527†	3391.4	0.0494	mg/L	0.00106	0.0494	mg/L	0.00106	2.14%
Be 234.861†	197.7	0.00031	mg/L	0.000030	0.00031	mg/L	0.000030	9.49%
B 249.677†	407.4	0.0135	mg/L	0.00113	0.0135	mg/L	0.00113	8.36%
Ca 227.546†	23599.8	146	mg/L	1.3	146	mg/L	1.3	0.87%
Cd 228.802†	-3.8	-0.00013	mg/L	0.000173	-0.00013	mg/L	0.000173	131.42%
Co 228.616†	-2.1	-0.00028	mg/L	0.000286	-0.00028	mg/L	0.000286	101.08%
Cr 267.716†	618.4	0.00715	mg/L	0.000177	0.00715	mg/L	0.000177	2.47%
Cu 327.393†	53.1	0.00142	mg/L	0.000562	0.00142	mg/L	0.000562	39.58%
Fe 239.562†	1501.4	0.564	mg/L	0.0192	0.564	mg/L	0.0192	3.40%
Mg 279.077†	36235.3	37.1	mg/L	0.39	37.1	mg/L	0.39	1.07%
Mn 257.610†	8352.3	0.0151	mg/L	0.00026	0.0151	mg/L	0.00026	1.71%
Mo 202.031†	54.7	0.00431	mg/L	0.000234	0.00431	mg/L	0.000234	5.43%
Ni 231.604†	-2.2	0.00013	mg/L	0.000795	0.00013	mg/L	0.000795	600.84%
Pb 220.353†	26.7	0.00375	mg/L	0.000949	0.00375	mg/L	0.000949	25.32%
Sb 206.836†	-3.4	-0.00187	mg/L	0.000747	-0.00187	mg/L	0.000747	39.84%
Se 196.026†	0.9	-0.00309	mg/L	0.007116	-0.00309	mg/L	0.007116	230.37%
Si 251.611†	467093.9	16.7	mg/L	0.07	16.7	mg/L	0.07	0.42%
Sn 189.927†	-305.5	-0.0602	mg/L	0.00063	-0.0602	mg/L	0.00063	1.05%
Ti 334.940†	2905.4	0.0252	mg/L	0.00156	0.0252	mg/L	0.00156	6.19%
Tl 190.801†	-27.2	-0.0210	mg/L	0.00908	-0.0210	mg/L	0.00908	43.20%
V 290.880†	2123.4	0.0132	mg/L	0.00198	0.0132	mg/L	0.00198	15.04%
Zn 206.200†	78.2	0.00311	mg/L	0.000248	0.00311	mg/L	0.000248	7.96%
K 766.490†	4123.2	3.15	mg/L	0.110	3.15	mg/L	0.110	3.50%
Na 589.592†	348476.9	36.7	mg/L	0.22	36.7	mg/L	0.22	0.61%
Sr 407.771†	1005437.1	1.09	mg/L	0.027	1.09	mg/L	0.027	2.45%
Li 670.784†	775.5	0.00937	mg/L	0.000311	0.00937	mg/L	0.000311	3.32%
P 214.914†	42.2	0.0686	mg/L	0.00880	0.0686	mg/L	0.00880	12.83%

Sequence No.: 23 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 2:25:15 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2353833.1						17298.93	0.73%
YRADIAL	162581.3						2887.98	1.78%
Ga 417.206	869136.3						11963.11	1.38%
GaRADIAL	45157.1						538.37	1.19%
Ag 328.068†	82507.1	0.387	mg/L	0.0070	0.387	mg/L	0.0070	1.80%

Approved: November 11, 2013

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   QC value within limits for Ag 328.068  Recovery = 96.80%
Al 396.153†            26297.8        9.86 mg/L        0.002        9.86 mg/L         0.002   0.02%
   QC value within limits for Al 396.153  Recovery = 98.56%
As 188.979†              536.1       0.386 mg/L       0.0046       0.386 mg/L        0.0046   1.19%
   QC value within limits for As 188.979  Recovery = 96.40%
Ba 233.527†            69485.3       0.999 mg/L       0.0191       0.999 mg/L        0.0191   1.91%
   QC value within limits for Ba 233.527  Recovery = 99.90%
Be 234.861†            27291.6      0.0483 mg/L      0.00119      0.0483 mg/L       0.00119   2.46%
   QC value within limits for Be 234.861  Recovery = 96.55%
B 249.677†             23689.6       0.478 mg/L       0.0095       0.478 mg/L        0.0095   1.99%
   QC value within limits for B 249.677  Recovery = 95.53%
Ca 227.546†             1546.4        10.0 mg/L         0.11        10.0 mg/L          0.11   1.09%
   QC value within limits for Ca 227.546  Recovery = 100.31%
Cd 228.802†             1077.5      0.0462 mg/L      0.00072      0.0462 mg/L       0.00072   1.55%
   QC value within limits for Cd 228.802  Recovery = 92.49%
Co 228.616†             3695.6       0.198 mg/L       0.0016       0.198 mg/L        0.0016   0.79%
   QC value within limits for Co 228.616  Recovery = 99.17%
Cr 267.716†            43130.2       0.492 mg/L       0.0108       0.492 mg/L        0.0108   2.20%
   QC value within limits for Cr 267.716  Recovery = 98.30%
Cu 327.393†            77947.0       0.484 mg/L       0.0116       0.484 mg/L        0.0116   2.39%
   QC value within limits for Cu 327.393  Recovery = 96.72%
Fe 239.562†            10359.8        3.94 mg/L        0.007        3.94 mg/L         0.007   0.17%
   QC value within limits for Fe 239.562  Recovery = 98.46%
Mg 279.077†             9730.1        9.95 mg/L        0.056        9.95 mg/L         0.056   0.56%
   QC value within limits for Mg 279.077  Recovery = 99.53%
Mn 257.610†           253880.8       0.511 mg/L       0.0106       0.511 mg/L        0.0106   2.07%
   QC value within limits for Mn 257.610  Recovery = 102.21%
Mo 202.031†            14419.6       0.986 mg/L       0.0155       0.986 mg/L        0.0155   1.57%
   QC value within limits for Mo 202.031  Recovery = 98.56%
Ni 231.604†            15567.9       0.500 mg/L       0.0108       0.500 mg/L        0.0108   2.17%
   QC value within limits for Ni 231.604  Recovery = 100.06%
Pb 220.353†             2651.9       0.502 mg/L       0.0025       0.502 mg/L        0.0025   0.49%
   QC value within limits for Pb 220.353  Recovery = 100.43%
Sb 206.836†             1882.6        1.15 mg/L        0.013        1.15 mg/L         0.013   1.12%
   QC value within limits for Sb 206.836  Recovery = 95.50%
Se 196.026†              270.5       0.391 mg/L       0.0027       0.391 mg/L        0.0027   0.69%
   QC value within limits for Se 196.026  Recovery = 97.78%
Si 251.611†           137608.2        4.91 mg/L        0.117        4.91 mg/L         0.117   2.39%
   QC value within limits for Si 251.611  Recovery = 98.19%
Sn 189.927†             5139.6       0.995 mg/L       0.0081       0.995 mg/L        0.0081   0.81%
   QC value within limits for Sn 189.927  Recovery = 99.54%
Ti 334.940†           698932.4       0.989 mg/L       0.0048       0.989 mg/L        0.0048   0.49%
   QC value within limits for Ti 334.940  Recovery = 98.90%
Tl 190.801†              751.7       0.512 mg/L       0.0048       0.512 mg/L        0.0048   0.95%
   QC value within limits for Tl 190.801  Recovery = 102.32%
V 290.880†            159932.9       0.992 mg/L       0.0218       0.992 mg/L        0.0218   2.20%
   QC value within limits for V 290.880  Recovery = 99.21%
Zn 206.200†            23799.5        1.01 mg/L        0.021        1.01 mg/L         0.021   2.10%
   QC value within limits for Zn 206.200  Recovery = 100.89%
K 766.490†             64669.4        50.8 mg/L         0.12        50.8 mg/L          0.12   0.24%
   QC value within limits for K 766.490  Recovery = 101.70%
Na 589.592†           454095.6        47.9 mg/L         1.40        47.9 mg/L          1.40   2.92%
   QC value within limits for Na 589.592  Recovery = 95.81%
Sr 407.771†           893693.0       0.974 mg/L       0.0311       0.974 mg/L        0.0311   3.19%
   QC value within limits for Sr 407.771  Recovery = 97.43%
Li 670.784†            59356.9       1.000 mg/L       0.0021       1.000 mg/L        0.0021   0.21%
   QC value within limits for Li 670.784  Recovery = 100.00%
P 214.914†              8054.2        9.78 mg/L        0.075        9.78 mg/L         0.075   0.77%
   QC value within limits for P 214.914  Recovery = 97.78%
All analyte(s) passed QC.

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Sequence No.: 24                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 11/8/2013 2:27:20 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                    171.0 kPa         0.45 L/min
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Approved: November 11, 2013

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2341621.5						7108.90	0.30%
YRADIAL	158405.2						2921.62	1.84%
Ga 417.206	841599.8						9372.73	1.11%
GaRADIAL	44208.8						981.68	2.22%
Ag 328.068†	38.8	0.00104	mg/L	0.000683	0.00104	mg/L	0.000683	65.59%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	10.0	-0.0298	mg/L	0.00060	-0.0298	mg/L	0.00060	2.03%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	2.8	0.00279	mg/L	0.001459	0.00279	mg/L	0.001459	52.37%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-13.4	0.00055	mg/L	0.000104	0.00055	mg/L	0.000104	18.95%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	53.5	0.00019	mg/L	0.000009	0.00019	mg/L	0.000009	4.61%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	125.2	0.00811	mg/L	0.000887	0.00811	mg/L	0.000887	10.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	11.2	0.102	mg/L	0.0912	0.102	mg/L	0.0912	89.15%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-6.9	-0.00034	mg/L	0.000202	-0.00034	mg/L	0.000202	59.27%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-8.3	-0.00058	mg/L	0.000164	-0.00058	mg/L	0.000164	28.13%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	12.6	0.00028	mg/L	0.000040	0.00028	mg/L	0.000040	14.07%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	189.7	0.00222	mg/L	0.000265	0.00222	mg/L	0.000265	11.93%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	9.3	-0.00399	mg/L	0.001416	-0.00399	mg/L	0.001416	35.46%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	21.2	0.00509	mg/L	0.005001	0.00509	mg/L	0.005001	98.33%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	100.2	-0.00161	mg/L	0.000046	-0.00161	mg/L	0.000046	2.85%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	11.5	0.00135	mg/L	0.000156	0.00135	mg/L	0.000156	11.60%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-20.4	-0.00046	mg/L	0.000204	-0.00046	mg/L	0.000204	44.48%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-5.7	-0.00244	mg/L	0.002247	-0.00244	mg/L	0.002247	92.22%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	3.1	0.00209	mg/L	0.001865	0.00209	mg/L	0.001865	89.14%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.1	-0.00437	mg/L	0.003354	-0.00437	mg/L	0.003354	76.68%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	284.3	0.0242	mg/L	0.00271	0.0242	mg/L	0.00271	11.20%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-7.4	-0.00236	mg/L	0.000708	-0.00236	mg/L	0.000708	29.93%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-110.2	-0.00092	mg/L	0.000097	-0.00092	mg/L	0.000097	10.59%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-2.0	-0.00430	mg/L	0.003569	-0.00430	mg/L	0.003569	82.97%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	636.4	0.00503	mg/L	0.000998	0.00503	mg/L	0.000998	19.84%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-35.2	-0.00170	mg/L	0.000328	-0.00170	mg/L	0.000328	19.28%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-22.3	-0.0200	mg/L	0.03222	-0.0200	mg/L	0.03222	161.40%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	310.0	0.0241	mg/L	0.02129	0.0241	mg/L	0.02129	88.35%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	77.6	0.00146	mg/L	0.000136	0.00146	mg/L	0.000136	9.36%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	45.4	-0.00297	mg/L	0.000652	-0.00297	mg/L	0.000652	21.94%
QC value within limits for Li 670.784 Recovery = Not calculated								
P 214.914†	22.0	0.0441	mg/L	0.00831	0.0441	mg/L	0.00831	18.83%
QC value within limits for P 214.914 Recovery = Not calculated								

All analyte(s) passed QC.

Approved: November 11, 2013

Sequence No.: 25 **Autosampler Location: 94**
Sample ID: L1311036301 **Date Collected: 11/8/2013 2:30:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036301

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2161522.2						27993.77	1.30%
YRADIAL	155855.1						5267.08	3.38%
Ga 417.206	851817.2						10831.07	1.27%
GaRADIAL	45764.3						1127.98	2.46%
Ag 328.068†	210.9	0.00191	mg/L	0.000565	0.00191	mg/L	0.000565	29.58%
Al 396.153†	886.6	0.299	mg/L	0.0064	0.299	mg/L	0.0064	2.14%
As 188.979†	-12.4	-0.00707	mg/L	0.001613	-0.00707	mg/L	0.001613	22.81%
Ba 233.527†	2567.3	0.0376	mg/L	0.00069	0.0376	mg/L	0.00069	1.82%
Be 234.861†	107.6	0.00026	mg/L	0.000026	0.00026	mg/L	0.000026	10.23%
B 249.677†	21343.1	0.434	mg/L	0.0092	0.434	mg/L	0.0092	2.11%
Ca 227.546†	9939.5	61.3	mg/L	1.10	61.3	mg/L	1.10	1.79%
Cd 228.802†	-0.8	-0.00001	mg/L	0.000040	-0.00001	mg/L	0.000040	290.91%
Co 228.616†	3.2	0.00008	mg/L	0.000488	0.00008	mg/L	0.000488	579.09%
Cr 267.716†	368.2	0.00432	mg/L	0.000266	0.00432	mg/L	0.000266	6.15%
Cu 327.393†	575.0	0.00463	mg/L	0.000371	0.00463	mg/L	0.000371	8.01%
Fe 239.562†	678.3	0.248	mg/L	0.0061	0.248	mg/L	0.0061	2.44%
Mg 279.077†	143489.2	147	mg/L	2.2	147	mg/L	2.2	1.47%
Mn 257.610†	86355.6	0.172	mg/L	0.0036	0.172	mg/L	0.0036	2.09%
Mo 202.031†	602.5	0.0417	mg/L	0.00087	0.0417	mg/L	0.00087	2.09%
Ni 231.604†	80.6	0.00279	mg/L	0.000380	0.00279	mg/L	0.000380	13.61%
Pb 220.353†	31.8	0.00462	mg/L	0.001914	0.00462	mg/L	0.001914	41.47%
Sb 206.836†	4.9	0.00326	mg/L	0.005061	0.00326	mg/L	0.005061	155.36%
Se 196.026†	3.2	0.00009	mg/L	0.001484	0.00009	mg/L	0.001484	>999.9%
Si 251.611†	99001.2	3.54	mg/L	0.080	3.54	mg/L	0.080	2.27%
Sn 189.927†	-229.6	-0.0454	mg/L	0.00053	-0.0454	mg/L	0.00053	1.16%
Ti 334.940†	1800.0	0.0110	mg/L	0.00084	0.0110	mg/L	0.00084	7.67%
Tl 190.801†	-27.4	-0.0213	mg/L	0.00354	-0.0213	mg/L	0.00354	16.60%
V 290.880†	3763.0	0.0206	mg/L	0.00249	0.0206	mg/L	0.00249	12.13%
Zn 206.200†	1019.2	0.0428	mg/L	0.00077	0.0428	mg/L	0.00077	1.79%
K 766.490†	81096.1	63.4	mg/L	1.50	63.4	mg/L	1.50	2.36%
Na 589.592†	5748675.1	666	mg/L	21.3	666	mg/L	21.3	3.19%
Sr 407.771†	244939.5	0.266	mg/L	0.0097	0.266	mg/L	0.0097	3.66%
Li 670.784†	1159.9	0.0159	mg/L	0.00228	0.0159	mg/L	0.00228	14.37%
P 214.914†	252.4	0.323	mg/L	0.0059	0.323	mg/L	0.0059	1.82%

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Sequence No.: 26 **Autosampler Location: 95**
Sample ID: L1311036303 **Date Collected: 11/8/2013 2:33:26 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036303

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036303

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2095186.1						22101.02	1.05%
YRADIAL	152991.3						3934.88	2.57%
Ga 417.206	822143.6						13720.94	1.67%
GaRADIAL	45216.0						503.83	1.11%
Ag 328.068†	337.6	0.00257	mg/L	0.000214	0.00257	mg/L	0.000214	8.34%
Al 396.153†	778.7	0.260	mg/L	0.0019	0.260	mg/L	0.0019	0.75%

Approved: November 11, 2013

As 188.979†	-6.7	-0.00256	mg/L	0.003989	-0.00256	mg/L	0.003989 155.87%
Ba 233.527†	2709.8	0.0396	mg/L	0.00025	0.0396	mg/L	0.00025 0.63%
Be 234.861†	119.3	0.00023	mg/L	0.000013	0.00023	mg/L	0.000013 5.47%
B 249.677†	21138.6	0.430	mg/L	0.0047	0.430	mg/L	0.0047 1.10%
Ca 227.546†	11439.2	70.6	mg/L	0.96	70.6	mg/L	0.96 1.36%
Cd 228.802†	-5.6	-0.00025	mg/L	0.000100	-0.00025	mg/L	0.000100 40.64%
Co 228.616†	1.9	-0.00002	mg/L	0.000109	-0.00002	mg/L	0.000109 475.72%
Cr 267.716†	461.6	0.00538	mg/L	0.000176	0.00538	mg/L	0.000176 3.28%
Cu 327.393†	316.8	0.00305	mg/L	0.000388	0.00305	mg/L	0.000388 12.73%
Fe 239.562†	1162.0	0.432	mg/L	0.0080	0.432	mg/L	0.0080 1.85%
Mg 279.077†	169809.1	174	mg/L	1.7	174	mg/L	1.7 0.99%
Mn 257.610†	96760.9	0.193	mg/L	0.0010	0.193	mg/L	0.0010 0.52%
Mo 202.031†	377.3	0.0264	mg/L	0.00045	0.0264	mg/L	0.00045 1.71%
Ni 231.604†	113.5	0.00385	mg/L	0.000258	0.00385	mg/L	0.000258 6.71%
Pb 220.353†	24.7	0.00325	mg/L	0.002214	0.00325	mg/L	0.002214 68.22%
Sb 206.836†	4.3	0.00287	mg/L	0.001852	0.00287	mg/L	0.001852 64.50%
Se 196.026†	-0.6	-0.00541	mg/L	0.003568	-0.00541	mg/L	0.003568 65.96%
Si 251.611†	104350.9	3.73	mg/L	0.045	3.73	mg/L	0.045 1.20%
Sn 189.927†	-238.2	-0.0471	mg/L	0.00139	-0.0471	mg/L	0.00139 2.95%
Ti 334.940†	3800.2	0.0152	mg/L	0.00079	0.0152	mg/L	0.00079 5.18%
Tl 190.801†	-21.9	-0.0176	mg/L	0.00609	-0.0176	mg/L	0.00609 34.51%
V 290.880†	3927.6	0.0209	mg/L	0.00030	0.0209	mg/L	0.00030 1.43%
Zn 206.200†	1525.5	0.0642	mg/L	0.00037	0.0642	mg/L	0.00037 0.58%
K 766.490†	77778.9	61.4	mg/L	1.12	61.4	mg/L	1.12 1.82%
Na 589.592†	Saturated2						
Sr 407.771†	256096.6	0.278	mg/L	0.0056	0.278	mg/L	0.0056 2.02%
Li 670.784†	1134.1	0.0154	mg/L	0.00051	0.0154	mg/L	0.00051 3.28%
P 214.914†	209.1	0.271	mg/L	0.0101	0.271	mg/L	0.0101 3.74%

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Sequence No.: 27 **Autosampler Location: 96**
Sample ID: L1311036305 **Date Collected: 11/8/2013 2:36:27 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036305

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036305

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2162564.2						26230.91	1.21%
YRADIAL	149178.6						3422.57	2.29%
Ga 417.206	869742.1						8656.96	1.00%
GaRADIAL	44089.8						1211.15	2.75%
Ag 328.068†	301.1	0.00243	mg/L	0.000391	0.00243	mg/L	0.000391	16.07%
Al 396.153†	1075.3	0.372	mg/L	0.0100	0.372	mg/L	0.0100	2.70%
As 188.979†	-7.5	-0.00315	mg/L	0.000561	-0.00315	mg/L	0.000561	17.80%
Ba 233.527†	2877.7	0.0420	mg/L	0.00033	0.0420	mg/L	0.00033	0.78%
Be 234.861†	197.9	0.00035	mg/L	0.000017	0.00035	mg/L	0.000017	4.77%
B 249.677†	21505.1	0.437	mg/L	0.0046	0.437	mg/L	0.0046	1.06%
Ca 227.546†	11595.5	71.6	mg/L	0.85	71.6	mg/L	0.85	1.19%
Cd 228.802†	-3.2	-0.00014	mg/L	0.000349	-0.00014	mg/L	0.000349	249.25%
Co 228.616†	1.6	-0.00005	mg/L	0.000256	-0.00005	mg/L	0.000256	499.27%
Cr 267.716†	475.0	0.00552	mg/L	0.000418	0.00552	mg/L	0.000418	7.57%
Cu 327.393†	466.2	0.00398	mg/L	0.000389	0.00398	mg/L	0.000389	9.79%
Fe 239.562†	1382.5	0.516	mg/L	0.0128	0.516	mg/L	0.0128	2.48%
Mg 279.077†	176833.5	181	mg/L	0.2	181	mg/L	0.2	0.13%
Mn 257.610†	96904.1	0.194	mg/L	0.0037	0.194	mg/L	0.0037	1.92%
Mo 202.031†	356.9	0.0250	mg/L	0.00009	0.0250	mg/L	0.00009	0.38%
Ni 231.604†	147.8	0.00495	mg/L	0.000415	0.00495	mg/L	0.000415	8.39%
Pb 220.353†	27.4	0.00376	mg/L	0.001276	0.00376	mg/L	0.001276	33.89%
Sb 206.836†	-0.1	0.00019	mg/L	0.001976	0.00019	mg/L	0.001976	>999.9%
Se 196.026†	5.9	0.00402	mg/L	0.005378	0.00402	mg/L	0.005378	133.76%
Si 251.611†	109947.9	3.93	mg/L	0.069	3.93	mg/L	0.069	1.75%
Sn 189.927†	-252.2	-0.0498	mg/L	0.00210	-0.0498	mg/L	0.00210	4.21%
Ti 334.940†	5548.5	0.0178	mg/L	0.00268	0.0178	mg/L	0.00268	15.05%
Tl 190.801†	-19.3	-0.0159	mg/L	0.00252	-0.0159	mg/L	0.00252	15.86%

Approved: November 11, 2013

V 290.880†	3719.6	0.0194 mg/L	0.00171	0.0194 mg/L	0.00171	8.85%
Zn 206.200†	1920.6	0.0809 mg/L	0.00112	0.0809 mg/L	0.00112	1.39%
K 766.490†	80590.6	63.7 mg/L	1.08	63.7 mg/L	1.08	1.70%
Na 589.592†	Saturated2					
Sr 407.771†	264687.3	0.287 mg/L	0.0074	0.287 mg/L	0.0074	2.57%
Li 670.784†	1244.1	0.0173 mg/L	0.00046	0.0173 mg/L	0.00046	2.65%
P 214.914†	325.8	0.412 mg/L	0.0086	0.412 mg/L	0.0086	2.09%

Sequence No.: 28 **Autosampler Location: 97**
Sample ID: L1311036307 **Date Collected: 11/8/2013 2:39:28 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036307

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036307

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2141844.9						29472.80	1.38%
YRADIAL	154309.1						3853.05	2.50%
Ga 417.206	851082.4						17799.82	2.09%
GaRADIAL	45069.4						1092.68	2.42%
Ag 328.068†	170.7	0.00169	mg/L	0.000235	0.00169	mg/L	0.000235	13.88%
Al 396.153†	396.9	0.115	mg/L	0.0029	0.115	mg/L	0.0029	2.48%
As 188.979†	-6.5	-0.00277	mg/L	0.001141	-0.00277	mg/L	0.001141	41.27%
Ba 233.527†	2633.8	0.0386	mg/L	0.00031	0.0386	mg/L	0.00031	0.80%
Be 234.861†	135.2	0.00032	mg/L	0.000058	0.00032	mg/L	0.000058	17.96%
B 249.677†	19326.9	0.394	mg/L	0.0079	0.394	mg/L	0.0079	2.02%
Ca 227.546†	9405.7	58.0	mg/L	1.15	58.0	mg/L	1.15	1.99%
Cd 228.802†	-8.3	-0.00037	mg/L	0.000262	-0.00037	mg/L	0.000262	70.68%
Co 228.616†	-1.5	-0.00020	mg/L	0.000192	-0.00020	mg/L	0.000192	96.90%
Cr 267.716†	341.9	0.00403	mg/L	0.000109	0.00403	mg/L	0.000109	2.71%
Cu 327.393†	2486.8	0.0164	mg/L	0.00077	0.0164	mg/L	0.00077	4.72%
Fe 239.562†	539.0	0.195	mg/L	0.0066	0.195	mg/L	0.0066	3.39%
Mg 279.077†	160507.3	164	mg/L	1.4	164	mg/L	1.4	0.88%
Mn 257.610†	133942.8	0.268	mg/L	0.0033	0.268	mg/L	0.0033	1.22%
Mo 202.031†	335.8	0.0236	mg/L	0.00094	0.0236	mg/L	0.00094	3.99%
Ni 231.604†	116.6	0.00395	mg/L	0.000395	0.00395	mg/L	0.000395	9.99%
Pb 220.353†	41.3	0.00632	mg/L	0.002532	0.00632	mg/L	0.002532	40.05%
Sb 206.836†	11.0	0.00696	mg/L	0.005527	0.00696	mg/L	0.005527	79.38%
Se 196.026†	2.1	-0.00151	mg/L	0.004216	-0.00151	mg/L	0.004216	279.61%
Si 251.611†	73294.9	2.63	mg/L	0.040	2.63	mg/L	0.040	1.52%
Sn 189.927†	-218.2	-0.0432	mg/L	0.00285	-0.0432	mg/L	0.00285	6.58%
Ti 334.940†	1875.1	0.0106	mg/L	0.00060	0.0106	mg/L	0.00060	5.69%
Tl 190.801†	-21.7	-0.0176	mg/L	0.00058	-0.0176	mg/L	0.00058	3.31%
V 290.880†	3723.7	0.0199	mg/L	0.00073	0.0199	mg/L	0.00073	3.68%
Zn 206.200†	1263.6	0.0532	mg/L	0.00032	0.0532	mg/L	0.00032	0.60%
K 766.490†	103537.5	82.4	mg/L	0.91	82.4	mg/L	0.91	1.11%
Na 589.592†	Saturated2							
Sr 407.771†	221121.2	0.240	mg/L	0.0060	0.240	mg/L	0.0060	2.48%
Li 670.784†	1018.8	0.0135	mg/L	0.00078	0.0135	mg/L	0.00078	5.81%
P 214.914†	217.9	0.281	mg/L	0.0094	0.281	mg/L	0.0094	3.35%

Sequence No.: 29 **Autosampler Location: 98**
Sample ID: L1311036801 **Date Collected: 11/8/2013 2:42:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036801

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311036801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2091737.6						24226.85	1.16%
YRADIAL	149878.2						5537.45	3.69%
Ga 417.206	859961.0						12450.82	1.45%
GaRADIAL	44818.7						563.25	1.26%
Ag 328.068†	1673.0	0.00728	mg/L	0.000351	0.00728	mg/L	0.000351	4.82%
Al 396.153†	-38.9	-0.0487	mg/L	0.00113	-0.0487	mg/L	0.00113	2.33%
As 188.979†	-0.8	0.00820	mg/L	0.005116	0.00820	mg/L	0.005116	62.41%
Ba 233.527†	905.6	0.0137	mg/L	0.00013	0.0137	mg/L	0.00013	0.97%
Be 234.861†	125.9	0.00036	mg/L	0.000053	0.00036	mg/L	0.000053	14.59%
B 249.677†	50339.1	1.02	mg/L	0.008	1.02	mg/L	0.008	0.81%
Ca 227.546†	59022.7	364	mg/L	3.6	364	mg/L	3.6	1.00%
Cd 228.802†	0.6	0.00001	mg/L	0.000192	0.00001	mg/L	0.000192	>999.9%
Co 228.616†	8.2	0.00044	mg/L	0.000667	0.00044	mg/L	0.000667	152.40%
Cr 267.716†	388.3	0.00457	mg/L	0.000300	0.00457	mg/L	0.000300	6.57%
Cu 327.393†	90.7	0.00149	mg/L	0.000243	0.00149	mg/L	0.000243	16.35%
Fe 239.562†	8.3	-0.0117	mg/L	0.00294	-0.0117	mg/L	0.00294	25.05%
Mg 279.077†	360231.0	369	mg/L	5.3	369	mg/L	5.3	1.44%
Mn 257.610†	204796.5	0.411	mg/L	0.0021	0.411	mg/L	0.0021	0.52%
Mo 202.031†	88.6	0.00671	mg/L	0.000526	0.00671	mg/L	0.000526	7.85%
Ni 231.604†	203.5	0.00675	mg/L	0.000194	0.00675	mg/L	0.000194	2.88%
Pb 220.353†	12.7	0.00080	mg/L	0.002847	0.00080	mg/L	0.002847	356.00%
Sb 206.836†	-3.2	-0.00174	mg/L	0.003939	-0.00174	mg/L	0.003939	226.28%
Se 196.026†	8.2	0.00724	mg/L	0.007802	0.00724	mg/L	0.007802	107.81%
Si 251.611†	148359.3	5.30	mg/L	0.034	5.30	mg/L	0.034	0.64%
Sn 189.927†	-375.0	-0.0736	mg/L	0.00087	-0.0736	mg/L	0.00087	1.19%
Ti 334.940†	-40361.1	-0.00324	mg/L	0.000572	-0.00324	mg/L	0.000572	17.67%
Tl 190.801†	-48.4	-0.0363	mg/L	0.00752	-0.0363	mg/L	0.00752	20.73%
V 290.880†	3879.8	0.0156	mg/L	0.00115	0.0156	mg/L	0.00115	7.41%
Zn 206.200†	25.9	0.00092	mg/L	0.000291	0.00092	mg/L	0.000291	31.82%
K 766.490†	14485.2	11.2	mg/L	0.19	11.2	mg/L	0.19	1.65%
Na 589.592†	Saturated2							
Sr 407.771†	6145738.6	6.68	mg/L	0.305	6.68	mg/L	0.305	4.57%
Li 670.784†	28087.1	0.471	mg/L	0.0006	0.471	mg/L	0.0006	0.12%
P 214.914†	56.4	0.0858	mg/L	0.00481	0.0858	mg/L	0.00481	5.60%

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Sequence No.: 30 **Autosampler Location: 99**
Sample ID: L1311036804 **Date Collected: 11/8/2013 2:45:36 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036804

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036804

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2120847.1						22916.53	1.08%
YRADIAL	153282.7						1262.49	0.82%
Ga 417.206	871647.2						9004.73	1.03%
GaRADIAL	45835.6						575.45	1.26%
Ag 328.068†	1857.7	0.00853	mg/L	0.000143	0.00853	mg/L	0.000143	1.68%
Al 396.153†	-37.2	-0.0479	mg/L	0.00088	-0.0479	mg/L	0.00088	1.83%
As 188.979†	-10.4	0.00192	mg/L	0.001502	0.00192	mg/L	0.001502	78.11%
Ba 233.527†	922.9	0.0140	mg/L	0.00018	0.0140	mg/L	0.00018	1.27%
Be 234.861†	167.5	0.00039	mg/L	0.000024	0.00039	mg/L	0.000024	6.03%
B 249.677†	31223.7	0.633	mg/L	0.0045	0.633	mg/L	0.0045	0.71%
Ca 227.546†	64003.1	395	mg/L	4.1	395	mg/L	4.1	1.04%
Cd 228.802†	-3.7	-0.00015	mg/L	0.000209	-0.00015	mg/L	0.000209	139.30%
Co 228.616†	5.5	0.00030	mg/L	0.000340	0.00030	mg/L	0.000340	113.59%
Cr 267.716†	277.4	0.00331	mg/L	0.000147	0.00331	mg/L	0.000147	4.44%
Cu 327.393†	-180.0	-0.00015	mg/L	0.000091	-0.00015	mg/L	0.000091	59.07%
Fe 239.562†	4.0	-0.0104	mg/L	0.00059	-0.0104	mg/L	0.00059	5.69%
Mg 279.077†	215727.2	221	mg/L	3.2	221	mg/L	3.2	1.43%
Mn 257.610†	4400.0	0.00707	mg/L	0.000103	0.00707	mg/L	0.000103	1.46%

Approved: November 11, 2013

Mo 202.031†	76.8	0.00582 mg/L	0.000779	0.00582 mg/L	0.000779	13.39%
Ni 231.604†	84.8	0.00293 mg/L	0.000274	0.00293 mg/L	0.000274	9.35%
Pb 220.353†	12.6	0.00102 mg/L	0.002424	0.00102 mg/L	0.002424	237.50%
Sb 206.836†	-5.1	-0.00289 mg/L	0.001413	-0.00289 mg/L	0.001413	48.89%
Se 196.026†	11.5	0.0121 mg/L	0.00654	0.0121 mg/L	0.00654	54.04%
Si 251.611†	109248.1	3.91 mg/L	0.018	3.91 mg/L	0.018	0.47%
Sn 189.927†	-383.0	-0.0752 mg/L	0.00067	-0.0752 mg/L	0.00067	0.89%
Ti 334.940†	-43705.4	-0.00336 mg/L	0.001036	-0.00336 mg/L	0.001036	30.83%
Tl 190.801†	-42.6	-0.0321 mg/L	0.01003	-0.0321 mg/L	0.01003	31.27%
V 290.880†	3578.7	0.0175 mg/L	0.00090	0.0175 mg/L	0.00090	5.13%
Zn 206.200†	10.0	0.00023 mg/L	0.000028	0.00023 mg/L	0.000028	12.19%
K 766.490†	6434.9	4.99 mg/L	0.055	4.99 mg/L	0.055	1.11%
Na 589.592†	Saturated2					
Sr 407.771†	4523071.2	4.91 mg/L	0.227	4.91 mg/L	0.227	4.62%
Li 670.784†	14320.1	0.238 mg/L	0.0023	0.238 mg/L	0.0023	0.98%
P 214.914†	86.4	0.122 mg/L	0.0048	0.122 mg/L	0.0048	3.92%

Sequence No.: 31 **Autosampler Location: 100**
Sample ID: L1311036805 **Date Collected: 11/8/2013 2:48:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036805

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036805

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2084866.9						7603.43	0.36%
YRADIAL	147186.9						3105.81	2.11%
Ga 417.206	850310.5						5761.30	0.68%
GaRADIAL	44275.1						877.47	1.98%
Ag 328.068†	1629.2	0.00762	mg/L	0.000324	0.00762	mg/L	0.000324	4.25%
Al 396.153†	-35.4	-0.0474	mg/L	0.00410	-0.0474	mg/L	0.00410	8.66%
As 188.979†	-3.7	0.00564	mg/L	0.002504	0.00564	mg/L	0.002504	44.36%
Ba 233.527†	1342.7	0.0200	mg/L	0.00010	0.0200	mg/L	0.00010	0.52%
Be 234.861†	117.1	0.00031	mg/L	0.000026	0.00031	mg/L	0.000026	8.57%
B 249.677†	27531.0	0.559	mg/L	0.0101	0.559	mg/L	0.0101	1.81%
Ca 227.546†	56001.2	345	mg/L	6.1	345	mg/L	6.1	1.78%
Cd 228.802†	-6.3	-0.00029	mg/L	0.000162	-0.00029	mg/L	0.000162	55.87%
Co 228.616†	-4.9	-0.00027	mg/L	0.000249	-0.00027	mg/L	0.000249	91.15%
Cr 267.716†	312.3	0.00370	mg/L	0.000079	0.00370	mg/L	0.000079	2.14%
Cu 327.393†	-276.7	-0.00074	mg/L	0.000601	-0.00074	mg/L	0.000601	81.30%
Fe 239.562†	-5.2	-0.0133	mg/L	0.00117	-0.0133	mg/L	0.00117	8.81%
Mg 279.077†	186704.6	191	mg/L	4.2	191	mg/L	4.2	2.22%
Mn 257.610†	2278.5	0.00279	mg/L	0.000036	0.00279	mg/L	0.000036	1.28%
Mo 202.031†	98.2	0.00727	mg/L	0.000568	0.00727	mg/L	0.000568	7.80%
Ni 231.604†	60.6	0.00215	mg/L	0.000693	0.00215	mg/L	0.000693	32.17%
Pb 220.353†	14.7	0.00143	mg/L	0.002563	0.00143	mg/L	0.002563	179.68%
Sb 206.836†	-5.1	-0.00288	mg/L	0.001202	-0.00288	mg/L	0.001202	41.80%
Se 196.026†	8.5	0.00778	mg/L	0.007112	0.00778	mg/L	0.007112	91.39%
Si 251.611†	117704.4	4.21	mg/L	0.069	4.21	mg/L	0.069	1.65%
Sn 189.927†	-368.7	-0.0724	mg/L	0.00159	-0.0724	mg/L	0.00159	2.20%
Ti 334.940†	-38585.2	-0.00352	mg/L	0.000982	-0.00352	mg/L	0.000982	27.87%
Tl 190.801†	-45.1	-0.0336	mg/L	0.01017	-0.0336	mg/L	0.01017	30.26%
V 290.880†	3094.2	0.0153	mg/L	0.00039	0.0153	mg/L	0.00039	2.57%
Zn 206.200†	14.6	0.00043	mg/L	0.000434	0.00043	mg/L	0.000434	100.43%
K 766.490†	6306.6	4.89	mg/L	0.116	4.89	mg/L	0.116	2.38%
Na 589.592†	Saturated2							
Sr 407.771†	3811069.7	4.14	mg/L	0.225	4.14	mg/L	0.225	5.42%
Li 670.784†	12244.8	0.203	mg/L	0.0043	0.203	mg/L	0.0043	2.13%
P 214.914†	286.5	0.365	mg/L	0.0071	0.365	mg/L	0.0071	1.96%

User canceled analysis.

Approved: November 11, 2013

Sheri L. Babcock

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Analysis Begun

Start Time: 11/8/2013 2:53:04 PM **Plasma On Time: 11/8/2013 6:59:30 AM**
Logged In Analyst: peicp2 **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N4011401 Autosampler Model: Cetac

Sample Information File: C:\pe\peicp2\Sample Information\FRIDAY1.sif
Batch ID:
Results Data Set: 110813H3R
Results Library: C:\pe\peicp2\Results\results1.mdb

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Sequence No.: 1 **Autosampler Location: 220**
Sample ID: L1311036803 WG451993-01 **Date Collected: 11/8/2013 2:53:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036803 WG451993-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036803 WG451993-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2404154.6						35870.77	1.49%
YRADIAL	160472.9						4084.46	2.55%
Ga 417.206	908342.5						14806.10	1.63%
GaRADIAL	45338.3						2030.89	4.48%
Ag 328.068†	133.3	0.00145	mg/L	0.000526	0.00145	mg/L	0.000526	36.22%
Al 396.153†	-6.9	-0.0361	mg/L	0.00202	-0.0361	mg/L	0.00202	5.60%
As 188.979†	-0.9	0.00020	mg/L	0.002080	0.00020	mg/L	0.002080	>999.9%
Ba 233.527†	10.8	0.00090	mg/L	0.000139	0.00090	mg/L	0.000139	15.48%
Be 234.861†	230.6	0.00051	mg/L	0.000061	0.00051	mg/L	0.000061	11.84%
B 249.677†	1069.8	0.0271	mg/L	0.00113	0.0271	mg/L	0.00113	4.18%
Ca 227.546†	491.7	3.07	mg/L	0.092	3.07	mg/L	0.092	3.01%
Cd 228.802†	-7.9	-0.00037	mg/L	0.000202	-0.00037	mg/L	0.000202	54.34%
Co 228.616†	-7.8	-0.00055	mg/L	0.000346	-0.00055	mg/L	0.000346	62.44%
Cr 267.716†	1.5	0.00016	mg/L	0.000034	0.00016	mg/L	0.000034	21.59%
Cu 327.393†	15.1	0.00114	mg/L	0.000321	0.00114	mg/L	0.000321	28.11%
Fe 239.562†	4.7	-0.00582	mg/L	0.001458	-0.00582	mg/L	0.001458	25.07%
Mg 279.077†	3954.1	4.03	mg/L	0.075	4.03	mg/L	0.075	1.87%
Mn 257.610†	41439.1	0.0818	mg/L	0.00101	0.0818	mg/L	0.00101	1.24%
Mo 202.031†	-11.2	-0.00018	mg/L	0.000326	-0.00018	mg/L	0.000326	176.09%
Ni 231.604†	5.8	0.00038	mg/L	0.000398	0.00038	mg/L	0.000398	104.52%
Pb 220.353†	2.9	-0.00086	mg/L	0.001041	-0.00086	mg/L	0.001041	121.29%
Sb 206.836†	0.8	0.00068	mg/L	0.000361	0.00068	mg/L	0.000361	53.20%
Se 196.026†	-1.1	-0.00627	mg/L	0.004668	-0.00627	mg/L	0.004668	74.42%
Si 251.611†	1367.5	0.0628	mg/L	0.00214	0.0628	mg/L	0.00214	3.40%
Sn 189.927†	-41.9	-0.00906	mg/L	0.000206	-0.00906	mg/L	0.000206	2.27%
Ti 334.940†	-568.4	-0.00112	mg/L	0.000176	-0.00112	mg/L	0.000176	15.69%
Tl 190.801†	3.2	-0.00098	mg/L	0.002179	-0.00098	mg/L	0.002179	223.18%
V 290.880†	260.2	0.00259	mg/L	0.002209	0.00259	mg/L	0.002209	85.22%
Zn 206.200†	-16.7	-0.00092	mg/L	0.000452	-0.00092	mg/L	0.000452	49.15%
K 766.490†	385.0	0.282	mg/L	0.0103	0.282	mg/L	0.0103	3.65%
Na 589.592†	131545.7	13.8	mg/L	0.23	13.8	mg/L	0.23	1.67%
Sr 407.771†	53853.1	0.0599	mg/L	0.00394	0.0599	mg/L	0.00394	6.58%
Li 670.784†	218.1	-0.00005	mg/L	0.000465	-0.00005	mg/L	0.000465	882.36%
P 214.914†	18.0	0.0393	mg/L	0.01503	0.0393	mg/L	0.01503	38.28%

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Sequence No.: 2 **Autosampler Location: 221**
Sample ID: L1311036806MS WG451993-04 **Date Collected: 11/8/2013 2:56:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Sheri L. Pabgard

Nebulizer Parameters: L1311036806MS WG451993-04

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036806MS WG451993-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2444350.3						19411.94	0.79%
YRADIAL	161241.3						5683.92	3.53%
Ga 417.206	916592.3						7545.76	0.82%
GaRADIAL	47151.7						527.93	1.12%
Ag 328.068†	475.6	0.00307	mg/L	0.000288	0.00307	mg/L	0.000288	9.38%
Al 396.153†	119.6	0.0117	mg/L	0.00057	0.0117	mg/L	0.00057	4.90%
As 188.979†	6.0	0.00520	mg/L	0.005118	0.00520	mg/L	0.005118	98.46%
Ba 233.527†	320.2	0.00534	mg/L	0.000260	0.00534	mg/L	0.000260	4.87%
Be 234.861†	333.3	0.00069	mg/L	0.000018	0.00069	mg/L	0.000018	2.60%
B 249.677†	1051.2	0.0267	mg/L	0.00094	0.0267	mg/L	0.00094	3.54%
Ca 227.546†	348.5	2.19	mg/L	0.074	2.19	mg/L	0.074	3.40%
Cd 228.802†	-4.7	-0.00025	mg/L	0.000084	-0.00025	mg/L	0.000084	33.59%
Co 228.616†	12.0	0.00050	mg/L	0.000490	0.00050	mg/L	0.000490	97.94%
Cr 267.716†	185.1	0.00225	mg/L	0.000128	0.00225	mg/L	0.000128	5.70%
Cu 327.393†	369.1	0.00334	mg/L	0.000804	0.00334	mg/L	0.000804	24.09%
Fe 239.562†	83.1	0.0241	mg/L	0.00171	0.0241	mg/L	0.00171	7.09%
Mg 279.077†	2103.5	2.14	mg/L	0.071	2.14	mg/L	0.071	3.31%
Mn 257.610†	32233.6	0.0632	mg/L	0.00216	0.0632	mg/L	0.00216	3.42%
Mo 202.031†	16.7	0.00172	mg/L	0.000186	0.00172	mg/L	0.000186	10.86%
Ni 231.604†	71.4	0.00249	mg/L	0.000161	0.00249	mg/L	0.000161	6.48%
Pb 220.353†	27.7	0.00385	mg/L	0.001996	0.00385	mg/L	0.001996	51.85%
Sb 206.836†	6.0	0.00386	mg/L	0.000381	0.00386	mg/L	0.000381	9.86%
Se 196.026†	-0.5	-0.00528	mg/L	0.006353	-0.00528	mg/L	0.006353	120.29%
Si 251.611†	3111.7	0.125	mg/L	0.0029	0.125	mg/L	0.0029	2.33%
Sn 189.927†	-22.6	-0.00532	mg/L	0.000447	-0.00532	mg/L	0.000447	8.41%
Ti 334.940†	2528.9	0.00313	mg/L	0.000167	0.00313	mg/L	0.000167	5.34%
Tl 190.801†	9.3	0.00319	mg/L	0.001883	0.00319	mg/L	0.001883	59.01%
V 290.880†	1260.4	0.00884	mg/L	0.000402	0.00884	mg/L	0.000402	4.55%
Zn 206.200†	90.4	0.00362	mg/L	0.000169	0.00362	mg/L	0.000169	4.67%
K 766.490†	547.8	0.414	mg/L	0.0187	0.414	mg/L	0.0187	4.52%
Na 589.592†	73205.2	7.67	mg/L	0.341	7.67	mg/L	0.341	4.45%
Sr 407.771†	34989.8	0.0394	mg/L	0.00017	0.0394	mg/L	0.00017	0.43%
Li 670.784†	373.6	0.00258	mg/L	0.000792	0.00258	mg/L	0.000792	30.73%
P 214.914†	83.5	0.119	mg/L	0.0050	0.119	mg/L	0.0050	4.21%

Sequence No.: 3 **Autosampler Location: 222**
Sample ID: L1311036807SD WG451993-05 **Date Collected: 11/8/2013 2:59:11 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036807SD WG451993-05

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036807SD WG451993-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2413122.6						41860.96	1.73%
YRADIAL	163707.5						3761.53	2.30%
Ga 417.206	898423.5						14864.92	1.65%
GaRADIAL	47286.1						354.99	0.75%
Ag 328.068†	455.7	0.00298	mg/L	0.000306	0.00298	mg/L	0.000306	10.25%
Al 396.153†	120.3	0.0119	mg/L	0.00180	0.0119	mg/L	0.00180	15.09%
As 188.979†	1.7	0.00205	mg/L	0.002929	0.00205	mg/L	0.002929	143.16%
Ba 233.527†	329.6	0.00547	mg/L	0.000212	0.00547	mg/L	0.000212	3.87%
Be 234.861†	337.1	0.00069	mg/L	0.000006	0.00069	mg/L	0.000006	0.84%
B 249.677†	913.7	0.0239	mg/L	0.00055	0.0239	mg/L	0.00055	2.29%
Ca 227.546†	282.5	1.78	mg/L	0.133	1.78	mg/L	0.133	7.46%
Cd 228.802†	-7.6	-0.00036	mg/L	0.000107	-0.00036	mg/L	0.000107	29.63%
Co 228.616†	12.8	0.00054	mg/L	0.000073	0.00054	mg/L	0.000073	13.41%

Approved: November 11, 2013

Cr 267.716†	202.9	0.00245 mg/L	0.000269	0.00245 mg/L	0.000269	10.96%
Cu 327.393†	430.7	0.00372 mg/L	0.000629	0.00372 mg/L	0.000629	16.92%
Fe 239.562†	99.1	0.0302 mg/L	0.00113	0.0302 mg/L	0.00113	3.75%
Mg 279.077†	1260.5	1.27 mg/L	0.013	1.27 mg/L	0.013	1.04%
Mn 257.610†	26393.2	0.0514 mg/L	0.00241	0.0514 mg/L	0.00241	4.69%
Mo 202.031†	21.8	0.00206 mg/L	0.000498	0.00206 mg/L	0.000498	24.14%
Ni 231.604†	80.6	0.00278 mg/L	0.000416	0.00278 mg/L	0.000416	14.94%
Pb 220.353†	17.6	0.00195 mg/L	0.000585	0.00195 mg/L	0.000585	30.03%
Sb 206.836†	6.0	0.00386 mg/L	0.002100	0.00386 mg/L	0.002100	54.38%
Se 196.026†	-2.1	-0.00763 mg/L	0.004129	-0.00763 mg/L	0.004129	54.14%
Si 251.611†	3759.7	0.148 mg/L	0.0084	0.148 mg/L	0.0084	5.68%
Sn 189.927†	-15.2	-0.00388 mg/L	0.001154	-0.00388 mg/L	0.001154	29.70%
Ti 334.940†	2668.3	0.00326 mg/L	0.000216	0.00326 mg/L	0.000216	6.62%
Tl 190.801†	12.4	0.00526 mg/L	0.003214	0.00526 mg/L	0.003214	61.13%
V 290.880†	1121.6	0.00800 mg/L	0.000902	0.00800 mg/L	0.000902	11.27%
Zn 206.200†	84.3	0.00336 mg/L	0.000310	0.00336 mg/L	0.000310	9.23%
K 766.490†	457.5	0.346 mg/L	0.0378	0.346 mg/L	0.0378	10.91%
Na 589.592†	49524.9	5.18 mg/L	0.170	5.18 mg/L	0.170	3.28%
Sr 407.771†	23082.0	0.0265 mg/L	0.00006	0.0265 mg/L	0.00006	0.24%
Li 670.784†	363.9	0.00241 mg/L	0.001225	0.00241 mg/L	0.001225	50.75%
P 214.914†	93.9	0.131 mg/L	0.0025	0.131 mg/L	0.0025	1.91%

Sequence No.: 4 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 3:02:13 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2354036.3						31290.95	1.33%
YRADIAL	163112.5						2177.95	1.34%
Ga 417.206	867773.4						19783.66	2.28%
GaRADIAL	45053.2						340.43	0.76%
Ag 328.068†	84411.4	0.396	mg/L	0.0118	0.396	mg/L	0.0118	2.99%
QC value within limits for Ag 328.068 Recovery = 99.02%								
Al 396.153†	27102.1	10.2	mg/L	0.05	10.2	mg/L	0.05	0.52%
QC value within limits for Al 396.153 Recovery = 101.59%								
As 188.979†	553.3	0.398	mg/L	0.0122	0.398	mg/L	0.0122	3.06%
QC value within limits for As 188.979 Recovery = 99.49%								
Ba 233.527†	70598.9	1.01	mg/L	0.019	1.01	mg/L	0.019	1.87%
QC value within limits for Ba 233.527 Recovery = 101.50%								
Be 234.861†	27950.8	0.0494	mg/L	0.00132	0.0494	mg/L	0.00132	2.66%
QC value within limits for Be 234.861 Recovery = 98.87%								
B 249.677†	24704.2	0.498	mg/L	0.0125	0.498	mg/L	0.0125	2.52%
QC value within limits for B 249.677 Recovery = 99.59%								
Ca 227.546†	1578.6	10.2	mg/L	0.19	10.2	mg/L	0.19	1.87%
QC value within limits for Ca 227.546 Recovery = 102.40%								
Cd 228.802†	1103.3	0.0473	mg/L	0.00127	0.0473	mg/L	0.00127	2.67%
QC value within limits for Cd 228.802 Recovery = 94.67%								
Co 228.616†	3771.2	0.202	mg/L	0.0030	0.202	mg/L	0.0030	1.50%
QC value within limits for Co 228.616 Recovery = 101.22%								
Cr 267.716†	44079.6	0.502	mg/L	0.0107	0.502	mg/L	0.0107	2.13%
QC value within limits for Cr 267.716 Recovery = 100.46%								
Cu 327.393†	79792.4	0.495	mg/L	0.0165	0.495	mg/L	0.0165	3.33%
QC value within limits for Cu 327.393 Recovery = 99.01%								
Fe 239.562†	10641.5	4.05	mg/L	0.053	4.05	mg/L	0.053	1.31%
QC value within limits for Fe 239.562 Recovery = 101.15%								
Mg 279.077†	9995.0	10.2	mg/L	0.11	10.2	mg/L	0.11	1.05%
QC value within limits for Mg 279.077 Recovery = 102.25%								
Mn 257.610†	258096.2	0.520	mg/L	0.0097	0.520	mg/L	0.0097	1.86%
QC value within limits for Mn 257.610 Recovery = 103.91%								
Mo 202.031†	14765.4	1.01	mg/L	0.019	1.01	mg/L	0.019	1.92%
QC value within limits for Mo 202.031 Recovery = 100.92%								

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Ni 231.604†            15901.2       0.511 mg/L        0.0102       0.511 mg/L        0.0102   1.99%
   QC value within limits for Ni 231.604  Recovery = 102.20%
Pb 220.353†             2697.1       0.511 mg/L        0.0092       0.511 mg/L        0.0092   1.79%
   QC value within limits for Pb 220.353  Recovery = 102.15%
Sb 206.836†             1932.4        1.18 mg/L         0.027        1.18 mg/L         0.027   2.29%
   QC value within limits for Sb 206.836  Recovery = 98.03%
Se 196.026†              281.4       0.407 mg/L        0.0042       0.407 mg/L        0.0042   1.02%
   QC value within limits for Se 196.026  Recovery = 101.77%
Si 251.611†           139925.2        4.99 mg/L         0.147        4.99 mg/L         0.147   2.94%
   QC value within limits for Si 251.611  Recovery = 99.83%
Sn 189.927†             5235.6        1.01 mg/L         0.013        1.01 mg/L         0.013   1.31%
   QC value within limits for Sn 189.927  Recovery = 101.40%
Ti 334.940†           704370.6       0.997 mg/L        0.0029       0.997 mg/L        0.0029   0.29%
   QC value within limits for Ti 334.940  Recovery = 99.67%
Tl 190.801†              767.5       0.522 mg/L        0.0082       0.522 mg/L        0.0082   1.56%
   QC value within limits for Tl 190.801  Recovery = 104.46%
V 290.880†            162647.5        1.01 mg/L         0.021        1.01 mg/L         0.021   2.08%
   QC value within limits for V 290.880  Recovery = 100.89%
Zn 206.200†            24377.0        1.03 mg/L         0.019        1.03 mg/L         0.019   1.86%
   QC value within limits for Zn 206.200  Recovery = 103.34%
K 766.490†             65786.8        51.7 mg/L          0.45        51.7 mg/L          0.45   0.87%
   QC value within limits for K 766.490  Recovery = 103.48%
Na 589.592†           482337.6        50.9 mg/L          0.36        50.9 mg/L          0.36   0.70%
   QC value within limits for Na 589.592  Recovery = 101.81%
Sr 407.771†           956550.1        1.04 mg/L         0.019        1.04 mg/L         0.019   1.85%
   QC value within limits for Sr 407.771  Recovery = 104.28%
Li 670.784†            60832.4        1.02 mg/L         0.006        1.02 mg/L         0.006   0.55%
   QC value within limits for Li 670.784  Recovery = 102.49%
P 214.914†              8300.5        10.1 mg/L          0.12        10.1 mg/L          0.12   1.21%
   QC value within limits for P 214.914  Recovery = 100.76%
All analyte(s) passed QC.

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Sequence No.: 5                                    Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 11/8/2013 3:04:18 PM
Analyst:                                           Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     171.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029            2383716.0                                                   31140.09   1.31%
YRADIAL               158521.3                                                    3484.28   2.20%
Ga 417.206            859232.7                                                   13351.44   1.55%
GaRADIAL               44374.7                                                     785.47   1.77%
Ag 328.068†               82.9     0.00124 mg/L      0.000142     0.00124 mg/L      0.000142  11.39%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               10.4     -0.0296 mg/L       0.00104     -0.0296 mg/L       0.00104   3.52%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                0.9     0.00146 mg/L      0.002748     0.00146 mg/L      0.002748 188.76%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               -4.3     0.00068 mg/L      0.000300     0.00068 mg/L      0.000300  44.20%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               85.3     0.00024 mg/L      0.000053     0.00024 mg/L      0.000053  21.69%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               452.8      0.0147 mg/L       0.00125      0.0147 mg/L       0.00125   8.54%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               35.6       0.254 mg/L        0.1538       0.254 mg/L        0.1538  60.62%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -3.4    -0.00018 mg/L      0.000087    -0.00018 mg/L      0.000087  49.07%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -7.8    -0.00055 mg/L      0.000109    -0.00055 mg/L      0.000109  19.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               14.8     0.00031 mg/L      0.000206     0.00031 mg/L      0.000206  66.85%
   QC value within limits for Cr 267.716  Recovery = Not calculated
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Cu 327.393†	123.3	0.00181 mg/L	0.000216	0.00181 mg/L	0.000216	11.93%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Fe 239.562†	9.9	-0.00377 mg/L	0.001032	-0.00377 mg/L	0.001032	27.36%
QC value within limits for Fe 239.562 Recovery = Not calculated						
Mg 279.077†	31.9	0.0160 mg/L	0.00310	0.0160 mg/L	0.00310	19.40%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	197.8	-0.00141 mg/L	0.000303	-0.00141 mg/L	0.000303	21.43%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	12.2	0.00139 mg/L	0.000077	0.00139 mg/L	0.000077	5.57%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	2.2	0.00027 mg/L	0.000266	0.00027 mg/L	0.000266	99.62%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	7.4	0.00005 mg/L	0.000786	0.00005 mg/L	0.000786	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	1.9	0.00139 mg/L	0.001364	0.00139 mg/L	0.001364	98.25%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.9	-0.00176 mg/L	0.003578	-0.00176 mg/L	0.003578	203.10%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	193.2	0.0209 mg/L	0.00815	0.0209 mg/L	0.00815	38.95%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-6.6	-0.00221 mg/L	0.001030	-0.00221 mg/L	0.001030	46.61%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-88.7	-0.00086 mg/L	0.000179	-0.00086 mg/L	0.000179	20.77%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-1.9	-0.00428 mg/L	0.001496	-0.00428 mg/L	0.001496	34.91%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	481.6	0.00407 mg/L	0.000909	0.00407 mg/L	0.000909	22.34%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	-25.6	-0.00130 mg/L	0.000647	-0.00130 mg/L	0.000647	49.91%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	28.0	0.0189 mg/L	0.01807	0.0189 mg/L	0.01807	95.76%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	1160.7	0.113 mg/L	0.0499	0.113 mg/L	0.0499	44.11%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	80.0	0.00145 mg/L	0.000189	0.00145 mg/L	0.000189	13.01%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	70.5	-0.00255 mg/L	0.000862	-0.00255 mg/L	0.000862	33.85%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	13.1	0.0334 mg/L	0.00326	0.0334 mg/L	0.00326	9.77%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 6 **Autosampler Location: 223**
Sample ID: L1311036801 0.01 **Date Collected: 11/8/2013 3:07:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036801 0.01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036801 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2419026.7						33467.15	1.38%
YRADIAL	163774.0						1255.07	0.77%
Ga 417.206	905629.3						14811.83	1.64%
GaRADIAL	47444.8						1263.59	2.66%
Ag 328.068†	-48.1	0.00062	mg/L	0.000541	0.00062	mg/L	0.000541	87.11%
Al 396.153†	-11.1	-0.0377	mg/L	0.00165	-0.0377	mg/L	0.00165	4.38%
As 188.979†	2.0	0.00234	mg/L	0.003047	0.00234	mg/L	0.003047	130.27%
Ba 233.527†	6.4	0.00083	mg/L	0.000145	0.00083	mg/L	0.000145	17.46%
Be 234.861†	195.7	0.00044	mg/L	0.000070	0.00044	mg/L	0.000070	15.93%
B 249.677†	655.8	0.0188	mg/L	0.00079	0.0188	mg/L	0.00079	4.21%
Ca 227.546†	525.3	3.27	mg/L	0.062	3.27	mg/L	0.062	1.89%
Cd 228.802†	-8.6	-0.00041	mg/L	0.000146	-0.00041	mg/L	0.000146	35.43%
Co 228.616†	-1.2	-0.00020	mg/L	0.000222	-0.00020	mg/L	0.000222	111.56%
Cr 267.716†	-1.4	0.00012	mg/L	0.000078	0.00012	mg/L	0.000078	63.32%

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Cu 327.393†	116.0	0.00177 mg/L	0.000385	0.00177 mg/L	0.000385	21.79%
Fe 239.562†	3.5	-0.00628 mg/L	0.001914	-0.00628 mg/L	0.001914	30.48%
Mg 279.077†	3545.0	3.61 mg/L	0.133	3.61 mg/L	0.133	3.67%
Mn 257.610†	2041.5	0.00230 mg/L	0.000138	0.00230 mg/L	0.000138	5.98%
Mo 202.031†	-4.6	0.00025 mg/L	0.000491	0.00025 mg/L	0.000491	199.60%
Ni 231.604†	-10.7	-0.00015 mg/L	0.000319	-0.00015 mg/L	0.000319	212.84%
Pb 220.353†	16.2	0.00171 mg/L	0.001010	0.00171 mg/L	0.001010	59.07%
Sb 206.836†	-1.7	-0.00083 mg/L	0.001185	-0.00083 mg/L	0.001185	143.10%
Se 196.026†	-2.7	-0.00858 mg/L	0.004445	-0.00858 mg/L	0.004445	51.80%
Si 251.611†	1387.8	0.0635 mg/L	0.00173	0.0635 mg/L	0.00173	2.72%
Sn 189.927†	-43.5	-0.00938 mg/L	0.000653	-0.00938 mg/L	0.000653	6.96%
Ti 334.940†	-612.1	-0.00115 mg/L	0.000249	-0.00115 mg/L	0.000249	21.63%
Tl 190.801†	4.4	-0.00008 mg/L	0.002449	-0.00008 mg/L	0.002449	>999.9%
V 290.880†	455.9	0.00382 mg/L	0.001369	0.00382 mg/L	0.001369	35.87%
Zn 206.200†	-22.0	-0.00114 mg/L	0.000266	-0.00114 mg/L	0.000266	23.29%
K 766.490†	138.5	0.0929 mg/L	0.01600	0.0929 mg/L	0.01600	17.21%
Na 589.592†	110350.3	11.6 mg/L	1.31	11.6 mg/L	1.31	11.28%
Sr 407.771†	62944.9	0.0698 mg/L	0.00467	0.0698 mg/L	0.00467	6.68%
Li 670.784†	252.5	0.00053 mg/L	0.000894	0.00053 mg/L	0.000894	168.74%
P 214.914†	15.0	0.0357 mg/L	0.00916	0.0357 mg/L	0.00916	25.67%

Sequence No.: 7 **Autosampler Location: 224**
Sample ID: L1311036804 0.01 **Date Collected: 11/8/2013 3:10:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036804 0.01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036804 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2369646.6						28407.26	1.20%
YRADIAL	159456.0						812.64	0.51%
Ga 417.206	888645.6						14996.79	1.69%
GaRADIAL	46360.5						1017.42	2.19%
Ag 328.068†	60.4	0.00113	mg/L	0.000425	0.00113	mg/L	0.000425	37.57%
Al 396.153†	-5.4	-0.0355	mg/L	0.00182	-0.0355	mg/L	0.00182	5.12%
As 188.979†	-0.4	0.00061	mg/L	0.001456	0.00061	mg/L	0.001456	239.35%
Ba 233.527†	6.0	0.00083	mg/L	0.000239	0.00083	mg/L	0.000239	28.91%
Be 234.861†	189.0	0.00043	mg/L	0.000061	0.00043	mg/L	0.000061	14.14%
B 249.677†	373.9	0.0131	mg/L	0.00037	0.0131	mg/L	0.00037	2.79%
Ca 227.546†	586.4	3.65	mg/L	0.106	3.65	mg/L	0.106	2.91%
Cd 228.802†	-6.7	-0.00032	mg/L	0.000139	-0.00032	mg/L	0.000139	43.82%
Co 228.616†	-3.8	-0.00034	mg/L	0.000065	-0.00034	mg/L	0.000065	19.19%
Cr 267.716†	-8.6	0.00004	mg/L	0.000113	0.00004	mg/L	0.000113	265.14%
Cu 327.393†	56.6	0.00140	mg/L	0.000494	0.00140	mg/L	0.000494	35.30%
Fe 239.562†	1.4	-0.00704	mg/L	0.002081	-0.00704	mg/L	0.002081	29.54%
Mg 279.077†	2260.6	2.30	mg/L	0.065	2.30	mg/L	0.065	2.83%
Mn 257.610†	105.2	-0.00160	mg/L	0.000013	-0.00160	mg/L	0.000013	0.82%
Mo 202.031†	-11.5	-0.00023	mg/L	0.000339	-0.00023	mg/L	0.000339	149.59%
Ni 231.604†	-2.7	0.00011	mg/L	0.000090	0.00011	mg/L	0.000090	85.02%
Pb 220.353†	11.5	0.00081	mg/L	0.001355	0.00081	mg/L	0.001355	166.82%
Sb 206.836†	0.9	0.00073	mg/L	0.001161	0.00073	mg/L	0.001161	158.04%
Se 196.026†	-3.0	-0.00897	mg/L	0.004377	-0.00897	mg/L	0.004377	48.78%
Si 251.611†	1017.9	0.0503	mg/L	0.00070	0.0503	mg/L	0.00070	1.40%
Sn 189.927†	-52.5	-0.0111	mg/L	0.00050	-0.0111	mg/L	0.00050	4.51%
Ti 334.940†	-635.7	-0.00113	mg/L	0.000164	-0.00113	mg/L	0.000164	14.55%
Tl 190.801†	3.3	-0.00081	mg/L	0.000609	-0.00081	mg/L	0.000609	75.54%
V 290.880†	698.4	0.00536	mg/L	0.001144	0.00536	mg/L	0.001144	21.37%
Zn 206.200†	-23.8	-0.00122	mg/L	0.000265	-0.00122	mg/L	0.000265	21.69%
K 766.490†	25.5	0.00667	mg/L	0.059424	0.00667	mg/L	0.059424	890.62%
Na 589.592†	99119.1	10.4	mg/L	0.37	10.4	mg/L	0.37	3.60%
Sr 407.771†	46046.5	0.0514	mg/L	0.00025	0.0514	mg/L	0.00025	0.49%
Li 670.784†	116.0	-0.00178	mg/L	0.002103	-0.00178	mg/L	0.002103	118.20%
P 214.914†	21.0	0.0429	mg/L	0.00503	0.0429	mg/L	0.00503	11.73%

Approved: November 11, 2013

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Sequence No.: 8 **Autosampler Location: 225**
Sample ID: L1311036805 0.01 **Date Collected: 11/8/2013 3:13:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036805 0.01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036805 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2363693.7						46067.58	1.95%
YRADIAL	157454.1						1856.48	1.18%
Ga 417.206	876216.5						18457.28	2.11%
GaRADIAL	45768.2						712.31	1.56%
Ag 328.068†	21.8	0.00095	mg/L	0.000127	0.00095	mg/L	0.000127	13.33%
Al 396.153†	-8.9	-0.0369	mg/L	0.00035	-0.0369	mg/L	0.00035	0.96%
As 188.979†	-2.2	-0.00075	mg/L	0.002245	-0.00075	mg/L	0.002245	299.23%
Ba 233.527†	3.5	0.00079	mg/L	0.000142	0.00079	mg/L	0.000142	18.01%
Be 234.861†	166.5	0.00039	mg/L	0.000076	0.00039	mg/L	0.000076	19.61%
B 249.677†	289.2	0.0114	mg/L	0.00012	0.0114	mg/L	0.00012	1.05%
Ca 227.546†	541.8	3.38	mg/L	0.145	3.38	mg/L	0.145	4.29%
Cd 228.802†	-7.2	-0.00034	mg/L	0.000199	-0.00034	mg/L	0.000199	59.28%
Co 228.616†	-3.2	-0.00031	mg/L	0.000305	-0.00031	mg/L	0.000305	99.43%
Cr 267.716†	-4.2	0.00009	mg/L	0.000066	0.00009	mg/L	0.000066	71.33%
Cu 327.393†	147.9	0.00196	mg/L	0.000600	0.00196	mg/L	0.000600	30.55%
Fe 239.562†	4.7	-0.00580	mg/L	0.002752	-0.00580	mg/L	0.002752	47.44%
Mg 279.077†	2021.6	2.05	mg/L	0.044	2.05	mg/L	0.044	2.14%
Mn 257.610†	59.4	-0.00169	mg/L	0.000011	-0.00169	mg/L	0.000011	0.65%
Mo 202.031†	-7.7	0.00004	mg/L	0.000032	0.00004	mg/L	0.000032	90.31%
Ni 231.604†	-12.6	-0.00021	mg/L	0.000503	-0.00021	mg/L	0.000503	237.12%
Pb 220.353†	13.0	0.00111	mg/L	0.000861	0.00111	mg/L	0.000861	77.43%
Sb 206.836†	-1.4	-0.00061	mg/L	0.001541	-0.00061	mg/L	0.001541	250.71%
Se 196.026†	-2.8	-0.00861	mg/L	0.003673	-0.00861	mg/L	0.003673	42.68%
Si 251.611†	1132.6	0.0544	mg/L	0.00096	0.0544	mg/L	0.00096	1.76%
Sn 189.927†	-52.5	-0.0111	mg/L	0.00147	-0.0111	mg/L	0.00147	13.24%
Ti 334.940†	-557.3	-0.00106	mg/L	0.000155	-0.00106	mg/L	0.000155	14.66%
Tl 190.801†	7.3	0.00186	mg/L	0.002258	0.00186	mg/L	0.002258	121.51%
V 290.880†	566.2	0.00454	mg/L	0.001919	0.00454	mg/L	0.001919	42.25%
Zn 206.200†	-23.9	-0.00123	mg/L	0.000126	-0.00123	mg/L	0.000126	10.24%
K 766.490†	81.3	0.0509	mg/L	0.01636	0.0509	mg/L	0.01636	32.12%
Na 589.592†	89417.6	9.37	mg/L	0.140	9.37	mg/L	0.140	1.50%
Sr 407.771†	40738.9	0.0456	mg/L	0.00197	0.0456	mg/L	0.00197	4.32%
Li 670.784†	40.8	-0.00305	mg/L	0.001123	-0.00305	mg/L	0.001123	36.81%
P 214.914†	25.4	0.0483	mg/L	0.01101	0.0483	mg/L	0.01101	22.81%

==========

Sequence No.: 9 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 3:16:24 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	170.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2344718.7						8091.43	0.35%
YRADIAL	166054.7						2719.73	1.64%
Ga 417.206	868391.8						9788.73	1.13%
GaRADIAL	45705.8						684.76	1.50%
Ag 328.068†	82572.9	0.388	mg/L	0.0030	0.388	mg/L	0.0030	0.78%

Approved: November 11, 2013

Sheri L. Pokorny

```
   QC value within limits for Ag 328.068  Recovery = 96.88%
Al 396.153†            26465.9        9.92 mg/L        0.101        9.92 mg/L        0.101   1.02%
   QC value within limits for Al 396.153  Recovery = 99.19%
As 188.979†              545.9       0.393 mg/L       0.0035       0.393 mg/L       0.0035   0.88%
   QC value within limits for As 188.979  Recovery = 98.17%
Ba 233.527†            69558.3        1.00 mg/L        0.003        1.00 mg/L        0.003   0.32%
   QC value within limits for Ba 233.527  Recovery = 100.00%
Be 234.861†            27198.8      0.0481 mg/L      0.00044      0.0481 mg/L      0.00044   0.92%
   QC value within limits for Be 234.861  Recovery = 96.20%
B 249.677†             23888.6       0.482 mg/L       0.0084       0.482 mg/L       0.0084   1.74%
   QC value within limits for B 249.677  Recovery = 96.33%
Ca 227.546†             1552.4        10.1 mg/L         0.14        10.1 mg/L         0.14   1.34%
   QC value within limits for Ca 227.546  Recovery = 100.68%
Cd 228.802†             1075.5      0.0461 mg/L      0.00033      0.0461 mg/L      0.00033   0.72%
   QC value within limits for Cd 228.802  Recovery = 92.26%
Co 228.616†             3719.1       0.200 mg/L       0.0021       0.200 mg/L       0.0021   1.08%
   QC value within limits for Co 228.616  Recovery = 99.81%
Cr 267.716†            43404.1       0.495 mg/L       0.0024       0.495 mg/L       0.0024   0.48%
   QC value within limits for Cr 267.716  Recovery = 98.93%
Cu 327.393†            78233.7       0.485 mg/L       0.0050       0.485 mg/L       0.0050   1.03%
   QC value within limits for Cu 327.393  Recovery = 97.08%
Fe 239.562†            10470.2        3.98 mg/L        0.050        3.98 mg/L        0.050   1.25%
   QC value within limits for Fe 239.562  Recovery = 99.52%
Mg 279.077†             9700.6        9.92 mg/L        0.080        9.92 mg/L        0.080   0.80%
   QC value within limits for Mg 279.077  Recovery = 99.23%
Mn 257.610†           254203.9       0.512 mg/L       0.0022       0.512 mg/L       0.0022   0.44%
   QC value within limits for Mn 257.610  Recovery = 102.34%
Mo 202.031†            14459.9       0.988 mg/L       0.0064       0.988 mg/L       0.0064   0.65%
   QC value within limits for Mo 202.031  Recovery = 98.84%
Ni 231.604†            15541.0       0.499 mg/L       0.0017       0.499 mg/L       0.0017   0.35%
   QC value within limits for Ni 231.604  Recovery = 99.88%
Pb 220.353†             2669.8       0.506 mg/L       0.0052       0.506 mg/L       0.0052   1.03%
   QC value within limits for Pb 220.353  Recovery = 101.11%
Sb 206.836†             1894.4        1.15 mg/L        0.011        1.15 mg/L        0.011   0.93%
   QC value within limits for Sb 206.836  Recovery = 96.10%
Se 196.026†              270.9       0.392 mg/L       0.0135       0.392 mg/L       0.0135   3.45%
   QC value within limits for Se 196.026  Recovery = 97.93%
Si 251.611†           136855.9        4.88 mg/L        0.042        4.88 mg/L        0.042   0.86%
   QC value within limits for Si 251.611  Recovery = 97.65%
Sn 189.927†             5160.3       0.999 mg/L       0.0099       0.999 mg/L       0.0099   0.99%
   QC value within limits for Sn 189.927  Recovery = 99.94%
Ti 334.940†           695705.8       0.984 mg/L       0.0048       0.984 mg/L       0.0048   0.49%
   QC value within limits for Ti 334.940  Recovery = 98.44%
Tl 190.801†              760.8       0.518 mg/L       0.0008       0.518 mg/L       0.0008   0.16%
   QC value within limits for Tl 190.801  Recovery = 103.52%
V 290.880†            160107.3       0.993 mg/L       0.0081       0.993 mg/L       0.0081   0.81%
   QC value within limits for V 290.880  Recovery = 99.32%
Zn 206.200†            23839.8        1.01 mg/L        0.004        1.01 mg/L        0.004   0.44%
   QC value within limits for Zn 206.200  Recovery = 101.06%
K 766.490†             64049.4        50.4 mg/L         0.30        50.4 mg/L         0.30   0.61%
   QC value within limits for K 766.490  Recovery = 100.70%
Na 589.592†           463802.0        48.9 mg/L         0.55        48.9 mg/L         0.55   1.12%
   QC value within limits for Na 589.592  Recovery = 97.87%
Sr 407.771†           916593.2       0.999 mg/L       0.0130       0.999 mg/L       0.0130   1.30%
   QC value within limits for Sr 407.771  Recovery = 99.93%
Li 670.784†            59481.2        1.00 mg/L        0.007        1.00 mg/L        0.007   0.73%
   QC value within limits for Li 670.784  Recovery = 100.21%
P 214.914†              8175.2        9.92 mg/L        0.127        9.92 mg/L        0.127   1.28%
   QC value within limits for P 214.914  Recovery = 99.24%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 10                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 11/8/2013 3:18:29 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                   172.0 kPa         0.45 L/min
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Approved: November 11, 2013

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2384116.9						36596.89	1.54%
YRADIAL	160269.5						1948.09	1.22%
Ga 417.206	861479.9						8644.90	1.00%
GaRADIAL	44843.8						1045.45	2.33%
Ag 328.068†	-10.4	0.00081	mg/L	0.000461	0.00081	mg/L	0.000461	57.03%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	10.3	-0.0297	mg/L	0.00214	-0.0297	mg/L	0.00214	7.21%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-4.7	-0.00259	mg/L	0.000863	-0.00259	mg/L	0.000863	33.31%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-17.2	0.00049	mg/L	0.000135	0.00049	mg/L	0.000135	27.20%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	89.0	0.00025	mg/L	0.000054	0.00025	mg/L	0.000054	21.68%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	232.1	0.0103	mg/L	0.00103	0.0103	mg/L	0.00103	10.06%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	16.8	0.137	mg/L	0.0616	0.137	mg/L	0.0616	44.91%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-7.4	-0.00033	mg/L	0.000034	-0.00033	mg/L	0.000034	10.18%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-9.4	-0.00064	mg/L	0.000348	-0.00064	mg/L	0.000348	54.34%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	14.8	0.00031	mg/L	0.000235	0.00031	mg/L	0.000235	76.73%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	169.0	0.00209	mg/L	0.000458	0.00209	mg/L	0.000458	21.89%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	7.0	-0.00488	mg/L	0.002073	-0.00488	mg/L	0.002073	42.45%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	26.1	0.0101	mg/L	0.00512	0.0101	mg/L	0.00512	50.62%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	46.0	-0.00172	mg/L	0.000021	-0.00172	mg/L	0.000021	1.19%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	12.3	0.00140	mg/L	0.000448	0.00140	mg/L	0.000448	31.97%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-10.1	-0.00013	mg/L	0.000151	-0.00013	mg/L	0.000151	114.81%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	9.9	0.00052	mg/L	0.002913	0.00052	mg/L	0.002913	562.28%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-0.4	-0.00006	mg/L	0.002389	-0.00006	mg/L	0.002389	>999.9%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.2	-0.00283	mg/L	0.005054	-0.00283	mg/L	0.005054	178.46%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-16.1	0.0135	mg/L	0.00037	0.0135	mg/L	0.00037	2.75%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-5.4	-0.00199	mg/L	0.001021	-0.00199	mg/L	0.001021	51.28%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-129.9	-0.00094	mg/L	0.000025	-0.00094	mg/L	0.000025	2.69%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	4.3	-0.00015	mg/L	0.001528	-0.00015	mg/L	0.001528	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	348.7	0.00325	mg/L	0.001183	0.00325	mg/L	0.001183	36.46%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-36.8	-0.00177	mg/L	0.000243	-0.00177	mg/L	0.000243	13.77%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	12.4	0.00683	mg/L	0.016563	0.00683	mg/L	0.016563	242.49%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	981.8	0.0945	mg/L	0.03802	0.0945	mg/L	0.03802	40.24%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	122.7	0.00150	mg/L	0.000262	0.00150	mg/L	0.000262	17.42%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	-2.6	-0.00378	mg/L	0.000593	-0.00378	mg/L	0.000593	15.67%
QC value within limits for Li 670.784 Recovery = Not calculated								
P 214.914†	22.9	0.0453	mg/L	0.00756	0.0453	mg/L	0.00756	16.69%
QC value within limits for P 214.914 Recovery = Not calculated								

All analyte(s) passed QC.

Approved: November 11, 2013

Sequence No.: 11
Sample ID: LLCCV
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 11/8/2013 3:21:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LLCCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2409150.2						21355.47	0.89%
YRADIAL	160588.4						4243.45	2.64%
Ga 417.206	857515.4						6481.46	0.76%
GaRADIAL	44303.7						1473.79	3.33%
Ag 328.068†	144.2	0.00156	mg/L	0.000337	0.00156	mg/L	0.000337	21.59%
Al 396.153†	439.2	0.133	mg/L	0.0056	0.133	mg/L	0.0056	4.22%
As 188.979†	-3.4	-0.00168	mg/L	0.001923	-0.00168	mg/L	0.001923	114.45%
Ba 233.527†	-22.9	0.00040	mg/L	0.000119	0.00040	mg/L	0.000119	29.37%
Be 234.861†	979.8	0.00182	mg/L	0.000036	0.00182	mg/L	0.000036	2.00%
B 249.677†	50.3	0.00657	mg/L	0.000364	0.00657	mg/L	0.000364	5.55%
Ca 227.546†	83.4	0.550	mg/L	0.0135	0.550	mg/L	0.0135	2.46%
Cd 228.802†	-2.3	-0.00011	mg/L	0.000127	-0.00011	mg/L	0.000127	113.19%
Co 228.616†	-6.9	-0.00051	mg/L	0.000157	-0.00051	mg/L	0.000157	30.89%
Cr 267.716†	-2.8	0.00011	mg/L	0.000029	0.00011	mg/L	0.000029	27.36%
Cu 327.393†	169.0	0.00210	mg/L	0.000270	0.00210	mg/L	0.000270	12.86%
Fe 239.562†	207.1	0.0714	mg/L	0.00231	0.0714	mg/L	0.00231	3.23%
Mg 279.077†	424.9	0.418	mg/L	0.0166	0.418	mg/L	0.0166	3.96%
Mn 257.610†	44.6	-0.00172	mg/L	0.000008	-0.00172	mg/L	0.000008	0.46%
Mo 202.031†	-9.3	-0.00007	mg/L	0.000407	-0.00007	mg/L	0.000407	545.04%
Ni 231.604†	-13.5	-0.00024	mg/L	0.000176	-0.00024	mg/L	0.000176	73.86%
Pb 220.353†	6.4	-0.00012	mg/L	0.000497	-0.00012	mg/L	0.000497	399.51%
Sb 206.836†	-4.2	-0.00232	mg/L	0.001045	-0.00232	mg/L	0.001045	45.11%
Se 196.026†	-0.4	-0.00517	mg/L	0.002341	-0.00517	mg/L	0.002341	45.28%
Si 251.611†	4.6	0.0142	mg/L	0.00084	0.0142	mg/L	0.00084	5.88%
Sn 189.927†	1820.0	0.352	mg/L	0.0063	0.352	mg/L	0.0063	1.79%
Ti 334.940†	-211.4	-0.00099	mg/L	0.000115	-0.00099	mg/L	0.000115	11.62%
Tl 190.801†	-0.5	-0.00332	mg/L	0.001026	-0.00332	mg/L	0.001026	30.89%
V 290.880†	440.6	0.00379	mg/L	0.000634	0.00379	mg/L	0.000634	16.72%
Zn 206.200†	-3.1	-0.00035	mg/L	0.000151	-0.00035	mg/L	0.000151	42.99%
K 766.490†	1072.9	0.827	mg/L	0.0324	0.827	mg/L	0.0324	3.91%
Na 589.592†	4413.7	0.454	mg/L	0.0223	0.454	mg/L	0.0223	4.90%
Sr 407.771†	-1.0	0.00136	mg/L	0.000079	0.00136	mg/L	0.000079	5.84%
Li 670.784†	-9.3	-0.00390	mg/L	0.000502	-0.00390	mg/L	0.000502	12.89%
P 214.914†	16.5	0.0375	mg/L	0.00426	0.0375	mg/L	0.00426	11.36%

Approved: November 11, 2013

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Analysis Begun

Start Time: 11/8/2013 3:27:44 PM **Plasma On Time: 11/8/2013 6:59:30 AM**
Logged In Analyst: peicp2 **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N4011401 Autosampler Model: Cetac

Sample Information File: C:\pe\peicp2\Sample Information\FRIDAY2.sif
Batch ID:
Results Data Set: 110813H3R
Results Library: C:\pe\peicp2\Results\results1.mdb

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Sequence No.: 1 **Autosampler Location: 226**
Sample ID: L1311037101 0.01 **Date Collected: 11/8/2013 3:27:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311037101 0.01

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311037101 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2326344.3						21989.73	0.95%
YRADIAL	162900.2						3130.15	1.92%
Ga 417.206	887103.2						11999.06	1.35%
GaRADIAL	45277.9						1401.85	3.10%
Ag 328.068†	5.4	0.00105	mg/L	0.000208	0.00105	mg/L	0.000208	19.73%
Al 396.153†	-12.1	-0.0380	mg/L	0.00088	-0.0380	mg/L	0.00088	2.30%
As 188.979†	-4.8	-0.00239	mg/L	0.002911	-0.00239	mg/L	0.002911	122.03%
Ba 233.527†	505.8	0.00793	mg/L	0.000323	0.00793	mg/L	0.000323	4.07%
Be 234.861†	379.0	0.00059	mg/L	0.000162	0.00059	mg/L	0.000162	27.71%
B 249.677†	1139.4	0.0281	mg/L	0.00212	0.0281	mg/L	0.00212	7.52%
Ca 227.546†	979.4	6.09	mg/L	0.178	6.09	mg/L	0.178	2.93%
Cd 228.802†	-4.8	-0.00022	mg/L	0.000101	-0.00022	mg/L	0.000101	46.49%
Co 228.616†	2.1	-0.00004	mg/L	0.000383	-0.00004	mg/L	0.000383	886.86%
Cr 267.716†	-8.7	-0.00002	mg/L	0.000087	-0.00002	mg/L	0.000087	373.40%
Cu 327.393†	144.3	0.00198	mg/L	0.000123	0.00198	mg/L	0.000123	6.19%
Fe 239.562†	2061.7	0.778	mg/L	0.0216	0.778	mg/L	0.0216	2.77%
Mg 279.077†	995.9	1.00	mg/L	0.028	1.00	mg/L	0.028	2.77%
Mn 257.610†	7202.9	0.0128	mg/L	0.00063	0.0128	mg/L	0.00063	4.95%
Mo 202.031†	-0.6	0.00053	mg/L	0.000294	0.00053	mg/L	0.000294	55.12%
Ni 231.604†	3.5	0.00031	mg/L	0.000214	0.00031	mg/L	0.000214	70.33%
Pb 220.353†	-0.2	-0.00143	mg/L	0.001064	-0.00143	mg/L	0.001064	74.42%
Sb 206.836†	-0.3	0.00005	mg/L	0.002826	0.00005	mg/L	0.002826	>999.9%
Se 196.026†	0.2	-0.00412	mg/L	0.001289	-0.00412	mg/L	0.001289	31.27%
Si 251.611†	461.6	0.0305	mg/L	0.00163	0.0305	mg/L	0.00163	5.36%
Sn 189.927†	-70.9	-0.0147	mg/L	0.00084	-0.0147	mg/L	0.00084	5.75%
Ti 334.940†	-894.2	-0.00113	mg/L	0.000058	-0.00113	mg/L	0.000058	5.13%
Tl 190.801†	3.3	-0.00081	mg/L	0.002420	-0.00081	mg/L	0.002420	298.89%
V 290.880†	296.3	0.00276	mg/L	0.001742	0.00276	mg/L	0.001742	63.05%
Zn 206.200†	-10.7	-0.00071	mg/L	0.000079	-0.00071	mg/L	0.000079	11.07%
K 766.490†	547.9	0.353	mg/L	0.0158	0.353	mg/L	0.0158	4.48%
Na 589.592†	649706.2	68.8	mg/L	1.95	68.8	mg/L	1.95	2.84%
Sr 407.771†	715422.0	0.780	mg/L	0.0554	0.780	mg/L	0.0554	7.10%
Li 670.784†	2107.2	0.0319	mg/L	0.00138	0.0319	mg/L	0.00138	4.31%
P 214.914†	-1.3	0.0159	mg/L	0.01736	0.0159	mg/L	0.01736	109.02%

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Sequence No.: 2 **Autosampler Location: 227**
Sample ID: L1311033701 0.1 **Date Collected: 11/8/2013 3:30:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Sheri L. Pabgard

Nebulizer Parameters: L1311033701 0.1

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311033701 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2331094.2						2785.65	0.12%
YRADIAL	158954.2						1838.97	1.16%
Ga 417.206	863228.7						2314.82	0.27%
GaRADIAL	45379.0						647.74	1.43%
Ag 328.068†	102.2	0.00134	mg/L	0.000405	0.00134	mg/L	0.000405	30.32%
Al 396.153†	8.6	-0.0302	mg/L	0.00290	-0.0302	mg/L	0.00290	9.60%
As 188.979†	-0.1	0.00088	mg/L	0.005541	0.00088	mg/L	0.005541	628.36%
Ba 233.527†	544.8	0.00856	mg/L	0.000351	0.00856	mg/L	0.000351	4.09%
Be 234.861†	142.0	0.00034	mg/L	0.000021	0.00034	mg/L	0.000021	6.25%
B 249.677†	-9.4	0.00540	mg/L	0.000347	0.00540	mg/L	0.000347	6.43%
Ca 227.546†	1004.2	6.23	mg/L	0.165	6.23	mg/L	0.165	2.65%
Cd 228.802†	-9.7	-0.00046	mg/L	0.000251	-0.00046	mg/L	0.000251	55.18%
Co 228.616†	-7.5	-0.00054	mg/L	0.000120	-0.00054	mg/L	0.000120	22.27%
Cr 267.716†	20.1	0.00037	mg/L	0.000169	0.00037	mg/L	0.000169	45.95%
Cu 327.393†	80.0	0.00155	mg/L	0.000347	0.00155	mg/L	0.000347	22.47%
Fe 239.562†	50.7	0.0118	mg/L	0.00085	0.0118	mg/L	0.00085	7.20%
Mg 279.077†	1083.9	1.09	mg/L	0.017	1.09	mg/L	0.017	1.55%
Mn 257.610†	125.8	-0.00156	mg/L	0.000018	-0.00156	mg/L	0.000018	1.16%
Mo 202.031†	-2.8	0.00037	mg/L	0.000396	0.00037	mg/L	0.000396	106.06%
Ni 231.604†	-13.4	-0.00024	mg/L	0.000194	-0.00024	mg/L	0.000194	81.77%
Pb 220.353†	14.4	0.00137	mg/L	0.001200	0.00137	mg/L	0.001200	87.44%
Sb 206.836†	-1.2	-0.00050	mg/L	0.000674	-0.00050	mg/L	0.000674	135.36%
Se 196.026†	1.2	-0.00279	mg/L	0.003422	-0.00279	mg/L	0.003422	122.78%
Si 251.611†	40676.9	1.46	mg/L	0.042	1.46	mg/L	0.042	2.87%
Sn 189.927†	-68.8	-0.0143	mg/L	0.00077	-0.0143	mg/L	0.00077	5.42%
Ti 334.940†	-807.3	-0.00098	mg/L	0.000286	-0.00098	mg/L	0.000286	29.08%
Tl 190.801†	1.7	-0.00188	mg/L	0.002520	-0.00188	mg/L	0.002520	133.70%
V 290.880†	960.7	0.00701	mg/L	0.001147	0.00701	mg/L	0.001147	16.37%
Zn 206.200†	-18.1	-0.00098	mg/L	0.000126	-0.00098	mg/L	0.000126	12.88%
K 766.490†	382.7	0.291	mg/L	0.0421	0.291	mg/L	0.0421	14.47%
Na 589.592†	26272.0	2.75	mg/L	0.098	2.75	mg/L	0.098	3.58%
Sr 407.771†	48047.0	0.0535	mg/L	0.00064	0.0535	mg/L	0.00064	1.20%
Li 670.784†	33.3	-0.00318	mg/L	0.000195	-0.00318	mg/L	0.000195	6.13%
P 214.914†	16.3	0.0372	mg/L	0.00776	0.0372	mg/L	0.00776	20.85%

Sequence No.: 3 **Autosampler Location: 228**
Sample ID: L1311033702 0.1 **Date Collected: 11/8/2013 3:33:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311033702 0.1

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311033702 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2320711.6						6159.29	0.27%
YRADIAL	162731.8						3812.93	2.34%
Ga 417.206	863624.1						5657.35	0.66%
GaRADIAL	45979.5						303.74	0.66%
Ag 328.068†	99.1	0.00132	mg/L	0.000141	0.00132	mg/L	0.000141	10.67%
Al 396.153†	18.0	-0.0266	mg/L	0.00477	-0.0266	mg/L	0.00477	17.91%
As 188.979†	-1.2	-0.00001	mg/L	0.001575	-0.00001	mg/L	0.001575	>999.9%
Ba 233.527†	363.2	0.00596	mg/L	0.000132	0.00596	mg/L	0.000132	2.21%
Be 234.861†	132.6	0.00032	mg/L	0.000011	0.00032	mg/L	0.000011	3.50%
B 249.677†	-56.1	0.00446	mg/L	0.000324	0.00446	mg/L	0.000324	7.27%
Ca 227.546†	681.5	4.24	mg/L	0.148	4.24	mg/L	0.148	3.49%
Cd 228.802†	-3.4	-0.00017	mg/L	0.000072	-0.00017	mg/L	0.000072	41.79%
Co 228.616†	-13.0	-0.00084	mg/L	0.000158	-0.00084	mg/L	0.000158	18.86%

Approved: November 11, 2013

Cr 267.716†	8.5	0.00024 mg/L	0.000075	0.00024 mg/L	0.000075	31.61%
Cu 327.393†	-25.3	0.00090 mg/L	0.000534	0.00090 mg/L	0.000534	59.54%
Fe 239.562†	47.4	0.0105 mg/L	0.00278	0.0105 mg/L	0.00278	26.39%
Mg 279.077†	700.8	0.700 mg/L	0.0177	0.700 mg/L	0.0177	2.53%
Mn 257.610†	274.5	-0.00126 mg/L	0.000028	-0.00126 mg/L	0.000028	2.24%
Mo 202.031†	-11.0	-0.00019 mg/L	0.000433	-0.00019 mg/L	0.000433	229.38%
Ni 231.604†	-5.8	0.00001 mg/L	0.000268	0.00001 mg/L	0.000268	>999.9%
Pb 220.353†	8.3	0.00021 mg/L	0.001358	0.00021 mg/L	0.001358	634.80%
Sb 206.836†	1.7	0.00128 mg/L	0.001131	0.00128 mg/L	0.001131	88.57%
Se 196.026†	-1.3	-0.00645 mg/L	0.003915	-0.00645 mg/L	0.003915	60.73%
Si 251.611†	46784.8	1.68 mg/L	0.047	1.68 mg/L	0.047	2.79%
Sn 189.927†	-59.5	-0.0125 mg/L	0.00080	-0.0125 mg/L	0.00080	6.41%
Ti 334.940†	-518.4	-0.00087 mg/L	0.000093	-0.00087 mg/L	0.000093	10.72%
Tl 190.801†	2.3	-0.00145 mg/L	0.002966	-0.00145 mg/L	0.002966	204.68%
V 290.880†	925.0	0.00680 mg/L	0.000699	0.00680 mg/L	0.000699	10.27%
Zn 206.200†	-19.3	-0.00103 mg/L	0.000290	-0.00103 mg/L	0.000290	28.16%
K 766.490†	340.3	0.259 mg/L	0.0124	0.259 mg/L	0.0124	4.81%
Na 589.592†	20871.1	2.18 mg/L	0.029	2.18 mg/L	0.029	1.34%
Sr 407.771†	31937.6	0.0360 mg/L	0.00070	0.0360 mg/L	0.00070	1.93%
Li 670.784†	34.6	-0.00316 mg/L	0.001138	-0.00316 mg/L	0.001138	36.07%
P 214.914†	23.4	0.0459 mg/L	0.01042	0.0459 mg/L	0.01042	22.71%

Sequence No.: 4
Sample ID: L1311033703 0.1
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 229
Date Collected: 11/8/2013 3:36:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311033703 0.1

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311033703 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2332306.1						23410.69	1.00%
YRADIAL	160230.3						1175.65	0.73%
Ga 417.206	878045.2						8313.76	0.95%
GaRADIAL	46314.7						655.95	1.42%
Ag 328.068†	153.3	0.00157	mg/L	0.000278	0.00157	mg/L	0.000278	17.68%
Al 396.153†	149.8	0.0232	mg/L	0.00150	0.0232	mg/L	0.00150	6.46%
As 188.979†	-4.1	-0.00184	mg/L	0.002023	-0.00184	mg/L	0.002023	109.93%
Ba 233.527†	328.7	0.00546	mg/L	0.000188	0.00546	mg/L	0.000188	3.45%
Be 234.861†	165.8	0.00038	mg/L	0.000002	0.00038	mg/L	0.000002	0.41%
B 249.677†	-117.1	0.00322	mg/L	0.000282	0.00322	mg/L	0.000282	8.74%
Ca 227.546†	2325.9	14.4	mg/L	0.40	14.4	mg/L	0.40	2.76%
Cd 228.802†	-12.8	-0.00058	mg/L	0.000121	-0.00058	mg/L	0.000121	20.96%
Co 228.616†	-2.6	-0.00028	mg/L	0.000117	-0.00028	mg/L	0.000117	42.17%
Cr 267.716†	66.4	0.00089	mg/L	0.000093	0.00089	mg/L	0.000093	10.39%
Cu 327.393†	71.8	0.00150	mg/L	0.000502	0.00150	mg/L	0.000502	33.51%
Fe 239.562†	152.5	0.0505	mg/L	0.00051	0.0505	mg/L	0.00051	1.01%
Mg 279.077†	3772.9	3.84	mg/L	0.052	3.84	mg/L	0.052	1.37%
Mn 257.610†	872.1	-0.00005	mg/L	0.000061	-0.00005	mg/L	0.000061	120.83%
Mo 202.031†	2.7	0.00074	mg/L	0.000356	0.00074	mg/L	0.000356	47.98%
Ni 231.604†	-9.7	-0.00012	mg/L	0.000196	-0.00012	mg/L	0.000196	167.40%
Pb 220.353†	12.4	0.00100	mg/L	0.000550	0.00100	mg/L	0.000550	54.81%
Sb 206.836†	-1.3	-0.00058	mg/L	0.000784	-0.00058	mg/L	0.000784	134.65%
Se 196.026†	-3.3	-0.00936	mg/L	0.006333	-0.00936	mg/L	0.006333	67.68%
Si 251.611†	46215.7	1.66	mg/L	0.046	1.66	mg/L	0.046	2.78%
Sn 189.927†	-119.2	-0.0240	mg/L	0.00123	-0.0240	mg/L	0.00123	5.11%
Ti 334.940†	-101.7	0.00124	mg/L	0.000230	0.00124	mg/L	0.000230	18.58%
Tl 190.801†	-3.4	-0.00527	mg/L	0.003318	-0.00527	mg/L	0.003318	62.94%
V 290.880†	764.4	0.00572	mg/L	0.001207	0.00572	mg/L	0.001207	21.12%
Zn 206.200†	-21.8	-0.00113	mg/L	0.000371	-0.00113	mg/L	0.000371	32.76%
K 766.490†	413.7	0.313	mg/L	0.0213	0.313	mg/L	0.0213	6.78%
Na 589.592†	38612.4	4.04	mg/L	0.160	4.04	mg/L	0.160	3.97%
Sr 407.771†	105145.0	0.115	mg/L	0.0020	0.115	mg/L	0.0020	1.72%
Li 670.784†	13.5	-0.00351	mg/L	0.000351	-0.00351	mg/L	0.000351	9.99%
P 214.914†	16.4	0.0373	mg/L	0.00576	0.0373	mg/L	0.00576	15.44%

Approved: November 11, 2013

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Sequence No.: 5 **Autosampler Location: 230**
Sample ID: L1311036301 0.01 **Date Collected: 11/8/2013 3:39:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036301 0.01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036301 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2375506.7						10691.95	0.45%
YRADIAL	156497.6						2507.89	1.60%
Ga 417.206	885784.1						1443.51	0.16%
GaRADIAL	45231.2						850.83	1.88%
Ag 328.068†	53.9	0.00111	mg/L	0.000369	0.00111	mg/L	0.000369	33.18%
Al 396.153†	1.2	-0.0330	mg/L	0.00382	-0.0330	mg/L	0.00382	11.59%
As 188.979†	-2.0	-0.00062	mg/L	0.001432	-0.00062	mg/L	0.001432	231.74%
Ba 233.527†	17.7	0.00099	mg/L	0.000065	0.00099	mg/L	0.000065	6.57%
Be 234.861†	165.0	0.00039	mg/L	0.000008	0.00039	mg/L	0.000008	2.17%
B 249.677†	34.9	0.00629	mg/L	0.000177	0.00629	mg/L	0.000177	2.81%
Ca 227.546†	104.7	0.679	mg/L	0.0628	0.679	mg/L	0.0628	9.25%
Cd 228.802†	-7.4	-0.00034	mg/L	0.000194	-0.00034	mg/L	0.000194	56.45%
Co 228.616†	-1.7	-0.00023	mg/L	0.000209	-0.00023	mg/L	0.000209	91.66%
Cr 267.716†	-13.8	-0.00002	mg/L	0.000301	-0.00002	mg/L	0.000301	>999.9%
Cu 327.393†	-20.2	0.00093	mg/L	0.000352	0.00093	mg/L	0.000352	37.96%
Fe 239.562†	9.4	-0.00399	mg/L	0.001360	-0.00399	mg/L	0.001360	34.06%
Mg 279.077†	1606.0	1.63	mg/L	0.052	1.63	mg/L	0.052	3.21%
Mn 257.610†	897.4	0.00000	mg/L	0.000096	0.00000	mg/L	0.000096	>999.9%
Mo 202.031†	-14.6	-0.00043	mg/L	0.000115	-0.00043	mg/L	0.000115	26.58%
Ni 231.604†	-7.3	-0.00004	mg/L	0.000132	-0.00004	mg/L	0.000132	327.17%
Pb 220.353†	16.2	0.00171	mg/L	0.001504	0.00171	mg/L	0.001504	88.17%
Sb 206.836†	-0.6	-0.00016	mg/L	0.000077	-0.00016	mg/L	0.000077	49.30%
Se 196.026†	-2.5	-0.00828	mg/L	0.000850	-0.00828	mg/L	0.000850	10.26%
Si 251.611†	883.7	0.0456	mg/L	0.00121	0.0456	mg/L	0.00121	2.65%
Sn 189.927†	-25.5	-0.00587	mg/L	0.001120	-0.00587	mg/L	0.001120	19.06%
Ti 334.940†	-100.0	-0.00081	mg/L	0.000421	-0.00081	mg/L	0.000421	51.70%
Tl 190.801†	1.7	-0.00188	mg/L	0.007020	-0.00188	mg/L	0.007020	372.88%
V 290.880†	742.6	0.00565	mg/L	0.000446	0.00565	mg/L	0.000446	7.89%
Zn 206.200†	-16.2	-0.00090	mg/L	0.000185	-0.00090	mg/L	0.000185	20.57%
K 766.490†	860.2	0.656	mg/L	0.0518	0.656	mg/L	0.0518	7.90%
Na 589.592†	65613.7	6.87	mg/L	0.065	6.87	mg/L	0.065	0.95%
Sr 407.771†	2565.4	0.00415	mg/L	0.000080	0.00415	mg/L	0.000080	1.92%
Li 670.784†	-27.8	-0.00421	mg/L	0.000771	-0.00421	mg/L	0.000771	18.30%
P 214.914†	17.6	0.0388	mg/L	0.00819	0.0388	mg/L	0.00819	21.09%

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Sequence No.: 6 **Autosampler Location: 231**
Sample ID: L1311036303 0.01 **Date Collected: 11/8/2013 3:42:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036303 0.01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311036303 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2363378.1						28140.25	1.19%
YRADIAL	158737.8						3785.83	2.38%
Ga 417.206	883927.7						7398.25	0.84%
GaRADIAL	45843.0						294.27	0.64%

Approved: November 11, 2013

Sheri L. Pabgard

Ag 328.068†	104.4	0.00135	mg/L	0.000696	0.00135	mg/L	0.000696	51.66%
Al 396.153†	0.1	-0.0334	mg/L	0.00474	-0.0334	mg/L	0.00474	14.18%
As 188.979†	2.9	0.00294	mg/L	0.002145	0.00294	mg/L	0.002145	72.95%
Ba 233.527†	14.1	0.00094	mg/L	0.000138	0.00094	mg/L	0.000138	14.64%
Be 234.861†	189.8	0.00043	mg/L	0.000031	0.00043	mg/L	0.000031	7.17%
B 249.677†	5.2	0.00570	mg/L	0.000176	0.00570	mg/L	0.000176	3.09%
Ca 227.546†	122.4	0.788	mg/L	0.0369	0.788	mg/L	0.0369	4.68%
Cd 228.802†	-7.2	-0.00035	mg/L	0.000270	-0.00035	mg/L	0.000270	76.42%
Co 228.616†	-6.3	-0.00048	mg/L	0.000286	-0.00048	mg/L	0.000286	59.61%
Cr 267.716†	-19.1	-0.00008	mg/L	0.000091	-0.00008	mg/L	0.000091	118.06%
Cu 327.393†	1.3	0.00106	mg/L	0.000314	0.00106	mg/L	0.000314	29.61%
Fe 239.562†	13.0	-0.00262	mg/L	0.000943	-0.00262	mg/L	0.000943	36.04%
Mg 279.077†	1810.3	1.84	mg/L	0.058	1.84	mg/L	0.058	3.17%
Mn 257.610†	989.2	0.00018	mg/L	0.000121	0.00018	mg/L	0.000121	66.24%
Mo 202.031†	-9.3	-0.00008	mg/L	0.000407	-0.00008	mg/L	0.000407	529.89%
Ni 231.604†	-13.3	-0.00023	mg/L	0.000205	-0.00023	mg/L	0.000205	87.76%
Pb 220.353†	9.3	0.00040	mg/L	0.000202	0.00040	mg/L	0.000202	50.46%
Sb 206.836†	-1.9	-0.00091	mg/L	0.001201	-0.00091	mg/L	0.001201	131.64%
Se 196.026†	-5.8	-0.0130	mg/L	0.00192	-0.0130	mg/L	0.00192	14.80%
Si 251.611†	878.0	0.0454	mg/L	0.00193	0.0454	mg/L	0.00193	4.25%
Sn 189.927†	-28.3	-0.00642	mg/L	0.000619	-0.00642	mg/L	0.000619	9.65%
Ti 334.940†	-243.9	-0.00100	mg/L	0.000179	-0.00100	mg/L	0.000179	17.89%
Tl 190.801†	-0.8	-0.00352	mg/L	0.001527	-0.00352	mg/L	0.001527	43.36%
V 290.880†	831.3	0.00619	mg/L	0.002101	0.00619	mg/L	0.002101	33.94%
Zn 206.200†	1.2	-0.00017	mg/L	0.000194	-0.00017	mg/L	0.000194	116.03%
K 766.490†	813.3	0.616	mg/L	0.0234	0.616	mg/L	0.0234	3.79%
Na 589.592†	103330.2	10.8	mg/L	0.04	10.8	mg/L	0.04	0.32%
Sr 407.771†	2640.4	0.00423	mg/L	0.000061	0.00423	mg/L	0.000061	1.44%
Li 670.784†	-63.2	-0.00481	mg/L	0.000755	-0.00481	mg/L	0.000755	15.69%
P 214.914†	23.4	0.0458	mg/L	0.01610	0.0458	mg/L	0.01610	35.15%

Sequence No.: 7 **Autosampler Location: 232**
Sample ID: L1311036305 0.01 **Date Collected: 11/8/2013 3:46:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036305 0.01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036305 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2315026.9						42522.26	1.84%
YRADIAL	151298.5						6104.37	4.03%
Ga 417.206	865411.3						17219.41	1.99%
GaRADIAL	43943.0						722.57	1.64%
Ag 328.068†	-8.4	0.00083	mg/L	0.000204	0.00083	mg/L	0.000204	24.68%
Al 396.153†	6.3	-0.0311	mg/L	0.00101	-0.0311	mg/L	0.00101	3.25%
As 188.979†	0.6	0.00126	mg/L	0.003637	0.00126	mg/L	0.003637	288.83%
Ba 233.527†	20.9	0.00104	mg/L	0.000059	0.00104	mg/L	0.000059	5.70%
Be 234.861†	151.5	0.00036	mg/L	0.000073	0.00036	mg/L	0.000073	20.17%
B 249.677†	25.8	0.00611	mg/L	0.000322	0.00611	mg/L	0.000322	5.26%
Ca 227.546†	128.7	0.827	mg/L	0.0239	0.827	mg/L	0.0239	2.88%
Cd 228.802†	-7.6	-0.00036	mg/L	0.000199	-0.00036	mg/L	0.000199	54.74%
Co 228.616†	-9.9	-0.00067	mg/L	0.000297	-0.00067	mg/L	0.000297	44.41%
Cr 267.716†	-8.2	0.00005	mg/L	0.000081	0.00005	mg/L	0.000081	171.22%
Cu 327.393†	-70.1	0.00062	mg/L	0.000331	0.00062	mg/L	0.000331	53.34%
Fe 239.562†	13.6	-0.00238	mg/L	0.000421	-0.00238	mg/L	0.000421	17.65%
Mg 279.077†	1986.6	2.02	mg/L	0.115	2.02	mg/L	0.115	5.72%
Mn 257.610†	1038.3	0.00028	mg/L	0.000044	0.00028	mg/L	0.000044	15.63%
Mo 202.031†	-16.1	-0.00054	mg/L	0.000158	-0.00054	mg/L	0.000158	29.19%
Ni 231.604†	-20.0	-0.00045	mg/L	0.000654	-0.00045	mg/L	0.000654	145.90%
Pb 220.353†	14.1	0.00131	mg/L	0.001090	0.00131	mg/L	0.001090	83.42%
Sb 206.836†	-0.3	0.00001	mg/L	0.001757	0.00001	mg/L	0.001757	>999.9%
Se 196.026†	-0.4	-0.00523	mg/L	0.002859	-0.00523	mg/L	0.002859	54.63%
Si 251.611†	1034.5	0.0509	mg/L	0.00195	0.0509	mg/L	0.00195	3.82%
Sn 189.927†	-32.5	-0.00725	mg/L	0.001038	-0.00725	mg/L	0.001038	14.33%

Approved: November 11, 2013

Ti 334.940†	-246.9	-0.00100	mg/L	0.000073	-0.00100	mg/L	0.000073	7.33%
Tl 190.801†	4.7	0.00011	mg/L	0.001133	0.00011	mg/L	0.001133	994.78%
V 290.880†	918.2	0.00673	mg/L	0.001668	0.00673	mg/L	0.001668	24.80%
Zn 206.200†	-3.7	-0.00037	mg/L	0.000226	-0.00037	mg/L	0.000226	60.58%
K 766.490†	867.1	0.657	mg/L	0.0635	0.657	mg/L	0.0635	9.67%
Na 589.592†	108380.6	11.4	mg/L	0.03	11.4	mg/L	0.03	0.30%
Sr 407.771†	2807.8	0.00441	mg/L	0.000147	0.00441	mg/L	0.000147	3.34%
Li 670.784†	-39.7	-0.00441	mg/L	0.000405	-0.00441	mg/L	0.000405	9.18%
P 214.914†	19.1	0.0406	mg/L	0.00349	0.0406	mg/L	0.00349	8.60%

Sequence No.: 8 **Autosampler Location: 233**
Sample ID: L1311036307 0.01 **Date Collected: 11/8/2013 3:49:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311036307 0.01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311036307 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2332747.4						22593.69	0.97%
YRADIAL	154573.5						2331.81	1.51%
Ga 417.206	872099.7						15181.21	1.74%
GaRADIAL	44744.9						302.02	0.67%
Ag 328.068†	29.1	0.00100	mg/L	0.000632	0.00100	mg/L	0.000632	63.27%
Al 396.153†	-4.5	-0.0352	mg/L	0.00203	-0.0352	mg/L	0.00203	5.77%
As 188.979†	-2.4	-0.00097	mg/L	0.002895	-0.00097	mg/L	0.002895	298.68%
Ba 233.527†	12.5	0.00092	mg/L	0.000120	0.00092	mg/L	0.000120	13.03%
Be 234.861†	159.9	0.00038	mg/L	0.000055	0.00038	mg/L	0.000055	14.58%
B 249.677†	-24.8	0.00509	mg/L	0.000321	0.00509	mg/L	0.000321	6.30%
Ca 227.546†	93.5	0.610	mg/L	0.0358	0.610	mg/L	0.0358	5.86%
Cd 228.802†	-5.4	-0.00025	mg/L	0.000072	-0.00025	mg/L	0.000072	28.69%
Co 228.616†	-5.6	-0.00044	mg/L	0.000049	-0.00044	mg/L	0.000049	11.12%
Cr 267.716†	1.1	0.00015	mg/L	0.000087	0.00015	mg/L	0.000087	56.64%
Cu 327.393†	94.2	0.00163	mg/L	0.000520	0.00163	mg/L	0.000520	31.83%
Fe 239.562†	8.5	-0.00433	mg/L	0.002190	-0.00433	mg/L	0.002190	50.58%
Mg 279.077†	1815.3	1.84	mg/L	0.045	1.84	mg/L	0.045	2.43%
Mn 257.610†	1366.2	0.00094	mg/L	0.000165	0.00094	mg/L	0.000165	17.53%
Mo 202.031†	-12.2	-0.00027	mg/L	0.000580	-0.00027	mg/L	0.000580	211.28%
Ni 231.604†	-16.6	-0.00034	mg/L	0.000318	-0.00034	mg/L	0.000318	92.92%
Pb 220.353†	12.5	0.00102	mg/L	0.001618	0.00102	mg/L	0.001618	159.19%
Sb 206.836†	4.6	0.00301	mg/L	0.002223	0.00301	mg/L	0.002223	73.95%
Se 196.026†	-4.6	-0.0113	mg/L	0.00806	-0.0113	mg/L	0.00806	71.37%
Si 251.611†	640.2	0.0369	mg/L	0.00283	0.0369	mg/L	0.00283	7.67%
Sn 189.927†	-34.4	-0.00761	mg/L	0.000798	-0.00761	mg/L	0.000798	10.49%
Ti 334.940†	-234.8	-0.00102	mg/L	0.000148	-0.00102	mg/L	0.000148	14.55%
Tl 190.801†	7.9	0.00222	mg/L	0.002468	0.00222	mg/L	0.002468	111.02%
V 290.880†	919.6	0.00674	mg/L	0.000663	0.00674	mg/L	0.000663	9.84%
Zn 206.200†	-6.0	-0.00047	mg/L	0.000235	-0.00047	mg/L	0.000235	50.15%
K 766.490†	1139.7	0.868	mg/L	0.0554	0.868	mg/L	0.0554	6.38%
Na 589.592†	107138.1	11.2	mg/L	0.41	11.2	mg/L	0.41	3.64%
Sr 407.771†	2377.1	0.00394	mg/L	0.000079	0.00394	mg/L	0.000079	2.01%
Li 670.784†	-32.6	-0.00429	mg/L	0.000976	-0.00429	mg/L	0.000976	22.75%
P 214.914†	31.4	0.0555	mg/L	0.00694	0.0555	mg/L	0.00694	12.51%

Sequence No.: 9 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 3:52:04 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2336321.8						43261.43	1.85%
YRADIAL	168059.3						2178.27	1.30%
Ga 417.206	867151.4						16627.95	1.92%
GaRADIAL	46126.6						452.98	0.98%
Ag 328.068†	82910.1	0.389	mg/L	0.0079	0.389	mg/L	0.0079	2.02%
QC value within limits for Ag 328.068 Recovery = 97.28%								
Al 396.153†	26894.6	10.1	mg/L	0.10	10.1	mg/L	0.10	1.00%
QC value within limits for Al 396.153 Recovery = 100.81%								
As 188.979†	549.7	0.395	mg/L	0.0061	0.395	mg/L	0.0061	1.54%
QC value within limits for As 188.979 Recovery = 98.85%								
Ba 233.527†	69819.9	1.00	mg/L	0.024	1.00	mg/L	0.024	2.40%
QC value within limits for Ba 233.527 Recovery = 100.38%								
Be 234.861†	27368.1	0.0484	mg/L	0.00069	0.0484	mg/L	0.00069	1.43%
QC value within limits for Be 234.861 Recovery = 96.78%								
B 249.677†	23725.3	0.478	mg/L	0.0131	0.478	mg/L	0.0131	2.74%
QC value within limits for B 249.677 Recovery = 95.66%								
Ca 227.546†	1574.4	10.2	mg/L	0.22	10.2	mg/L	0.22	2.19%
QC value within limits for Ca 227.546 Recovery = 102.09%								
Cd 228.802†	1089.5	0.0467	mg/L	0.00091	0.0467	mg/L	0.00091	1.95%
QC value within limits for Cd 228.802 Recovery = 93.49%								
Co 228.616†	3785.7	0.203	mg/L	0.0043	0.203	mg/L	0.0043	2.10%
QC value within limits for Co 228.616 Recovery = 101.59%								
Cr 267.716†	43694.9	0.498	mg/L	0.0085	0.498	mg/L	0.0085	1.72%
QC value within limits for Cr 267.716 Recovery = 99.59%								
Cu 327.393†	78561.3	0.487	mg/L	0.0083	0.487	mg/L	0.0083	1.69%
QC value within limits for Cu 327.393 Recovery = 97.49%								
Fe 239.562†	10634.9	4.04	mg/L	0.043	4.04	mg/L	0.043	1.06%
QC value within limits for Fe 239.562 Recovery = 101.08%								
Mg 279.077†	9829.7	10.1	mg/L	0.09	10.1	mg/L	0.09	0.90%
QC value within limits for Mg 279.077 Recovery = 100.56%								
Mn 257.610†	255407.3	0.514	mg/L	0.0127	0.514	mg/L	0.0127	2.48%
QC value within limits for Mn 257.610 Recovery = 102.82%								
Mo 202.031†	14637.2	1.00	mg/L	0.018	1.00	mg/L	0.018	1.77%
QC value within limits for Mo 202.031 Recovery = 100.05%								
Ni 231.604†	15743.1	0.506	mg/L	0.0099	0.506	mg/L	0.0099	1.96%
QC value within limits for Ni 231.604 Recovery = 101.18%								
Pb 220.353†	2708.1	0.513	mg/L	0.0121	0.513	mg/L	0.0121	2.36%
QC value within limits for Pb 220.353 Recovery = 102.56%								
Sb 206.836†	1921.3	1.17	mg/L	0.030	1.17	mg/L	0.030	2.58%
QC value within limits for Sb 206.836 Recovery = 97.46%								
Se 196.026†	270.8	0.392	mg/L	0.0107	0.392	mg/L	0.0107	2.73%
QC value within limits for Se 196.026 Recovery = 97.90%								
Si 251.611†	137608.5	4.91	mg/L	0.101	4.91	mg/L	0.101	2.06%
QC value within limits for Si 251.611 Recovery = 98.18%								
Sn 189.927†	5254.2	1.02	mg/L	0.025	1.02	mg/L	0.025	2.47%
QC value within limits for Sn 189.927 Recovery = 101.76%								
Ti 334.940†	710058.9	1.00	mg/L	0.008	1.00	mg/L	0.008	0.78%
QC value within limits for Ti 334.940 Recovery = 100.48%								
Tl 190.801†	775.9	0.528	mg/L	0.0108	0.528	mg/L	0.0108	2.05%
QC value within limits for Tl 190.801 Recovery = 105.58%								
V 290.880†	161329.9	1.00	mg/L	0.025	1.00	mg/L	0.025	2.54%
QC value within limits for V 290.880 Recovery = 100.07%								
Zn 206.200†	23953.7	1.02	mg/L	0.024	1.02	mg/L	0.024	2.34%
QC value within limits for Zn 206.200 Recovery = 101.55%								
K 766.490†	65563.9	51.6	mg/L	0.64	51.6	mg/L	0.64	1.23%
QC value within limits for K 766.490 Recovery = 103.13%								
Na 589.592†	462561.5	48.8	mg/L	0.71	48.8	mg/L	0.71	1.45%
QC value within limits for Na 589.592 Recovery = 97.61%								
Sr 407.771†	910643.2	0.993	mg/L	0.0201	0.993	mg/L	0.0201	2.02%
QC value within limits for Sr 407.771 Recovery = 99.28%								
Li 670.784†	60768.6	1.02	mg/L	0.008	1.02	mg/L	0.008	0.76%
QC value within limits for Li 670.784 Recovery = 102.39%								
P 214.914†	8297.2	10.1	mg/L	0.28	10.1	mg/L	0.28	2.76%
QC value within limits for P 214.914 Recovery = 100.72%								

All analyte(s) passed QC.

Approved: November 11, 2013

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/8/2013 3:54:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2275683.7						13149.07	0.58%
YRADIAL	157486.9						1025.18	0.65%
Ga 417.206	826759.0						10530.92	1.27%
GaRADIAL	43999.3						1227.87	2.79%
Ag 328.068†	34.9	0.00102	mg/L	0.000159	0.00102	mg/L	0.000159	15.50%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	-1.7	-0.0342	mg/L	0.00212	-0.0342	mg/L	0.00212	6.20%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-1.9	-0.00063	mg/L	0.003527	-0.00063	mg/L	0.003527	564.22%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-10.8	0.00059	mg/L	0.000060	0.00059	mg/L	0.000060	10.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	29.1	0.00014	mg/L	0.000044	0.00014	mg/L	0.000044	30.87%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	71.7	0.00703	mg/L	0.000934	0.00703	mg/L	0.000934	13.28%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	16.9	0.138	mg/L	0.0545	0.138	mg/L	0.0545	39.65%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-5.2	-0.00025	mg/L	0.000181	-0.00025	mg/L	0.000181	73.51%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-11.1	-0.00073	mg/L	0.000274	-0.00073	mg/L	0.000274	37.53%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	16.9	0.00033	mg/L	0.000137	0.00033	mg/L	0.000137	41.24%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	163.9	0.00206	mg/L	0.000391	0.00206	mg/L	0.000391	18.95%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	10.4	-0.00359	mg/L	0.002953	-0.00359	mg/L	0.002953	82.26%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	14.6	-0.00166	mg/L	0.008050	-0.00166	mg/L	0.008050	485.79%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	56.8	-0.00170	mg/L	0.000013	-0.00170	mg/L	0.000013	0.75%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	9.3	0.00119	mg/L	0.000189	0.00119	mg/L	0.000189	15.83%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-26.2	-0.00065	mg/L	0.000672	-0.00065	mg/L	0.000672	103.71%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	9.5	0.00044	mg/L	0.001703	0.00044	mg/L	0.001703	387.41%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-0.1	0.00014	mg/L	0.000291	0.00014	mg/L	0.000291	208.34%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-1.3	-0.00647	mg/L	0.002504	-0.00647	mg/L	0.002504	38.70%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-6.9	0.0138	mg/L	0.00096	0.0138	mg/L	0.00096	6.96%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	40.8	0.00698	mg/L	0.000604	0.00698	mg/L	0.000604	8.66%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-92.2	-0.00088	mg/L	0.000123	-0.00088	mg/L	0.000123	13.87%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-0.3	-0.00322	mg/L	0.000999	-0.00322	mg/L	0.000999	31.04%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	778.9	0.00591	mg/L	0.001301	0.00591	mg/L	0.001301	21.99%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-33.3	-0.00162	mg/L	0.000324	-0.00162	mg/L	0.000324	20.03%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	-52.5	-0.0433	mg/L	0.03387	-0.0433	mg/L	0.03387	78.18%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	350.1	0.0283	mg/L	0.01301	0.0283	mg/L	0.01301	45.99%

Approved: November 11, 2013

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	90.7	0.00147 mg/L	0.000148	0.00147 mg/L	0.000148	10.09%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	100.6	-0.00204 mg/L	0.000658	-0.00204 mg/L	0.000658	32.26%

QC value within limits for Li 670.784 Recovery = Not calculated

P 214.914†	22.2	0.0443 mg/L	0.00684	0.0443 mg/L	0.00684	15.43%

QC value within limits for P 214.914 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 103**
Sample ID: PBW D1 WG451680-03 **Date Collected: 11/8/2013 3:57:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW D1 WG451680-03

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: PBW D1 WG451680-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2302065.3						21295.11	0.93%
YRADIAL	154299.1						1715.06	1.11%
Ga 417.206	837749.0						12281.16	1.47%
GaRADIAL	43216.6						945.26	2.19%
Ag 328.068†	52.6	0.00111	mg/L	0.000142	0.00111	mg/L	0.000142	12.85%
Al 396.153†	-3.5	-0.0349	mg/L	0.00124	-0.0349	mg/L	0.00124	3.56%
As 188.979†	-7.8	-0.00489	mg/L	0.004075	-0.00489	mg/L	0.004075	83.35%
Ba 233.527†	-21.6	0.00043	mg/L	0.000254	0.00043	mg/L	0.000254	58.96%
Be 234.861†	33.2	0.00015	mg/L	0.000043	0.00015	mg/L	0.000043	28.64%
B 249.677†	-106.2	0.00345	mg/L	0.000394	0.00345	mg/L	0.000394	11.40%
Ca 227.546†	9.9	0.0941	mg/L	0.02342	0.0941	mg/L	0.02342	24.89%
Cd 228.802†	2.4	0.00011	mg/L	0.000205	0.00011	mg/L	0.000205	186.86%
Co 228.616†	-10.8	-0.00072	mg/L	0.000240	-0.00072	mg/L	0.000240	33.49%
Cr 267.716†	5.6	0.00020	mg/L	0.000286	0.00020	mg/L	0.000286	140.60%
Cu 327.393†	116.1	0.00177	mg/L	0.000285	0.00177	mg/L	0.000285	16.11%
Fe 239.562†	6.4	-0.00510	mg/L	0.002370	-0.00510	mg/L	0.002370	46.49%
Mg 279.077†	14.4	-0.00195	mg/L	0.010009	-0.00195	mg/L	0.010009	514.50%
Mn 257.610†	43.2	-0.00173	mg/L	0.000004	-0.00173	mg/L	0.000004	0.23%
Mo 202.031†	-0.2	0.00055	mg/L	0.000216	0.00055	mg/L	0.000216	39.41%
Ni 231.604†	-25.6	-0.00063	mg/L	0.000240	-0.00063	mg/L	0.000240	38.16%
Pb 220.353†	10.9	0.00071	mg/L	0.001299	0.00071	mg/L	0.001299	183.67%
Sb 206.836†	-0.3	0.00003	mg/L	0.004028	0.00003	mg/L	0.004028	>999.9%
Se 196.026†	-0.3	-0.00500	mg/L	0.008514	-0.00500	mg/L	0.008514	170.35%
Si 251.611†	-41.0	0.0126	mg/L	0.00068	0.0126	mg/L	0.00068	5.40%
Sn 189.927†	-14.2	-0.00370	mg/L	0.000593	-0.00370	mg/L	0.000593	16.03%
Ti 334.940†	-97.7	-0.00090	mg/L	0.000098	-0.00090	mg/L	0.000098	10.91%
Tl 190.801†	-2.1	-0.00437	mg/L	0.000398	-0.00437	mg/L	0.000398	9.10%
V 290.880†	651.2	0.00512	mg/L	0.001204	0.00512	mg/L	0.001204	23.49%
Zn 206.200†	0.0	-0.00021	mg/L	0.000138	-0.00021	mg/L	0.000138	64.63%
K 766.490†	-2.4	-0.00457	mg/L	0.021630	-0.00457	mg/L	0.021630	473.20%
Na 589.592†	416.0	0.0352	mg/L	0.02167	0.0352	mg/L	0.02167	61.56%
Sr 407.771†	-51.5	0.00132	mg/L	0.000003	0.00132	mg/L	0.000003	0.23%
Li 670.784†	17.8	-0.00344	mg/L	0.000803	-0.00344	mg/L	0.000803	23.35%
P 214.914†	17.7	0.0389	mg/L	0.00549	0.0389	mg/L	0.00549	14.10%

Sequence No.: 12 **Autosampler Location: 104**
Sample ID: LCSW D1 WG451680-04 **Date Collected: 11/8/2013 4:00:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW D1 WG451680-04

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Approved: November 11, 2013

Sheri L. Babcock

Mean Data: LCSW D1 WG451680-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2285382.0						2946.41	0.13%
YRADIAL	154634.0						1736.14	1.12%
Ga 417.206	844169.4						8108.89	0.96%
GaRADIAL	44507.0						286.95	0.64%
Ag 328.068†	42080.5	0.198	mg/L	0.0039	0.198	mg/L	0.0039	1.97%
Al 396.153†	13122.0	4.90	mg/L	0.041	4.90	mg/L	0.041	0.84%
As 188.979†	265.7	0.192	mg/L	0.0025	0.192	mg/L	0.0025	1.32%
Ba 233.527†	34194.9	0.492	mg/L	0.0151	0.492	mg/L	0.0151	3.06%
Be 234.861†	13197.8	0.0234	mg/L	0.00035	0.0234	mg/L	0.00035	1.51%
B 249.677†	47474.9	0.957	mg/L	0.0326	0.957	mg/L	0.0326	3.41%
Ca 227.546†	769.4	5.01	mg/L	0.016	5.01	mg/L	0.016	0.32%
Cd 228.802†	533.9	0.0229	mg/L	0.00039	0.0229	mg/L	0.00039	1.71%
Co 228.616†	1858.7	0.0997	mg/L	0.00076	0.0997	mg/L	0.00076	0.77%
Cr 267.716†	21528.4	0.245	mg/L	0.0064	0.245	mg/L	0.0064	2.61%
Cu 327.393†	39160.4	0.243	mg/L	0.0060	0.243	mg/L	0.0060	2.48%
Fe 239.562†	5364.1	2.04	mg/L	0.021	2.04	mg/L	0.021	1.02%
Mg 279.077†	4971.1	5.08	mg/L	0.028	5.08	mg/L	0.028	0.55%
Mn 257.610†	126062.4	0.253	mg/L	0.0076	0.253	mg/L	0.0076	2.99%
Mo 202.031†	7231.0	0.495	mg/L	0.0135	0.495	mg/L	0.0135	2.72%
Ni 231.604†	7672.2	0.247	mg/L	0.0059	0.247	mg/L	0.0059	2.40%
Pb 220.353†	1324.0	0.250	mg/L	0.0012	0.250	mg/L	0.0012	0.46%
Sb 206.836†	952.4	0.580	mg/L	0.0059	0.580	mg/L	0.0059	1.02%
Se 196.026†	135.9	0.194	mg/L	0.0042	0.194	mg/L	0.0042	2.17%
Si 251.611†	67604.3	2.42	mg/L	0.059	2.42	mg/L	0.059	2.42%
Sn 189.927†	-23.3	-0.00546	mg/L	0.001252	-0.00546	mg/L	0.001252	22.94%
Ti 334.940†	348035.6	0.492	mg/L	0.0071	0.492	mg/L	0.0071	1.44%
Tl 190.801†	380.1	0.257	mg/L	0.0053	0.257	mg/L	0.0053	2.05%
V 290.880†	79501.1	0.494	mg/L	0.0198	0.494	mg/L	0.0198	4.01%
Zn 206.200†	11756.8	0.498	mg/L	0.0109	0.498	mg/L	0.0109	2.19%
K 766.490†	31683.7	24.7	mg/L	0.14	24.7	mg/L	0.14	0.58%
Na 589.592†	229621.2	24.1	mg/L	0.07	24.1	mg/L	0.07	0.30%
Sr 407.771†	472788.0	0.516	mg/L	0.0071	0.516	mg/L	0.0071	1.38%
Li 670.784†	29624.7	0.497	mg/L	0.0023	0.497	mg/L	0.0023	0.45%
P 214.914†	-115.8	-0.123	mg/L	0.0276	-0.123	mg/L	0.0276	22.49%

Sequence No.: 13 **Autosampler Location: 105**
Sample ID: L1311020829 WG451680-01 **Date Collected: 11/8/2013 4:02:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020829 WG451680-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311020829 WG451680-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2334846.2						37481.62	1.61%
YRADIAL	159532.0						5321.34	3.34%
Ga 417.206	898605.5						17174.16	1.91%
GaRADIAL	45285.8						779.28	1.72%
Ag 328.068†	407.3	0.00268	mg/L	0.000387	0.00268	mg/L	0.000387	14.43%
Al 396.153†	1.4	-0.0333	mg/L	0.00260	-0.0333	mg/L	0.00260	7.81%
As 188.979†	-13.3	-0.00755	mg/L	0.001654	-0.00755	mg/L	0.001654	21.92%
Ba 233.527†	3243.8	0.0473	mg/L	0.00075	0.0473	mg/L	0.00075	1.59%
Be 234.861†	113.2	0.00030	mg/L	0.000058	0.00030	mg/L	0.000058	19.49%
B 249.677†	2771.4	0.0613	mg/L	0.00271	0.0613	mg/L	0.00271	4.42%
Ca 227.546†	10099.6	62.3	mg/L	1.10	62.3	mg/L	1.10	1.77%
Cd 228.802†	-4.4	-0.00017	mg/L	0.000159	-0.00017	mg/L	0.000159	93.13%
Co 228.616†	-8.5	-0.00058	mg/L	0.000148	-0.00058	mg/L	0.000148	25.41%
Cr 267.716†	69.5	0.00093	mg/L	0.000181	0.00093	mg/L	0.000181	19.38%
Cu 327.393†	202.3	0.00229	mg/L	0.000649	0.00229	mg/L	0.000649	28.33%
Fe 239.562†	16.9	-0.00134	mg/L	0.002317	-0.00134	mg/L	0.002317	173.21%
Mg 279.077†	11550.0	11.8	mg/L	0.29	11.8	mg/L	0.29	2.48%

Approved: November 11, 2013

Mn 257.610†	2772.1	0.00378	mg/L	0.000152	0.00378	mg/L	0.000152	4.01%
Mo 202.031†	57.7	0.00450	mg/L	0.000249	0.00450	mg/L	0.000249	5.53%
Ni 231.604†	-29.6	-0.00075	mg/L	0.000094	-0.00075	mg/L	0.000094	12.51%
Pb 220.353†	22.3	0.00287	mg/L	0.001037	0.00287	mg/L	0.001037	36.16%
Sb 206.836†	-1.9	-0.00093	mg/L	0.002548	-0.00093	mg/L	0.002548	273.21%
Se 196.026†	-1.0	-0.00601	mg/L	0.004468	-0.00601	mg/L	0.004468	74.40%
Si 251.611†	83280.7	2.98	mg/L	0.034	2.98	mg/L	0.034	1.13%
Sn 189.927†	-237.4	-0.0470	mg/L	0.00068	-0.0470	mg/L	0.00068	1.44%
Ti 334.940†	-7385.1	-0.00187	mg/L	0.000180	-0.00187	mg/L	0.000180	9.65%
Tl 190.801†	-25.6	-0.0202	mg/L	0.00509	-0.0202	mg/L	0.00509	25.25%
V 290.880†	1114.3	0.00769	mg/L	0.000850	0.00769	mg/L	0.000850	11.05%
Zn 206.200†	-7.6	-0.00053	mg/L	0.000169	-0.00053	mg/L	0.000169	31.92%
K 766.490†	2993.7	2.28	mg/L	0.086	2.28	mg/L	0.086	3.78%
Na 589.592†	334795.5	35.3	mg/L	0.77	35.3	mg/L	0.77	2.18%
Sr 407.771†	353665.5	0.385	mg/L	0.0172	0.385	mg/L	0.0172	4.47%
Li 670.784†	117.9	-0.00175	mg/L	0.001115	-0.00175	mg/L	0.001115	63.83%
P 214.914†	55.4	0.0846	mg/L	0.00829	0.0846	mg/L	0.00829	9.80%

Sequence No.: 14 **Autosampler Location: 106**
Sample ID: L1311020829DU WG451680-05 **Date Collected: 11/8/2013 4:05:17 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020829DU WG451680-05

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020829DU WG451680-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2317924.2						19980.61	0.86%
YRADIAL	157317.3						983.45	0.63%
Ga 417.206	895486.3						9445.16	1.05%
GaRADIAL	44823.5						868.12	1.94%
Ag 328.068†	346.9	0.00240	mg/L	0.000225	0.00240	mg/L	0.000225	9.34%
Al 396.153†	-7.9	-0.0367	mg/L	0.00242	-0.0367	mg/L	0.00242	6.60%
As 188.979†	-9.9	-0.00511	mg/L	0.001547	-0.00511	mg/L	0.001547	30.27%
Ba 233.527†	3186.2	0.0465	mg/L	0.00048	0.0465	mg/L	0.00048	1.04%
Be 234.861†	85.8	0.00025	mg/L	0.000043	0.00025	mg/L	0.000043	17.68%
B 249.677†	2387.6	0.0536	mg/L	0.00168	0.0536	mg/L	0.00168	3.14%
Ca 227.546†	9793.9	60.4	mg/L	1.49	60.4	mg/L	1.49	2.47%
Cd 228.802†	-5.3	-0.00022	mg/L	0.000100	-0.00022	mg/L	0.000100	44.54%
Co 228.616†	-6.2	-0.00046	mg/L	0.000316	-0.00046	mg/L	0.000316	68.60%
Cr 267.716†	66.2	0.00089	mg/L	0.000241	0.00089	mg/L	0.000241	26.95%
Cu 327.393†	140.3	0.00191	mg/L	0.000289	0.00191	mg/L	0.000289	15.14%
Fe 239.562†	16.2	-0.00161	mg/L	0.002247	-0.00161	mg/L	0.002247	139.16%
Mg 279.077†	11532.1	11.8	mg/L	0.16	11.8	mg/L	0.16	1.39%
Mn 257.610†	2737.0	0.00371	mg/L	0.000060	0.00371	mg/L	0.000060	1.62%
Mo 202.031†	41.4	0.00339	mg/L	0.000255	0.00339	mg/L	0.000255	7.52%
Ni 231.604†	-12.4	-0.00020	mg/L	0.000490	-0.00020	mg/L	0.000490	245.36%
Pb 220.353†	18.1	0.00207	mg/L	0.000738	0.00207	mg/L	0.000738	35.59%
Sb 206.836†	-0.7	-0.00020	mg/L	0.001170	-0.00020	mg/L	0.001170	595.75%
Se 196.026†	-1.1	-0.00626	mg/L	0.006419	-0.00626	mg/L	0.006419	102.55%
Si 251.611†	81199.4	2.91	mg/L	0.081	2.91	mg/L	0.081	2.78%
Sn 189.927†	-239.7	-0.0474	mg/L	0.00208	-0.0474	mg/L	0.00208	4.39%
Ti 334.940†	-7124.3	-0.00178	mg/L	0.000101	-0.00178	mg/L	0.000101	5.67%
Tl 190.801†	-19.9	-0.0164	mg/L	0.00938	-0.0164	mg/L	0.00938	57.30%
V 290.880†	1252.0	0.00854	mg/L	0.001751	0.00854	mg/L	0.001751	20.49%
Zn 206.200†	-1.5	-0.00027	mg/L	0.000117	-0.00027	mg/L	0.000117	42.74%
K 766.490†	2955.8	2.25	mg/L	0.097	2.25	mg/L	0.097	4.29%
Na 589.592†	332085.6	35.0	mg/L	0.27	35.0	mg/L	0.27	0.78%
Sr 407.771†	351837.5	0.383	mg/L	0.0094	0.383	mg/L	0.0094	2.47%
Li 670.784†	121.9	-0.00168	mg/L	0.000416	-0.00168	mg/L	0.000416	24.80%
P 214.914†	63.1	0.0939	mg/L	0.00778	0.0939	mg/L	0.00778	8.29%

Sequence No.: 15 **Autosampler Location: 107**
Sample ID: L1311020829 WG451680-06 **Date Collected: 11/8/2013 4:08:22 PM**

Approved: November 11, 2013

Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020829 WG451680-06

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020829 WG451680-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2297844.3						19668.63	0.86%
YRADIAL	157278.0						3098.81	1.97%
Ga 417.206	867812.2						9514.43	1.10%
GaRADIAL	45162.5						704.92	1.56%
Ag 328.068†	41783.6	0.196	mg/L	0.0050	0.196	mg/L	0.0050	2.54%
Al 396.153†	13336.7	4.98	mg/L	0.059	4.98	mg/L	0.059	1.19%
As 188.979†	269.9	0.196	mg/L	0.0054	0.196	mg/L	0.0054	2.75%
Ba 233.527†	37305.6	0.537	mg/L	0.0137	0.537	mg/L	0.0137	2.55%
Be 234.861†	13503.3	0.0239	mg/L	0.00065	0.0239	mg/L	0.00065	2.70%
B 249.677†	50229.0	1.01	mg/L	0.035	1.01	mg/L	0.035	3.41%
Ca 227.546†	10682.3	66.2	mg/L	0.96	66.2	mg/L	0.96	1.45%
Cd 228.802†	530.6	0.0227	mg/L	0.00050	0.0227	mg/L	0.00050	2.19%
Co 228.616†	1832.3	0.0983	mg/L	0.00174	0.0983	mg/L	0.00174	1.77%
Cr 267.716†	21635.8	0.247	mg/L	0.0058	0.247	mg/L	0.0058	2.37%
Cu 327.393†	37488.8	0.233	mg/L	0.0071	0.233	mg/L	0.0071	3.05%
Fe 239.562†	5378.4	2.04	mg/L	0.022	2.04	mg/L	0.022	1.09%
Mg 279.077†	16071.9	16.4	mg/L	0.21	16.4	mg/L	0.21	1.31%
Mn 257.610†	128222.8	0.257	mg/L	0.0067	0.257	mg/L	0.0067	2.60%
Mo 202.031†	7597.9	0.520	mg/L	0.0100	0.520	mg/L	0.0100	1.92%
Ni 231.604†	7819.8	0.251	mg/L	0.0045	0.251	mg/L	0.0045	1.78%
Pb 220.353†	1334.3	0.252	mg/L	0.0036	0.252	mg/L	0.0036	1.42%
Sb 206.836†	958.6	0.584	mg/L	0.0099	0.584	mg/L	0.0099	1.69%
Se 196.026†	137.3	0.196	mg/L	0.0089	0.196	mg/L	0.0089	4.53%
Si 251.611†	145828.6	5.21	mg/L	0.141	5.21	mg/L	0.141	2.71%
Sn 189.927†	-213.6	-0.0423	mg/L	0.00134	-0.0423	mg/L	0.00134	3.17%
Ti 334.940†	353294.8	0.509	mg/L	0.0132	0.509	mg/L	0.0132	2.60%
Tl 190.801†	354.8	0.240	mg/L	0.0050	0.240	mg/L	0.0050	2.09%
V 290.880†	80867.0	0.502	mg/L	0.0185	0.502	mg/L	0.0185	3.68%
Zn 206.200†	11744.7	0.498	mg/L	0.0099	0.498	mg/L	0.0099	1.98%
K 766.490†	35624.2	27.8	mg/L	0.18	27.8	mg/L	0.18	0.64%
Na 589.592†	548555.0	58.0	mg/L	0.34	58.0	mg/L	0.34	0.58%
Sr 407.771†	819137.3	0.891	mg/L	0.0046	0.891	mg/L	0.0046	0.52%
Li 670.784†	29973.6	0.503	mg/L	0.0069	0.503	mg/L	0.0069	1.37%
P 214.914†	-67.9	-0.0648	mg/L	0.03642	-0.0648	mg/L	0.03642	56.24%

Sequence No.: 16 **Autosampler Location: 108**
Sample ID: L1311020831 **Date Collected: 11/8/2013 4:10:27 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311020831

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311020831

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2334120.0						24632.12	1.06%
YRADIAL	160238.3						3840.56	2.40%
Ga 417.206	897058.2						10795.97	1.20%
GaRADIAL	45492.3						181.59	0.40%
Ag 328.068†	467.3	0.00299	mg/L	0.000076	0.00299	mg/L	0.000076	2.54%
Al 396.153†	30.2	-0.0223	mg/L	0.00270	-0.0223	mg/L	0.00270	12.11%
As 188.979†	-10.3	-0.00528	mg/L	0.002091	-0.00528	mg/L	0.002091	39.58%
Ba 233.527†	3456.8	0.0504	mg/L	0.00038	0.0504	mg/L	0.00038	0.75%

Approved: November 11, 2013

Be 234.861†	95.8	0.00026	mg/L	0.000010	0.00026	mg/L	0.000010 3.80%
B 249.677†	2532.0	0.0564	mg/L	0.00374	0.0564	mg/L	0.00374 6.63%
Ca 227.546†	10560.6	65.2	mg/L	1.78	65.2	mg/L	1.78 2.73%
Cd 228.802†	-7.8	-0.00033	mg/L	0.000139	-0.00033	mg/L	0.000139 41.97%
Co 228.616†	-0.1	-0.00013	mg/L	0.000224	-0.00013	mg/L	0.000224 171.87%
Cr 267.716†	73.7	0.00098	mg/L	0.000048	0.00098	mg/L	0.000048 4.90%
Cu 327.393†	218.7	0.00239	mg/L	0.000744	0.00239	mg/L	0.000744 31.09%
Fe 239.562†	98.8	0.0299	mg/L	0.00163	0.0299	mg/L	0.00163 5.46%
Mg 279.077†	11635.8	11.9	mg/L	0.12	11.9	mg/L	0.12 1.04%
Mn 257.610†	3797.7	0.00585	mg/L	0.000089	0.00585	mg/L	0.000089 1.52%
Mo 202.031†	49.9	0.00397	mg/L	0.000278	0.00397	mg/L	0.000278 7.00%
Ni 231.604†	-7.8	-0.00005	mg/L	0.000060	-0.00005	mg/L	0.000060 120.35%
Pb 220.353†	23.4	0.00307	mg/L	0.002210	0.00307	mg/L	0.002210 71.96%
Sb 206.836†	-1.9	-0.00095	mg/L	0.000810	-0.00095	mg/L	0.000810 84.87%
Se 196.026†	2.6	-0.00076	mg/L	0.006530	-0.00076	mg/L	0.006530 858.57%
Si 251.611†	83621.7	3.00	mg/L	0.073	3.00	mg/L	0.073 2.45%
Sn 189.927†	-242.8	-0.0480	mg/L	0.00134	-0.0480	mg/L	0.00134 2.80%
Ti 334.940†	-7526.6	-0.00164	mg/L	0.000141	-0.00164	mg/L	0.000141 8.60%
Tl 190.801†	-26.0	-0.0204	mg/L	0.00727	-0.0204	mg/L	0.00727 35.61%
V 290.880†	1244.1	0.00848	mg/L	0.000057	0.00848	mg/L	0.000057 0.68%
Zn 206.200†	7.2	0.00010	mg/L	0.000241	0.00010	mg/L	0.000241 253.57%
K 766.490†	2925.4	2.23	mg/L	0.051	2.23	mg/L	0.051 2.28%
Na 589.592†	281953.0	29.7	mg/L	0.40	29.7	mg/L	0.40 1.36%
Sr 407.771†	275250.4	0.299	mg/L	0.0169	0.299	mg/L	0.0169 5.64%
Li 670.784†	98.2	-0.00208	mg/L	0.000328	-0.00208	mg/L	0.000328 15.79%
P 214.914†	81.8	0.117	mg/L	0.0112	0.117	mg/L	0.0112 9.58%

Sequence No.: 17 **Autosampler Location: 109**
Sample ID: L1311021003 **Date Collected: 11/8/2013 4:13:31 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021003

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021003

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2342009.1						37664.38	1.61%
YRADIAL	160031.9						1539.13	0.96%
Ga 417.206	904855.3						20220.08	2.23%
GaRADIAL	46560.7						978.64	2.10%
Ag 328.068†	277.2	0.00210	mg/L	0.000372	0.00210	mg/L	0.000372	17.66%
Al 396.153†	32.9	-0.0212	mg/L	0.00207	-0.0212	mg/L	0.00207	9.74%
As 188.979†	-10.8	-0.00608	mg/L	0.003499	-0.00608	mg/L	0.003499	57.53%
Ba 233.527†	3302.9	0.0482	mg/L	0.00068	0.0482	mg/L	0.00068	1.40%
Be 234.861†	111.8	0.00029	mg/L	0.000066	0.00029	mg/L	0.000066	22.86%
B 249.677†	2303.1	0.0519	mg/L	0.00122	0.0519	mg/L	0.00122	2.36%
Ca 227.546†	7378.2	45.5	mg/L	0.02	45.5	mg/L	0.02	0.04%
Cd 228.802†	-8.8	-0.00037	mg/L	0.000084	-0.00037	mg/L	0.000084	22.40%
Co 228.616†	-13.8	-0.00087	mg/L	0.000059	-0.00087	mg/L	0.000059	6.70%
Cr 267.716†	66.6	0.00090	mg/L	0.000130	0.00090	mg/L	0.000130	14.46%
Cu 327.393†	436.8	0.00374	mg/L	0.000914	0.00374	mg/L	0.000914	24.43%
Fe 239.562†	46.9	0.0102	mg/L	0.00135	0.0102	mg/L	0.00135	13.21%
Mg 279.077†	8243.6	8.42	mg/L	0.098	8.42	mg/L	0.098	1.17%
Mn 257.610†	4327.8	0.00692	mg/L	0.000036	0.00692	mg/L	0.000036	0.53%
Mo 202.031†	39.9	0.00329	mg/L	0.000285	0.00329	mg/L	0.000285	8.68%
Ni 231.604†	-12.7	-0.00021	mg/L	0.000150	-0.00021	mg/L	0.000150	72.56%
Pb 220.353†	15.7	0.00162	mg/L	0.001387	0.00162	mg/L	0.001387	85.71%
Sb 206.836†	-3.3	-0.00183	mg/L	0.003162	-0.00183	mg/L	0.003162	173.21%
Se 196.026†	-0.0	-0.00465	mg/L	0.005928	-0.00465	mg/L	0.005928	127.57%
Si 251.611†	86342.1	3.09	mg/L	0.021	3.09	mg/L	0.021	0.69%
Sn 189.927†	-215.1	-0.0426	mg/L	0.00083	-0.0426	mg/L	0.00083	1.94%
Ti 334.940†	-5385.8	-0.00156	mg/L	0.000119	-0.00156	mg/L	0.000119	7.65%
Tl 190.801†	-19.6	-0.0161	mg/L	0.00206	-0.0161	mg/L	0.00206	12.74%
V 290.880†	873.9	0.00628	mg/L	0.000826	0.00628	mg/L	0.000826	13.15%
Zn 206.200†	20.3	0.00065	mg/L	0.000223	0.00065	mg/L	0.000223	34.55%

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K 766.490†	3793.9	2.91	mg/L	0.034	2.91	mg/L	0.034	1.16%
Na 589.592†	202137.6	21.2	mg/L	0.06	21.2	mg/L	0.06	0.26%
Sr 407.771†	235125.4	0.256	mg/L	0.0088	0.256	mg/L	0.0088	3.43%
Li 670.784†	7.9	-0.00361	mg/L	0.000471	-0.00361	mg/L	0.000471	13.05%
P 214.914†	97.0	0.135	mg/L	0.0080	0.135	mg/L	0.0080	5.89%

Sequence No.: 18 **Autosampler Location: 110**
Sample ID: L1311021005 **Date Collected: 11/8/2013 4:16:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021005

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2356066.7						19852.80	0.84%
YRADIAL	160116.3						2780.78	1.74%
Ga 417.206	911070.1						11762.12	1.29%
GaRADIAL	46426.4						612.76	1.32%
Ag 328.068†	212.8	0.00182	mg/L	0.000340	0.00182	mg/L	0.000340	18.71%
Al 396.153†	26.0	-0.0238	mg/L	0.00362	-0.0238	mg/L	0.00362	15.20%
As 188.979†	-9.6	-0.00520	mg/L	0.000280	-0.00520	mg/L	0.000280	5.39%
Ba 233.527†	3299.6	0.0481	mg/L	0.00020	0.0481	mg/L	0.00020	0.43%
Be 234.861†	120.4	0.00030	mg/L	0.000043	0.00030	mg/L	0.000043	13.98%
B 249.677†	2121.8	0.0482	mg/L	0.00241	0.0482	mg/L	0.00241	5.00%
Ca 227.546†	7364.6	45.5	mg/L	1.32	45.5	mg/L	1.32	2.90%
Cd 228.802†	-7.6	-0.00033	mg/L	0.000340	-0.00033	mg/L	0.000340	103.85%
Co 228.616†	-12.0	-0.00078	mg/L	0.000216	-0.00078	mg/L	0.000216	27.70%
Cr 267.716†	73.7	0.00098	mg/L	0.000139	0.00098	mg/L	0.000139	14.21%
Cu 327.393†	401.2	0.00352	mg/L	0.000357	0.00352	mg/L	0.000357	10.14%
Fe 239.562†	57.5	0.0142	mg/L	0.00030	0.0142	mg/L	0.00030	2.10%
Mg 279.077†	7714.7	7.88	mg/L	0.095	7.88	mg/L	0.095	1.21%
Mn 257.610†	4194.2	0.00665	mg/L	0.000352	0.00665	mg/L	0.000352	5.30%
Mo 202.031†	35.1	0.00296	mg/L	0.000634	0.00296	mg/L	0.000634	21.42%
Ni 231.604†	-1.1	0.00016	mg/L	0.000180	0.00016	mg/L	0.000180	110.37%
Pb 220.353†	20.6	0.00255	mg/L	0.001977	0.00255	mg/L	0.001977	77.61%
Sb 206.836†	-0.1	0.00017	mg/L	0.002822	0.00017	mg/L	0.002822	>999.9%
Se 196.026†	0.6	-0.00364	mg/L	0.004211	-0.00364	mg/L	0.004211	115.67%
Si 251.611†	91817.4	3.29	mg/L	0.088	3.29	mg/L	0.088	2.68%
Sn 189.927†	-219.3	-0.0434	mg/L	0.00117	-0.0434	mg/L	0.00117	2.70%
Ti 334.940†	-5133.3	-0.00122	mg/L	0.000156	-0.00122	mg/L	0.000156	12.80%
Tl 190.801†	-12.9	-0.0116	mg/L	0.00414	-0.0116	mg/L	0.00414	35.51%
V 290.880†	1084.6	0.00760	mg/L	0.002210	0.00760	mg/L	0.002210	29.07%
Zn 206.200†	79.1	0.00313	mg/L	0.000115	0.00313	mg/L	0.000115	3.67%
K 766.490†	3685.2	2.84	mg/L	0.056	2.84	mg/L	0.056	1.98%
Na 589.592†	155181.4	16.3	mg/L	0.12	16.3	mg/L	0.12	0.73%
Sr 407.771†	195680.7	0.213	mg/L	0.0084	0.213	mg/L	0.0084	3.93%
Li 670.784†	82.9	-0.00234	mg/L	0.001342	-0.00234	mg/L	0.001342	57.40%
P 214.914†	94.0	0.131	mg/L	0.0077	0.131	mg/L	0.0077	5.83%

Sequence No.: 19 **Autosampler Location: 111**
Sample ID: L1311021005PS WG451899-01 **Date Collected: 11/8/2013 4:19:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021005PS WG451899-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021005PS WG451899-01

Mean Corrected Calib. Sample

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2344141.0						28002.98	1.19%
YRADIAL	155233.0						643.65	0.41%
Ga 417.206	886077.9						9978.78	1.13%
GaRADIAL	44883.4						187.17	0.42%
Ag 328.068†	40728.1	0.192	mg/L	0.0037	0.192	mg/L	0.0037	1.93%
Al 396.153†	13675.2	5.11	mg/L	0.079	5.11	mg/L	0.079	1.55%
As 188.979†	268.1	0.194	mg/L	0.0027	0.194	mg/L	0.0027	1.39%
Ba 233.527†	36906.1	0.531	mg/L	0.0112	0.531	mg/L	0.0112	2.11%
Be 234.861†	13269.8	0.0235	mg/L	0.00058	0.0235	mg/L	0.00058	2.49%
B 249.677†	49088.9	0.990	mg/L	0.0126	0.990	mg/L	0.0126	1.27%
Ca 227.546†	7593.5	47.1	mg/L	0.48	47.1	mg/L	0.48	1.02%
Cd 228.802†	519.9	0.0223	mg/L	0.00030	0.0223	mg/L	0.00030	1.35%
Co 228.616†	1858.0	0.0997	mg/L	0.00105	0.0997	mg/L	0.00105	1.05%
Cr 267.716†	21435.7	0.244	mg/L	0.0041	0.244	mg/L	0.0041	1.69%
Cu 327.393†	37785.5	0.235	mg/L	0.0042	0.235	mg/L	0.0042	1.80%
Fe 239.562†	5563.1	2.11	mg/L	0.052	2.11	mg/L	0.052	2.46%
Mg 279.077†	12259.5	12.5	mg/L	0.14	12.5	mg/L	0.14	1.13%
Mn 257.610†	128470.7	0.258	mg/L	0.0057	0.258	mg/L	0.0057	2.22%
Mo 202.031†	7601.2	0.520	mg/L	0.0069	0.520	mg/L	0.0069	1.32%
Ni 231.604†	7917.7	0.255	mg/L	0.0038	0.255	mg/L	0.0038	1.50%
Pb 220.353†	1345.0	0.254	mg/L	0.0034	0.254	mg/L	0.0034	1.33%
Sb 206.836†	957.0	0.583	mg/L	0.0037	0.583	mg/L	0.0037	0.64%
Se 196.026†	136.1	0.195	mg/L	0.0053	0.195	mg/L	0.0053	2.74%
Si 251.611†	150100.3	5.36	mg/L	0.090	5.36	mg/L	0.090	1.68%
Sn 189.927†	-207.8	-0.0412	mg/L	0.00220	-0.0412	mg/L	0.00220	5.35%
Ti 334.940†	351420.0	0.503	mg/L	0.0107	0.503	mg/L	0.0107	2.13%
Tl 190.801†	362.8	0.246	mg/L	0.0039	0.246	mg/L	0.0039	1.60%
V 290.880†	79912.0	0.496	mg/L	0.0102	0.496	mg/L	0.0102	2.07%
Zn 206.200†	11915.5	0.505	mg/L	0.0074	0.505	mg/L	0.0074	1.46%
K 766.490†	36202.2	28.2	mg/L	0.28	28.2	mg/L	0.28	0.99%
Na 589.592†	374692.9	39.5	mg/L	0.24	39.5	mg/L	0.24	0.62%
Sr 407.771†	660535.8	0.719	mg/L	0.0061	0.719	mg/L	0.0061	0.85%
Li 670.784†	30672.3	0.515	mg/L	0.0036	0.515	mg/L	0.0036	0.69%
P 214.914†	-35.2	-0.0251	mg/L	0.03068	-0.0251	mg/L	0.03068	122.01%

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Sequence No.: 20 **Autosampler Location: 112**
Sample ID: L1311021005DL WG451899-02 **Date Collected: 11/8/2013 4:21:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021005DL WG451899-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021005DL WG451899-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2377502.1						7329.08	0.31%
YRADIAL	159289.2						2870.28	1.80%
Ga 417.206	881248.2						2051.90	0.23%
GaRADIAL	44238.9						954.93	2.16%
Ag 328.068†	90.9	0.00128	mg/L	0.000298	0.00128	mg/L	0.000298	23.34%
Al 396.153†	3.5	-0.0322	mg/L	0.00355	-0.0322	mg/L	0.00355	11.01%
As 188.979†	-7.5	-0.00445	mg/L	0.002565	-0.00445	mg/L	0.002565	57.68%
Ba 233.527†	636.4	0.00988	mg/L	0.000079	0.00988	mg/L	0.000079	0.80%
Be 234.861†	108.7	0.00029	mg/L	0.000012	0.00029	mg/L	0.000012	4.04%
B 249.677†	1006.2	0.0258	mg/L	0.00266	0.0258	mg/L	0.00266	10.30%
Ca 227.546†	1462.7	9.06	mg/L	0.102	9.06	mg/L	0.102	1.12%
Cd 228.802†	-4.4	-0.00019	mg/L	0.000206	-0.00019	mg/L	0.000206	106.12%
Co 228.616†	-12.8	-0.00082	mg/L	0.000531	-0.00082	mg/L	0.000531	64.48%
Cr 267.716†	19.7	0.00036	mg/L	0.000145	0.00036	mg/L	0.000145	39.76%
Cu 327.393†	225.9	0.00244	mg/L	0.000500	0.00244	mg/L	0.000500	20.46%
Fe 239.562†	15.1	-0.00180	mg/L	0.001639	-0.00180	mg/L	0.001639	91.12%
Mg 279.077†	1549.1	1.57	mg/L	0.033	1.57	mg/L	0.033	2.11%
Mn 257.610†	936.2	0.00008	mg/L	0.000027	0.00008	mg/L	0.000027	35.35%
Mo 202.031†	6.4	0.00100	mg/L	0.000167	0.00100	mg/L	0.000167	16.66%
Ni 231.604†	-3.3	0.00009	mg/L	0.000180	0.00009	mg/L	0.000180	199.64%

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Pb 220.353†	13.4	0.00119 mg/L	0.000807	0.00119 mg/L	0.000807	68.08%
Sb 206.836†	0.5	0.00049 mg/L	0.000469	0.00049 mg/L	0.000469	95.74%
Se 196.026†	1.1	-0.00292 mg/L	0.006504	-0.00292 mg/L	0.006504	222.69%
Si 251.611†	18518.7	0.674 mg/L	0.0077	0.674 mg/L	0.0077	1.14%
Sn 189.927†	-86.4	-0.0177 mg/L	0.00085	-0.0177 mg/L	0.00085	4.83%
Ti 334.940†	-1111.3	-0.00099 mg/L	0.000117	-0.00099 mg/L	0.000117	11.89%
Tl 190.801†	0.4	-0.00277 mg/L	0.000514	-0.00277 mg/L	0.000514	18.55%
V 290.880†	743.3	0.00565 mg/L	0.000709	0.00565 mg/L	0.000709	12.54%
Zn 206.200†	37.6	0.00137 mg/L	0.000233	0.00137 mg/L	0.000233	16.92%
K 766.490†	757.3	0.580 mg/L	0.0791	0.580 mg/L	0.0791	13.64%
Na 589.592†	31736.9	3.32 mg/L	0.052	3.32 mg/L	0.052	1.57%
Sr 407.771†	37502.3	0.0419 mg/L	0.00165	0.0419 mg/L	0.00165	3.93%
Li 670.784†	79.4	-0.00240 mg/L	0.001527	-0.00240 mg/L	0.001527	63.69%
P 214.914†	30.5	0.0544 mg/L	0.01225	0.0544 mg/L	0.01225	22.50%

Sequence No.: 21 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 4:24:38 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2327752.9						31783.78	1.37%
YRADIAL	161468.7						3034.28	1.88%
Ga 417.206	870603.9						25410.10	2.92%
GaRADIAL	45206.8						573.57	1.27%
Ag 328.068†	84375.5	0.396	mg/L	0.0072	0.396	mg/L	0.0072	1.83%
QC value within limits for Ag 328.068 Recovery = 98.99%								
Al 396.153†	27340.3	10.2	mg/L	0.10	10.2	mg/L	0.10	0.97%
QC value within limits for Al 396.153 Recovery = 102.48%								
As 188.979†	552.6	0.397	mg/L	0.0070	0.397	mg/L	0.0070	1.75%
QC value within limits for As 188.979 Recovery = 99.36%								
Ba 233.527†	71549.4	1.03	mg/L	0.008	1.03	mg/L	0.008	0.76%
QC value within limits for Ba 233.527 Recovery = 102.86%								
Be 234.861†	27832.7	0.0492	mg/L	0.00105	0.0492	mg/L	0.00105	2.13%
QC value within limits for Be 234.861 Recovery = 98.43%								
B 249.677†	24588.3	0.496	mg/L	0.0083	0.496	mg/L	0.0083	1.68%
QC value within limits for B 249.677 Recovery = 99.12%								
Ca 227.546†	1606.1	10.4	mg/L	0.37	10.4	mg/L	0.37	3.56%
QC value within limits for Ca 227.546 Recovery = 104.14%								
Cd 228.802†	1097.6	0.0471	mg/L	0.00174	0.0471	mg/L	0.00174	3.70%
QC value within limits for Cd 228.802 Recovery = 94.20%								
Co 228.616†	3832.0	0.206	mg/L	0.0024	0.206	mg/L	0.0024	1.19%
QC value within limits for Co 228.616 Recovery = 102.84%								
Cr 267.716†	44696.5	0.509	mg/L	0.0054	0.509	mg/L	0.0054	1.06%
QC value within limits for Cr 267.716 Recovery = 101.87%								
Cu 327.393†	80149.6	0.497	mg/L	0.0102	0.497	mg/L	0.0102	2.05%
QC value within limits for Cu 327.393 Recovery = 99.45%								
Fe 239.562†	10755.6	4.09	mg/L	0.054	4.09	mg/L	0.054	1.31%
QC value within limits for Fe 239.562 Recovery = 102.23%								
Mg 279.077†	10097.5	10.3	mg/L	0.10	10.3	mg/L	0.10	0.99%
QC value within limits for Mg 279.077 Recovery = 103.30%								
Mn 257.610†	261912.7	0.527	mg/L	0.0022	0.527	mg/L	0.0022	0.42%
QC value within limits for Mn 257.610 Recovery = 105.45%								
Mo 202.031†	14916.2	1.02	mg/L	0.005	1.02	mg/L	0.005	0.50%
QC value within limits for Mo 202.031 Recovery = 101.95%								
Ni 231.604†	16069.7	0.516	mg/L	0.0002	0.516	mg/L	0.0002	0.05%
QC value within limits for Ni 231.604 Recovery = 103.28%								
Pb 220.353†	2741.1	0.519	mg/L	0.0069	0.519	mg/L	0.0069	1.33%
QC value within limits for Pb 220.353 Recovery = 103.82%								
Sb 206.836†	1932.4	1.18	mg/L	0.032	1.18	mg/L	0.032	2.75%
QC value within limits for Sb 206.836 Recovery = 98.03%								
Se 196.026†	276.0	0.399	mg/L	0.0047	0.399	mg/L	0.0047	1.17%

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   QC value within limits for Se 196.026  Recovery = 99.77%
Si 251.611†          140351.3        5.01 mg/L        0.077        5.01 mg/L        0.077   1.53%
   QC value within limits for Si 251.611  Recovery = 100.13%
Sn 189.927†            5292.6        1.03 mg/L        0.010        1.03 mg/L        0.010   0.97%
   QC value within limits for Sn 189.927  Recovery = 102.50%
Ti 334.940†          722209.2        1.02 mg/L        0.004        1.02 mg/L        0.004   0.42%
   QC value within limits for Ti 334.940  Recovery = 102.20%
Tl 190.801†            775.9       0.528 mg/L       0.0080       0.528 mg/L       0.0080   1.51%
   QC value within limits for Tl 190.801  Recovery = 105.64%
V 290.880†           165348.9        1.03 mg/L        0.010        1.03 mg/L        0.010   0.94%
   QC value within limits for V 290.880  Recovery = 102.57%
Zn 206.200†           24521.7        1.04 mg/L        0.011        1.04 mg/L        0.011   1.10%
   QC value within limits for Zn 206.200  Recovery = 103.95%
K 766.490†            66505.0        52.3 mg/L         0.42        52.3 mg/L         0.42   0.80%
   QC value within limits for K 766.490  Recovery = 104.63%
Na 589.592†          476552.9        50.3 mg/L         0.88        50.3 mg/L         0.88   1.76%
   QC value within limits for Na 589.592  Recovery = 100.58%
Sr 407.771†          958184.5        1.04 mg/L        0.024        1.04 mg/L        0.024   2.26%
   QC value within limits for Sr 407.771  Recovery = 104.46%
Li 670.784†           61322.3        1.03 mg/L        0.011        1.03 mg/L        0.011   1.02%
   QC value within limits for Li 670.784  Recovery = 103.32%
P 214.914†             8405.0        10.2 mg/L         0.13        10.2 mg/L         0.13   1.30%
   QC value within limits for P 214.914  Recovery = 102.03%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 22                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 11/8/2013 4:26:43 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                      172.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.     Conc. Units      Std.Dev.   RSD
Y 371.029            2279183.4                                                   34789.98   1.53%
YRADIAL               155485.1                                                    3393.73   2.18%
Ga 417.206            829154.8                                                   11822.32   1.43%
GaRADIAL               43582.0                                                     218.74   0.50%
Ag 328.068†              -39.6     0.00068 mg/L      0.000178     0.00068 mg/L      0.000178  26.23%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†                0.1     -0.0335 mg/L       0.00231     -0.0335 mg/L       0.00231   6.88%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -3.1    -0.00148 mg/L      0.002363    -0.00148 mg/L      0.002363 159.76%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -19.4     0.00046 mg/L      0.000050     0.00046 mg/L      0.000050  10.81%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               26.3     0.00014 mg/L      0.000074     0.00014 mg/L      0.000074  53.26%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               393.6      0.0135 mg/L       0.00145      0.0135 mg/L       0.00145  10.75%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                9.2      0.0901 mg/L       0.02747      0.0901 mg/L       0.02747  30.49%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -6.6    -0.00030 mg/L      0.000062    -0.00030 mg/L      0.000062  20.42%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -5.8    -0.00045 mg/L      0.000147    -0.00045 mg/L      0.000147  33.01%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               21.2     0.00038 mg/L      0.000030     0.00038 mg/L      0.000030   7.92%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†               284.7     0.00281 mg/L      0.000357     0.00281 mg/L      0.000357  12.70%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                3.2    -0.00632 mg/L      0.000522    -0.00632 mg/L      0.000522   8.26%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               18.8     0.00260 mg/L      0.005840     0.00260 mg/L      0.005840 224.76%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               49.7    -0.00171 mg/L      0.000040    -0.00171 mg/L      0.000040   2.33%
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   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              12.8     0.00143 mg/L      0.000262     0.00143 mg/L      0.000262  18.27%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†             -20.2    -0.00045 mg/L      0.000166    -0.00045 mg/L      0.000166  36.72%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              13.1     0.00113 mg/L      0.001422     0.00113 mg/L      0.001422 125.90%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               2.4     0.00170 mg/L      0.001970     0.00170 mg/L      0.001970 115.53%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               3.1     0.00000 mg/L      0.001302     0.00000 mg/L      0.001302 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             109.2      0.0179 mg/L       0.00217      0.0179 mg/L       0.00217  12.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              39.0     0.00663 mg/L      0.000705     0.00663 mg/L      0.000705  10.64%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†            -243.6    -0.00111 mg/L      0.000147    -0.00111 mg/L      0.000147  13.27%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.6    -0.00407 mg/L      0.001377    -0.00407 mg/L      0.001377  33.86%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              884.5     0.00657 mg/L      0.000450     0.00657 mg/L      0.000450   6.85%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -32.3    -0.00158 mg/L      0.000214    -0.00158 mg/L      0.000214  13.58%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               23.6      0.0156 mg/L       0.03647      0.0156 mg/L       0.03647 233.57%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             280.3      0.0210 mg/L       0.01397      0.0210 mg/L       0.01397  66.55%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              77.0     0.00146 mg/L      0.000117     0.00146 mg/L      0.000117   8.03%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              87.8    -0.00226 mg/L      0.000981    -0.00226 mg/L      0.000981  43.46%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†               19.2      0.0407 mg/L       0.00850      0.0407 mg/L       0.00850  20.85%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 23                                    Autosampler Location: 113
Sample ID: L1311021102                              Date Collected: 11/8/2013 4:29:43 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1311021102
Analyte                 Back Pressure     Flow
All                     172.0 kPa         0.45 L/min

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Mean Data: L1311021102
                   Mean Corrected          Calib.                          Sample
Analyte               Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2138646.5                                                     43225.65   2.02%
YRADIAL               150094.5                                                      2921.73   1.95%
Ga 417.206            861629.5                                                     18578.39   2.16%
GaRADIAL               45032.5                                                      1198.26   2.66%
Ag 328.068†             2146.9      0.0105 mg/L       0.00025      0.0105 mg/L       0.00025   2.38%
Al 396.153†              551.5       0.175 mg/L        0.0018       0.175 mg/L        0.0018   1.03%
As 188.979†              -14.2     0.00047 mg/L      0.003255     0.00047 mg/L      0.003255 699.80%
Ba 233.527†              309.0     0.00518 mg/L      0.000169     0.00518 mg/L      0.000169   3.27%
Be 234.861†              100.9     0.00035 mg/L      0.000083     0.00035 mg/L      0.000083  24.00%
B 249.677†             14994.1       0.307 mg/L        0.0041       0.307 mg/L        0.0041   1.35%
Ca 227.546†            73930.8         456 mg/L           1.9         456 mg/L           1.9   0.42%
Cd 228.802†               -5.1    -0.00020 mg/L      0.000228    -0.00020 mg/L      0.000228 116.00%
Co 228.616†                8.1     0.00046 mg/L      0.000139     0.00046 mg/L      0.000139  30.30%
Cr 267.716†              166.0     0.00204 mg/L      0.000030     0.00204 mg/L      0.000030   1.49%
Cu 327.393†             -472.6    -0.00198 mg/L      0.000769    -0.00198 mg/L      0.000769  38.74%
Fe 239.562†               80.2      0.0216 mg/L       0.00167      0.0216 mg/L       0.00167   7.74%
Mg 279.077†            68847.2        70.4 mg/L          2.26        70.4 mg/L          2.26   3.21%
Mn 257.610†           391443.8       0.788 mg/L        0.0072       0.788 mg/L        0.0072   0.92%
Mo 202.031†               45.4     0.00383 mg/L      0.000632     0.00383 mg/L      0.000632  16.51%
Ni 231.604†               27.2     0.00107 mg/L      0.000429     0.00107 mg/L      0.000429  39.98%
Pb 220.353†                1.0    -0.00161 mg/L      0.004267    -0.00161 mg/L      0.004267 265.84%
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Sb 206.836†	-5.0	-0.00283	mg/L	0.001881	-0.00283	mg/L	0.001881	66.38%
Se 196.026†	-2.0	-0.00780	mg/L	0.003364	-0.00780	mg/L	0.003364	43.13%
Si 251.611†	9355.5	0.348	mg/L	0.0078	0.348	mg/L	0.0078	2.24%
Sn 189.927†	-397.6	-0.0780	mg/L	0.00076	-0.0780	mg/L	0.00076	0.97%
Ti 334.940†	-50758.1	-0.00415	mg/L	0.000688	-0.00415	mg/L	0.000688	16.58%
Tl 190.801†	-25.8	-0.0218	mg/L	0.00530	-0.0218	mg/L	0.00530	24.32%
V 290.880†	2421.0	0.0143	mg/L	0.00061	0.0143	mg/L	0.00061	4.24%
Zn 206.200†	-21.1	-0.00109	mg/L	0.000329	-0.00109	mg/L	0.000329	30.04%
K 766.490†	11387.1	8.60	mg/L	0.250	8.60	mg/L	0.250	2.91%
Na 589.592†	2127804.0	231	mg/L	5.4	231	mg/L	5.4	2.33%
Sr 407.771†	1107282.7	1.19	mg/L	0.063	1.19	mg/L	0.063	5.31%
Li 670.784†	19462.7	0.325	mg/L	0.0072	0.325	mg/L	0.0072	2.21%
P 214.914†	44.8	0.0718	mg/L	0.00601	0.0718	mg/L	0.00601	8.38%

Sequence No.: 24 **Autosampler Location: 114**
Sample ID: L1311021302 **Date Collected: 11/8/2013 4:32:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021302

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021302

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2297735.3						39308.31	1.71%
YRADIAL	159742.4						2534.68	1.59%
Ga 417.206	897190.3						11368.60	1.27%
GaRADIAL	45897.8						1068.04	2.33%
Ag 328.068†	450.2	0.00283	mg/L	0.000602	0.00283	mg/L	0.000602	21.26%
Al 396.153†	18.2	-0.0269	mg/L	0.00396	-0.0269	mg/L	0.00396	14.71%
As 188.979†	-13.8	-0.00810	mg/L	0.001695	-0.00810	mg/L	0.001695	20.91%
Ba 233.527†	2965.1	0.0433	mg/L	0.00102	0.0433	mg/L	0.00102	2.34%
Be 234.861†	108.9	0.00029	mg/L	0.000038	0.00029	mg/L	0.000038	13.10%
B 249.677†	4288.6	0.0917	mg/L	0.00067	0.0917	mg/L	0.00067	0.73%
Ca 227.546†	8647.7	53.4	mg/L	0.14	53.4	mg/L	0.14	0.26%
Cd 228.802†	-6.2	-0.00025	mg/L	0.000205	-0.00025	mg/L	0.000205	82.49%
Co 228.616†	-14.5	-0.00090	mg/L	0.000032	-0.00090	mg/L	0.000032	3.58%
Cr 267.716†	75.2	0.00100	mg/L	0.000129	0.00100	mg/L	0.000129	12.98%
Cu 327.393†	216.1	0.00238	mg/L	0.000619	0.00238	mg/L	0.000619	26.04%
Fe 239.562†	12.2	-0.00310	mg/L	0.002387	-0.00310	mg/L	0.002387	77.03%
Mg 279.077†	10492.4	10.7	mg/L	0.09	10.7	mg/L	0.09	0.87%
Mn 257.610†	1574.3	0.00136	mg/L	0.000072	0.00136	mg/L	0.000072	5.30%
Mo 202.031†	58.1	0.00453	mg/L	0.000425	0.00453	mg/L	0.000425	9.38%
Ni 231.604†	16.4	0.00073	mg/L	0.000164	0.00073	mg/L	0.000164	22.62%
Pb 220.353†	16.4	0.00176	mg/L	0.002505	0.00176	mg/L	0.002505	142.42%
Sb 206.836†	-3.3	-0.00179	mg/L	0.001495	-0.00179	mg/L	0.001495	83.71%
Se 196.026†	1.1	-0.00301	mg/L	0.007789	-0.00301	mg/L	0.007789	258.50%
Si 251.611†	94918.1	3.40	mg/L	0.032	3.40	mg/L	0.032	0.93%
Sn 189.927†	-231.8	-0.0459	mg/L	0.00180	-0.0459	mg/L	0.00180	3.93%
Ti 334.940†	-6449.2	-0.00189	mg/L	0.000155	-0.00189	mg/L	0.000155	8.19%
Tl 190.801†	-19.5	-0.0161	mg/L	0.00588	-0.0161	mg/L	0.00588	36.50%
V 290.880†	1116.0	0.00773	mg/L	0.002163	0.00773	mg/L	0.002163	28.00%
Zn 206.200†	75.0	0.00296	mg/L	0.000096	0.00296	mg/L	0.000096	3.24%
K 766.490†	4027.6	3.04	mg/L	0.091	3.04	mg/L	0.091	2.98%
Na 589.592†	697363.3	73.8	mg/L	1.05	73.8	mg/L	1.05	1.42%
Sr 407.771†	583734.9	0.635	mg/L	0.0117	0.635	mg/L	0.0117	1.84%
Li 670.784†	647.2	0.00720	mg/L	0.000334	0.00720	mg/L	0.000334	4.64%
P 214.914†	21.2	0.0432	mg/L	0.00843	0.0432	mg/L	0.00843	19.51%

Sequence No.: 25 **Autosampler Location: 115**
Sample ID: L1311021304 **Date Collected: 11/8/2013 4:35:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: L1311021304

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021304

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2289955.4						22805.75	1.00%
YRADIAL	159146.9						2140.42	1.34%
Ga 417.206	878746.5						11592.21	1.32%
GaRADIAL	45333.0						1099.90	2.43%
Ag 328.068†	351.9	0.00244	mg/L	0.000614	0.00244	mg/L	0.000614	25.17%
Al 396.153†	2.6	-0.0327	mg/L	0.00188	-0.0327	mg/L	0.00188	5.76%
As 188.979†	-13.1	-0.00747	mg/L	0.004009	-0.00747	mg/L	0.004009	53.66%
Ba 233.527†	3124.3	0.0456	mg/L	0.00039	0.0456	mg/L	0.00039	0.85%
Be 234.861†	68.9	0.00022	mg/L	0.000045	0.00022	mg/L	0.000045	20.83%
B 249.677†	2194.7	0.0497	mg/L	0.00166	0.0497	mg/L	0.00166	3.34%
Ca 227.546†	9282.4	57.3	mg/L	0.35	57.3	mg/L	0.35	0.61%
Cd 228.802†	-4.3	-0.00017	mg/L	0.000050	-0.00017	mg/L	0.000050	29.65%
Co 228.616†	-15.1	-0.00094	mg/L	0.000330	-0.00094	mg/L	0.000330	35.09%
Cr 267.716†	79.5	0.00105	mg/L	0.000299	0.00105	mg/L	0.000299	28.61%
Cu 327.393†	265.0	0.00268	mg/L	0.000763	0.00268	mg/L	0.000763	28.49%
Fe 239.562†	18.1	-0.00085	mg/L	0.001328	-0.00085	mg/L	0.001328	156.67%
Mg 279.077†	9936.8	10.1	mg/L	0.13	10.1	mg/L	0.13	1.27%
Mn 257.610†	3268.2	0.00478	mg/L	0.000402	0.00478	mg/L	0.000402	8.41%
Mo 202.031†	42.2	0.00345	mg/L	0.000544	0.00345	mg/L	0.000544	15.79%
Ni 231.604†	-7.1	-0.00002	mg/L	0.000363	-0.00002	mg/L	0.000363	>999.9%
Pb 220.353†	16.7	0.00180	mg/L	0.000472	0.00180	mg/L	0.000472	26.20%
Sb 206.836†	-0.9	-0.00031	mg/L	0.002893	-0.00031	mg/L	0.002893	941.35%
Se 196.026†	5.6	0.00361	mg/L	0.005831	0.00361	mg/L	0.005831	161.39%
Si 251.611†	84238.4	3.02	mg/L	0.016	3.02	mg/L	0.016	0.52%
Sn 189.927†	-235.7	-0.0466	mg/L	0.00076	-0.0466	mg/L	0.00076	1.63%
Ti 334.940†	-6754.4	-0.00173	mg/L	0.000053	-0.00173	mg/L	0.000053	3.08%
Tl 190.801†	-24.4	-0.0193	mg/L	0.00210	-0.0193	mg/L	0.00210	10.88%
V 290.880†	1451.1	0.00982	mg/L	0.000416	0.00982	mg/L	0.000416	4.24%
Zn 206.200†	13.3	0.00035	mg/L	0.000560	0.00035	mg/L	0.000560	158.48%
K 766.490†	3004.8	2.30	mg/L	0.070	2.30	mg/L	0.070	3.04%
Na 589.592†	265248.3	27.9	mg/L	0.76	27.9	mg/L	0.76	2.73%
Sr 407.771†	300467.3	0.327	mg/L	0.0042	0.327	mg/L	0.0042	1.28%
Li 670.784†	80.8	-0.00237	mg/L	0.001194	-0.00237	mg/L	0.001194	50.30%
P 214.914†	70.9	0.103	mg/L	0.0028	0.103	mg/L	0.0028	2.71%

Sequence No.: 26 **Autosampler Location: 116**
Sample ID: L1311021306 **Date Collected: 11/8/2013 4:38:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021306

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021306

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2284976.1						15600.40	0.68%
YRADIAL	153928.0						2530.21	1.64%
Ga 417.206	876502.7						7541.78	0.86%
GaRADIAL	45276.9						1036.86	2.29%
Ag 328.068†	349.1	0.00243	mg/L	0.000323	0.00243	mg/L	0.000323	13.28%
Al 396.153†	-7.0	-0.0363	mg/L	0.00117	-0.0363	mg/L	0.00117	3.21%
As 188.979†	-9.4	-0.00485	mg/L	0.004254	-0.00485	mg/L	0.004254	87.70%
Ba 233.527†	3258.3	0.0475	mg/L	0.00025	0.0475	mg/L	0.00025	0.53%
Be 234.861†	56.2	0.00019	mg/L	0.000010	0.00019	mg/L	0.000010	5.26%
B 249.677†	1974.8	0.0453	mg/L	0.00183	0.0453	mg/L	0.00183	4.05%
Ca 227.546†	9042.3	55.8	mg/L	1.63	55.8	mg/L	1.63	2.93%
Cd 228.802†	-6.8	-0.00029	mg/L	0.000326	-0.00029	mg/L	0.000326	111.08%

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Co 228.616†	-15.0	-0.00094 mg/L	0.000405	-0.00094 mg/L	0.000405	43.14%
Cr 267.716†	83.4	0.00109 mg/L	0.000081	0.00109 mg/L	0.000081	7.40%
Cu 327.393†	220.5	0.00240 mg/L	0.000741	0.00240 mg/L	0.000741	30.82%
Fe 239.562†	10.9	-0.00359 mg/L	0.001797	-0.00359 mg/L	0.001797	50.04%
Mg 279.077†	9683.1	9.89 mg/L	0.138	9.89 mg/L	0.138	1.40%
Mn 257.610†	1566.0	0.00135 mg/L	0.000029	0.00135 mg/L	0.000029	2.12%
Mo 202.031†	38.9	0.00322 mg/L	0.000401	0.00322 mg/L	0.000401	12.47%
Ni 231.604†	-28.6	-0.00072 mg/L	0.000581	-0.00072 mg/L	0.000581	80.79%
Pb 220.353†	27.1	0.00378 mg/L	0.002191	0.00378 mg/L	0.002191	57.93%
Sb 206.836†	-2.1	-0.00109 mg/L	0.001057	-0.00109 mg/L	0.001057	97.34%
Se 196.026†	-0.4	-0.00518 mg/L	0.001301	-0.00518 mg/L	0.001301	25.10%
Si 251.611†	82990.1	2.97 mg/L	0.071	2.97 mg/L	0.071	2.37%
Sn 189.927†	-234.4	-0.0464 mg/L	0.00024	-0.0464 mg/L	0.00024	0.52%
Ti 334.940†	-6567.3	-0.00169 mg/L	0.000072	-0.00169 mg/L	0.000072	4.23%
Tl 190.801†	-16.9	-0.0143 mg/L	0.00729	-0.0143 mg/L	0.00729	50.93%
V 290.880†	1023.9	0.00718 mg/L	0.001504	0.00718 mg/L	0.001504	20.97%
Zn 206.200†	-3.1	-0.00034 mg/L	0.000278	-0.00034 mg/L	0.000278	81.68%
K 766.490†	2831.8	2.17 mg/L	0.054	2.17 mg/L	0.054	2.49%
Na 589.592†	224878.4	23.6 mg/L	0.12	23.6 mg/L	0.12	0.51%
Sr 407.771†	259425.8	0.282 mg/L	0.0090	0.282 mg/L	0.0090	3.18%
Li 670.784†	47.4	-0.00294 mg/L	0.000203	-0.00294 mg/L	0.000203	6.92%
P 214.914†	82.0	0.117 mg/L	0.0039	0.117 mg/L	0.0039	3.37%

Sequence No.: 27 **Autosampler Location: 117**
Sample ID: L1311021308 **Date Collected: 11/8/2013 4:41:57 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021308

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021308

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2315458.3						41219.12	1.78%
YRADIAL	152390.1						1508.70	0.99%
Ga 417.206	893434.2						18988.80	2.13%
GaRADIAL	44490.2						793.16	1.78%
Ag 328.068†	339.6	0.00238	mg/L	0.000194	0.00238	mg/L	0.000194	8.13%
Al 396.153†	-4.2	-0.0353	mg/L	0.00186	-0.0353	mg/L	0.00186	5.28%
As 188.979†	-12.1	-0.00685	mg/L	0.004411	-0.00685	mg/L	0.004411	64.36%
Ba 233.527†	3101.7	0.0453	mg/L	0.00070	0.0453	mg/L	0.00070	1.55%
Be 234.861†	97.9	0.00027	mg/L	0.000052	0.00027	mg/L	0.000052	19.48%
B 249.677†	1828.0	0.0423	mg/L	0.00089	0.0423	mg/L	0.00089	2.10%
Ca 227.546†	8550.0	52.8	mg/L	0.68	52.8	mg/L	0.68	1.28%
Cd 228.802†	-8.2	-0.00034	mg/L	0.000268	-0.00034	mg/L	0.000268	78.14%
Co 228.616†	-14.9	-0.00093	mg/L	0.000403	-0.00093	mg/L	0.000403	43.46%
Cr 267.716†	69.2	0.00093	mg/L	0.000060	0.00093	mg/L	0.000060	6.46%
Cu 327.393†	208.5	0.00233	mg/L	0.000544	0.00233	mg/L	0.000544	23.32%
Fe 239.562†	9.8	-0.00401	mg/L	0.002443	-0.00401	mg/L	0.002443	60.89%
Mg 279.077†	9631.2	9.84	mg/L	0.126	9.84	mg/L	0.126	1.28%
Mn 257.610†	1196.7	0.00060	mg/L	0.000091	0.00060	mg/L	0.000091	15.10%
Mo 202.031†	43.1	0.00350	mg/L	0.000176	0.00350	mg/L	0.000176	5.01%
Ni 231.604†	-18.8	-0.00040	mg/L	0.000329	-0.00040	mg/L	0.000329	81.64%
Pb 220.353†	19.2	0.00227	mg/L	0.001099	0.00227	mg/L	0.001099	48.34%
Sb 206.836†	-1.7	-0.00083	mg/L	0.001233	-0.00083	mg/L	0.001233	148.88%
Se 196.026†	2.0	-0.00171	mg/L	0.003166	-0.00171	mg/L	0.003166	185.06%
Si 251.611†	80293.7	2.88	mg/L	0.034	2.88	mg/L	0.034	1.19%
Sn 189.927†	-230.5	-0.0456	mg/L	0.00204	-0.0456	mg/L	0.00204	4.47%
Ti 334.940†	-6471.9	-0.00201	mg/L	0.000275	-0.00201	mg/L	0.000275	13.67%
Tl 190.801†	-20.3	-0.0166	mg/L	0.00424	-0.0166	mg/L	0.00424	25.48%
V 290.880†	1055.1	0.00737	mg/L	0.001689	0.00737	mg/L	0.001689	22.92%
Zn 206.200†	-6.3	-0.00047	mg/L	0.000200	-0.00047	mg/L	0.000200	42.15%
K 766.490†	2888.4	2.21	mg/L	0.069	2.21	mg/L	0.069	3.11%
Na 589.592†	238140.5	25.0	mg/L	0.12	25.0	mg/L	0.12	0.47%
Sr 407.771†	272711.1	0.297	mg/L	0.0088	0.297	mg/L	0.0088	2.98%
Li 670.784†	66.8	-0.00261	mg/L	0.000972	-0.00261	mg/L	0.000972	37.25%

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P 214.914†	74.0	0.107 mg/L	0.0070	0.107 mg/L	0.0070	6.51%

Sequence No.: 28 **Autosampler Location: 118**
Sample ID: L1311021310 WG451680-02 **Date Collected: 11/8/2013 4:44:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021310 WG451680-02

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021310 WG451680-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2351408.2						47143.61	2.00%
YRADIAL	157974.0						7820.39	4.95%
Ga 417.206	910314.0						17442.07	1.92%
GaRADIAL	46189.3						2866.47	6.21%
Ag 328.068†	299.3	0.00220	mg/L	0.000102	0.00220	mg/L	0.000102	4.63%
Al 396.153†	-5.4	-0.0357	mg/L	0.00213	-0.0357	mg/L	0.00213	5.96%
As 188.979†	-10.2	-0.00538	mg/L	0.001461	-0.00538	mg/L	0.001461	27.14%
Ba 233.527†	3325.6	0.0485	mg/L	0.00065	0.0485	mg/L	0.00065	1.35%
Be 234.861†	121.7	0.00031	mg/L	0.000064	0.00031	mg/L	0.000064	20.60%
B 249.677†	1826.4	0.0423	mg/L	0.00060	0.0423	mg/L	0.00060	1.42%
Ca 227.546†	9133.0	56.4	mg/L	0.18	56.4	mg/L	0.18	0.31%
Cd 228.802†	-5.7	-0.00024	mg/L	0.000128	-0.00024	mg/L	0.000128	52.87%
Co 228.616†	-12.5	-0.00080	mg/L	0.000208	-0.00080	mg/L	0.000208	26.02%
Cr 267.716†	61.2	0.00084	mg/L	0.000053	0.00084	mg/L	0.000053	6.30%
Cu 327.393†	178.6	0.00215	mg/L	0.000895	0.00215	mg/L	0.000895	41.73%
Fe 239.562†	15.7	-0.00174	mg/L	0.000917	-0.00174	mg/L	0.000917	52.71%
Mg 279.077†	9681.7	9.89	mg/L	0.087	9.89	mg/L	0.087	0.88%
Mn 257.610†	1481.2	0.00118	mg/L	0.000156	0.00118	mg/L	0.000156	13.28%
Mo 202.031†	36.6	0.00306	mg/L	0.000455	0.00306	mg/L	0.000455	14.89%
Ni 231.604†	-17.2	-0.00035	mg/L	0.000199	-0.00035	mg/L	0.000199	56.77%
Pb 220.353†	22.1	0.00282	mg/L	0.002284	0.00282	mg/L	0.002284	80.94%
Sb 206.836†	-2.4	-0.00122	mg/L	0.001126	-0.00122	mg/L	0.001126	92.19%
Se 196.026†	0.5	-0.00379	mg/L	0.005181	-0.00379	mg/L	0.005181	136.84%
Si 251.611†	84647.9	3.03	mg/L	0.013	3.03	mg/L	0.013	0.41%
Sn 189.927†	-236.9	-0.0469	mg/L	0.00054	-0.0469	mg/L	0.00054	1.15%
Ti 334.940†	-6946.4	-0.00214	mg/L	0.000133	-0.00214	mg/L	0.000133	6.20%
Tl 190.801†	-21.1	-0.0171	mg/L	0.00570	-0.0171	mg/L	0.00570	33.25%
V 290.880†	1127.2	0.00782	mg/L	0.001598	0.00782	mg/L	0.001598	20.45%
Zn 206.200†	-3.9	-0.00038	mg/L	0.000202	-0.00038	mg/L	0.000202	53.54%
K 766.490†	2813.7	2.15	mg/L	0.018	2.15	mg/L	0.018	0.85%
Na 589.592†	205389.8	21.6	mg/L	0.32	21.6	mg/L	0.32	1.49%
Sr 407.771†	246527.1	0.268	mg/L	0.0069	0.268	mg/L	0.0069	2.57%
Li 670.784†	68.1	-0.00259	mg/L	0.000755	-0.00259	mg/L	0.000755	29.17%
P 214.914†	76.2	0.110	mg/L	0.0203	0.110	mg/L	0.0203	18.52%

Sequence No.: 29 **Autosampler Location: 119**
Sample ID: L1311021310MS WG451680-07 **Date Collected: 11/8/2013 4:47:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021310MS WG451680-07

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021310MS WG451680-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2326457.0						27584.78	1.19%
YRADIAL	162644.3						4237.75	2.61%
Ga 417.206	878922.0						18772.64	2.14%

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GaRADIAL	46815.8					762.70	1.63%
Ag 328.068†	41372.0	0.195	mg/L	0.0089	0.195 mg/L	0.0089	4.57%
Al 396.153†	12997.5	4.85	mg/L	0.174	4.85 mg/L	0.174	3.58%
As 188.979†	254.4	0.184	mg/L	0.0040	0.184 mg/L	0.0040	2.15%
Ba 233.527†	37522.8	0.540	mg/L	0.0192	0.540 mg/L	0.0192	3.55%
Be 234.861†	13408.0	0.0238	mg/L	0.00103	0.0238 mg/L	0.00103	4.32%
B 249.677†	50081.4	1.01	mg/L	0.043	1.01 mg/L	0.043	4.31%
Ca 227.546†	9949.4	61.6	mg/L	1.47	61.6 mg/L	1.47	2.39%
Cd 228.802†	504.8	0.0216	mg/L	0.00076	0.0216 mg/L	0.00076	3.52%
Co 228.616†	1780.5	0.0955	mg/L	0.00082	0.0955 mg/L	0.00082	0.86%
Cr 267.716†	21655.6	0.247	mg/L	0.0103	0.247 mg/L	0.0103	4.16%
Cu 327.393†	37865.3	0.236	mg/L	0.0114	0.236 mg/L	0.0114	4.83%
Fe 239.562†	5273.1	2.00	mg/L	0.083	2.00 mg/L	0.083	4.16%
Mg 279.077†	14148.2	14.5	mg/L	0.51	14.5 mg/L	0.51	3.55%
Mn 257.610†	127120.6	0.255	mg/L	0.0095	0.255 mg/L	0.0095	3.72%
Mo 202.031†	7406.2	0.507	mg/L	0.0054	0.507 mg/L	0.0054	1.07%
Ni 231.604†	7638.4	0.246	mg/L	0.0021	0.246 mg/L	0.0021	0.85%
Pb 220.353†	1294.9	0.245	mg/L	0.0051	0.245 mg/L	0.0051	2.07%
Sb 206.836†	929.8	0.566	mg/L	0.0106	0.566 mg/L	0.0106	1.87%
Se 196.026†	133.1	0.190	mg/L	0.0012	0.190 mg/L	0.0012	0.64%
Si 251.611†	150713.2	5.38	mg/L	0.252	5.38 mg/L	0.252	4.69%
Sn 189.927†	-212.0	-0.0420	mg/L	0.00275	-0.0420 mg/L	0.00275	6.54%
Ti 334.940†	354948.5	0.510	mg/L	0.0215	0.510 mg/L	0.0215	4.22%
Tl 190.801†	348.4	0.236	mg/L	0.0012	0.236 mg/L	0.0012	0.53%
V 290.880†	81171.1	0.504	mg/L	0.0176	0.504 mg/L	0.0176	3.50%
Zn 206.200†	11401.6	0.483	mg/L	0.0050	0.483 mg/L	0.0050	1.03%
K 766.490†	34752.9	27.1	mg/L	0.12	27.1 mg/L	0.12	0.43%
Na 589.592†	429473.4	45.3	mg/L	0.23	45.3 mg/L	0.23	0.52%
Sr 407.771†	712194.8	0.775	mg/L	0.0109	0.775 mg/L	0.0109	1.41%
Li 670.784†	29239.2	0.491	mg/L	0.0191	0.491 mg/L	0.0191	3.90%
P 214.914†	-39.7	-0.0306	mg/L	0.02040	-0.0306 mg/L	0.02040	66.68%

Sequence No.: 30 **Autosampler Location: 120**
Sample ID: L1311021403 **Date Collected: 11/8/2013 4:50:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021403

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021403

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2330679.0						6601.64	0.28%
YRADIAL	166152.7						3850.71	2.32%
Ga 417.206	903270.3						9534.35	1.06%
GaRADIAL	47229.9						196.94	0.42%
Ag 328.068†	438.8	0.00277	mg/L	0.000673	0.00277	mg/L	0.000673	24.35%
Al 396.153†	1.7	-0.0331	mg/L	0.00316	-0.0331	mg/L	0.00316	9.53%
As 188.979†	-12.2	-0.00646	mg/L	0.001475	-0.00646	mg/L	0.001475	22.84%
Ba 233.527†	6022.7	0.0873	mg/L	0.00091	0.0873	mg/L	0.00091	1.04%
Be 234.861†	111.7	0.00035	mg/L	0.000011	0.00035	mg/L	0.000011	3.14%
B 249.677†	2727.6	0.0604	mg/L	0.00092	0.0604	mg/L	0.00092	1.52%
Ca 227.546†	11990.8	74.0	mg/L	1.18	74.0	mg/L	1.18	1.60%
Cd 228.802†	-4.8	-0.00019	mg/L	0.000175	-0.00019	mg/L	0.000175	91.64%
Co 228.616†	-4.6	-0.00038	mg/L	0.000134	-0.00038	mg/L	0.000134	34.95%
Cr 267.716†	79.6	0.00104	mg/L	0.000068	0.00104	mg/L	0.000068	6.47%
Cu 327.393†	240.5	0.00253	mg/L	0.000329	0.00253	mg/L	0.000329	13.01%
Fe 239.562†	117.8	0.0371	mg/L	0.00150	0.0371	mg/L	0.00150	4.03%
Mg 279.077†	11198.5	11.4	mg/L	0.17	11.4	mg/L	0.17	1.48%
Mn 257.610†	310067.5	0.624	mg/L	0.0020	0.624	mg/L	0.0020	0.32%
Mo 202.031†	48.4	0.00400	mg/L	0.000528	0.00400	mg/L	0.000528	13.22%
Ni 231.604†	34.0	0.00129	mg/L	0.000604	0.00129	mg/L	0.000604	46.79%
Pb 220.353†	9.4	0.00005	mg/L	0.002877	0.00005	mg/L	0.002877	>999.9%
Sb 206.836†	-3.8	-0.00208	mg/L	0.000119	-0.00208	mg/L	0.000119	5.71%
Se 196.026†	2.3	-0.00137	mg/L	0.001876	-0.00137	mg/L	0.001876	136.47%
Si 251.611†	84280.3	3.02	mg/L	0.043	3.02	mg/L	0.043	1.43%

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Sn 189.927†	-258.3	-0.0510	mg/L	0.00025	-0.0510	mg/L	0.00025	0.49%
Ti 334.940†	-8588.8	-0.00182	mg/L	0.000020	-0.00182	mg/L	0.000020	1.12%
Tl 190.801†	-16.2	-0.0146	mg/L	0.00603	-0.0146	mg/L	0.00603	41.39%
V 290.880†	1110.5	0.00766	mg/L	0.000851	0.00766	mg/L	0.000851	11.11%
Zn 206.200†	101.2	0.00406	mg/L	0.000104	0.00406	mg/L	0.000104	2.57%
K 766.490†	2601.9	1.96	mg/L	0.091	1.96	mg/L	0.091	4.66%
Na 589.592†	505572.4	53.4	mg/L	0.74	53.4	mg/L	0.74	1.39%
Sr 407.771†	342683.6	0.372	mg/L	0.0089	0.372	mg/L	0.0089	2.38%
Li 670.784†	270.7	0.00084	mg/L	0.000714	0.00084	mg/L	0.000714	85.32%
P 214.914†	33.2	0.0577	mg/L	0.01205	0.0577	mg/L	0.01205	20.89%

Sequence No.: 31 **Autosampler Location: 121**
Sample ID: L1311021405 **Date Collected: 11/8/2013 4:53:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021405

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311021405

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2063221.7						20091.43	0.97%
YRADIAL	154937.0						1630.21	1.05%
Ga 417.206	839246.0						13151.46	1.57%
GaRADIAL	45013.1						335.08	0.74%
Ag 328.068†	959.6	0.00441	mg/L	0.000366	0.00441	mg/L	0.000366	8.28%
Al 396.153†	-46.2	-0.0515	mg/L	0.01245	-0.0515	mg/L	0.01245	24.20%
As 188.979†	-13.7	-0.00451	mg/L	0.005223	-0.00451	mg/L	0.005223	115.85%
Ba 233.527†	279.9	0.00476	mg/L	0.000076	0.00476	mg/L	0.000076	1.61%
Be 234.861†	95.3	0.00028	mg/L	0.000069	0.00028	mg/L	0.000069	24.30%
B 249.677†	26372.5	0.535	mg/L	0.0175	0.535	mg/L	0.0175	3.27%
Ca 227.546†	34376.9	212	mg/L	6.3	212	mg/L	6.3	2.97%
Cd 228.802†	-7.8	-0.00031	mg/L	0.000179	-0.00031	mg/L	0.000179	57.12%
Co 228.616†	19.8	0.00102	mg/L	0.000503	0.00102	mg/L	0.000503	49.46%
Cr 267.716†	223.0	0.00269	mg/L	0.000049	0.00269	mg/L	0.000049	1.81%
Cu 327.393†	-284.2	-0.00075	mg/L	0.000769	-0.00075	mg/L	0.000769	102.93%
Fe 239.562†	35.5	0.00342	mg/L	0.003894	0.00342	mg/L	0.003894	113.98%
Mg 279.077†	125692.2	129	mg/L	1.1	129	mg/L	1.1	0.85%
Mn 257.610†	100289.2	0.200	mg/L	0.0047	0.200	mg/L	0.0047	2.34%
Mo 202.031†	96.9	0.00723	mg/L	0.000298	0.00723	mg/L	0.000298	4.12%
Ni 231.604†	40.4	0.00150	mg/L	0.000168	0.00150	mg/L	0.000168	11.21%
Pb 220.353†	22.6	0.00280	mg/L	0.003047	0.00280	mg/L	0.003047	108.74%
Sb 206.836†	-5.7	-0.00328	mg/L	0.002700	-0.00328	mg/L	0.002700	82.20%
Se 196.026†	6.5	0.00481	mg/L	0.008625	0.00481	mg/L	0.008625	179.47%
Si 251.611†	65789.4	2.36	mg/L	0.074	2.36	mg/L	0.074	3.12%
Sn 189.927†	-329.9	-0.0649	mg/L	0.00110	-0.0649	mg/L	0.00110	1.70%
Ti 334.940†	-24270.7	-0.00329	mg/L	0.000424	-0.00329	mg/L	0.000424	12.91%
Tl 190.801†	-40.4	-0.0304	mg/L	0.00371	-0.0304	mg/L	0.00371	12.19%
V 290.880†	3648.6	0.0204	mg/L	0.00374	0.0204	mg/L	0.00374	18.37%
Zn 206.200†	-8.2	-0.00054	mg/L	0.000661	-0.00054	mg/L	0.000661	122.68%
K 766.490†	17622.4	13.7	mg/L	0.24	13.7	mg/L	0.24	1.73%
Na 589.592†	Saturated2							
Sr 407.771†	4211238.6	4.58	mg/L	0.188	4.58	mg/L	0.188	4.10%
Li 670.784†	6781.2	0.111	mg/L	0.0011	0.111	mg/L	0.0011	0.95%
P 214.914†	190.3	0.248	mg/L	0.0172	0.248	mg/L	0.0172	6.93%

Sequence No.: 32 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 4:56:13 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow

Approved: November 11, 2013

All 172.0 kPa 0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2343340.7						7640.71	0.33%
YRADIAL	163262.4						1862.46	1.14%
Ga 417.206	874961.0						6302.57	0.72%
GaRADIAL	45606.9						485.93	1.07%
Ag 328.068†	83614.9	0.392	mg/L	0.0079	0.392	mg/L	0.0079	2.02%
QC value within limits for Ag 328.068 Recovery = 98.10%								
Al 396.153†	26721.8	10.0	mg/L	0.10	10.0	mg/L	0.10	1.00%
QC value within limits for Al 396.153 Recovery = 100.15%								
As 188.979†	551.1	0.396	mg/L	0.0041	0.396	mg/L	0.0041	1.04%
QC value within limits for As 188.979 Recovery = 99.10%								
Ba 233.527†	70674.7	1.02	mg/L	0.015	1.02	mg/L	0.015	1.49%
QC value within limits for Ba 233.527 Recovery = 101.61%								
Be 234.861†	27621.1	0.0489	mg/L	0.00095	0.0489	mg/L	0.00095	1.94%
QC value within limits for Be 234.861 Recovery = 97.70%								
B 249.677†	24738.7	0.499	mg/L	0.0107	0.499	mg/L	0.0107	2.14%
QC value within limits for B 249.677 Recovery = 99.73%								
Ca 227.546†	1567.7	10.2	mg/L	0.02	10.2	mg/L	0.02	0.22%
QC value within limits for Ca 227.546 Recovery = 101.71%								
Cd 228.802†	1084.8	0.0465	mg/L	0.00022	0.0465	mg/L	0.00022	0.47%
QC value within limits for Cd 228.802 Recovery = 93.06%								
Co 228.616†	3788.9	0.203	mg/L	0.0025	0.203	mg/L	0.0025	1.22%
QC value within limits for Co 228.616 Recovery = 101.68%								
Cr 267.716†	43984.1	0.501	mg/L	0.0097	0.501	mg/L	0.0097	1.94%
QC value within limits for Cr 267.716 Recovery = 100.25%								
Cu 327.393†	79487.8	0.493	mg/L	0.0118	0.493	mg/L	0.0118	2.40%
QC value within limits for Cu 327.393 Recovery = 98.63%								
Fe 239.562†	10579.3	4.02	mg/L	0.068	4.02	mg/L	0.068	1.68%
QC value within limits for Fe 239.562 Recovery = 100.55%								
Mg 279.077†	9831.7	10.1	mg/L	0.05	10.1	mg/L	0.05	0.47%
QC value within limits for Mg 279.077 Recovery = 100.58%								
Mn 257.610†	258837.7	0.521	mg/L	0.0071	0.521	mg/L	0.0071	1.37%
QC value within limits for Mn 257.610 Recovery = 104.21%								
Mo 202.031†	14765.7	1.01	mg/L	0.013	1.01	mg/L	0.013	1.31%
QC value within limits for Mo 202.031 Recovery = 100.93%								
Ni 231.604†	15879.3	0.510	mg/L	0.0077	0.510	mg/L	0.0077	1.51%
QC value within limits for Ni 231.604 Recovery = 102.06%								
Pb 220.353†	2698.3	0.511	mg/L	0.0048	0.511	mg/L	0.0048	0.95%
QC value within limits for Pb 220.353 Recovery = 102.19%								
Sb 206.836†	1915.8	1.17	mg/L	0.009	1.17	mg/L	0.009	0.73%
QC value within limits for Sb 206.836 Recovery = 97.19%								
Se 196.026†	274.5	0.397	mg/L	0.0033	0.397	mg/L	0.0033	0.82%
QC value within limits for Se 196.026 Recovery = 99.22%								
Si 251.611†	138818.5	4.95	mg/L	0.084	4.95	mg/L	0.084	1.69%
QC value within limits for Si 251.611 Recovery = 99.04%								
Sn 189.927†	5242.7	1.02	mg/L	0.012	1.02	mg/L	0.012	1.17%
QC value within limits for Sn 189.927 Recovery = 101.54%								
Ti 334.940†	715203.6	1.01	mg/L	0.010	1.01	mg/L	0.010	0.97%
QC value within limits for Ti 334.940 Recovery = 101.20%								
Tl 190.801†	777.3	0.529	mg/L	0.0086	0.529	mg/L	0.0086	1.62%
QC value within limits for Tl 190.801 Recovery = 105.79%								
V 290.880†	163552.0	1.01	mg/L	0.015	1.01	mg/L	0.015	1.46%
QC value within limits for V 290.880 Recovery = 101.45%								
Zn 206.200†	24084.1	1.02	mg/L	0.012	1.02	mg/L	0.012	1.22%
QC value within limits for Zn 206.200 Recovery = 102.10%								
K 766.490†	65144.1	51.2	mg/L	0.39	51.2	mg/L	0.39	0.77%
QC value within limits for K 766.490 Recovery = 102.45%								
Na 589.592†	475836.7	50.2	mg/L	0.32	50.2	mg/L	0.32	0.65%
QC value within limits for Na 589.592 Recovery = 100.43%								
Sr 407.771†	947624.3	1.03	mg/L	0.008	1.03	mg/L	0.008	0.76%
QC value within limits for Sr 407.771 Recovery = 103.31%								
Li 670.784†	60506.0	1.02	mg/L	0.008	1.02	mg/L	0.008	0.76%
QC value within limits for Li 670.784 Recovery = 101.94%								
P 214.914†	8300.8	10.1	mg/L	0.13	10.1	mg/L	0.13	1.31%
QC value within limits for P 214.914 Recovery = 100.76%								

All analyte(s) passed QC.

Approved: November 11, 2013

Sheri L. Pabgard

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/8/2013 4:58:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2342425.4						24978.46	1.07%
YRADIAL	157786.5						2454.12	1.56%
Ga 417.206	855734.3						10644.73	1.24%
GaRADIAL	44372.8						330.01	0.74%
Ag 328.068†	55.5	0.00112	mg/L	0.000394	0.00112	mg/L	0.000394	35.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	20.7	-0.0257	mg/L	0.00208	-0.0257	mg/L	0.00208	8.07%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.5	0.00187	mg/L	0.001754	0.00187	mg/L	0.001754	94.02%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-14.8	0.00053	mg/L	0.000069	0.00053	mg/L	0.000069	13.04%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	65.4	0.00021	mg/L	0.000036	0.00021	mg/L	0.000036	17.22%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	458.5	0.0148	mg/L	0.00113	0.0148	mg/L	0.00113	7.65%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	13.7	0.118	mg/L	0.0333	0.118	mg/L	0.0333	28.30%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-6.0	-0.00030	mg/L	0.000024	-0.00030	mg/L	0.000024	8.27%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-8.5	-0.00060	mg/L	0.000352	-0.00060	mg/L	0.000352	59.09%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-4.6	0.00009	mg/L	0.000168	0.00009	mg/L	0.000168	191.68%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	253.0	0.00261	mg/L	0.000395	0.00261	mg/L	0.000395	15.11%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	10.6	-0.00351	mg/L	0.000715	-0.00351	mg/L	0.000715	20.39%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	39.0	0.0232	mg/L	0.02938	0.0232	mg/L	0.02938	126.54%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	68.2	-0.00167	mg/L	0.000009	-0.00167	mg/L	0.000009	0.52%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	7.7	0.00109	mg/L	0.000373	0.00109	mg/L	0.000373	34.27%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-7.5	-0.00004	mg/L	0.000372	-0.00004	mg/L	0.000372	848.23%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.6	0.00009	mg/L	0.000745	0.00009	mg/L	0.000745	800.68%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	0.2	0.00034	mg/L	0.000937	0.00034	mg/L	0.000937	272.81%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.2	-0.00436	mg/L	0.000877	-0.00436	mg/L	0.000877	20.11%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	94.6	0.0174	mg/L	0.00199	0.0174	mg/L	0.00199	11.43%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	34.7	0.00579	mg/L	0.000805	0.00579	mg/L	0.000805	13.90%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-164.7	-0.00099	mg/L	0.000015	-0.00099	mg/L	0.000015	1.55%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-3.0	-0.00502	mg/L	0.001218	-0.00502	mg/L	0.001218	24.27%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	791.2	0.00599	mg/L	0.001370	0.00599	mg/L	0.001370	22.86%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-40.0	-0.00190	mg/L	0.000162	-0.00190	mg/L	0.000162	8.53%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	78.3	0.0577	mg/L	0.03662	0.0577	mg/L	0.03662	63.46%
QC value within limits for K 766.490 Recovery = Not calculated								

Approved: November 11, 2013

Na 589.592†	1947.7	0.196	mg/L	0.0512	0.196	mg/L	0.0512	26.15%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	366.3	0.00177	mg/L	0.000162	0.00177	mg/L	0.000162	9.14%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	0.6	-0.00373	mg/L	0.000805	-0.00373	mg/L	0.000805	21.58%
QC value within limits for Li 670.784 Recovery = Not calculated								
P 214.914†	16.3	0.0372	mg/L	0.01325	0.0372	mg/L	0.01325	35.62%
QC value within limits for P 214.914 Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 34 **Autosampler Location: 122**
Sample ID: L1311021407 **Date Collected: 11/8/2013 5:01:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021407

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021407

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2301907.6						23379.97	1.02%
YRADIAL	160787.9						4322.16	2.69%
Ga 417.206	893403.6						14489.30	1.62%
GaRADIAL	46024.0						1878.23	4.08%
Ag 328.068†	434.6	0.00274	mg/L	0.000507	0.00274	mg/L	0.000507	18.53%
Al 396.153†	13.4	-0.0287	mg/L	0.00311	-0.0287	mg/L	0.00311	10.85%
As 188.979†	-10.4	-0.00522	mg/L	0.005007	-0.00522	mg/L	0.005007	95.97%
Ba 233.527†	3153.9	0.0460	mg/L	0.00032	0.0460	mg/L	0.00032	0.69%
Be 234.861†	103.3	0.00028	mg/L	0.000038	0.00028	mg/L	0.000038	13.70%
B 249.677†	3323.7	0.0724	mg/L	0.00272	0.0724	mg/L	0.00272	3.76%
Ca 227.546†	11534.3	71.2	mg/L	0.56	71.2	mg/L	0.56	0.78%
Cd 228.802†	-9.5	-0.00041	mg/L	0.000098	-0.00041	mg/L	0.000098	24.14%
Co 228.616†	-2.4	-0.00025	mg/L	0.000388	-0.00025	mg/L	0.000388	153.89%
Cr 267.716†	99.7	0.00128	mg/L	0.000285	0.00128	mg/L	0.000285	22.34%
Cu 327.393†	160.5	0.00203	mg/L	0.000206	0.00203	mg/L	0.000206	10.16%
Fe 239.562†	29.1	0.00319	mg/L	0.001295	0.00319	mg/L	0.001295	40.58%
Mg 279.077†	17756.4	18.1	mg/L	0.10	18.1	mg/L	0.10	0.58%
Mn 257.610†	2577.7	0.00339	mg/L	0.000081	0.00339	mg/L	0.000081	2.39%
Mo 202.031†	48.4	0.00387	mg/L	0.000522	0.00387	mg/L	0.000522	13.51%
Ni 231.604†	-18.4	-0.00039	mg/L	0.000209	-0.00039	mg/L	0.000209	53.42%
Pb 220.353†	15.1	0.00150	mg/L	0.001673	0.00150	mg/L	0.001673	111.73%
Sb 206.836†	-0.1	0.00012	mg/L	0.001780	0.00012	mg/L	0.001780	>999.9%
Se 196.026†	5.9	0.00402	mg/L	0.008796	0.00402	mg/L	0.008796	218.91%
Si 251.611†	101967.8	3.65	mg/L	0.051	3.65	mg/L	0.051	1.41%
Sn 189.927†	-247.5	-0.0489	mg/L	0.00168	-0.0489	mg/L	0.00168	3.44%
Ti 334.940†	-8222.0	-0.00173	mg/L	0.000120	-0.00173	mg/L	0.000120	6.94%
Tl 190.801†	-25.2	-0.0199	mg/L	0.00510	-0.0199	mg/L	0.00510	25.58%
V 290.880†	1351.3	0.00899	mg/L	0.000702	0.00899	mg/L	0.000702	7.81%
Zn 206.200†	37.0	0.00136	mg/L	0.000465	0.00136	mg/L	0.000465	34.33%
K 766.490†	3896.8	2.93	mg/L	0.059	2.93	mg/L	0.059	2.00%
Na 589.592†	765902.9	81.2	mg/L	2.13	81.2	mg/L	2.13	2.62%
Sr 407.771†	693151.9	0.754	mg/L	0.0207	0.754	mg/L	0.0207	2.75%
Li 670.784†	541.9	0.00542	mg/L	0.000537	0.00542	mg/L	0.000537	9.91%
P 214.914†	40.0	0.0659	mg/L	0.01211	0.0659	mg/L	0.01211	18.37%

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Sequence No.: 35 **Autosampler Location: 123**
Sample ID: L1311021502 **Date Collected: 11/8/2013 5:04:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021502

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311021502

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2212809.8						26774.07	1.21%
YRADIAL	153888.1						4461.85	2.90%
Ga 417.206	895331.3						9249.96	1.03%
GaRADIAL	46384.5						1969.85	4.25%
Ag 328.068†	2051.3	0.0100	mg/L	0.00040	0.0100	mg/L	0.00040	4.01%
Al 396.153†	297.2	0.0788	mg/L	0.00261	0.0788	mg/L	0.00261	3.31%
As 188.979†	-16.2	-0.00159	mg/L	0.001400	-0.00159	mg/L	0.001400	88.25%
Ba 233.527†	425.1	0.00685	mg/L	0.000029	0.00685	mg/L	0.000029	0.42%
Be 234.861†	129.9	0.00042	mg/L	0.000038	0.00042	mg/L	0.000038	8.90%
B 249.677†	13955.1	0.286	mg/L	0.0046	0.286	mg/L	0.0046	1.61%
Ca 227.546†	69204.0	427	mg/L	6.0	427	mg/L	6.0	1.41%
Cd 228.802†	-8.6	-0.00034	mg/L	0.000093	-0.00034	mg/L	0.000093	27.12%
Co 228.616†	21.6	0.00118	mg/L	0.000229	0.00118	mg/L	0.000229	19.36%
Cr 267.716†	160.9	0.00198	mg/L	0.000205	0.00198	mg/L	0.000205	10.36%
Cu 327.393†	-471.8	-0.00198	mg/L	0.000562	-0.00198	mg/L	0.000562	28.43%
Fe 239.562†	-13.5	-0.0140	mg/L	0.00229	-0.0140	mg/L	0.00229	16.37%
Mg 279.077†	64193.2	65.7	mg/L	1.06	65.7	mg/L	1.06	1.61%
Mn 257.610†	477115.0	0.961	mg/L	0.0056	0.961	mg/L	0.0056	0.59%
Mo 202.031†	34.8	0.00314	mg/L	0.000158	0.00314	mg/L	0.000158	5.04%
Ni 231.604†	123.0	0.00415	mg/L	0.000457	0.00415	mg/L	0.000457	11.00%
Pb 220.353†	6.2	-0.00074	mg/L	0.001279	-0.00074	mg/L	0.001279	171.89%
Sb 206.836†	-7.6	-0.00443	mg/L	0.002097	-0.00443	mg/L	0.002097	47.36%
Se 196.026†	-2.8	-0.00900	mg/L	0.003616	-0.00900	mg/L	0.003616	40.16%
Si 251.611†	12431.7	0.457	mg/L	0.0081	0.457	mg/L	0.0081	1.77%
Sn 189.927†	-376.4	-0.0739	mg/L	0.00278	-0.0739	mg/L	0.00278	3.76%
Ti 334.940†	-47966.7	-0.00458	mg/L	0.000669	-0.00458	mg/L	0.000669	14.62%
Tl 190.801†	-33.4	-0.0270	mg/L	0.00921	-0.0270	mg/L	0.00921	34.09%
V 290.880†	2242.4	0.0133	mg/L	0.00121	0.0133	mg/L	0.00121	9.11%
Zn 206.200†	-21.2	-0.00110	mg/L	0.000056	-0.00110	mg/L	0.000056	5.15%
K 766.490†	10946.2	8.27	mg/L	0.229	8.27	mg/L	0.229	2.77%
Na 589.592†	2006436.6	217	mg/L	8.4	217	mg/L	8.4	3.85%
Sr 407.771†	1060365.8	1.14	mg/L	0.020	1.14	mg/L	0.020	1.76%
Li 670.784†	18663.0	0.312	mg/L	0.0057	0.312	mg/L	0.0057	1.81%
P 214.914†	39.9	0.0659	mg/L	0.02159	0.0659	mg/L	0.02159	32.76%

Sequence No.: 36 **Autosampler Location: 124**
Sample ID: L1311021508 **Date Collected: 11/8/2013 5:07:28 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021508

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021508

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2185926.2						8098.62	0.37%
YRADIAL	155356.4						3990.91	2.57%
Ga 417.206	881000.3						4124.28	0.47%
GaRADIAL	46779.5						344.11	0.74%
Ag 328.068†	1832.4	0.00909	mg/L	0.000498	0.00909	mg/L	0.000498	5.47%
Al 396.153†	101.8	0.00485	mg/L	0.003572	0.00485	mg/L	0.003572	73.67%
As 188.979†	-14.6	-0.00146	mg/L	0.001615	-0.00146	mg/L	0.001615	110.43%
Ba 233.527†	1052.9	0.0159	mg/L	0.00015	0.0159	mg/L	0.00015	0.94%
Be 234.861†	93.1	0.00032	mg/L	0.000013	0.00032	mg/L	0.000013	4.13%
B 249.677†	12477.0	0.256	mg/L	0.0078	0.256	mg/L	0.0078	3.05%
Ca 227.546†	61770.8	381	mg/L	13.4	381	mg/L	13.4	3.52%
Cd 228.802†	-3.0	-0.00010	mg/L	0.000314	-0.00010	mg/L	0.000314	313.54%
Co 228.616†	14.3	0.00077	mg/L	0.000501	0.00077	mg/L	0.000501	65.22%
Cr 267.716†	164.9	0.00202	mg/L	0.000287	0.00202	mg/L	0.000287	14.17%
Cu 327.393†	-371.6	-0.00134	mg/L	0.000551	-0.00134	mg/L	0.000551	41.14%
Fe 239.562†	35.6	0.00483	mg/L	0.001712	0.00483	mg/L	0.001712	35.44%

Approved: November 11, 2013

Mg 279.077†	57711.5	59.0	mg/L	0.96	59.0	mg/L	0.96	1.63%
Mn 257.610†	313121.2	0.630	mg/L	0.0163	0.630	mg/L	0.0163	2.59%
Mo 202.031†	41.9	0.00356	mg/L	0.000646	0.00356	mg/L	0.000646	18.17%
Ni 231.604†	83.5	0.00289	mg/L	0.000061	0.00289	mg/L	0.000061	2.12%
Pb 220.353†	7.8	-0.00025	mg/L	0.001254	-0.00025	mg/L	0.001254	508.83%
Sb 206.836†	-4.7	-0.00268	mg/L	0.000604	-0.00268	mg/L	0.000604	22.55%
Se 196.026†	-1.1	-0.00634	mg/L	0.010314	-0.00634	mg/L	0.010314	162.80%
Si 251.611†	24535.2	0.889	mg/L	0.0288	0.889	mg/L	0.0288	3.24%
Sn 189.927†	-387.0	-0.0760	mg/L	0.00098	-0.0760	mg/L	0.00098	1.29%
Ti 334.940†	-42960.3	-0.00437	mg/L	0.000804	-0.00437	mg/L	0.000804	18.38%
Tl 190.801†	-32.3	-0.0258	mg/L	0.00148	-0.0258	mg/L	0.00148	5.72%
V 290.880†	2390.2	0.0144	mg/L	0.00185	0.0144	mg/L	0.00185	12.86%
Zn 206.200†	161.8	0.00663	mg/L	0.000288	0.00663	mg/L	0.000288	4.35%
K 766.490†	10329.9	7.82	mg/L	0.224	7.82	mg/L	0.224	2.86%
Na 589.592†	1760352.6	190	mg/L	2.8	190	mg/L	2.8	1.50%
Sr 407.771†	1000076.3	1.08	mg/L	0.044	1.08	mg/L	0.044	4.10%
Li 670.784†	15298.2	0.255	mg/L	0.0037	0.255	mg/L	0.0037	1.44%
P 214.914†	59.9	0.0901	mg/L	0.01156	0.0901	mg/L	0.01156	12.83%

Sequence No.: 37 **Autosampler Location: 125**
Sample ID: L1311021510 **Date Collected: 11/8/2013 5:10:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021510

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021510

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2322527.9						4250.59	0.18%
YRADIAL	157092.7						1517.44	0.97%
Ga 417.206	899559.2						6889.89	0.77%
GaRADIAL	44991.3						1318.70	2.93%
Ag 328.068†	466.1	0.00293	mg/L	0.000342	0.00293	mg/L	0.000342	11.70%
Al 396.153†	36.1	-0.0201	mg/L	0.00359	-0.0201	mg/L	0.00359	17.90%
As 188.979†	-14.9	-0.00851	mg/L	0.004531	-0.00851	mg/L	0.004531	53.25%
Ba 233.527†	4466.2	0.0649	mg/L	0.00027	0.0649	mg/L	0.00027	0.42%
Be 234.861†	114.8	0.00029	mg/L	0.000015	0.00029	mg/L	0.000015	5.03%
B 249.677†	2433.1	0.0545	mg/L	0.00055	0.0545	mg/L	0.00055	1.01%
Ca 227.546†	11142.5	68.8	mg/L	0.87	68.8	mg/L	0.87	1.26%
Cd 228.802†	-9.2	-0.00038	mg/L	0.000111	-0.00038	mg/L	0.000111	29.32%
Co 228.616†	-12.6	-0.00081	mg/L	0.000331	-0.00081	mg/L	0.000331	40.96%
Cr 267.716†	82.7	0.00108	mg/L	0.000033	0.00108	mg/L	0.000033	3.05%
Cu 327.393†	148.8	0.00196	mg/L	0.000780	0.00196	mg/L	0.000780	39.75%
Fe 239.562†	76.5	0.0212	mg/L	0.00233	0.0212	mg/L	0.00233	10.97%
Mg 279.077†	18678.4	19.1	mg/L	0.22	19.1	mg/L	0.22	1.15%
Mn 257.610†	6039.3	0.0104	mg/L	0.00011	0.0104	mg/L	0.00011	1.06%
Mo 202.031†	42.2	0.00345	mg/L	0.000114	0.00345	mg/L	0.000114	3.30%
Ni 231.604†	-5.2	0.00003	mg/L	0.000092	0.00003	mg/L	0.000092	272.45%
Pb 220.353†	24.0	0.00319	mg/L	0.001256	0.00319	mg/L	0.001256	39.35%
Sb 206.836†	-3.3	-0.00179	mg/L	0.002465	-0.00179	mg/L	0.002465	138.00%
Se 196.026†	1.7	-0.00214	mg/L	0.004376	-0.00214	mg/L	0.004376	204.03%
Si 251.611†	96643.1	3.46	mg/L	0.015	3.46	mg/L	0.015	0.43%
Sn 189.927†	-256.3	-0.0506	mg/L	0.00156	-0.0506	mg/L	0.00156	3.09%
Ti 334.940†	-7753.4	-0.00143	mg/L	0.000138	-0.00143	mg/L	0.000138	9.68%
Tl 190.801†	-20.0	-0.0164	mg/L	0.00370	-0.0164	mg/L	0.00370	22.48%
V 290.880†	1372.8	0.00910	mg/L	0.000554	0.00910	mg/L	0.000554	6.09%
Zn 206.200†	142.3	0.00580	mg/L	0.000372	0.00580	mg/L	0.000372	6.42%
K 766.490†	4069.2	3.13	mg/L	0.041	3.13	mg/L	0.041	1.32%
Na 589.592†	187218.6	19.7	mg/L	0.64	19.7	mg/L	0.64	3.26%
Sr 407.771†	533835.4	0.581	mg/L	0.0192	0.581	mg/L	0.0192	3.31%
Li 670.784†	328.5	0.00181	mg/L	0.000422	0.00181	mg/L	0.000422	23.26%
P 214.914†	50.5	0.0787	mg/L	0.00779	0.0787	mg/L	0.00779	9.90%

Sequence No.: 38 **Autosampler Location: 126**

Approved: November 11, 2013

Sample ID: L1311021513 **Date Collected: 11/8/2013 5:13:37 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021513

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021513

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2319788.4						25031.79	1.08%
YRADIAL	155689.2						928.30	0.60%
Ga 417.206	901256.3						14155.47	1.57%
GaRADIAL	44744.2						864.00	1.93%
Ag 328.068†	360.7	0.00243	mg/L	0.000279	0.00243	mg/L	0.000279	11.47%
Al 396.153†	28.8	-0.0228	mg/L	0.00144	-0.0228	mg/L	0.00144	6.29%
As 188.979†	-16.3	-0.00963	mg/L	0.000688	-0.00963	mg/L	0.000688	7.14%
Ba 233.527†	4560.2	0.0662	mg/L	0.00057	0.0662	mg/L	0.00057	0.86%
Be 234.861†	100.4	0.00027	mg/L	0.000053	0.00027	mg/L	0.000053	19.55%
B 249.677†	2360.0	0.0530	mg/L	0.00120	0.0530	mg/L	0.00120	2.26%
Ca 227.546†	10705.4	66.1	mg/L	0.96	66.1	mg/L	0.96	1.45%
Cd 228.802†	-10.0	-0.00041	mg/L	0.000177	-0.00041	mg/L	0.000177	43.38%
Co 228.616†	-5.2	-0.00041	mg/L	0.000457	-0.00041	mg/L	0.000457	110.97%
Cr 267.716†	95.5	0.00123	mg/L	0.000219	0.00123	mg/L	0.000219	17.82%
Cu 327.393†	212.6	0.00235	mg/L	0.000931	0.00235	mg/L	0.000931	39.55%
Fe 239.562†	51.1	0.0116	mg/L	0.00348	0.0116	mg/L	0.00348	29.96%
Mg 279.077†	16274.8	16.6	mg/L	0.22	16.6	mg/L	0.22	1.30%
Mn 257.610†	6051.2	0.0104	mg/L	0.00008	0.0104	mg/L	0.00008	0.82%
Mo 202.031†	48.1	0.00385	mg/L	0.000298	0.00385	mg/L	0.000298	7.75%
Ni 231.604†	-6.3	0.00000	mg/L	0.000108	0.00000	mg/L	0.000108	>999.9%
Pb 220.353†	13.6	0.00121	mg/L	0.000657	0.00121	mg/L	0.000657	54.50%
Sb 206.836†	-2.2	-0.00116	mg/L	0.001182	-0.00116	mg/L	0.001182	101.78%
Se 196.026†	0.7	-0.00350	mg/L	0.003495	-0.00350	mg/L	0.003495	99.96%
Si 251.611†	93127.5	3.33	mg/L	0.039	3.33	mg/L	0.039	1.18%
Sn 189.927†	-252.7	-0.0499	mg/L	0.00069	-0.0499	mg/L	0.00069	1.39%
Ti 334.940†	-7392.9	-0.00132	mg/L	0.000154	-0.00132	mg/L	0.000154	11.65%
Tl 190.801†	-20.7	-0.0169	mg/L	0.00346	-0.0169	mg/L	0.00346	20.47%
V 290.880†	1293.9	0.00867	mg/L	0.000758	0.00867	mg/L	0.000758	8.74%
Zn 206.200†	13.6	0.00037	mg/L	0.000224	0.00037	mg/L	0.000224	60.96%
K 766.490†	4111.7	3.16	mg/L	0.055	3.16	mg/L	0.055	1.73%
Na 589.592†	168827.0	17.7	mg/L	0.23	17.7	mg/L	0.23	1.30%
Sr 407.771†	533479.2	0.580	mg/L	0.0146	0.580	mg/L	0.0146	2.52%
Li 670.784†	477.7	0.00434	mg/L	0.000398	0.00434	mg/L	0.000398	9.18%
P 214.914†	55.8	0.0851	mg/L	0.01319	0.0851	mg/L	0.01319	15.49%

Sequence No.: 39 **Autosampler Location: 127**
Sample ID: L1311021602 **Date Collected: 11/8/2013 5:16:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311021602

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311021602

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2204587.3						16271.30	0.74%
YRADIAL	151897.9						2048.99	1.35%
Ga 417.206	891785.5						4243.82	0.48%
GaRADIAL	45506.8						628.01	1.38%
Ag 328.068†	1377.9	0.00690	mg/L	0.000450	0.00690	mg/L	0.000450	6.53%
Al 396.153†	20.8	-0.0259	mg/L	0.00172	-0.0259	mg/L	0.00172	6.64%
As 188.979†	-13.0	-0.00255	mg/L	0.003852	-0.00255	mg/L	0.003852	151.07%

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Ba 233.527†	770.7	0.0118 mg/L	0.00012	0.0118 mg/L	0.00012	1.00%
Be 234.861†	123.6	0.00041 mg/L	0.000032	0.00041 mg/L	0.000032	7.78%
B 249.677†	8868.2	0.184 mg/L	0.0026	0.184 mg/L	0.0026	1.41%
Ca 227.546†	45387.6	280 mg/L	3.8	280 mg/L	3.8	1.34%
Cd 228.802†	-6.8	-0.00027 mg/L	0.000169	-0.00027 mg/L	0.000169	63.40%
Co 228.616†	48.4	0.00258 mg/L	0.000086	0.00258 mg/L	0.000086	3.34%
Cr 267.716†	178.8	0.00218 mg/L	0.000031	0.00218 mg/L	0.000031	1.42%
Cu 327.393†	-258.5	-0.00064 mg/L	0.000723	-0.00064 mg/L	0.000723	112.77%
Fe 239.562†	29.0	0.00140 mg/L	0.000769	0.00140 mg/L	0.000769	54.91%
Mg 279.077†	102796.6	105 mg/L	1.4	105 mg/L	1.4	1.29%
Mn 257.610†	466308.8	0.939 mg/L	0.0092	0.939 mg/L	0.0092	0.98%
Mo 202.031†	52.3	0.00433 mg/L	0.000655	0.00433 mg/L	0.000655	15.10%
Ni 231.604†	307.1	0.0101 mg/L	0.00043	0.0101 mg/L	0.00043	4.23%
Pb 220.353†	15.4	0.00100 mg/L	0.000776	0.00100 mg/L	0.000776	77.80%
Sb 206.836†	-7.2	-0.00419 mg/L	0.002567	-0.00419 mg/L	0.002567	61.26%
Se 196.026†	-1.6	-0.00727 mg/L	0.004903	-0.00727 mg/L	0.004903	67.44%
Si 251.611†	125573.6	4.49 mg/L	0.071	4.49 mg/L	0.071	1.58%
Sn 189.927†	-346.7	-0.0682 mg/L	0.00213	-0.0682 mg/L	0.00213	3.13%
Ti 334.940†	-31583.9	-0.00344 mg/L	0.000630	-0.00344 mg/L	0.000630	18.29%
Tl 190.801†	-30.4	-0.0247 mg/L	0.00268	-0.0247 mg/L	0.00268	10.87%
V 290.880†	2519.2	0.0140 mg/L	0.00132	0.0140 mg/L	0.00132	9.42%
Zn 206.200†	-25.4	-0.00127 mg/L	0.000073	-0.00127 mg/L	0.000073	5.74%
K 766.490†	11810.9	8.90 mg/L	0.216	8.90 mg/L	0.216	2.42%
Na 589.592†	2394894.1	261 mg/L	5.1	261 mg/L	5.1	1.94%
Sr 407.771†	1224428.5	1.33 mg/L	0.040	1.33 mg/L	0.040	3.00%
Li 670.784†	21051.9	0.352 mg/L	0.0029	0.352 mg/L	0.0029	0.83%
P 214.914†	46.2	0.0735 mg/L	0.01864	0.0735 mg/L	0.01864	25.38%

Sequence No.: 40 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 5:19:46 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2349948.7						21451.64	0.91%
YRADIAL	161963.9						5247.11	3.24%
Ga 417.206	880115.3						6588.21	0.75%
GaRADIAL	45164.6						1035.49	2.29%
Ag 328.068†	84244.1	0.395	mg/L	0.0044	0.395	mg/L	0.0044	1.11%
QC value within limits for Ag 328.068 Recovery = 98.84%								
Al 396.153†	27334.6	10.2	mg/L	0.03	10.2	mg/L	0.03	0.25%
QC value within limits for Al 396.153 Recovery = 102.46%								
As 188.979†	550.8	0.396	mg/L	0.0085	0.396	mg/L	0.0085	2.15%
QC value within limits for As 188.979 Recovery = 99.03%								
Ba 233.527†	71577.7	1.03	mg/L	0.007	1.03	mg/L	0.007	0.72%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 234.861†	27898.7	0.0493	mg/L	0.00050	0.0493	mg/L	0.00050	1.00%
QC value within limits for Be 234.861 Recovery = 98.68%								
B 249.677†	24481.6	0.493	mg/L	0.0094	0.493	mg/L	0.0094	1.90%
QC value within limits for B 249.677 Recovery = 98.69%								
Ca 227.546†	1602.1	10.4	mg/L	0.21	10.4	mg/L	0.21	2.05%
QC value within limits for Ca 227.546 Recovery = 103.88%								
Cd 228.802†	1094.6	0.0470	mg/L	0.00042	0.0470	mg/L	0.00042	0.89%
QC value within limits for Cd 228.802 Recovery = 93.94%								
Co 228.616†	3836.3	0.206	mg/L	0.0043	0.206	mg/L	0.0043	2.07%
QC value within limits for Co 228.616 Recovery = 102.96%								
Cr 267.716†	44701.1	0.509	mg/L	0.0011	0.509	mg/L	0.0011	0.21%
QC value within limits for Cr 267.716 Recovery = 101.88%								
Cu 327.393†	80153.1	0.497	mg/L	0.0047	0.497	mg/L	0.0047	0.95%
QC value within limits for Cu 327.393 Recovery = 99.46%								
Fe 239.562†	10740.1	4.08	mg/L	0.004	4.08	mg/L	0.004	0.10%
QC value within limits for Fe 239.562 Recovery = 102.09%								

Approved: November 11, 2013

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Mg 279.077†            10083.1        10.3 mg/L          0.07        10.3 mg/L          0.07   0.72%
   QC value within limits for Mg 279.077  Recovery = 103.15%
Mn 257.610†           262140.0       0.528 mg/L        0.0034       0.528 mg/L        0.0034   0.65%
   QC value within limits for Mn 257.610  Recovery = 105.54%
Mo 202.031†            14989.8        1.02 mg/L         0.003        1.02 mg/L         0.003   0.27%
   QC value within limits for Mo 202.031  Recovery = 102.46%
Ni 231.604†            16040.0       0.515 mg/L        0.0027       0.515 mg/L        0.0027   0.52%
   QC value within limits for Ni 231.604  Recovery = 103.09%
Pb 220.353†             2734.5       0.518 mg/L        0.0096       0.518 mg/L        0.0096   1.86%
   QC value within limits for Pb 220.353  Recovery = 103.57%
Sb 206.836†             1929.2        1.17 mg/L         0.020        1.17 mg/L         0.020   1.70%
   QC value within limits for Sb 206.836  Recovery = 97.86%
Se 196.026†              274.0       0.396 mg/L        0.0069       0.396 mg/L        0.0069   1.75%
   QC value within limits for Se 196.026  Recovery = 99.04%
Si 251.611†           140423.0        5.01 mg/L         0.075        5.01 mg/L         0.075   1.49%
   QC value within limits for Si 251.611  Recovery = 100.18%
Sn 189.927†             5308.2        1.03 mg/L         0.021        1.03 mg/L         0.021   2.02%
   QC value within limits for Sn 189.927  Recovery = 102.81%
Ti 334.940†           719195.2        1.02 mg/L         0.004        1.02 mg/L         0.004   0.35%
   QC value within limits for Ti 334.940  Recovery = 101.77%
Tl 190.801†              788.2       0.536 mg/L        0.0072       0.536 mg/L        0.0072   1.34%
   QC value within limits for Tl 190.801  Recovery = 107.26%
V 290.880†            166115.9        1.03 mg/L         0.013        1.03 mg/L         0.013   1.23%
   QC value within limits for V 290.880  Recovery = 103.04%
Zn 206.200†            24436.9        1.04 mg/L         0.004        1.04 mg/L         0.004   0.43%
   QC value within limits for Zn 206.200  Recovery = 103.60%
K 766.490†             65985.1        51.9 mg/L          0.21        51.9 mg/L          0.21   0.40%
   QC value within limits for K 766.490  Recovery = 103.80%
Na 589.592†           484664.8        51.2 mg/L          1.11        51.2 mg/L          1.11   2.16%
   QC value within limits for Na 589.592  Recovery = 102.31%
Sr 407.771†           970035.5        1.06 mg/L         0.035        1.06 mg/L         0.035   3.29%
   QC value within limits for Sr 407.771  Recovery = 105.75%
Li 670.784†            61403.6        1.03 mg/L         0.004        1.03 mg/L         0.004   0.43%
   QC value within limits for Li 670.784  Recovery = 103.46%
P 214.914†              8421.3        10.2 mg/L          0.25        10.2 mg/L          0.25   2.48%
   QC value within limits for P 214.914  Recovery = 102.22%
All analyte(s) passed QC.

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Sequence No.: 41                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 11/8/2013 5:21:51 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                    172.0 kPa        0.45 L/min

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Mean Data: CCB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2332646.0                                                    19946.20   0.86%
YRADIAL               158819.6                                                     3861.25   2.43%
Ga 417.206            848140.1                                                    10046.83   1.18%
GaRADIAL               44211.8                                                      279.20   0.63%
Ag 328.068†               64.6     0.00116 mg/L      0.000582     0.00116 mg/L      0.000582  50.13%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               15.0     -0.0279 mg/L       0.00107     -0.0279 mg/L       0.00107   3.83%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -2.6    -0.00110 mg/L      0.001791    -0.00110 mg/L      0.001791 163.36%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -15.2     0.00052 mg/L      0.000100     0.00052 mg/L      0.000100  19.20%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               63.2     0.00021 mg/L      0.000042     0.00021 mg/L      0.000042  20.71%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               285.5      0.0113 mg/L       0.00099      0.0113 mg/L       0.00099   8.73%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               10.8      0.0998 mg/L       0.04364      0.0998 mg/L       0.04364  43.75%
   QC value within limits for Ca 227.546  Recovery = Not calculated
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Cd 228.802†	-6.7	-0.00031 mg/L	0.000130	-0.00031 mg/L	0.000130	41.58%
QC value within limits for Cd 228.802 Recovery = Not calculated						
Co 228.616†	-3.8	-0.00034 mg/L	0.000231	-0.00034 mg/L	0.000231	68.54%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	4.3	0.00019 mg/L	0.000316	0.00019 mg/L	0.000316	167.42%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 327.393†	133.8	0.00188 mg/L	0.000579	0.00188 mg/L	0.000579	30.83%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Fe 239.562†	6.1	-0.00521 mg/L	0.001262	-0.00521 mg/L	0.001262	24.22%
QC value within limits for Fe 239.562 Recovery = Not calculated						
Mg 279.077†	25.1	0.00906 mg/L	0.002958	0.00906 mg/L	0.002958	32.65%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	115.3	-0.00158 mg/L	0.000050	-0.00158 mg/L	0.000050	3.19%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	12.8	0.00144 mg/L	0.000134	0.00144 mg/L	0.000134	9.31%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	-21.5	-0.00050 mg/L	0.000243	-0.00050 mg/L	0.000243	48.83%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	10.4	0.00062 mg/L	0.002427	0.00062 mg/L	0.002427	390.11%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	-0.3	0.00005 mg/L	0.001078	0.00005 mg/L	0.001078	>999.9%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.6	-0.00227 mg/L	0.009874	-0.00227 mg/L	0.009874	434.36%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	55.4	0.0160 mg/L	0.00095	0.0160 mg/L	0.00095	5.91%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	32.1	0.00529 mg/L	0.000412	0.00529 mg/L	0.000412	7.79%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-173.2	-0.00100 mg/L	0.000106	-0.00100 mg/L	0.000106	10.55%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-3.0	-0.00497 mg/L	0.000493	-0.00497 mg/L	0.000493	9.92%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	649.2	0.00511 mg/L	0.000809	0.00511 mg/L	0.000809	15.84%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	-35.5	-0.00172 mg/L	0.000063	-0.00172 mg/L	0.000063	3.67%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	17.6	0.0109 mg/L	0.06350	0.0109 mg/L	0.06350	580.64%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	654.3	0.0602 mg/L	0.01557	0.0602 mg/L	0.01557	25.87%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	110.4	0.00149 mg/L	0.000144	0.00149 mg/L	0.000144	9.67%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	38.4	-0.00309 mg/L	0.001713	-0.00309 mg/L	0.001713	55.42%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	22.7	0.0450 mg/L	0.00921	0.0450 mg/L	0.00921	20.48%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 42 **Autosampler Location: 128**
Sample ID: PBW B6 WG451845-03 **Date Collected: 11/8/2013 5:24:51 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW B6 WG451845-03

Analyte	**Back Pressure**	**Flow**
All	172.0 kPa	0.45 L/min

Mean Data: PBW B6 WG451845-03

Analyte	**Mean Corrected Intensity**	**Calib. Conc. Units**	**Std.Dev.**	**Sample Conc. Units**	**Std.Dev.**	**RSD**
Y 371.029	2414711.5				28195.35	1.17%
YRADIAL	164628.3				2982.49	1.81%
Ga 417.206	888815.7				11531.58	1.30%
GaRADIAL	45716.9				470.47	1.03%
Ag 328.068†	-26.8	0.00073 mg/L	0.000409	0.00073 mg/L	0.000409	55.70%
Al 396.153†	0.8	-0.0332 mg/L	0.00341	-0.0332 mg/L	0.00341	10.27%
As 188.979†	-2.4	-0.00095 mg/L	0.001615	-0.00095 mg/L	0.001615	169.96%
Ba 233.527†	-7.3	0.00064 mg/L	0.000043	0.00064 mg/L	0.000043	6.83%

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Be 234.861†	96.7	0.00026	mg/L	0.000024	0.00026	mg/L	0.000024	9.12%
B 249.677†	40.9	0.00641	mg/L	0.000433	0.00641	mg/L	0.000433	6.75%
Ca 227.546†	23.0	0.176	mg/L	0.0083	0.176	mg/L	0.0083	4.75%
Cd 228.802†	-4.9	-0.00023	mg/L	0.000231	-0.00023	mg/L	0.000231	99.10%
Co 228.616†	-11.4	-0.00075	mg/L	0.000287	-0.00075	mg/L	0.000287	38.27%
Cr 267.716†	6.6	0.00021	mg/L	0.000031	0.00021	mg/L	0.000031	14.66%
Cu 327.393†	122.4	0.00181	mg/L	0.000480	0.00181	mg/L	0.000480	26.54%
Fe 239.562†	9.3	-0.00400	mg/L	0.000702	-0.00400	mg/L	0.000702	17.55%
Mg 279.077†	22.2	0.00608	mg/L	0.004096	0.00608	mg/L	0.004096	67.40%
Mn 257.610†	117.8	-0.00158	mg/L	0.000122	-0.00158	mg/L	0.000122	7.73%
Mo 202.031†	-7.0	0.00008	mg/L	0.000196	0.00008	mg/L	0.000196	245.36%
Ni 231.604†	-9.8	-0.00012	mg/L	0.000202	-0.00012	mg/L	0.000202	171.53%
Pb 220.353†	9.9	0.00051	mg/L	0.000440	0.00051	mg/L	0.000440	86.16%
Sb 206.836†	-0.6	-0.00016	mg/L	0.002027	-0.00016	mg/L	0.002027	>999.9%
Se 196.026†	-1.6	-0.00691	mg/L	0.003416	-0.00691	mg/L	0.003416	49.41%
Si 251.611†	27.5	0.0150	mg/L	0.00196	0.0150	mg/L	0.00196	13.07%
Sn 189.927†	-14.3	-0.00370	mg/L	0.001288	-0.00370	mg/L	0.001288	34.78%
Ti 334.940†	-112.1	-0.00091	mg/L	0.000022	-0.00091	mg/L	0.000022	2.38%
Tl 190.801†	-4.8	-0.00622	mg/L	0.001435	-0.00622	mg/L	0.001435	23.08%
V 290.880†	472.7	0.00401	mg/L	0.000623	0.00401	mg/L	0.000623	15.52%
Zn 206.200†	30.1	0.00105	mg/L	0.000200	0.00105	mg/L	0.000200	18.95%
K 766.490†	-17.7	-0.0164	mg/L	0.02628	-0.0164	mg/L	0.02628	160.38%
Na 589.592†	401.9	0.0337	mg/L	0.02044	0.0337	mg/L	0.02044	60.60%
Sr 407.771†	53.8	0.00143	mg/L	0.000090	0.00143	mg/L	0.000090	6.27%
Li 670.784†	-25.1	-0.00416	mg/L	0.000854	-0.00416	mg/L	0.000854	20.50%
P 214.914†	16.0	0.0368	mg/L	0.00756	0.0368	mg/L	0.00756	20.52%

Sequence No.: 43 **Autosampler Location: 129**
Sample ID: LCSW B6 WG451845-04 **Date Collected: 11/8/2013 5:27:52 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW B6 WG451845-04

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: LCSW B6 WG451845-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2410087.5						13543.81	0.56%
YRADIAL	164010.0						2338.69	1.43%
Ga 417.206	902827.0						6690.28	0.74%
GaRADIAL	46675.0						472.04	1.01%
Ag 328.068†	40507.3	0.191	mg/L	0.0054	0.191	mg/L	0.0054	2.85%
Al 396.153†	13094.9	4.89	mg/L	0.166	4.89	mg/L	0.166	3.39%
As 188.979†	259.6	0.187	mg/L	0.0047	0.187	mg/L	0.0047	2.49%
Ba 233.527†	33665.9	0.484	mg/L	0.0209	0.484	mg/L	0.0209	4.31%
Be 234.861†	12980.1	0.0230	mg/L	0.00081	0.0230	mg/L	0.00081	3.53%
B 249.677†	46284.8	0.933	mg/L	0.0398	0.933	mg/L	0.0398	4.27%
Ca 227.546†	754.5	4.91	mg/L	0.037	4.91	mg/L	0.037	0.75%
Cd 228.802†	518.6	0.0222	mg/L	0.00017	0.0222	mg/L	0.00017	0.78%
Co 228.616†	1825.6	0.0979	mg/L	0.00202	0.0979	mg/L	0.00202	2.07%
Cr 267.716†	21045.3	0.240	mg/L	0.0076	0.240	mg/L	0.0076	3.17%
Cu 327.393†	38272.1	0.238	mg/L	0.0079	0.238	mg/L	0.0079	3.33%
Fe 239.562†	5343.9	2.03	mg/L	0.060	2.03	mg/L	0.060	2.95%
Mg 279.077†	4937.9	5.04	mg/L	0.142	5.04	mg/L	0.142	2.81%
Mn 257.610†	123797.0	0.248	mg/L	0.0107	0.248	mg/L	0.0107	4.31%
Mo 202.031†	7129.1	0.488	mg/L	0.0165	0.488	mg/L	0.0165	3.38%
Ni 231.604†	7585.1	0.244	mg/L	0.0105	0.244	mg/L	0.0105	4.29%
Pb 220.353†	1318.2	0.249	mg/L	0.0059	0.249	mg/L	0.0059	2.37%
Sb 206.836†	923.2	0.562	mg/L	0.0060	0.562	mg/L	0.0060	1.06%
Se 196.026†	125.7	0.179	mg/L	0.0042	0.179	mg/L	0.0042	2.34%
Si 251.611†	65743.6	2.35	mg/L	0.079	2.35	mg/L	0.079	3.37%
Sn 189.927†	-54.4	-0.0115	mg/L	0.00030	-0.0115	mg/L	0.00030	2.61%
Ti 334.940†	343466.4	0.486	mg/L	0.0041	0.486	mg/L	0.0041	0.85%
Tl 190.801†	376.1	0.254	mg/L	0.0039	0.254	mg/L	0.0039	1.53%
V 290.880†	78275.6	0.486	mg/L	0.0230	0.486	mg/L	0.0230	4.73%
Zn 206.200†	11455.3	0.486	mg/L	0.0201	0.486	mg/L	0.0201	4.14%

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K 766.490†	31778.6	24.8	mg/L	0.84	24.8	mg/L	0.84	3.41%
Na 589.592†	228710.1	24.0	mg/L	0.11	24.0	mg/L	0.11	0.48%
Sr 407.771†	465561.1	0.508	mg/L	0.0039	0.508	mg/L	0.0039	0.77%
Li 670.784†	29580.6	0.496	mg/L	0.0046	0.496	mg/L	0.0046	0.92%
P 214.914†	-108.1	-0.113	mg/L	0.0449	-0.113	mg/L	0.0449	39.60%

Sequence No.: 44 **Autosampler Location: 130**
Sample ID: L1311023101 WG451845-01 **Date Collected: 11/8/2013 5:29:57 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023101 WG451845-01

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311023101 WG451845-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2373572.8						35066.08	1.48%
YRADIAL	163234.4						2832.70	1.74%
Ga 417.206	915065.5						15080.03	1.65%
GaRADIAL	46359.7						807.84	1.74%
Ag 328.068†	294.7	0.00203	mg/L	0.000218	0.00203	mg/L	0.000218	10.78%
Al 396.153†	25.0	-0.0242	mg/L	0.00263	-0.0242	mg/L	0.00263	10.90%
As 188.979†	-10.6	-0.00587	mg/L	0.005149	-0.00587	mg/L	0.005149	87.65%
Ba 233.527†	2715.2	0.0397	mg/L	0.00070	0.0397	mg/L	0.00070	1.76%
Be 234.861†	141.1	0.00033	mg/L	0.000039	0.00033	mg/L	0.000039	11.67%
B 249.677†	2600.3	0.0578	mg/L	0.00127	0.0578	mg/L	0.00127	2.20%
Ca 227.546†	7752.1	47.9	mg/L	1.95	47.9	mg/L	1.95	4.07%
Cd 228.802†	-4.8	-0.00020	mg/L	0.000083	-0.00020	mg/L	0.000083	41.63%
Co 228.616†	-11.1	-0.00073	mg/L	0.000185	-0.00073	mg/L	0.000185	25.43%
Cr 267.716†	79.1	0.00104	mg/L	0.000118	0.00104	mg/L	0.000118	11.41%
Cu 327.393†	145.1	0.00194	mg/L	0.000427	0.00194	mg/L	0.000427	21.97%
Fe 239.562†	183.2	0.0619	mg/L	0.00169	0.0619	mg/L	0.00169	2.73%
Mg 279.077†	18359.3	18.8	mg/L	0.48	18.8	mg/L	0.48	2.57%
Mn 257.610†	22479.7	0.0435	mg/L	0.00158	0.0435	mg/L	0.00158	3.63%
Mo 202.031†	27.5	0.00245	mg/L	0.000157	0.00245	mg/L	0.000157	6.41%
Ni 231.604†	8.8	0.00048	mg/L	0.000281	0.00048	mg/L	0.000281	58.47%
Pb 220.353†	23.4	0.00304	mg/L	0.002861	0.00304	mg/L	0.002861	94.09%
Sb 206.836†	-4.3	-0.00241	mg/L	0.001629	-0.00241	mg/L	0.001629	67.65%
Se 196.026†	0.2	-0.00431	mg/L	0.001383	-0.00431	mg/L	0.001383	32.08%
Si 251.611†	72554.3	2.60	mg/L	0.097	2.60	mg/L	0.097	3.74%
Sn 189.927†	-218.2	-0.0432	mg/L	0.00120	-0.0432	mg/L	0.00120	2.78%
Ti 334.940†	-5750.9	-0.00173	mg/L	0.000201	-0.00173	mg/L	0.000201	11.60%
Tl 190.801†	-12.9	-0.0117	mg/L	0.00553	-0.0117	mg/L	0.00553	47.19%
V 290.880†	1242.5	0.00829	mg/L	0.001633	0.00829	mg/L	0.001633	19.70%
Zn 206.200†	80.7	0.00319	mg/L	0.000353	0.00319	mg/L	0.000353	11.06%
K 766.490†	7685.5	5.93	mg/L	0.202	5.93	mg/L	0.202	3.40%
Na 589.592†	218887.1	23.0	mg/L	0.28	23.0	mg/L	0.28	1.23%
Sr 407.771†	1064811.8	1.16	mg/L	0.063	1.16	mg/L	0.063	5.41%
Li 670.784†	1355.1	0.0192	mg/L	0.00094	0.0192	mg/L	0.00094	4.93%
P 214.914†	17.2	0.0383	mg/L	0.00665	0.0383	mg/L	0.00665	17.35%

Sequence No.: 45 **Autosampler Location: 131**
Sample ID: L1311023101DU WG451845-05 **Date Collected: 11/8/2013 5:33:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023101DU WG451845-05

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311023101DU WG451845-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2368415.0						19654.80	0.83%
YRADIAL	163204.9						3121.26	1.91%
Ga 417.206	918487.3						15045.76	1.64%
GaRADIAL	46396.8						1589.27	3.43%
Ag 328.068†	358.9	0.00233	mg/L	0.000374	0.00233	mg/L	0.000374	16.08%
Al 396.153†	20.0	-0.0261	mg/L	0.00201	-0.0261	mg/L	0.00201	7.72%
As 188.979†	-13.7	-0.00813	mg/L	0.002842	-0.00813	mg/L	0.002842	34.98%
Ba 233.527†	2682.3	0.0393	mg/L	0.00031	0.0393	mg/L	0.00031	0.79%
Be 234.861†	142.0	0.00034	mg/L	0.000041	0.00034	mg/L	0.000041	12.27%
B 249.677†	2264.0	0.0510	mg/L	0.00243	0.0510	mg/L	0.00243	4.75%
Ca 227.546†	7649.1	47.2	mg/L	1.50	47.2	mg/L	1.50	3.18%
Cd 228.802†	-4.2	-0.00016	mg/L	0.000142	-0.00016	mg/L	0.000142	89.90%
Co 228.616†	-1.6	-0.00022	mg/L	0.000261	-0.00022	mg/L	0.000261	120.26%
Cr 267.716†	72.0	0.00096	mg/L	0.000072	0.00096	mg/L	0.000072	7.52%
Cu 327.393†	132.1	0.00186	mg/L	0.000307	0.00186	mg/L	0.000307	16.49%
Fe 239.562†	175.0	0.0588	mg/L	0.00173	0.0588	mg/L	0.00173	2.94%
Mg 279.077†	18457.9	18.9	mg/L	0.10	18.9	mg/L	0.10	0.53%
Mn 257.610†	22650.0	0.0439	mg/L	0.00100	0.0439	mg/L	0.00100	2.27%
Mo 202.031†	34.6	0.00294	mg/L	0.000437	0.00294	mg/L	0.000437	14.87%
Ni 231.604†	4.5	0.00034	mg/L	0.000274	0.00034	mg/L	0.000274	79.83%
Pb 220.353†	23.0	0.00297	mg/L	0.001051	0.00297	mg/L	0.001051	35.33%
Sb 206.836†	-0.1	0.00015	mg/L	0.001205	0.00015	mg/L	0.001205	815.30%
Se 196.026†	1.0	-0.00314	mg/L	0.005575	-0.00314	mg/L	0.005575	177.41%
Si 251.611†	71732.4	2.57	mg/L	0.081	2.57	mg/L	0.081	3.14%
Sn 189.927†	-216.2	-0.0428	mg/L	0.00139	-0.0428	mg/L	0.00139	3.24%
Ti 334.940†	-5643.3	-0.00167	mg/L	0.000109	-0.00167	mg/L	0.000109	6.49%
Tl 190.801†	-15.4	-0.0134	mg/L	0.00132	-0.0134	mg/L	0.00132	9.90%
V 290.880†	1241.9	0.00829	mg/L	0.000980	0.00829	mg/L	0.000980	11.83%
Zn 206.200†	15.7	0.00045	mg/L	0.000043	0.00045	mg/L	0.000043	9.48%
K 766.490†	7675.1	5.93	mg/L	0.122	5.93	mg/L	0.122	2.07%
Na 589.592†	214637.0	22.6	mg/L	0.59	22.6	mg/L	0.59	2.61%
Sr 407.771†	1045033.1	1.14	mg/L	0.017	1.14	mg/L	0.017	1.51%
Li 670.784†	1274.5	0.0178	mg/L	0.00092	0.0178	mg/L	0.00092	5.17%
P 214.914†	27.1	0.0503	mg/L	0.01361	0.0503	mg/L	0.01361	27.07%

Sequence No.: 46 **Autosampler Location: 132**
Sample ID: L1311023101MS WG451845-06 **Date Collected: 11/8/2013 5:36:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023101MS WG451845-06

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311023101MS WG451845-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2370118.7						57254.26	2.42%
YRADIAL	158476.5						3909.38	2.47%
Ga 417.206	899920.4						35356.75	3.93%
GaRADIAL	46148.2						930.63	2.02%
Ag 328.068†	40336.7	0.190	mg/L	0.0063	0.190	mg/L	0.0063	3.31%
Al 396.153†	13134.9	4.90	mg/L	0.160	4.90	mg/L	0.160	3.27%
As 188.979†	255.5	0.185	mg/L	0.0022	0.185	mg/L	0.0022	1.21%
Ba 233.527†	36189.4	0.521	mg/L	0.0108	0.521	mg/L	0.0108	2.07%
Be 234.861†	13037.7	0.0231	mg/L	0.00048	0.0231	mg/L	0.00048	2.06%
B 249.677†	48781.3	0.984	mg/L	0.0258	0.984	mg/L	0.0258	2.62%
Ca 227.546†	8867.4	55.0	mg/L	2.16	55.0	mg/L	2.16	3.93%
Cd 228.802†	506.5	0.0217	mg/L	0.00133	0.0217	mg/L	0.00133	6.10%
Co 228.616†	1790.7	0.0960	mg/L	0.00217	0.0960	mg/L	0.00217	2.26%
Cr 267.716†	21234.7	0.242	mg/L	0.0053	0.242	mg/L	0.0053	2.19%
Cu 327.393†	36642.3	0.228	mg/L	0.0072	0.228	mg/L	0.0072	3.16%
Fe 239.562†	5554.1	2.11	mg/L	0.068	2.11	mg/L	0.068	3.22%
Mg 279.077†	24101.8	24.6	mg/L	0.69	24.6	mg/L	0.69	2.81%
Mn 257.610†	144917.5	0.291	mg/L	0.0046	0.291	mg/L	0.0046	1.59%
Mo 202.031†	7474.0	0.511	mg/L	0.0127	0.511	mg/L	0.0127	2.48%
Ni 231.604†	7651.7	0.246	mg/L	0.0051	0.246	mg/L	0.0051	2.07%

Approved: November 11, 2013

Pb 220.353†	1301.9	0.246 mg/L	0.0055	0.246 mg/L	0.0055	2.25%
Sb 206.836†	938.0	0.571 mg/L	0.0199	0.571 mg/L	0.0199	3.49%
Se 196.026†	134.1	0.192 mg/L	0.0138	0.192 mg/L	0.0138	7.19%
Si 251.611†	137655.9	4.92 mg/L	0.133	4.92 mg/L	0.133	2.70%
Sn 189.927†	-223.7	-0.0443 mg/L	0.00136	-0.0443 mg/L	0.00136	3.06%
Ti 334.940†	347633.6	0.499 mg/L	0.0105	0.499 mg/L	0.0105	2.11%
Tl 190.801†	350.1	0.237 mg/L	0.0022	0.237 mg/L	0.0022	0.91%
V 290.880†	79103.7	0.491 mg/L	0.0069	0.491 mg/L	0.0069	1.41%
Zn 206.200†	11507.0	0.488 mg/L	0.0105	0.488 mg/L	0.0105	2.15%
K 766.490†	39520.0	30.8 mg/L	0.25	30.8 mg/L	0.25	0.81%
Na 589.592†	437341.7	46.1 mg/L	0.09	46.1 mg/L	0.09	0.19%
Sr 407.771†	1523532.7	1.66 mg/L	0.012	1.66 mg/L	0.012	0.71%
Li 670.784†	31098.9	0.522 mg/L	0.0018	0.522 mg/L	0.0018	0.35%
P 214.914†	-111.9	-0.118 mg/L	0.0330	-0.118 mg/L	0.0330	27.91%

Sequence No.: 47 **Autosampler Location: 133**
Sample ID: L1311023103 **Date Collected: 11/8/2013 5:38:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023103

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311023103

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2361241.8						39880.76	1.69%
YRADIAL	162586.2						3044.69	1.87%
Ga 417.206	913732.0						20903.48	2.29%
GaRADIAL	46864.1						488.94	1.04%
Ag 328.068†	237.8	0.00179	mg/L	0.000546	0.00179	mg/L	0.000546	30.60%
Al 396.153†	47.3	-0.0158	mg/L	0.00324	-0.0158	mg/L	0.00324	20.54%
As 188.979†	-11.0	-0.00616	mg/L	0.007182	-0.00616	mg/L	0.007182	116.53%
Ba 233.527†	2559.1	0.0375	mg/L	0.00075	0.0375	mg/L	0.00075	1.99%
Be 234.861†	154.4	0.00033	mg/L	0.000050	0.00033	mg/L	0.000050	15.07%
B 249.677†	2835.7	0.0625	mg/L	0.00203	0.0625	mg/L	0.00203	3.24%
Ca 227.546†	7595.1	46.9	mg/L	0.51	46.9	mg/L	0.51	1.09%
Cd 228.802†	-9.7	-0.00041	mg/L	0.000085	-0.00041	mg/L	0.000085	20.68%
Co 228.616†	3.6	0.00006	mg/L	0.000295	0.00006	mg/L	0.000295	475.59%
Cr 267.716†	67.0	0.00089	mg/L	0.000119	0.00089	mg/L	0.000119	13.39%
Cu 327.393†	161.1	0.00205	mg/L	0.000563	0.00205	mg/L	0.000563	27.49%
Fe 239.562†	482.8	0.176	mg/L	0.0030	0.176	mg/L	0.0030	1.71%
Mg 279.077†	19769.9	20.2	mg/L	0.09	20.2	mg/L	0.09	0.43%
Mn 257.610†	43628.2	0.0862	mg/L	0.00087	0.0862	mg/L	0.00087	1.01%
Mo 202.031†	44.1	0.00360	mg/L	0.000312	0.00360	mg/L	0.000312	8.67%
Ni 231.604†	22.8	0.00093	mg/L	0.000117	0.00093	mg/L	0.000117	12.60%
Pb 220.353†	26.3	0.00358	mg/L	0.002070	0.00358	mg/L	0.002070	57.85%
Sb 206.836†	-2.0	-0.00099	mg/L	0.002264	-0.00099	mg/L	0.002264	228.55%
Se 196.026†	-2.6	-0.00840	mg/L	0.001508	-0.00840	mg/L	0.001508	17.96%
Si 251.611†	72269.5	2.59	mg/L	0.033	2.59	mg/L	0.033	1.28%
Sn 189.927†	-215.6	-0.0427	mg/L	0.00195	-0.0427	mg/L	0.00195	4.55%
Ti 334.940†	-5394.3	-0.00137	mg/L	0.000204	-0.00137	mg/L	0.000204	14.86%
Tl 190.801†	-18.2	-0.0153	mg/L	0.00344	-0.0153	mg/L	0.00344	22.48%
V 290.880†	1198.3	0.00796	mg/L	0.000854	0.00796	mg/L	0.000854	10.73%
Zn 206.200†	10.5	0.00022	mg/L	0.000461	0.00022	mg/L	0.000461	205.96%
K 766.490†	8493.7	6.56	mg/L	0.084	6.56	mg/L	0.084	1.28%
Na 589.592†	241698.5	25.4	mg/L	0.41	25.4	mg/L	0.41	1.61%
Sr 407.771†	1152725.2	1.26	mg/L	0.032	1.26	mg/L	0.032	2.58%
Li 670.784†	1677.8	0.0246	mg/L	0.00141	0.0246	mg/L	0.00141	5.74%
P 214.914†	14.7	0.0353	mg/L	0.00714	0.0353	mg/L	0.00714	20.25%

Sequence No.: 48 **Autosampler Location: 134**
Sample ID: L1311023105 **Date Collected: 11/8/2013 5:41:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: L1311023105

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311023105

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2349086.5						21220.32	0.90%
YRADIAL	161539.0						950.44	0.59%
Ga 417.206	915202.9						6414.67	0.70%
GaRADIAL	46861.0						882.41	1.88%
Ag 328.068†	376.1	0.00249	mg/L	0.000080	0.00249	mg/L	0.000080	3.20%
Al 396.153†	135.9	0.0178	mg/L	0.00256	0.0178	mg/L	0.00256	14.34%
As 188.979†	-11.1	-0.00616	mg/L	0.000944	-0.00616	mg/L	0.000944	15.31%
Ba 233.527†	2432.8	0.0357	mg/L	0.00022	0.0357	mg/L	0.00022	0.62%
Be 234.861†	155.0	0.00034	mg/L	0.000026	0.00034	mg/L	0.000026	7.69%
B 249.677†	2067.6	0.0471	mg/L	0.00097	0.0471	mg/L	0.00097	2.05%
Ca 227.546†	7890.3	48.7	mg/L	1.18	48.7	mg/L	1.18	2.42%
Cd 228.802†	-4.3	-0.00017	mg/L	0.000225	-0.00017	mg/L	0.000225	128.36%
Co 228.616†	-4.4	-0.00037	mg/L	0.000068	-0.00037	mg/L	0.000068	18.43%
Cr 267.716†	95.1	0.00121	mg/L	0.000067	0.00121	mg/L	0.000067	5.55%
Cu 327.393†	164.1	0.00206	mg/L	0.001060	0.00206	mg/L	0.001060	51.33%
Fe 239.562†	363.2	0.130	mg/L	0.0020	0.130	mg/L	0.0020	1.56%
Mg 279.077†	25365.9	25.9	mg/L	0.20	25.9	mg/L	0.20	0.75%
Mn 257.610†	19370.4	0.0373	mg/L	0.00086	0.0373	mg/L	0.00086	2.32%
Mo 202.031†	26.0	0.00234	mg/L	0.000408	0.00234	mg/L	0.000408	17.41%
Ni 231.604†	56.7	0.00202	mg/L	0.000268	0.00202	mg/L	0.000268	13.26%
Pb 220.353†	18.5	0.00213	mg/L	0.002311	0.00213	mg/L	0.002311	108.55%
Sb 206.836†	-2.6	-0.00139	mg/L	0.001198	-0.00139	mg/L	0.001198	86.01%
Se 196.026†	4.2	0.00157	mg/L	0.002044	0.00157	mg/L	0.002044	130.05%
Si 251.611†	71082.9	2.55	mg/L	0.054	2.55	mg/L	0.054	2.13%
Sn 189.927†	-218.8	-0.0433	mg/L	0.00015	-0.0433	mg/L	0.00015	0.36%
Ti 334.940†	-5033.1	-0.00059	mg/L	0.000899	-0.00059	mg/L	0.000899	152.98%
Tl 190.801†	-16.9	-0.0143	mg/L	0.00314	-0.0143	mg/L	0.00314	21.91%
V 290.880†	1244.8	0.00811	mg/L	0.000872	0.00811	mg/L	0.000872	10.76%
Zn 206.200†	97.6	0.00391	mg/L	0.000113	0.00391	mg/L	0.000113	2.89%
K 766.490†	6648.8	5.13	mg/L	0.087	5.13	mg/L	0.087	1.70%
Na 589.592†	206108.9	21.7	mg/L	0.28	21.7	mg/L	0.28	1.28%
Sr 407.771†	812564.6	0.885	mg/L	0.0249	0.885	mg/L	0.0249	2.82%
Li 670.784†	923.9	0.0119	mg/L	0.00017	0.0119	mg/L	0.00017	1.45%
P 214.914†	21.7	0.0438	mg/L	0.00703	0.0438	mg/L	0.00703	16.04%

Sequence No.: 49
Sample ID: L1311023107
Analyst: KHR
Initial Sample Wt:
Dilution:
Autosampler Location: 135
Date Collected: 11/8/2013 5:44:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311023107

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311023107

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2347771.1						39569.37	1.69%
YRADIAL	157674.8						4752.05	3.01%
Ga 417.206	921554.4						19207.40	2.08%
GaRADIAL	45270.0						2249.68	4.97%
Ag 328.068†	289.5	0.00211	mg/L	0.000254	0.00211	mg/L	0.000254	12.04%
Al 396.153†	126.5	0.0142	mg/L	0.00277	0.0142	mg/L	0.00277	19.41%
As 188.979†	-8.8	-0.00450	mg/L	0.004934	-0.00450	mg/L	0.004934	109.53%
Ba 233.527†	2340.5	0.0343	mg/L	0.00038	0.0343	mg/L	0.00038	1.09%
Be 234.861†	175.0	0.00037	mg/L	0.000021	0.00037	mg/L	0.000021	5.63%
B 249.677†	1713.7	0.0400	mg/L	0.00039	0.0400	mg/L	0.00039	0.97%
Ca 227.546†	7843.0	48.4	mg/L	0.82	48.4	mg/L	0.82	1.69%

Approved: November 11, 2013

Cd 228.802†	-6.7	-0.00029	mg/L	0.000136	-0.00029	mg/L	0.000136	47.56%
Co 228.616†	-6.7	-0.00050	mg/L	0.000490	-0.00050	mg/L	0.000490	98.76%
Cr 267.716†	90.4	0.00116	mg/L	0.000303	0.00116	mg/L	0.000303	26.14%
Cu 327.393†	216.4	0.00239	mg/L	0.000192	0.00239	mg/L	0.000192	8.02%
Fe 239.562†	395.7	0.143	mg/L	0.0030	0.143	mg/L	0.0030	2.14%
Mg 279.077†	28127.1	28.8	mg/L	0.36	28.8	mg/L	0.36	1.24%
Mn 257.610†	18543.7	0.0356	mg/L	0.00035	0.0356	mg/L	0.00035	0.97%
Mo 202.031†	32.2	0.00277	mg/L	0.000620	0.00277	mg/L	0.000620	22.40%
Ni 231.604†	79.5	0.00275	mg/L	0.000102	0.00275	mg/L	0.000102	3.71%
Pb 220.353†	32.0	0.00469	mg/L	0.001311	0.00469	mg/L	0.001311	27.96%
Sb 206.836†	-1.1	-0.00044	mg/L	0.002064	-0.00044	mg/L	0.002064	464.69%
Se 196.026†	-3.2	-0.00924	mg/L	0.007514	-0.00924	mg/L	0.007514	81.29%
Si 251.611†	68818.6	2.47	mg/L	0.038	2.47	mg/L	0.038	1.52%
Sn 189.927†	-219.7	-0.0435	mg/L	0.00187	-0.0435	mg/L	0.00187	4.30%
Ti 334.940†	-4973.6	-0.00055	mg/L	0.000426	-0.00055	mg/L	0.000426	77.86%
Tl 190.801†	-14.7	-0.0129	mg/L	0.00614	-0.0129	mg/L	0.00614	47.69%
V 290.880†	1228.0	0.00793	mg/L	0.001420	0.00793	mg/L	0.001420	17.91%
Zn 206.200†	48.3	0.00182	mg/L	0.000265	0.00182	mg/L	0.000265	14.52%
K 766.490†	6243.6	4.81	mg/L	0.154	4.81	mg/L	0.154	3.20%
Na 589.592†	208429.4	21.9	mg/L	0.80	21.9	mg/L	0.80	3.64%
Sr 407.771†	717871.5	0.782	mg/L	0.0082	0.782	mg/L	0.0082	1.05%
Li 670.784†	833.4	0.0104	mg/L	0.00145	0.0104	mg/L	0.00145	14.02%
P 214.914†	12.0	0.0320	mg/L	0.01129	0.0320	mg/L	0.01129	35.27%

Sequence No.: 50 **Autosampler Location: 136**
Sample ID: L1311023107PS WG452061-01 **Date Collected: 11/8/2013 5:47:54 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023107PS WG452061-01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311023107PS WG452061-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2287187.6						21298.85	0.93%
YRADIAL	159707.7						2520.19	1.58%
Ga 417.206	864899.7						5614.87	0.65%
GaRADIAL	46175.3						915.24	1.98%
Ag 328.068†	42400.4	0.199	mg/L	0.0022	0.199	mg/L	0.0022	1.09%
Al 396.153†	13361.4	4.99	mg/L	0.004	4.99	mg/L	0.004	0.07%
As 188.979†	264.7	0.192	mg/L	0.0016	0.192	mg/L	0.0016	0.82%
Ba 233.527†	37199.9	0.535	mg/L	0.0032	0.535	mg/L	0.0032	0.60%
Be 234.861†	13730.4	0.0243	mg/L	0.00036	0.0243	mg/L	0.00036	1.50%
B 249.677†	51026.0	1.03	mg/L	0.009	1.03	mg/L	0.009	0.86%
Ca 227.546†	8315.9	51.6	mg/L	0.70	51.6	mg/L	0.70	1.37%
Cd 228.802†	535.9	0.0230	mg/L	0.00039	0.0230	mg/L	0.00039	1.69%
Co 228.616†	1880.9	0.101	mg/L	0.0009	0.101	mg/L	0.0009	0.88%
Cr 267.716†	22162.9	0.253	mg/L	0.0014	0.253	mg/L	0.0014	0.56%
Cu 327.393†	38157.6	0.237	mg/L	0.0028	0.237	mg/L	0.0028	1.19%
Fe 239.562†	5664.5	2.15	mg/L	0.032	2.15	mg/L	0.032	1.51%
Mg 279.077†	30344.4	31.0	mg/L	0.13	31.0	mg/L	0.13	0.41%
Mn 257.610†	147786.1	0.297	mg/L	0.0022	0.297	mg/L	0.0022	0.74%
Mo 202.031†	7521.4	0.514	mg/L	0.0031	0.514	mg/L	0.0031	0.60%
Ni 231.604†	7890.8	0.254	mg/L	0.0017	0.254	mg/L	0.0017	0.66%
Pb 220.353†	1371.6	0.259	mg/L	0.0007	0.259	mg/L	0.0007	0.26%
Sb 206.836†	976.9	0.595	mg/L	0.0026	0.595	mg/L	0.0026	0.44%
Se 196.026†	137.8	0.197	mg/L	0.0025	0.197	mg/L	0.0025	1.27%
Si 251.611†	135576.1	4.84	mg/L	0.038	4.84	mg/L	0.038	0.78%
Sn 189.927†	-215.7	-0.0428	mg/L	0.00178	-0.0428	mg/L	0.00178	4.17%
Ti 334.940†	353630.4	0.507	mg/L	0.0024	0.507	mg/L	0.0024	0.46%
Tl 190.801†	365.1	0.247	mg/L	0.0028	0.247	mg/L	0.0028	1.14%
V 290.880†	83951.7	0.521	mg/L	0.0052	0.521	mg/L	0.0052	1.00%
Zn 206.200†	11661.0	0.494	mg/L	0.0040	0.494	mg/L	0.0040	0.81%
K 766.490†	39063.9	30.5	mg/L	0.03	30.5	mg/L	0.03	0.09%
Na 589.592†	422096.4	44.5	mg/L	0.14	44.5	mg/L	0.14	0.31%
Sr 407.771†	1141874.3	1.24	mg/L	0.010	1.24	mg/L	0.010	0.77%

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Li 670.784†	31895.9	0.536 mg/L	0.0015	0.536 mg/L	0.0015	0.28%
P 214.914†	-98.4	-0.102 mg/L	0.0261	-0.102 mg/L	0.0261	25.61%

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Sequence No.: 51 **Autosampler Location: 137**
Sample ID: L1311023107DL WG452061-02 **Date Collected: 11/8/2013 5:49:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023107DL WG452061-02

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311023107DL WG452061-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2382562.4						19020.10	0.80%
YRADIAL	159600.5						2095.31	1.31%
Ga 417.206	888025.5						9329.60	1.05%
GaRADIAL	46090.4						659.88	1.43%
Ag 328.068†	146.6	0.00152	mg/L	0.000298	0.00152	mg/L	0.000298	19.59%
Al 396.153†	28.0	-0.0230	mg/L	0.00323	-0.0230	mg/L	0.00323	14.05%
As 188.979†	-7.4	-0.00436	mg/L	0.001349	-0.00436	mg/L	0.001349	30.90%
Ba 233.527†	417.2	0.00673	mg/L	0.000312	0.00673	mg/L	0.000312	4.64%
Be 234.861†	130.0	0.00032	mg/L	0.000014	0.00032	mg/L	0.000014	4.34%
B 249.677†	773.7	0.0211	mg/L	0.00299	0.0211	mg/L	0.00299	14.16%
Ca 227.546†	1516.0	9.39	mg/L	0.245	9.39	mg/L	0.245	2.61%
Cd 228.802†	-1.7	-0.00007	mg/L	0.000039	-0.00007	mg/L	0.000039	52.82%
Co 228.616†	-6.4	-0.00048	mg/L	0.000183	-0.00048	mg/L	0.000183	38.14%
Cr 267.716†	19.8	0.00036	mg/L	0.000064	0.00036	mg/L	0.000064	17.76%
Cu 327.393†	301.9	0.00291	mg/L	0.000332	0.00291	mg/L	0.000332	11.39%
Fe 239.562†	81.7	0.0235	mg/L	0.00358	0.0235	mg/L	0.00358	15.23%
Mg 279.077†	5867.8	5.99	mg/L	0.178	5.99	mg/L	0.178	2.97%
Mn 257.610†	3576.3	0.00540	mg/L	0.000125	0.00540	mg/L	0.000125	2.31%
Mo 202.031†	5.1	0.00091	mg/L	0.000117	0.00091	mg/L	0.000117	12.85%
Ni 231.604†	1.0	0.00023	mg/L	0.000181	0.00023	mg/L	0.000181	79.02%
Pb 220.353†	8.5	0.00025	mg/L	0.000742	0.00025	mg/L	0.000742	293.94%
Sb 206.836†	-1.5	-0.00068	mg/L	0.002432	-0.00068	mg/L	0.002432	355.36%
Se 196.026†	-0.8	-0.00578	mg/L	0.005844	-0.00578	mg/L	0.005844	101.19%
Si 251.611†	13368.4	0.491	mg/L	0.0158	0.491	mg/L	0.0158	3.21%
Sn 189.927†	-89.2	-0.0182	mg/L	0.00026	-0.0182	mg/L	0.00026	1.45%
Ti 334.940†	-1085.5	-0.00090	mg/L	0.000208	-0.00090	mg/L	0.000208	23.03%
Tl 190.801†	-5.1	-0.00642	mg/L	0.003161	-0.00642	mg/L	0.003161	49.22%
V 290.880†	742.6	0.00553	mg/L	0.001450	0.00553	mg/L	0.001450	26.22%
Zn 206.200†	15.0	0.00042	mg/L	0.000211	0.00042	mg/L	0.000211	50.56%
K 766.490†	1400.8	1.08	mg/L	0.039	1.08	mg/L	0.039	3.64%
Na 589.592†	42835.8	4.48	mg/L	0.120	4.48	mg/L	0.120	2.69%
Sr 407.771†	149922.7	0.164	mg/L	0.0013	0.164	mg/L	0.0013	0.80%
Li 670.784†	226.3	0.00009	mg/L	0.001738	0.00009	mg/L	0.001738	>999.9%
P 214.914†	14.1	0.0346	mg/L	0.00108	0.0346	mg/L	0.00108	3.13%

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Sequence No.: 52 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 11/8/2013 5:53:00 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2314968.6						14825.76	0.64%
YRADIAL	164262.0						4891.34	2.98%

Approved: November 11, 2013

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Ga 417.206            863908.3                                                    7569.80   0.88%
GaRADIAL               45432.6                                                    1100.07   2.42%
Ag 328.068†            86343.2       0.405 mg/L        0.0099       0.405 mg/L     0.0099   2.44%
   QC value within limits for Ag 328.068  Recovery = 101.29%
Al 396.153†            27317.3        10.2 mg/L          0.05        10.2 mg/L       0.05   0.45%
   QC value within limits for Al 396.153  Recovery = 102.38%
As 188.979†              567.7       0.408 mg/L        0.0082       0.408 mg/L     0.0082   2.02%
   QC value within limits for As 188.979  Recovery = 102.08%
Ba 233.527†            72942.0        1.05 mg/L         0.016        1.05 mg/L      0.016   1.57%
   QC value within limits for Ba 233.527  Recovery = 104.86%
Be 234.861†            28341.3      0.0501 mg/L       0.00102      0.0501 mg/L    0.00102   2.03%
   QC value within limits for Be 234.861  Recovery = 100.27%
B 249.677†             25189.3       0.508 mg/L        0.0128       0.508 mg/L     0.0128   2.52%
   QC value within limits for B 249.677  Recovery = 101.53%
Ca 227.546†             1638.4        10.6 mg/L          0.03        10.6 mg/L       0.03   0.25%
   QC value within limits for Ca 227.546  Recovery = 106.21%
Cd 228.802†             1122.0      0.0481 mg/L       0.00032      0.0481 mg/L    0.00032   0.66%
   QC value within limits for Cd 228.802  Recovery = 96.26%
Co 228.616†             3902.1       0.209 mg/L        0.0042       0.209 mg/L     0.0042   2.00%
   QC value within limits for Co 228.616  Recovery = 104.74%
Cr 267.716†            45322.5       0.516 mg/L        0.0085       0.516 mg/L     0.0085   1.65%
   QC value within limits for Cr 267.716  Recovery = 103.30%
Cu 327.393†            82145.0       0.510 mg/L        0.0138       0.510 mg/L     0.0138   2.70%
   QC value within limits for Cu 327.393  Recovery = 101.92%
Fe 239.562†            10774.0        4.10 mg/L         0.071        4.10 mg/L      0.071   1.74%
   QC value within limits for Fe 239.562  Recovery = 102.41%
Mg 279.077†            10055.2        10.3 mg/L          0.10        10.3 mg/L       0.10   1.01%
   QC value within limits for Mg 279.077  Recovery = 102.87%
Mn 257.610†           266553.7       0.537 mg/L        0.0081       0.537 mg/L     0.0081   1.51%
   QC value within limits for Mn 257.610  Recovery = 107.33%
Mo 202.031            15261.3        1.04 mg/L         0.013        1.04 mg/L      0.013   1.22%
   QC value within limits for Mo 202.031  Recovery = 104.31%
Ni 231.604            16374.7       0.526 mg/L        0.0088       0.526 mg/L     0.0088   1.68%
   QC value within limits for Ni 231.604  Recovery = 105.24%
Pb 220.353             2795.3       0.529 mg/L        0.0115       0.529 mg/L     0.0115   2.16%
   QC value within limits for Pb 220.353  Recovery = 105.87%
Sb 206.836             1980.9        1.21 mg/L         0.006        1.21 mg/L      0.006   0.48%
   QC value within limits for Sb 206.836  Recovery = 100.49%
Se 196.026              281.3       0.407 mg/L        0.0068       0.407 mg/L     0.0068   1.68%
   QC value within limits for Se 196.026  Recovery = 101.71%
Si 251.611           143229.9        5.11 mg/L         0.123        5.11 mg/L      0.123   2.40%
   QC value within limits for Si 251.611  Recovery = 102.18%
Sn 189.927             5411.1        1.05 mg/L         0.022        1.05 mg/L      0.022   2.11%
   QC value within limits for Sn 189.927  Recovery = 104.80%
Ti 334.940†           721947.1        1.02 mg/L         0.008        1.02 mg/L      0.008   0.80%
   QC value within limits for Ti 334.940  Recovery = 102.16%
Tl 190.801†              794.5       0.541 mg/L        0.0124       0.541 mg/L     0.0124   2.29%
   QC value within limits for Tl 190.801  Recovery = 108.13%
V 290.880†            168484.2        1.05 mg/L         0.013        1.05 mg/L      0.013   1.28%
   QC value within limits for V 290.880  Recovery = 104.51%
Zn 206.200†            24831.4        1.05 mg/L         0.011        1.05 mg/L      0.011   1.01%
   QC value within limits for Zn 206.200  Recovery = 105.27%
K 766.490†             66561.5        52.4 mg/L          0.39        52.4 mg/L       0.39   0.74%
   QC value within limits for K 766.490  Recovery = 104.72%
Na 589.592†           485256.6        51.2 mg/L          1.64        51.2 mg/L       1.64   3.21%
   QC value within limits for Na 589.592  Recovery = 102.43%
Sr 407.771†           962722.6        1.05 mg/L         0.041        1.05 mg/L      0.041   3.90%
   QC value within limits for Sr 407.771  Recovery = 104.95%
Li 670.784†            61890.9        1.04 mg/L         0.010        1.04 mg/L      0.010   0.98%
   QC value within limits for Li 670.784  Recovery = 104.28%
P 214.914†              8594.2        10.4 mg/L          0.26        10.4 mg/L       0.26   2.49%
   QC value within limits for P 214.914  Recovery = 104.32%
All analyte(s) passed QC.

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Sequence No.: 53                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 11/8/2013 5:55:05 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Approved: November 11, 2013

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2291458.0						19520.73	0.85%
YRADIAL	157730.6						955.87	0.61%
Ga 417.206	836776.7						8186.75	0.98%
GaRADIAL	44096.8						477.62	1.08%
Ag 328.068†	6.5	0.00089	mg/L	0.000069	0.00089	mg/L	0.000069	7.66%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	29.5	-0.0224	mg/L	0.00148	-0.0224	mg/L	0.00148	6.62%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-1.2	-0.00009	mg/L	0.004221	-0.00009	mg/L	0.004221	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-16.5	0.00050	mg/L	0.000128	0.00050	mg/L	0.000128	25.36%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	50.1	0.00018	mg/L	0.000059	0.00018	mg/L	0.000059	32.61%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	374.8	0.0131	mg/L	0.00095	0.0131	mg/L	0.00095	7.22%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	14.5	0.123	mg/L	0.0549	0.123	mg/L	0.0549	44.62%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-5.4	-0.00026	mg/L	0.000194	-0.00026	mg/L	0.000194	74.76%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-10.4	-0.00070	mg/L	0.000244	-0.00070	mg/L	0.000244	34.96%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	4.8	0.00020	mg/L	0.000104	0.00020	mg/L	0.000104	52.94%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	195.9	0.00226	mg/L	0.001012	0.00226	mg/L	0.001012	44.75%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	5.3	-0.00551	mg/L	0.000228	-0.00551	mg/L	0.000228	4.14%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	18.7	0.00249	mg/L	0.001231	0.00249	mg/L	0.001231	49.47%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	47.5	-0.00172	mg/L	0.000052	-0.00172	mg/L	0.000052	3.05%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	15.0	0.00158	mg/L	0.000469	0.00158	mg/L	0.000469	29.61%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-13.6	-0.00024	mg/L	0.000639	-0.00024	mg/L	0.000639	265.35%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	14.1	0.00131	mg/L	0.000155	0.00131	mg/L	0.000155	11.83%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.5	0.00114	mg/L	0.004114	0.00114	mg/L	0.004114	361.88%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	5.5	0.00349	mg/L	0.001962	0.00349	mg/L	0.001962	56.29%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	43.0	0.0156	mg/L	0.00181	0.0156	mg/L	0.00181	11.62%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	29.9	0.00486	mg/L	0.000948	0.00486	mg/L	0.000948	19.53%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-95.7	-0.00089	mg/L	0.000065	-0.00089	mg/L	0.000065	7.27%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-2.5	-0.00465	mg/L	0.002351	-0.00465	mg/L	0.002351	50.58%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	926.9	0.00683	mg/L	0.001163	0.00683	mg/L	0.001163	17.03%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-30.5	-0.00150	mg/L	0.000356	-0.00150	mg/L	0.000356	23.72%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	39.7	0.0280	mg/L	0.00891	0.0280	mg/L	0.00891	31.84%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	396.9	0.0332	mg/L	0.01895	0.0332	mg/L	0.01895	57.07%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	147.7	0.00153	mg/L	0.000173	0.00153	mg/L	0.000173	11.29%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	62.0	-0.00269	mg/L	0.000462	-0.00269	mg/L	0.000462	17.17%
QC value within limits for Li 670.784 Recovery = Not calculated								
P 214.914†	15.7	0.0365	mg/L	0.01182	0.0365	mg/L	0.01182	32.41%
QC value within limits for P 214.914 Recovery = Not calculated								

Approved: November 11, 2013

All analyte(s) passed QC.

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Sequence No.: 54 **Autosampler Location: 138**
Sample ID: L1311023109 **Date Collected: 11/8/2013 5:58:05 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311023109

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311023109

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2351377.2						15371.98	0.65%
YRADIAL	162426.0						3652.44	2.25%
Ga 417.206	918411.9						5749.05	0.63%
GaRADIAL	47326.7						772.04	1.63%
Ag 328.068†	297.0	0.00216	mg/L	0.000152	0.00216	mg/L	0.000152	7.02%
Al 396.153†	141.2	0.0198	mg/L	0.00055	0.0198	mg/L	0.00055	2.76%
As 188.979†	-10.8	-0.00572	mg/L	0.003346	-0.00572	mg/L	0.003346	58.53%
Ba 233.527†	2108.0	0.0310	mg/L	0.00028	0.0310	mg/L	0.00028	0.89%
Be 234.861†	180.9	0.00038	mg/L	0.000024	0.00038	mg/L	0.000024	6.27%
B 249.677†	1927.2	0.0442	mg/L	0.00144	0.0442	mg/L	0.00144	3.26%
Ca 227.546†	9552.1	59.0	mg/L	0.75	59.0	mg/L	0.75	1.28%
Cd 228.802†	-7.6	-0.00032	mg/L	0.000031	-0.00032	mg/L	0.000031	9.75%
Co 228.616†	4.1	0.00009	mg/L	0.000350	0.00009	mg/L	0.000350	377.16%
Cr 267.716†	103.1	0.00130	mg/L	0.000038	0.00130	mg/L	0.000038	2.88%
Cu 327.393†	281.8	0.00279	mg/L	0.000319	0.00279	mg/L	0.000319	11.42%
Fe 239.562†	475.8	0.173	mg/L	0.0041	0.173	mg/L	0.0041	2.39%
Mg 279.077†	33942.6	34.7	mg/L	0.50	34.7	mg/L	0.50	1.43%
Mn 257.610†	31753.6	0.0623	mg/L	0.00054	0.0623	mg/L	0.00054	0.88%
Mo 202.031†	33.6	0.00287	mg/L	0.000424	0.00287	mg/L	0.000424	14.74%
Ni 231.604†	133.4	0.00449	mg/L	0.000246	0.00449	mg/L	0.000246	5.47%
Pb 220.353†	22.8	0.00293	mg/L	0.002253	0.00293	mg/L	0.002253	76.83%
Sb 206.836†	0.1	0.00026	mg/L	0.001265	0.00026	mg/L	0.001265	481.56%
Se 196.026†	-0.4	-0.00516	mg/L	0.000505	-0.00516	mg/L	0.000505	9.79%
Si 251.611†	74037.9	2.65	mg/L	0.016	2.65	mg/L	0.016	0.60%
Sn 189.927†	-228.7	-0.0453	mg/L	0.00079	-0.0453	mg/L	0.00079	1.74%
Ti 334.940†	-6250.0	-0.00077	mg/L	0.000470	-0.00077	mg/L	0.000470	60.94%
Tl 190.801†	-13.9	-0.0124	mg/L	0.00260	-0.0124	mg/L	0.00260	21.02%
V 290.880†	1870.8	0.0118	mg/L	0.00168	0.0118	mg/L	0.00168	14.33%
Zn 206.200†	102.0	0.00409	mg/L	0.000195	0.00409	mg/L	0.000195	4.77%
K 766.490†	6376.0	4.92	mg/L	0.063	4.92	mg/L	0.063	1.27%
Na 589.592†	222763.7	23.4	mg/L	0.20	23.4	mg/L	0.20	0.85%
Sr 407.771†	741081.6	0.807	mg/L	0.0375	0.807	mg/L	0.0375	4.65%
Li 670.784†	866.8	0.0109	mg/L	0.00105	0.0109	mg/L	0.00105	9.60%
P 214.914†	18.3	0.0396	mg/L	0.00685	0.0396	mg/L	0.00685	17.30%

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Sequence No.: 55 **Autosampler Location: 139**
Sample ID: L1311025601 **Date Collected: 11/8/2013 6:01:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025601

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2334249.6						25650.46	1.10%
YRADIAL	162136.2						1800.17	1.11%
Ga 417.206	940467.1						19532.65	2.08%

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GaRADIAL	47414.4				1365.76	2.88%
Ag 328.068†	394.8	0.00267 mg/L	0.000318	0.00267 mg/L	0.000318	11.88%
Al 396.153†	31.0	-0.0219 mg/L	0.00300	-0.0219 mg/L	0.00300	13.70%
As 188.979†	-16.2	-0.00928 mg/L	0.002430	-0.00928 mg/L	0.002430	26.17%
Ba 233.527†	2195.3	0.0323 mg/L	0.00052	0.0323 mg/L	0.00052	1.60%
Be 234.861†	268.4	0.00057 mg/L	0.000027	0.00057 mg/L	0.000027	4.74%
B 249.677†	407.2	0.0137 mg/L	0.00156	0.0137 mg/L	0.00156	11.38%
Ca 227.546†	12361.4	76.3 mg/L	2.45	76.3 mg/L	2.45	3.22%
Cd 228.802†	-4.8	-0.00017 mg/L	0.000177	-0.00017 mg/L	0.000177	105.03%
Co 228.616†	43.0	0.00220 mg/L	0.000199	0.00220 mg/L	0.000199	9.04%
Cr 267.716†	161.6	0.00197 mg/L	0.000197	0.00197 mg/L	0.000197	9.99%
Cu 327.393†	46.4	0.00133 mg/L	0.000397	0.00133 mg/L	0.000397	29.79%
Fe 239.562†	351.0	0.125 mg/L	0.0014	0.125 mg/L	0.0014	1.11%
Mg 279.077†	81126.4	83.0 mg/L	1.38	83.0 mg/L	1.38	1.66%
Mn 257.610†	149412.4	0.300 mg/L	0.0013	0.300 mg/L	0.0013	0.43%
Mo 202.031†	28.2	0.00255 mg/L	0.000107	0.00255 mg/L	0.000107	4.19%
Ni 231.604†	373.9	0.0122 mg/L	0.00021	0.0122 mg/L	0.00021	1.73%
Pb 220.353†	26.4	0.00346 mg/L	0.000912	0.00346 mg/L	0.000912	26.37%
Sb 206.836†	-1.3	-0.00060 mg/L	0.002960	-0.00060 mg/L	0.002960	490.53%
Se 196.026†	0.5	-0.00398 mg/L	0.001912	-0.00398 mg/L	0.001912	48.07%
Si 251.611†	59488.9	2.13 mg/L	0.058	2.13 mg/L	0.058	2.72%
Sn 189.927†	-245.8	-0.0486 mg/L	0.00178	-0.0486 mg/L	0.00178	3.66%
Ti 334.940†	-9230.8	-0.00239 mg/L	0.000289	-0.00239 mg/L	0.000289	12.09%
Tl 190.801†	-17.9	-0.0153 mg/L	0.00364	-0.0153 mg/L	0.00364	23.74%
V 290.880†	2034.1	0.0115 mg/L	0.00104	0.0115 mg/L	0.00104	9.01%
Zn 206.200†	285.8	0.0119 mg/L	0.00013	0.0119 mg/L	0.00013	1.12%
K 766.490†	13527.0	10.4 mg/L	0.37	10.4 mg/L	0.37	3.54%
Na 589.592†	599441.6	63.4 mg/L	0.81	63.4 mg/L	0.81	1.28%
Sr 407.771†	242840.0	0.263 mg/L	0.0067	0.263 mg/L	0.0067	2.54%
Li 670.784†	793.3	0.00967 mg/L	0.000436	0.00967 mg/L	0.000436	4.51%
P 214.914†	27.4	0.0507 mg/L	0.00604	0.0507 mg/L	0.00604	11.92%

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Sequence No.: 56 **Autosampler Location: 140**
Sample ID: L1311025603 **Date Collected: 11/8/2013 6:04:15 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025603

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025603

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2242580.7						50445.65	2.25%
YRADIAL	160252.6						4194.19	2.62%
Ga 417.206	924373.1						25234.61	2.73%
GaRADIAL	47168.2						167.69	0.36%
Ag 328.068†	787.7	0.00435	mg/L	0.000372	0.00435	mg/L	0.000372	8.55%
Al 396.153†	78.6	-0.00390	mg/L	0.006914	-0.00390	mg/L	0.006914	177.26%
As 188.979†	-13.6	-0.00548	mg/L	0.004577	-0.00548	mg/L	0.004577	83.56%
Ba 233.527†	1606.9	0.0238	mg/L	0.00051	0.0238	mg/L	0.00051	2.12%
Be 234.861†	243.3	0.00060	mg/L	0.000072	0.00060	mg/L	0.000072	12.12%
B 249.677†	255.9	0.0107	mg/L	0.00014	0.0107	mg/L	0.00014	1.33%
Ca 227.546†	26530.7	164	mg/L	3.0	164	mg/L	3.0	1.82%
Cd 228.802†	-7.3	-0.00028	mg/L	0.000098	-0.00028	mg/L	0.000098	35.53%
Co 228.616†	114.1	0.00607	mg/L	0.000722	0.00607	mg/L	0.000722	11.89%
Cr 267.716†	197.0	0.00239	mg/L	0.000288	0.00239	mg/L	0.000288	12.07%
Cu 327.393†	-0.8	0.00101	mg/L	0.000572	0.00101	mg/L	0.000572	56.51%
Fe 239.562†	56.0	0.0118	mg/L	0.00184	0.0118	mg/L	0.00184	15.61%
Mg 279.077†	97348.6	99.6	mg/L	1.50	99.6	mg/L	1.50	1.50%
Mn 257.610†	359196.4	0.723	mg/L	0.0183	0.723	mg/L	0.0183	2.53%
Mo 202.031†	34.8	0.00310	mg/L	0.000076	0.00310	mg/L	0.000076	2.46%
Ni 231.604†	542.3	0.0176	mg/L	0.00032	0.0176	mg/L	0.00032	1.81%
Pb 220.353†	30.5	0.00398	mg/L	0.001056	0.00398	mg/L	0.001056	26.51%
Sb 206.836†	-4.5	-0.00252	mg/L	0.001915	-0.00252	mg/L	0.001915	75.87%
Se 196.026†	6.4	0.00450	mg/L	0.005357	0.00450	mg/L	0.005357	118.94%
Si 251.611†	43934.9	1.58	mg/L	0.034	1.58	mg/L	0.034	2.16%

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Sn 189.927†	-301.0	-0.0593	mg/L	0.00121	-0.0593	mg/L	0.00121	2.04%
Ti 334.940†	-19341.4	-0.00358	mg/L	0.000444	-0.00358	mg/L	0.000444	12.43%
Tl 190.801†	-19.7	-0.0172	mg/L	0.00227	-0.0172	mg/L	0.00227	13.24%
V 290.880†	2594.9	0.0146	mg/L	0.00123	0.0146	mg/L	0.00123	8.43%
Zn 206.200†	237.1	0.00981	mg/L	0.000122	0.00981	mg/L	0.000122	1.25%
K 766.490†	22531.3	17.3	mg/L	0.52	17.3	mg/L	0.52	3.02%
Na 589.592†	1935940.1	209	mg/L	3.6	209	mg/L	3.6	1.73%
Sr 407.771†	476482.1	0.515	mg/L	0.0183	0.515	mg/L	0.0183	3.55%
Li 670.784†	3085.9	0.0484	mg/L	0.00136	0.0484	mg/L	0.00136	2.80%
P 214.914†	33.5	0.0581	mg/L	0.01552	0.0581	mg/L	0.01552	26.70%

Sequence No.: 57 **Autosampler Location: 141**
Sample ID: L1311025605 **Date Collected: 11/8/2013 6:07:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025605

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: L1311025605

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2250220.6						32568.16	1.45%
YRADIAL	160819.8						1821.12	1.13%
Ga 417.206	897028.5						18076.10	2.02%
GaRADIAL	46496.2						771.23	1.66%
Ag 328.068†	666.5	0.00383	mg/L	0.000801	0.00383	mg/L	0.000801	20.90%
Al 396.153†	330.7	0.0915	mg/L	0.00161	0.0915	mg/L	0.00161	1.75%
As 188.979†	-13.6	-0.00643	mg/L	0.001654	-0.00643	mg/L	0.001654	25.73%
Ba 233.527†	2407.1	0.0353	mg/L	0.00055	0.0353	mg/L	0.00055	1.56%
Be 234.861†	215.8	0.00052	mg/L	0.000025	0.00052	mg/L	0.000025	4.81%
B 249.677†	225.9	0.0101	mg/L	0.00053	0.0101	mg/L	0.00053	5.23%
Ca 227.546†	19845.3	122	mg/L	2.6	122	mg/L	2.6	2.11%
Cd 228.802†	-5.6	-0.00021	mg/L	0.000121	-0.00021	mg/L	0.000121	57.85%
Co 228.616†	55.8	0.00291	mg/L	0.000176	0.00291	mg/L	0.000176	6.07%
Cr 267.716†	155.6	0.00192	mg/L	0.000132	0.00192	mg/L	0.000132	6.88%
Cu 327.393†	-58.0	0.00067	mg/L	0.000524	0.00067	mg/L	0.000524	78.24%
Fe 239.562†	36.8	0.00514	mg/L	0.001540	0.00514	mg/L	0.001540	29.98%
Mg 279.077†	65843.6	67.3	mg/L	0.56	67.3	mg/L	0.56	0.84%
Mn 257.610†	206190.5	0.414	mg/L	0.0075	0.414	mg/L	0.0075	1.80%
Mo 202.031†	38.0	0.00325	mg/L	0.000329	0.00325	mg/L	0.000329	10.12%
Ni 231.604†	277.1	0.00911	mg/L	0.000215	0.00911	mg/L	0.000215	2.36%
Pb 220.353†	25.1	0.00317	mg/L	0.000439	0.00317	mg/L	0.000439	13.84%
Sb 206.836†	-3.0	-0.00159	mg/L	0.001262	-0.00159	mg/L	0.001262	79.25%
Se 196.026†	0.9	-0.00336	mg/L	0.008323	-0.00336	mg/L	0.008323	247.95%
Si 251.611†	47608.0	1.71	mg/L	0.036	1.71	mg/L	0.036	2.11%
Sn 189.927†	-294.3	-0.0580	mg/L	0.00041	-0.0580	mg/L	0.00041	0.71%
Ti 334.940†	-14095.8	-0.00234	mg/L	0.000085	-0.00234	mg/L	0.000085	3.62%
Tl 190.801†	-25.8	-0.0208	mg/L	0.00295	-0.0208	mg/L	0.00295	14.20%
V 290.880†	2158.4	0.0127	mg/L	0.00128	0.0127	mg/L	0.00128	10.05%
Zn 206.200†	177.6	0.00730	mg/L	0.000413	0.00730	mg/L	0.000413	5.66%
K 766.490†	15117.0	11.6	mg/L	0.15	11.6	mg/L	0.15	1.29%
Na 589.592†	1266171.4	135	mg/L	0.1	135	mg/L	0.1	0.06%
Sr 407.771†	414800.0	0.449	mg/L	0.0194	0.449	mg/L	0.0194	4.32%
Li 670.784†	2227.8	0.0339	mg/L	0.00024	0.0339	mg/L	0.00024	0.71%
P 214.914†	22.9	0.0453	mg/L	0.01040	0.0453	mg/L	0.01040	22.97%

Sequence No.: 58 **Autosampler Location: 142**
Sample ID: L1311025607 **Date Collected: 11/8/2013 6:10:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025607

Analyte	Back Pressure	Flow

Approved: November 11, 2013

All 172.0 kPa 0.45 L/min

Mean Data: L1311025607

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2308543.5						1147.99	0.05%
YRADIAL	159919.5						2530.26	1.58%
Ga 417.206	916726.8						5996.66	0.65%
GaRADIAL	46904.2						1399.01	2.98%
Ag 328.068†	397.4	0.00271	mg/L	0.000594	0.00271	mg/L	0.000594	21.90%
Al 396.153†	77.6	-0.00426	mg/L	0.002706	-0.00426	mg/L	0.002706	63.53%
As 188.979†	-7.2	-0.00286	mg/L	0.002533	-0.00286	mg/L	0.002533	88.62%
Ba 233.527†	745.9	0.0114	mg/L	0.00010	0.0114	mg/L	0.00010	0.86%
Be 234.861†	184.7	0.00042	mg/L	0.000024	0.00042	mg/L	0.000024	5.85%
B 249.677†	318.9	0.0119	mg/L	0.00015	0.0119	mg/L	0.00015	1.25%
Ca 227.546†	11568.8	71.4	mg/L	0.60	71.4	mg/L	0.60	0.84%
Cd 228.802†	-5.9	-0.00025	mg/L	0.000392	-0.00025	mg/L	0.000392	155.94%
Co 228.616†	25.8	0.00128	mg/L	0.000635	0.00128	mg/L	0.000635	49.72%
Cr 267.716†	164.2	0.00200	mg/L	0.000024	0.00200	mg/L	0.000024	1.22%
Cu 327.393†	105.5	0.00170	mg/L	0.000650	0.00170	mg/L	0.000650	38.15%
Fe 239.562†	473.4	0.171	mg/L	0.0020	0.171	mg/L	0.0020	1.20%
Mg 279.077†	97517.6	99.7	mg/L	0.37	99.7	mg/L	0.37	0.37%
Mn 257.610†	173053.1	0.347	mg/L	0.0047	0.347	mg/L	0.0047	1.34%
Mo 202.031†	28.6	0.00259	mg/L	0.000338	0.00259	mg/L	0.000338	13.01%
Ni 231.604†	102.4	0.00349	mg/L	0.000104	0.00349	mg/L	0.000104	2.97%
Pb 220.353†	16.3	0.00152	mg/L	0.001400	0.00152	mg/L	0.001400	92.14%
Sb 206.836†	2.0	0.00145	mg/L	0.002229	0.00145	mg/L	0.002229	154.06%
Se 196.026†	-2.7	-0.00854	mg/L	0.000957	-0.00854	mg/L	0.000957	11.21%
Si 251.611†	51736.8	1.86	mg/L	0.029	1.86	mg/L	0.029	1.57%
Sn 189.927†	-241.5	-0.0478	mg/L	0.00087	-0.0478	mg/L	0.00087	1.82%
Ti 334.940†	-8411.4	-0.00196	mg/L	0.000332	-0.00196	mg/L	0.000332	16.92%
Tl 190.801†	-13.0	-0.0121	mg/L	0.00243	-0.0121	mg/L	0.00243	20.08%
V 290.880†	2100.9	0.0115	mg/L	0.00342	0.0115	mg/L	0.00342	29.78%
Zn 206.200†	59.8	0.00232	mg/L	0.000174	0.00232	mg/L	0.000174	7.52%
K 766.490†	14451.3	11.2	mg/L	0.19	11.2	mg/L	0.19	1.68%
Na 589.592†	585061.4	61.8	mg/L	1.27	61.8	mg/L	1.27	2.05%
Sr 407.771†	196606.4	0.213	mg/L	0.0048	0.213	mg/L	0.0048	2.25%
Li 670.784†	642.7	0.00713	mg/L	0.000329	0.00713	mg/L	0.000329	4.61%
P 214.914†	18.0	0.0392	mg/L	0.00856	0.0392	mg/L	0.00856	21.81%

Sequence No.: 59 **Autosampler Location: 143**
Sample ID: L1311025609 WG451845-02 **Date Collected: 11/8/2013 6:13:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025609 WG451845-02

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025609 WG451845-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2262160.4						20827.95	0.92%
YRADIAL	162168.8						4273.37	2.64%
Ga 417.206	911069.3						9451.47	1.04%
GaRADIAL	47148.2						1570.92	3.33%
Ag 328.068†	810.8	0.00446	mg/L	0.000302	0.00446	mg/L	0.000302	6.76%
Al 396.153†	136.4	0.0180	mg/L	0.00023	0.0180	mg/L	0.00023	1.29%
As 188.979†	-7.9	-0.00188	mg/L	0.005324	-0.00188	mg/L	0.005324	283.36%
Ba 233.527†	1391.0	0.0207	mg/L	0.00017	0.0207	mg/L	0.00017	0.82%
Be 234.861†	175.8	0.00049	mg/L	0.000034	0.00049	mg/L	0.000034	6.82%
B 249.677†	179.7	0.00917	mg/L	0.000448	0.00917	mg/L	0.000448	4.88%
Ca 227.546†	22939.6	142	mg/L	2.5	142	mg/L	2.5	1.80%
Cd 228.802†	-4.6	-0.00019	mg/L	0.000145	-0.00019	mg/L	0.000145	75.46%
Co 228.616†	32.9	0.00169	mg/L	0.000257	0.00169	mg/L	0.000257	15.24%
Cr 267.716†	218.3	0.00263	mg/L	0.000278	0.00263	mg/L	0.000278	10.58%
Cu 327.393†	-52.0	0.00071	mg/L	0.000878	0.00071	mg/L	0.000878	123.93%

Approved: November 11, 2013

Fe 239.562†	99.7	0.0275 mg/L	0.00133	0.0275 mg/L	0.00133	4.85%
Mg 279.077†	145142.6	148 mg/L	9.7	148 mg/L	9.7	6.51%
Mn 257.610†	462514.6	0.931 mg/L	0.0031	0.931 mg/L	0.0031	0.33%
Mo 202.031†	31.5	0.00291 mg/L	0.000542	0.00291 mg/L	0.000542	18.62%
Ni 231.604†	112.0	0.00380 mg/L	0.000161	0.00380 mg/L	0.000161	4.25%
Pb 220.353†	31.8	0.00411 mg/L	0.002758	0.00411 mg/L	0.002758	67.13%
Sb 206.836†	-6.4	-0.00372 mg/L	0.002275	-0.00372 mg/L	0.002275	61.17%
Se 196.026†	-2.3	-0.00817 mg/L	0.003831	-0.00817 mg/L	0.003831	46.91%
Si 251.611†	43361.2	1.56 mg/L	0.031	1.56 mg/L	0.031	1.99%
Sn 189.927†	-290.3	-0.0572 mg/L	0.00174	-0.0572 mg/L	0.00174	3.04%
Ti 334.940†	-16503.7	-0.00289 mg/L	0.000404	-0.00289 mg/L	0.000404	13.98%
Tl 190.801†	-22.2	-0.0190 mg/L	0.00340	-0.0190 mg/L	0.00340	17.91%
V 290.880†	2625.0	0.0135 mg/L	0.00193	0.0135 mg/L	0.00193	14.29%
Zn 206.200†	104.8	0.00423 mg/L	0.000286	0.00423 mg/L	0.000286	6.77%
K 766.490†	16966.0	13.1 mg/L	0.25	13.1 mg/L	0.25	1.89%
Na 589.592†	1020154.3	109 mg/L	7.2	109 mg/L	7.2	6.66%
Sr 407.771†	375259.2	0.406 mg/L	0.0299	0.406 mg/L	0.0299	7.38%
Li 670.784†	1810.9	0.0269 mg/L	0.00062	0.0269 mg/L	0.00062	2.30%
P 214.914†	17.9	0.0392 mg/L	0.00817	0.0392 mg/L	0.00817	20.84%

Sequence No.: 60 **Autosampler Location: 144**
Sample ID: L1311025609MS WG451845-07 **Date Collected: 11/8/2013 6:16:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025609MS WG451845-07

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025609MS WG451845-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2230340.2						13271.46	0.60%
YRADIAL	156458.3						2437.61	1.56%
Ga 417.206	876663.8						5177.28	0.59%
GaRADIAL	45645.2						709.71	1.55%
Ag 328.068†	39754.6	0.187	mg/L	0.0025	0.187	mg/L	0.0025	1.31%
Al 396.153†	13604.2	5.08	mg/L	0.030	5.08	mg/L	0.030	0.59%
As 188.979†	248.1	0.182	mg/L	0.0047	0.182	mg/L	0.0047	2.56%
Ba 233.527†	34754.5	0.500	mg/L	0.0054	0.500	mg/L	0.0054	1.09%
Be 234.861†	12751.8	0.0227	mg/L	0.00030	0.0227	mg/L	0.00030	1.31%
B 249.677†	46631.1	0.940	mg/L	0.0157	0.940	mg/L	0.0157	1.67%
Ca 227.546†	23525.7	145	mg/L	3.7	145	mg/L	3.7	2.54%
Cd 228.802†	497.6	0.0214	mg/L	0.00051	0.0214	mg/L	0.00051	2.38%
Co 228.616†	1802.8	0.0967	mg/L	0.00119	0.0967	mg/L	0.00119	1.23%
Cr 267.716†	21098.7	0.241	mg/L	0.0043	0.241	mg/L	0.0043	1.78%
Cu 327.393†	36666.7	0.228	mg/L	0.0031	0.228	mg/L	0.0031	1.38%
Fe 239.562†	5436.7	2.06	mg/L	0.020	2.06	mg/L	0.020	0.95%
Mg 279.077†	153096.3	157	mg/L	0.7	157	mg/L	0.7	0.46%
Mn 257.610†	575031.8	1.16	mg/L	0.009	1.16	mg/L	0.009	0.75%
Mo 202.031†	7402.7	0.506	mg/L	0.0062	0.506	mg/L	0.0062	1.22%
Ni 231.604†	7638.3	0.246	mg/L	0.0029	0.246	mg/L	0.0029	1.17%
Pb 220.353†	1297.7	0.245	mg/L	0.0010	0.245	mg/L	0.0010	0.40%
Sb 206.836†	917.9	0.559	mg/L	0.0077	0.559	mg/L	0.0077	1.37%
Se 196.026†	129.0	0.184	mg/L	0.0051	0.184	mg/L	0.0051	2.78%
Si 251.611†	107519.5	3.84	mg/L	0.048	3.84	mg/L	0.048	1.24%
Sn 189.927†	-297.8	-0.0587	mg/L	0.00080	-0.0587	mg/L	0.00080	1.36%
Ti 334.940†	337941.3	0.499	mg/L	0.0081	0.499	mg/L	0.0081	1.63%
Tl 190.801†	344.9	0.233	mg/L	0.0080	0.233	mg/L	0.0080	3.42%
V 290.880†	80931.5	0.499	mg/L	0.0089	0.499	mg/L	0.0089	1.78%
Zn 206.200†	11327.9	0.480	mg/L	0.0058	0.480	mg/L	0.0058	1.21%
K 766.490†	49200.4	38.4	mg/L	0.36	38.4	mg/L	0.36	0.95%
Na 589.592†	1253304.9	134	mg/L	0.9	134	mg/L	0.9	0.67%
Sr 407.771†	849599.3	0.922	mg/L	0.0130	0.922	mg/L	0.0130	1.41%
Li 670.784†	32639.5	0.548	mg/L	0.0038	0.548	mg/L	0.0038	0.70%
P 214.914†	-100.8	-0.105	mg/L	0.0285	-0.105	mg/L	0.0285	27.26%

Approved: November 11, 2013

Sequence No.: 61 **Autosampler Location: 145**
Sample ID: L1311025701 **Date Collected: 11/8/2013 6:18:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025701

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025701

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2259951.5						15378.25	0.68%
YRADIAL	155760.6						5045.18	3.24%
Ga 417.206	896248.1						5477.88	0.61%
GaRADIAL	45955.9						410.08	0.89%
Ag 328.068†	376.2	0.00267	mg/L	0.000392	0.00267	mg/L	0.000392	14.68%
Al 396.153†	73.7	-0.00571	mg/L	0.000943	-0.00571	mg/L	0.000943	16.50%
As 188.979†	-11.0	-0.00517	mg/L	0.003413	-0.00517	mg/L	0.003413	66.05%
Ba 233.527†	457.2	0.00726	mg/L	0.000144	0.00726	mg/L	0.000144	1.98%
Be 234.861†	211.9	0.00040	mg/L	0.000049	0.00040	mg/L	0.000049	12.11%
B 249.677†	1058.2	0.0266	mg/L	0.00098	0.0266	mg/L	0.00098	3.70%
Ca 227.546†	14041.1	86.7	mg/L	0.22	86.7	mg/L	0.22	0.25%
Cd 228.802†	-9.5	-0.00039	mg/L	0.000249	-0.00039	mg/L	0.000249	63.37%
Co 228.616†	59.9	0.00311	mg/L	0.000537	0.00311	mg/L	0.000537	17.23%
Cr 267.716†	167.1	0.00201	mg/L	0.000001	0.00201	mg/L	0.000001	0.04%
Cu 327.393†	78.3	0.00155	mg/L	0.000399	0.00155	mg/L	0.000399	25.75%
Fe 239.562†	1302.6	0.487	mg/L	0.0118	0.487	mg/L	0.0118	2.42%
Mg 279.077†	89058.9	91.1	mg/L	2.55	91.1	mg/L	2.55	2.80%
Mn 257.610†	232917.6	0.468	mg/L	0.0047	0.468	mg/L	0.0047	1.00%
Mo 202.031†	37.6	0.00324	mg/L	0.000859	0.00324	mg/L	0.000859	26.53%
Ni 231.604†	167.0	0.00556	mg/L	0.000303	0.00556	mg/L	0.000303	5.45%
Pb 220.353†	25.7	0.00323	mg/L	0.000440	0.00323	mg/L	0.000440	13.63%
Sb 206.836†	-2.4	-0.00126	mg/L	0.001510	-0.00126	mg/L	0.001510	119.54%
Se 196.026†	-0.5	-0.00531	mg/L	0.003554	-0.00531	mg/L	0.003554	66.97%
Si 251.611†	71672.6	2.57	mg/L	0.035	2.57	mg/L	0.035	1.37%
Sn 189.927†	-266.1	-0.0525	mg/L	0.00039	-0.0525	mg/L	0.00039	0.74%
Ti 334.940†	-10000.5	-0.00192	mg/L	0.000232	-0.00192	mg/L	0.000232	12.07%
Tl 190.801†	-12.8	-0.0121	mg/L	0.00163	-0.0121	mg/L	0.00163	13.48%
V 290.880†	2336.8	0.0131	mg/L	0.00209	0.0131	mg/L	0.00209	15.91%
Zn 206.200†	52.6	0.00199	mg/L	0.000149	0.00199	mg/L	0.000149	7.50%
K 766.490†	8630.0	6.63	mg/L	0.174	6.63	mg/L	0.174	2.62%
Na 589.592†	536865.2	56.7	mg/L	0.53	56.7	mg/L	0.53	0.94%
Sr 407.771†	488449.7	0.531	mg/L	0.0254	0.531	mg/L	0.0254	4.78%
Li 670.784†	1034.5	0.0138	mg/L	0.00014	0.0138	mg/L	0.00014	1.03%
P 214.914†	24.3	0.0469	mg/L	0.01022	0.0469	mg/L	0.01022	21.78%

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Sequence No.: 62 **Autosampler Location: 146**
Sample ID: L1311025703 **Date Collected: 11/8/2013 6:21:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025703

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025703

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2173927.7						55051.12	2.53%
YRADIAL	153482.7						1635.32	1.07%
Ga 417.206	868546.9						35992.56	4.14%
GaRADIAL	45318.9						350.84	0.77%
Ag 328.068†	763.7	0.00420	mg/L	0.000658	0.00420	mg/L	0.000658	15.66%
Al 396.153†	237.9	0.0564	mg/L	0.00148	0.0564	mg/L	0.00148	2.62%

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As 188.979†	-5.5	-0.00014 mg/L	0.002139	-0.00014 mg/L	0.002139	>999.9%
Ba 233.527†	527.1	0.00830 mg/L	0.000048	0.00830 mg/L	0.000048	0.58%
Be 234.861†	136.6	0.00037 mg/L	0.000084	0.00037 mg/L	0.000084	22.69%
B 249.677†	423.0	0.0140 mg/L	0.00051	0.0140 mg/L	0.00051	3.64%
Ca 227.546†	22644.6	140 mg/L	2.8	140 mg/L	2.8	2.03%
Cd 228.802†	-5.0	-0.00020 mg/L	0.000226	-0.00020 mg/L	0.000226	111.88%
Co 228.616†	109.1	0.00580 mg/L	0.000059	0.00580 mg/L	0.000059	1.01%
Cr 267.716†	145.3	0.00179 mg/L	0.000168	0.00179 mg/L	0.000168	9.38%
Cu 327.393†	-40.1	0.00077 mg/L	0.000421	0.00077 mg/L	0.000421	54.40%
Fe 239.562†	278.7	0.0974 mg/L	0.00193	0.0974 mg/L	0.00193	1.98%
Mg 279.077†	59399.9	60.8 mg/L	0.63	60.8 mg/L	0.63	1.03%
Mn 257.610†	283048.9	0.569 mg/L	0.0022	0.569 mg/L	0.0022	0.39%
Mo 202.031†	38.6	0.00332 mg/L	0.000420	0.00332 mg/L	0.000420	12.65%
Ni 231.604†	230.5	0.00761 mg/L	0.000519	0.00761 mg/L	0.000519	6.83%
Pb 220.353†	22.4	0.00254 mg/L	0.000957	0.00254 mg/L	0.000957	37.62%
Sb 206.836†	-4.6	-0.00260 mg/L	0.001679	-0.00260 mg/L	0.001679	64.45%
Se 196.026†	-0.8	-0.00585 mg/L	0.007618	-0.00585 mg/L	0.007618	130.28%
Si 251.611†	41973.7	1.51 mg/L	0.027	1.51 mg/L	0.027	1.76%
Sn 189.927†	-304.4	-0.0599 mg/L	0.00180	-0.0599 mg/L	0.00180	3.01%
Ti 334.940†	-16191.7	-0.00272 mg/L	0.000460	-0.00272 mg/L	0.000460	16.94%
Tl 190.801†	-25.5	-0.0208 mg/L	0.00785	-0.0208 mg/L	0.00785	37.74%
V 290.880†	2454.2	0.0147 mg/L	0.00093	0.0147 mg/L	0.00093	6.29%
Zn 206.200†	119.2	0.00482 mg/L	0.000319	0.00482 mg/L	0.000319	6.61%
K 766.490†	8866.4	6.61 mg/L	0.132	6.61 mg/L	0.132	1.99%
Na 589.592†	2433010.3	265 mg/L	7.5	265 mg/L	7.5	2.82%
Sr 407.771†	891036.9	0.967 mg/L	0.0612	0.967 mg/L	0.0612	6.33%
Li 670.784†	5712.7	0.0929 mg/L	0.00109	0.0929 mg/L	0.00109	1.18%
P 214.914†	30.0	0.0538 mg/L	0.00132	0.0538 mg/L	0.00132	2.45%

Sequence No.: 63 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 11/8/2013 6:24:49 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2330023.9						34971.81	1.50%
YRADIAL	163405.4						3928.34	2.40%
Ga 417.206	868961.4						25717.99	2.96%
GaRADIAL	45492.2						811.08	1.78%
Ag 328.068†	86406.4	0.405	mg/L	0.0121	0.405	mg/L	0.0121	2.99%
QC value within limits for Ag 328.068 Recovery = 101.37%								
Al 396.153†	27954.8	10.5	mg/L	0.05	10.5	mg/L	0.05	0.49%
QC value within limits for Al 396.153 Recovery = 104.79%								
As 188.979†	562.8	0.405	mg/L	0.0169	0.405	mg/L	0.0169	4.17%
QC value within limits for As 188.979 Recovery = 101.17%								
Ba 233.527†	72821.6	1.05	mg/L	0.017	1.05	mg/L	0.017	1.59%
QC value within limits for Ba 233.527 Recovery = 104.69%								
Be 234.861†	28665.6	0.0507	mg/L	0.00153	0.0507	mg/L	0.00153	3.01%
QC value within limits for Be 234.861 Recovery = 101.39%								
B 249.677†	25055.8	0.505	mg/L	0.0132	0.505	mg/L	0.0132	2.61%
QC value within limits for B 249.677 Recovery = 100.98%								
Ca 227.546†	1635.2	10.6	mg/L	0.29	10.6	mg/L	0.29	2.72%
QC value within limits for Ca 227.546 Recovery = 106.04%								
Cd 228.802†	1125.4	0.0483	mg/L	0.00217	0.0483	mg/L	0.00217	4.50%
QC value within limits for Cd 228.802 Recovery = 96.59%								
Co 228.616†	3879.8	0.208	mg/L	0.0028	0.208	mg/L	0.0028	1.35%
QC value within limits for Co 228.616 Recovery = 104.13%								
Cr 267.716†	45748.7	0.521	mg/L	0.0099	0.521	mg/L	0.0099	1.89%
QC value within limits for Cr 267.716 Recovery = 104.27%								
Cu 327.393†	82540.5	0.512	mg/L	0.0161	0.512	mg/L	0.0161	3.15%
QC value within limits for Cu 327.393 Recovery = 102.41%								
Fe 239.562†	10994.1	4.18	mg/L	0.014	4.18	mg/L	0.014	0.34%

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   QC value within limits for Fe 239.562  Recovery = 104.50%
Mg 279.077†            10346.6        10.6 mg/L          0.04        10.6 mg/L          0.04   0.34%
   QC value within limits for Mg 279.077  Recovery = 105.85%
Mn 257.610†           266979.2       0.537 mg/L        0.0079       0.537 mg/L        0.0079   1.47%
   QC value within limits for Mn 257.610  Recovery = 107.50%
Mo 202.031†            15304.7        1.05 mg/L         0.018        1.05 mg/L         0.018   1.68%
   QC value within limits for Mo 202.031  Recovery = 104.61%
Ni 231.604†            16412.5       0.527 mg/L        0.0077       0.527 mg/L        0.0077   1.46%
   QC value within limits for Ni 231.604  Recovery = 105.48%
Pb 220.353†             2781.7       0.527 mg/L        0.0078       0.527 mg/L        0.0078   1.49%
   QC value within limits for Pb 220.353  Recovery = 105.36%
Sb 206.836†             1973.1        1.20 mg/L         0.037        1.20 mg/L         0.037   3.11%
   QC value within limits for Sb 206.836  Recovery = 100.09%
Se 196.026†              282.6       0.409 mg/L        0.0097       0.409 mg/L        0.0097   2.38%
   QC value within limits for Se 196.026  Recovery = 102.20%
Si 251.611†           143362.9        5.11 mg/L         0.151        5.11 mg/L         0.151   2.95%
   QC value within limits for Si 251.611  Recovery = 102.28%
Sn 189.927†             5394.9        1.04 mg/L         0.015        1.04 mg/L         0.015   1.47%
   QC value within limits for Sn 189.927  Recovery = 104.49%
Ti 334.940†           732710.4        1.04 mg/L         0.007        1.04 mg/L         0.007   0.63%
   QC value within limits for Ti 334.940  Recovery = 103.68%
Tl 190.801†              795.7       0.542 mg/L        0.0082       0.542 mg/L        0.0082   1.51%
   QC value within limits for Tl 190.801  Recovery = 108.33%
V 290.880†            168659.0        1.05 mg/L         0.012        1.05 mg/L         0.012   1.19%
   QC value within limits for V 290.880  Recovery = 104.62%
Zn 206.200†            24823.4        1.05 mg/L         0.015        1.05 mg/L         0.015   1.41%
   QC value within limits for Zn 206.200  Recovery = 105.24%
K 766.490†             67241.9        52.9 mg/L          0.04        52.9 mg/L          0.04   0.07%
   QC value within limits for K 766.490  Recovery = 105.81%
Na 589.592†           493664.1        52.1 mg/L          1.50        52.1 mg/L          1.50   2.88%
   QC value within limits for Na 589.592  Recovery = 104.22%
Sr 407.771†           984520.3        1.07 mg/L         0.047        1.07 mg/L         0.047   4.36%
   QC value within limits for Sr 407.771  Recovery = 107.32%
Li 670.784†            63303.8        1.07 mg/L         0.006        1.07 mg/L         0.006   0.56%
   QC value within limits for Li 670.784  Recovery = 106.67%
P 214.914†              8547.1        10.4 mg/L          0.10        10.4 mg/L          0.10   0.92%
   QC value within limits for P 214.914  Recovery = 103.75%
All analyte(s) passed QC.

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Sequence No.: 64                                    Autosampler Location: 8
Sample ID: CCB                                      Date Collected: 11/8/2013 6:26:54 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                  Back Pressure     Flow
All                     172.0 kPa         0.45 L/min

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Mean Data: CCB
                   Mean Corrected          Calib.                          Sample
Analyte               Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2339489.4                                                      9130.02   0.39%
YRADIAL               160213.5                                                      6507.69   4.06%
Ga 417.206            851871.6                                                     11373.81   1.34%
GaRADIAL               44711.7                                                      1689.78   3.78%
Ag 328.068†               48.8     0.00109 mg/L      0.000585     0.00109 mg/L      0.000585  53.66%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              -11.2     -0.0378 mg/L       0.00079     -0.0378 mg/L       0.00079   2.10%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -1.0     0.00008 mg/L      0.001245     0.00008 mg/L      0.001245 >999.9%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -19.3     0.00046 mg/L      0.000040     0.00046 mg/L      0.000040   8.70%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               80.1     0.00024 mg/L      0.000028     0.00024 mg/L      0.000028  11.73%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               189.5     0.00940 mg/L      0.001364     0.00940 mg/L      0.001364  14.50%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                5.5      0.0668 mg/L       0.00522      0.0668 mg/L       0.00522   7.82%
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Sheri L. Pokorny

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   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -7.8    -0.00037 mg/L      0.000169    -0.00037 mg/L      0.000169  46.10%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -6.8    -0.00050 mg/L      0.000169    -0.00050 mg/L      0.000169  33.84%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               8.7     0.00024 mg/L      0.000098     0.00024 mg/L      0.000098  40.83%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             100.5     0.00167 mg/L      0.000280     0.00167 mg/L      0.000280  16.75%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               5.1    -0.00557 mg/L      0.000535    -0.00557 mg/L      0.000535   9.60%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              28.1      0.0121 mg/L       0.00215      0.0121 mg/L       0.00215  17.71%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             112.4    -0.00159 mg/L      0.000004    -0.00159 mg/L      0.000004   0.24%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               9.5     0.00121 mg/L      0.000307     0.00121 mg/L      0.000307  25.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†             -20.7    -0.00047 mg/L      0.000271    -0.00047 mg/L      0.000271  57.84%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               1.3    -0.00112 mg/L      0.002392    -0.00112 mg/L      0.002392 213.92%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -0.1     0.00015 mg/L      0.003034     0.00015 mg/L      0.003034 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.0    -0.00603 mg/L      0.007740    -0.00603 mg/L      0.007740 128.27%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              22.8      0.0148 mg/L       0.00228      0.0148 mg/L       0.00228  15.36%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              69.6      0.0126 mg/L       0.00087      0.0126 mg/L       0.00087   6.89%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -79.3    -0.00088 mg/L      0.000080    -0.00088 mg/L      0.000080   9.12%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -2.6    -0.00475 mg/L      0.004673    -0.00475 mg/L      0.004673  98.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              887.3     0.00659 mg/L      0.001456     0.00659 mg/L      0.001456  22.10%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -36.6    -0.00176 mg/L      0.000282    -0.00176 mg/L      0.000282  16.03%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -8.0    -0.00887 mg/L      0.037688    -0.00887 mg/L      0.037688 424.78%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             586.8      0.0531 mg/L       0.02746      0.0531 mg/L       0.02746  51.71%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             136.6     0.00152 mg/L      0.000150     0.00152 mg/L      0.000150   9.86%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               7.4    -0.00361 mg/L      0.000329    -0.00361 mg/L      0.000329   9.10%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                9.5      0.0290 mg/L       0.01465      0.0290 mg/L       0.01465  50.45%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 65                                    Autosampler Location: 147
Sample ID: L1311025901                              Date Collected: 11/8/2013 6:29:56 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1311025901
Analyte                 Back Pressure    Flow
All                    173.0 kPa        0.45 L/min

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Mean Data: L1311025901
                  Mean Corrected         Calib.                          Sample
Analyte              Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2356517.8                                                    42237.66   1.79%
YRADIAL               158855.2                                                     4091.68   2.58%
Ga 417.206            936510.9                                                    17005.39   1.82%
GaRADIAL               45768.4                                                     1493.73   3.26%
Ag 328.068†              529.0     0.00326 mg/L      0.000556     0.00326 mg/L      0.000556  17.06%
Al 396.153†               40.1     -0.0185 mg/L       0.00249     -0.0185 mg/L       0.00249  13.50%
As 188.979†               -7.7    -0.00263 mg/L      0.005492    -0.00263 mg/L      0.005492 208.82%
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Approved: November 11, 2013

Ba 233.527†	1395.2	0.0208	mg/L	0.00042	0.0208	mg/L	0.00042	2.03%
Be 234.861†	206.8	0.00043	mg/L	0.000047	0.00043	mg/L	0.000047	11.01%
B 249.677†	919.6	0.0240	mg/L	0.00105	0.0240	mg/L	0.00105	4.36%
Ca 227.546†	15584.0	96.2	mg/L	2.00	96.2	mg/L	2.00	2.08%
Cd 228.802†	-5.0	-0.00022	mg/L	0.000202	-0.00022	mg/L	0.000202	93.49%
Co 228.616†	3.2	0.00006	mg/L	0.000495	0.00006	mg/L	0.000495	790.30%
Cr 267.716†	152.3	0.00186	mg/L	0.000066	0.00186	mg/L	0.000066	3.56%
Cu 327.393†	41.1	0.00130	mg/L	0.000749	0.00130	mg/L	0.000749	57.51%
Fe 239.562†	518.3	0.188	mg/L	0.0062	0.188	mg/L	0.0062	3.27%
Mg 279.077†	76160.9	77.9	mg/L	1.32	77.9	mg/L	1.32	1.69%
Mn 257.610†	58799.2	0.117	mg/L	0.0032	0.117	mg/L	0.0032	2.72%
Mo 202.031†	33.1	0.00285	mg/L	0.000679	0.00285	mg/L	0.000679	23.83%
Ni 231.604†	138.6	0.00465	mg/L	0.000111	0.00465	mg/L	0.000111	2.38%
Pb 220.353†	18.4	0.00205	mg/L	0.001977	0.00205	mg/L	0.001977	96.47%
Sb 206.836†	-2.6	-0.00134	mg/L	0.000608	-0.00134	mg/L	0.000608	45.25%
Se 196.026†	-3.3	-0.00944	mg/L	0.002936	-0.00944	mg/L	0.002936	31.11%
Si 251.611†	50377.4	1.81	mg/L	0.043	1.81	mg/L	0.043	2.39%
Sn 189.927†	-255.0	-0.0504	mg/L	0.00090	-0.0504	mg/L	0.00090	1.78%
Ti 334.940†	-10907.6	-0.00178	mg/L	0.000500	-0.00178	mg/L	0.000500	28.16%
Tl 190.801†	-19.2	-0.0161	mg/L	0.00445	-0.0161	mg/L	0.00445	27.69%
V 290.880†	1680.6	0.00945	mg/L	0.003621	0.00945	mg/L	0.003621	38.31%
Zn 206.200†	115.2	0.00465	mg/L	0.000141	0.00465	mg/L	0.000141	3.03%
K 766.490†	8930.1	6.92	mg/L	0.220	6.92	mg/L	0.220	3.18%
Na 589.592†	30814.1	3.22	mg/L	0.038	3.22	mg/L	0.038	1.17%
Sr 407.771†	626671.9	0.681	mg/L	0.0386	0.681	mg/L	0.0386	5.67%
Li 670.784†	536.4	0.00533	mg/L	0.000268	0.00533	mg/L	0.000268	5.02%
P 214.914†	15.0	0.0357	mg/L	0.01745	0.0357	mg/L	0.01745	48.90%

Sequence No.: 66 **Autosampler Location: 148**
Sample ID: L1311025903 **Date Collected: 11/8/2013 6:33:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025903

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025903

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2254365.4						36711.51	1.63%
YRADIAL	156834.2						1530.30	0.98%
Ga 417.206	898861.3						17293.31	1.92%
GaRADIAL	46282.2						1221.81	2.64%
Ag 328.068†	676.9	0.00388	mg/L	0.000551	0.00388	mg/L	0.000551	14.20%
Al 396.153†	66.3	-0.00859	mg/L	0.002029	-0.00859	mg/L	0.002029	23.62%
As 188.979†	-6.8	-0.00131	mg/L	0.002009	-0.00131	mg/L	0.002009	153.81%
Ba 233.527†	1064.7	0.0160	mg/L	0.00012	0.0160	mg/L	0.00012	0.72%
Be 234.861†	220.0	0.00047	mg/L	0.000040	0.00047	mg/L	0.000040	8.42%
B 249.677†	611.4	0.0178	mg/L	0.00035	0.0178	mg/L	0.00035	1.97%
Ca 227.546†	20825.7	129	mg/L	5.1	129	mg/L	5.1	4.00%
Cd 228.802†	-9.3	-0.00041	mg/L	0.000136	-0.00041	mg/L	0.000136	33.42%
Co 228.616†	-2.0	-0.00020	mg/L	0.000348	-0.00020	mg/L	0.000348	171.49%
Cr 267.716†	187.2	0.00227	mg/L	0.000061	0.00227	mg/L	0.000061	2.69%
Cu 327.393†	5.8	0.00107	mg/L	0.000696	0.00107	mg/L	0.000696	65.07%
Fe 239.562†	200.6	0.0666	mg/L	0.00161	0.0666	mg/L	0.00161	2.42%
Mg 279.077†	109693.5	112	mg/L	1.7	112	mg/L	1.7	1.51%
Mn 257.610†	30076.8	0.0589	mg/L	0.00203	0.0589	mg/L	0.00203	3.44%
Mo 202.031†	42.7	0.00349	mg/L	0.000264	0.00349	mg/L	0.000264	7.55%
Ni 231.604†	534.6	0.0174	mg/L	0.00047	0.0174	mg/L	0.00047	2.72%
Pb 220.353†	28.5	0.00402	mg/L	0.001783	0.00402	mg/L	0.001783	44.39%
Sb 206.836†	-5.7	-0.00326	mg/L	0.001512	-0.00326	mg/L	0.001512	46.34%
Se 196.026†	1.1	-0.00303	mg/L	0.000554	-0.00303	mg/L	0.000554	18.27%
Si 251.611†	68084.5	2.44	mg/L	0.080	2.44	mg/L	0.080	3.26%
Sn 189.927†	-282.6	-0.0557	mg/L	0.00089	-0.0557	mg/L	0.00089	1.59%
Ti 334.940†	-14752.3	-0.00236	mg/L	0.000550	-0.00236	mg/L	0.000550	23.28%
Tl 190.801†	-21.6	-0.0176	mg/L	0.00263	-0.0176	mg/L	0.00263	14.91%
V 290.880†	2367.0	0.0128	mg/L	0.00090	0.0128	mg/L	0.00090	7.00%

Approved: November 11, 2013

Zn 206.200†	489.8	0.0205 mg/L	0.00055	0.0205 mg/L	0.00055	2.68%
K 766.490†	12298.3	9.54 mg/L	0.267	9.54 mg/L	0.267	2.80%
Na 589.592†	29999.0	3.14 mg/L	0.011	3.14 mg/L	0.011	0.35%
Sr 407.771†	761909.2	0.827 mg/L	0.0127	0.827 mg/L	0.0127	1.53%
Li 670.784†	1380.7	0.0196 mg/L	0.00078	0.0196 mg/L	0.00078	3.96%
P 214.914†	20.9	0.0428 mg/L	0.00984	0.0428 mg/L	0.00984	23.01%

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Sequence No.: 67 **Autosampler Location: 149**
Sample ID: L1311025905 **Date Collected: 11/8/2013 6:36:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025905

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025905

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2295778.1						17671.02	0.77%
YRADIAL	161924.9						644.36	0.40%
Ga 417.206	903630.5						7963.80	0.88%
GaRADIAL	46164.1						920.91	1.99%
Ag 328.068†	324.8	0.00218	mg/L	0.000668	0.00218	mg/L	0.000668	30.60%
Al 396.153†	75.5	-0.00507	mg/L	0.001776	-0.00507	mg/L	0.001776	35.07%
As 188.979†	-8.6	-0.00426	mg/L	0.000468	-0.00426	mg/L	0.000468	10.99%
Ba 233.527†	1631.6	0.0242	mg/L	0.00011	0.0242	mg/L	0.00011	0.46%
Be 234.861†	121.1	0.00042	mg/L	0.000053	0.00042	mg/L	0.000053	12.58%
B 249.677†	529.9	0.0162	mg/L	0.00115	0.0162	mg/L	0.00115	7.08%
Ca 227.546†	9080.4	56.1	mg/L	0.43	56.1	mg/L	0.43	0.76%
Cd 228.802†	-3.2	-0.00012	mg/L	0.000022	-0.00012	mg/L	0.000022	17.71%
Co 228.616†	70.6	0.00369	mg/L	0.000446	0.00369	mg/L	0.000446	12.09%
Cr 267.716†	149.2	0.00184	mg/L	0.000086	0.00184	mg/L	0.000086	4.66%
Cu 327.393†	-60.8	0.00067	mg/L	0.001361	0.00067	mg/L	0.001361	203.86%
Fe 239.562†	91.1	0.0258	mg/L	0.00100	0.0258	mg/L	0.00100	3.85%
Mg 279.077†	64735.8	66.2	mg/L	0.91	66.2	mg/L	0.91	1.37%
Mn 257.610†	600620.4	1.21	mg/L	0.011	1.21	mg/L	0.011	0.93%
Mo 202.031†	28.5	0.00277	mg/L	0.000189	0.00277	mg/L	0.000189	6.85%
Ni 231.604†	645.7	0.0210	mg/L	0.00005	0.0210	mg/L	0.00005	0.23%
Pb 220.353†	26.9	0.00302	mg/L	0.002844	0.00302	mg/L	0.002844	94.24%
Sb 206.836†	-1.5	-0.00070	mg/L	0.001524	-0.00070	mg/L	0.001524	217.26%
Se 196.026†	3.3	-0.00008	mg/L	0.006052	-0.00008	mg/L	0.006052	>999.9%
Si 251.611†	71209.3	2.55	mg/L	0.016	2.55	mg/L	0.016	0.62%
Sn 189.927†	-229.9	-0.0455	mg/L	0.00096	-0.0455	mg/L	0.00096	2.12%
Ti 334.940†	-6715.6	-0.00187	mg/L	0.000165	-0.00187	mg/L	0.000165	8.82%
Tl 190.801†	-17.1	-0.0157	mg/L	0.00267	-0.0157	mg/L	0.00267	17.05%
V 290.880†	2003.6	0.0118	mg/L	0.00079	0.0118	mg/L	0.00079	6.69%
Zn 206.200†	139.1	0.00567	mg/L	0.000250	0.00567	mg/L	0.000250	4.41%
K 766.490†	7666.5	5.91	mg/L	0.189	5.91	mg/L	0.189	3.20%
Na 589.592†	266492.4	28.0	mg/L	0.74	28.0	mg/L	0.74	2.64%
Sr 407.771†	268900.7	0.292	mg/L	0.0185	0.292	mg/L	0.0185	6.33%
Li 670.784†	165.3	-0.00095	mg/L	0.000691	-0.00095	mg/L	0.000691	73.15%
P 214.914†	11.3	0.0312	mg/L	0.01386	0.0312	mg/L	0.01386	44.46%

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Sequence No.: 68 **Autosampler Location: 150**
Sample ID: L1311025907 **Date Collected: 11/8/2013 6:39:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025907

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025907

Approved: November 11, 2013

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2355450.0						50695.57	2.15%
YRADIAL	158867.7						2631.98	1.66%
Ga 417.206	928658.4						24001.87	2.58%
GaRADIAL	46780.8						194.09	0.41%
Ag 328.068†	280.3	0.00218	mg/L	0.000630	0.00218	mg/L	0.000630	28.92%
Al 396.153†	357.2	0.102	mg/L	0.0021	0.102	mg/L	0.0021	2.09%
As 188.979†	-10.9	-0.00605	mg/L	0.003838	-0.00605	mg/L	0.003838	63.46%
Ba 233.527†	2117.5	0.0311	mg/L	0.00083	0.0311	mg/L	0.00083	2.65%
Be 234.861†	206.8	0.00042	mg/L	0.000046	0.00042	mg/L	0.000046	11.00%
B 249.677†	594.3	0.0174	mg/L	0.00078	0.0174	mg/L	0.00078	4.49%
Ca 227.546†	7538.0	46.5	mg/L	1.38	46.5	mg/L	1.38	2.96%
Cd 228.802†	-6.7	-0.00028	mg/L	0.000217	-0.00028	mg/L	0.000217	76.88%
Co 228.616†	-0.8	-0.00018	mg/L	0.000492	-0.00018	mg/L	0.000492	270.27%
Cr 267.716†	126.3	0.00157	mg/L	0.000154	0.00157	mg/L	0.000154	9.82%
Cu 327.393†	256.9	0.00265	mg/L	0.000793	0.00265	mg/L	0.000793	29.96%
Fe 239.562†	531.4	0.194	mg/L	0.0060	0.194	mg/L	0.0060	3.10%
Mg 279.077†	46294.3	47.3	mg/L	1.68	47.3	mg/L	1.68	3.54%
Mn 257.610†	22388.6	0.0434	mg/L	0.00094	0.0434	mg/L	0.00094	2.16%
Mo 202.031†	17.0	0.00174	mg/L	0.000809	0.00174	mg/L	0.000809	46.52%
Ni 231.604†	43.9	0.00161	mg/L	0.000729	0.00161	mg/L	0.000729	45.33%
Pb 220.353†	7.0	-0.00004	mg/L	0.001378	-0.00004	mg/L	0.001378	>999.9%
Sb 206.836†	-5.6	-0.00321	mg/L	0.002089	-0.00321	mg/L	0.002089	65.19%
Se 196.026†	1.7	-0.00202	mg/L	0.005684	-0.00202	mg/L	0.005684	281.95%
Si 251.611†	50083.3	1.80	mg/L	0.052	1.80	mg/L	0.052	2.87%
Sn 189.927†	-205.5	-0.0408	mg/L	0.00091	-0.0408	mg/L	0.00091	2.24%
Ti 334.940†	-3218.7	0.00165	mg/L	0.001646	0.00165	mg/L	0.001646	99.61%
Tl 190.801†	-14.7	-0.0128	mg/L	0.00226	-0.0128	mg/L	0.00226	17.60%
V 290.880†	1575.8	0.00959	mg/L	0.001670	0.00959	mg/L	0.001670	17.41%
Zn 206.200†	77.3	0.00305	mg/L	0.000556	0.00305	mg/L	0.000556	18.22%
K 766.490†	7405.3	5.74	mg/L	0.270	5.74	mg/L	0.270	4.71%
Na 589.592†	18359.5	1.92	mg/L	0.041	1.92	mg/L	0.041	2.12%
Sr 407.771†	337691.0	0.368	mg/L	0.0201	0.368	mg/L	0.0201	5.45%
Li 670.784†	316.3	0.00161	mg/L	0.001616	0.00161	mg/L	0.001616	100.45%
P 214.914†	30.6	0.0546	mg/L	0.01101	0.0546	mg/L	0.01101	20.18%

Sequence No.: 69 **Autosampler Location: 151**
Sample ID: L1311026301 **Date Collected: 11/8/2013 6:42:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026301

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2313385.7						14294.02	0.62%
YRADIAL	156424.3						6554.16	4.19%
Ga 417.206	897300.4						8032.39	0.90%
GaRADIAL	45444.6						839.93	1.85%
Ag 328.068†	156.0	0.00177	mg/L	0.000421	0.00177	mg/L	0.000421	23.81%
Al 396.153†	785.2	0.264	mg/L	0.0101	0.264	mg/L	0.0101	3.82%
As 188.979†	-7.2	-0.00375	mg/L	0.002906	-0.00375	mg/L	0.002906	77.58%
Ba 233.527†	3268.7	0.0476	mg/L	0.00047	0.0476	mg/L	0.00047	0.99%
Be 234.861†	212.2	0.00034	mg/L	0.000091	0.00034	mg/L	0.000091	26.95%
B 249.677†	330.7	0.0120	mg/L	0.00019	0.0120	mg/L	0.00019	1.55%
Ca 227.546†	4515.5	27.9	mg/L	0.22	27.9	mg/L	0.22	0.80%
Cd 228.802†	-6.6	-0.00029	mg/L	0.000197	-0.00029	mg/L	0.000197	69.04%
Co 228.616†	2.2	-0.00005	mg/L	0.000209	-0.00005	mg/L	0.000209	452.23%
Cr 267.716†	77.0	0.00098	mg/L	0.000156	0.00098	mg/L	0.000156	15.89%
Cu 327.393†	158.0	0.00206	mg/L	0.000348	0.00206	mg/L	0.000348	16.87%
Fe 239.562†	1528.6	0.575	mg/L	0.0216	0.575	mg/L	0.0216	3.76%
Mg 279.077†	12697.3	13.0	mg/L	0.55	13.0	mg/L	0.55	4.22%
Mn 257.610†	19669.0	0.0379	mg/L	0.00075	0.0379	mg/L	0.00075	1.99%
Mo 202.031†	19.3	0.00190	mg/L	0.000046	0.00190	mg/L	0.000046	2.44%

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Ni 231.604†	2.3	0.00027 mg/L	0.000347	0.00027 mg/L	0.000347	126.62%
Pb 220.353†	15.5	0.00158 mg/L	0.000555	0.00158 mg/L	0.000555	35.10%
Sb 206.836†	-2.0	-0.00096 mg/L	0.001948	-0.00096 mg/L	0.001948	202.22%
Se 196.026†	-3.5	-0.00958 mg/L	0.008515	-0.00958 mg/L	0.008515	88.85%
Si 251.611†	71163.0	2.55 mg/L	0.067	2.55 mg/L	0.067	2.63%
Sn 189.927†	-171.3	-0.0341 mg/L	0.00181	-0.0341 mg/L	0.00181	5.31%
Ti 334.940†	-265.5	0.00303 mg/L	0.000790	0.00303 mg/L	0.000790	26.06%
Tl 190.801†	-16.7	-0.0141 mg/L	0.00188	-0.0141 mg/L	0.00188	13.31%
V 290.880†	1347.7	0.00901 mg/L	0.001661	0.00901 mg/L	0.001661	18.44%
Zn 206.200†	45.9	0.00170 mg/L	0.000477	0.00170 mg/L	0.000477	28.14%
K 766.490†	3507.9	2.70 mg/L	0.096	2.70 mg/L	0.096	3.55%
Na 589.592†	96889.0	10.2 mg/L	0.08	10.2 mg/L	0.08	0.80%
Sr 407.771†	291515.4	0.318 mg/L	0.0135	0.318 mg/L	0.0135	4.25%
Li 670.784†	114.4	-0.00181 mg/L	0.000215	-0.00181 mg/L	0.000215	11.91%
P 214.914†	80.2	0.115 mg/L	0.0131	0.115 mg/L	0.0131	11.47%

Sequence No.: 70 **Autosampler Location: 152**
Sample ID: L1311026303 **Date Collected: 11/8/2013 6:45:46 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026303

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026303

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2361945.1						38498.92	1.63%
YRADIAL	160900.8						1247.63	0.78%
Ga 417.206	917824.7						25651.41	2.79%
GaRADIAL	45721.6						796.43	1.74%
Ag 328.068†	230.9	0.00186	mg/L	0.000344	0.00186	mg/L	0.000344	18.50%
Al 396.153†	100.9	0.00460	mg/L	0.004571	0.00460	mg/L	0.004571	99.27%
As 188.979†	-6.1	-0.00289	mg/L	0.001546	-0.00289	mg/L	0.001546	53.54%
Ba 233.527†	3516.1	0.0512	mg/L	0.00065	0.0512	mg/L	0.00065	1.27%
Be 234.861†	143.5	0.00034	mg/L	0.000069	0.00034	mg/L	0.000069	20.37%
B 249.677†	288.0	0.0114	mg/L	0.00043	0.0114	mg/L	0.00043	3.78%
Ca 227.546†	5412.3	33.4	mg/L	0.84	33.4	mg/L	0.84	2.52%
Cd 228.802†	-6.1	-0.00027	mg/L	0.000054	-0.00027	mg/L	0.000054	19.94%
Co 228.616†	-7.0	-0.00052	mg/L	0.000306	-0.00052	mg/L	0.000306	58.88%
Cr 267.716†	66.9	0.00090	mg/L	0.000199	0.00090	mg/L	0.000199	22.12%
Cu 327.393†	128.5	0.00184	mg/L	0.000773	0.00184	mg/L	0.000773	41.94%
Fe 239.562†	96.5	0.0288	mg/L	0.00154	0.0288	mg/L	0.00154	5.33%
Mg 279.077†	19056.4	19.5	mg/L	0.25	19.5	mg/L	0.25	1.27%
Mn 257.610†	2280.1	0.00279	mg/L	0.000057	0.00279	mg/L	0.000057	2.06%
Mo 202.031†	14.7	0.00157	mg/L	0.000269	0.00157	mg/L	0.000269	17.19%
Ni 231.604†	-5.9	0.00001	mg/L	0.000117	0.00001	mg/L	0.000117	>999.9%
Pb 220.353†	17.4	0.00194	mg/L	0.000540	0.00194	mg/L	0.000540	27.78%
Sb 206.836†	-2.7	-0.00143	mg/L	0.003553	-0.00143	mg/L	0.003553	248.62%
Se 196.026†	1.2	-0.00279	mg/L	0.007660	-0.00279	mg/L	0.007660	274.95%
Si 251.611†	57771.1	2.07	mg/L	0.052	2.07	mg/L	0.052	2.50%
Sn 189.927†	-187.4	-0.0373	mg/L	0.00111	-0.0373	mg/L	0.00111	2.97%
Ti 334.940†	-3700.4	-0.00100	mg/L	0.000315	-0.00100	mg/L	0.000315	31.62%
Tl 190.801†	-4.1	-0.00576	mg/L	0.006501	-0.00576	mg/L	0.006501	112.89%
V 290.880†	1143.3	0.00766	mg/L	0.001770	0.00766	mg/L	0.001770	23.10%
Zn 206.200†	3.0	-0.00009	mg/L	0.000049	-0.00009	mg/L	0.000049	56.53%
K 766.490†	3517.3	2.72	mg/L	0.048	2.72	mg/L	0.048	1.78%
Na 589.592†	54299.6	5.69	mg/L	0.160	5.69	mg/L	0.160	2.81%
Sr 407.771†	438395.0	0.478	mg/L	0.0030	0.478	mg/L	0.0030	0.64%
Li 670.784†	281.6	0.00102	mg/L	0.000241	0.00102	mg/L	0.000241	23.54%
P 214.914†	86.7	0.122	mg/L	0.0113	0.122	mg/L	0.0113	9.26%

Sequence No.: 71 **Autosampler Location: 153**
Sample ID: L1311026306 **Date Collected: 11/8/2013 6:48:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: November 11, 2013

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026306

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026306

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2344972.5						9276.13	0.40%
YRADIAL	160526.2						2390.55	1.49%
Ga 417.206	911438.7						4205.53	0.46%
GaRADIAL	45542.9						1447.02	3.18%
Ag 328.068†	166.3	0.00156	mg/L	0.000496	0.00156	mg/L	0.000496	31.76%
Al 396.153†	60.6	-0.0106	mg/L	0.00194	-0.0106	mg/L	0.00194	18.24%
As 188.979†	-7.1	-0.00367	mg/L	0.001843	-0.00367	mg/L	0.001843	50.29%
Ba 233.527†	3465.2	0.0505	mg/L	0.00048	0.0505	mg/L	0.00048	0.94%
Be 234.861†	124.7	0.00031	mg/L	0.000009	0.00031	mg/L	0.000009	3.05%
B 249.677†	212.2	0.00984	mg/L	0.000149	0.00984	mg/L	0.000149	1.52%
Ca 227.546†	5202.9	32.1	mg/L	0.27	32.1	mg/L	0.27	0.84%
Cd 228.802†	-6.4	-0.00028	mg/L	0.000113	-0.00028	mg/L	0.000113	40.16%
Co 228.616†	-13.4	-0.00087	mg/L	0.000067	-0.00087	mg/L	0.000067	7.74%
Cr 267.716†	60.7	0.00083	mg/L	0.000136	0.00083	mg/L	0.000136	16.34%
Cu 327.393†	125.4	0.00182	mg/L	0.000346	0.00182	mg/L	0.000346	18.99%
Fe 239.562†	118.5	0.0372	mg/L	0.00176	0.0372	mg/L	0.00176	4.74%
Mg 279.077†	18721.5	19.1	mg/L	0.27	19.1	mg/L	0.27	1.42%
Mn 257.610†	3118.0	0.00448	mg/L	0.000046	0.00448	mg/L	0.000046	1.04%
Mo 202.031†	12.2	0.00140	mg/L	0.000186	0.00140	mg/L	0.000186	13.34%
Ni 231.604†	-11.2	-0.00016	mg/L	0.000177	-0.00016	mg/L	0.000177	109.52%
Pb 220.353†	16.3	0.00172	mg/L	0.000606	0.00172	mg/L	0.000606	35.22%
Sb 206.836†	-1.6	-0.00074	mg/L	0.001308	-0.00074	mg/L	0.001308	177.33%
Se 196.026†	1.6	-0.00218	mg/L	0.007829	-0.00218	mg/L	0.007829	359.51%
Si 251.611†	59325.7	2.13	mg/L	0.023	2.13	mg/L	0.023	1.09%
Sn 189.927†	-188.1	-0.0374	mg/L	0.00061	-0.0374	mg/L	0.00061	1.64%
Ti 334.940†	-3697.3	-0.00118	mg/L	0.000140	-0.00118	mg/L	0.000140	11.80%
Tl 190.801†	-14.9	-0.0130	mg/L	0.00611	-0.0130	mg/L	0.00611	47.12%
V 290.880†	1156.8	0.00775	mg/L	0.000976	0.00775	mg/L	0.000976	12.58%
Zn 206.200†	37.0	0.00135	mg/L	0.000326	0.00135	mg/L	0.000326	24.11%
K 766.490†	3247.3	2.51	mg/L	0.096	2.51	mg/L	0.096	3.82%
Na 589.592†	50119.0	5.25	mg/L	0.033	5.25	mg/L	0.033	0.62%
Sr 407.771†	436779.0	0.476	mg/L	0.0153	0.476	mg/L	0.0153	3.22%
Li 670.784†	307.4	0.00146	mg/L	0.000124	0.00146	mg/L	0.000124	8.52%
P 214.914†	23.5	0.0460	mg/L	0.01081	0.0460	mg/L	0.01081	23.49%

Sequence No.: 72 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 11/8/2013 6:51:54 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2324270.6						28141.90	1.21%
YRADIAL	162040.0						5786.06	3.57%
Ga 417.206	873915.2						20820.52	2.38%
GaRADIAL	44969.0						1421.31	3.16%
Ag 328.068†	83975.4	0.394	mg/L	0.0086	0.394	mg/L	0.0086	2.19%
QC value within limits for Ag 328.068 Recovery = 98.53%								
Al 396.153†	27354.0	10.3	mg/L	0.12	10.3	mg/L	0.12	1.17%
QC value within limits for Al 396.153 Recovery = 102.53%								
As 188.979†	549.2	0.395	mg/L	0.0061	0.395	mg/L	0.0061	1.54%
QC value within limits for As 188.979 Recovery = 98.74%								

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Ba 233.527†	71343.6	1.03 mg/L	0.007	1.03 mg/L	0.007	0.65%
QC value within limits for Ba 233.527 Recovery = 102.57%						
Be 234.861†	27562.5	0.0487 mg/L	0.00103	0.0487 mg/L	0.00103	2.10%
QC value within limits for Be 234.861 Recovery = 97.46%						
B 249.677†	24039.4	0.485 mg/L	0.0094	0.485 mg/L	0.0094	1.93%
QC value within limits for B 249.677 Recovery = 96.92%						
Ca 227.546†	1591.9	10.3 mg/L	0.17	10.3 mg/L	0.17	1.66%
QC value within limits for Ca 227.546 Recovery = 103.26%						
Cd 228.802†	1089.7	0.0468 mg/L	0.00133	0.0468 mg/L	0.00133	2.84%
QC value within limits for Cd 228.802 Recovery = 93.52%						
Co 228.616†	3813.0	0.205 mg/L	0.0020	0.205 mg/L	0.0020	0.98%
QC value within limits for Co 228.616 Recovery = 102.32%						
Cr 267.716†	44491.6	0.507 mg/L	0.0068	0.507 mg/L	0.0068	1.33%
QC value within limits for Cr 267.716 Recovery = 101.40%						
Cu 327.393†	80101.8	0.497 mg/L	0.0118	0.497 mg/L	0.0118	2.38%
QC value within limits for Cu 327.393 Recovery = 99.40%						
Fe 239.562†	10802.3	4.11 mg/L	0.062	4.11 mg/L	0.062	1.51%
QC value within limits for Fe 239.562 Recovery = 102.68%						
Mg 279.077†	10054.1	10.3 mg/L	0.12	10.3 mg/L	0.12	1.16%
QC value within limits for Mg 279.077 Recovery = 102.85%						
Mn 257.610†	260919.5	0.525 mg/L	0.0029	0.525 mg/L	0.0029	0.54%
QC value within limits for Mn 257.610 Recovery = 105.05%						
Mo 202.031†	14942.1	1.02 mg/L	0.012	1.02 mg/L	0.012	1.19%
QC value within limits for Mo 202.031 Recovery = 102.13%						
Ni 231.604†	16021.7	0.515 mg/L	0.0047	0.515 mg/L	0.0047	0.92%
QC value within limits for Ni 231.604 Recovery = 102.97%						
Pb 220.353†	2723.4	0.516 mg/L	0.0051	0.516 mg/L	0.0051	0.99%
QC value within limits for Pb 220.353 Recovery = 103.15%						
Sb 206.836†	1918.1	1.17 mg/L	0.025	1.17 mg/L	0.025	2.10%
QC value within limits for Sb 206.836 Recovery = 97.30%						
Se 196.026†	275.1	0.398 mg/L	0.0063	0.398 mg/L	0.0063	1.57%
QC value within limits for Se 196.026 Recovery = 99.47%						
Si 251.611†	139110.4	4.96 mg/L	0.097	4.96 mg/L	0.097	1.96%
QC value within limits for Si 251.611 Recovery = 99.25%						
Sn 189.927†	5267.4	1.02 mg/L	0.011	1.02 mg/L	0.011	1.09%
QC value within limits for Sn 189.927 Recovery = 102.02%						
Ti 334.940†	723869.2	1.02 mg/L	0.002	1.02 mg/L	0.002	0.17%
QC value within limits for Ti 334.940 Recovery = 102.43%						
Tl 190.801†	782.8	0.533 mg/L	0.0111	0.533 mg/L	0.0111	2.08%
QC value within limits for Tl 190.801 Recovery = 106.57%						
V 290.880†	165135.6	1.02 mg/L	0.005	1.02 mg/L	0.005	0.46%
QC value within limits for V 290.880 Recovery = 102.43%						
Zn 206.200†	24192.9	1.03 mg/L	0.013	1.03 mg/L	0.013	1.27%
QC value within limits for Zn 206.200 Recovery = 102.56%						
K 766.490†	65845.3	51.8 mg/L	0.37	51.8 mg/L	0.37	0.71%
QC value within limits for K 766.490 Recovery = 103.57%						
Na 589.592†	487077.3	51.4 mg/L	2.40	51.4 mg/L	2.40	4.66%
QC value within limits for Na 589.592 Recovery = 102.82%						
Sr 407.771†	971343.2	1.06 mg/L	0.052	1.06 mg/L	0.052	4.90%
QC value within limits for Sr 407.771 Recovery = 105.89%						
Li 670.784†	61948.9	1.04 mg/L	0.010	1.04 mg/L	0.010	1.00%
QC value within limits for Li 670.784 Recovery = 104.38%						
P 214.914†	8366.4	10.2 mg/L	0.14	10.2 mg/L	0.14	1.38%
QC value within limits for P 214.914 Recovery = 101.56%						

All analyte(s) passed QC.

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Sequence No.: 73 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 11/8/2013 6:53:59 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD

Approved: November 11, 2013

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Y 371.029            2364557.5                                                    18527.57   0.78%
YRADIAL               159334.1                                                     3344.49   2.10%
Ga 417.206            865831.4                                                     4814.06   0.56%
GaRADIAL               44304.7                                                      495.86   1.12%
Ag 328.068†               48.1     0.00108 mg/L      0.000281     0.00108 mg/L      0.000281  25.96%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               -3.9     -0.0350 mg/L       0.00261     -0.0350 mg/L       0.00261   7.45%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -0.6     0.00036 mg/L      0.004468     0.00036 mg/L      0.004468 >999.9%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              -10.7     0.00059 mg/L      0.000098     0.00059 mg/L      0.000098  16.71%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               97.9     0.00027 mg/L      0.000039     0.00027 mg/L      0.000039  14.45%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                41.1     0.00642 mg/L      0.000889     0.00642 mg/L      0.000889  13.84%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               12.7       0.112 mg/L        0.0335       0.112 mg/L        0.0335  29.98%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -6.9    -0.00033 mg/L      0.000183    -0.00033 mg/L      0.000183  55.81%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -7.3    -0.00053 mg/L      0.000212    -0.00053 mg/L      0.000212  40.19%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                7.6     0.00023 mg/L      0.000134     0.00023 mg/L      0.000134  59.02%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              191.6     0.00223 mg/L      0.000388     0.00223 mg/L      0.000388  17.39%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                0.9    -0.00720 mg/L      0.000514    -0.00720 mg/L      0.000514   7.14%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               14.4    -0.00194 mg/L      0.002440    -0.00194 mg/L      0.002440 125.95%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               49.6    -0.00171 mg/L      0.000026    -0.00171 mg/L      0.000026   1.49%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.6     0.00088 mg/L      0.000226     0.00088 mg/L      0.000226  25.80%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -24.4    -0.00059 mg/L      0.000544    -0.00059 mg/L      0.000544  92.48%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               13.9     0.00127 mg/L      0.003140     0.00127 mg/L      0.003140 247.78%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                0.4     0.00048 mg/L      0.000801     0.00048 mg/L      0.000801 166.22%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                2.7    -0.00060 mg/L      0.005186    -0.00060 mg/L      0.005186 862.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -3.9      0.0139 mg/L       0.00172      0.0139 mg/L       0.00172  12.39%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               76.4      0.0139 mg/L       0.00081      0.0139 mg/L       0.00081   5.84%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             -141.5    -0.00096 mg/L      0.000093    -0.00096 mg/L      0.000093   9.74%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -1.5    -0.00400 mg/L      0.002159    -0.00400 mg/L      0.002159  53.94%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               709.3     0.00548 mg/L      0.000523     0.00548 mg/L      0.000523   9.53%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -38.5    -0.00184 mg/L      0.000075    -0.00184 mg/L      0.000075   4.08%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                25.4      0.0170 mg/L       0.03383      0.0170 mg/L       0.03383 198.89%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              354.4      0.0287 mg/L       0.02364      0.0287 mg/L       0.02364  82.23%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              136.0     0.00152 mg/L      0.000191     0.00152 mg/L      0.000191  12.57%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              -24.5    -0.00415 mg/L      0.001574    -0.00415 mg/L      0.001574  37.89%
   QC value within limits for Li 670.784  Recovery = Not calculated
P 214.914†                13.9      0.0343 mg/L       0.01428      0.0343 mg/L       0.01428  41.56%
   QC value within limits for P 214.914  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 74 **Autosampler Location: 154**
Sample ID: PBW 9A WG451856-03 **Date Collected: 11/8/2013 6:57:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: PBW 9A WG451856-03

Analyte	Back Pressure	Flow
All	171.0 kPa	0.45 L/min

Mean Data: PBW 9A WG451856-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2375607.2						84557.46	3.56%
YRADIAL	161360.5						3693.07	2.29%
Ga 417.206	871163.3						39172.40	4.50%
GaRADIAL	44921.8						703.29	1.57%
Ag 328.068†	-24.3	0.00075	mg/L	0.000177	0.00075	mg/L	0.000177	23.64%
Al 396.153†	0.4	-0.0334	mg/L	0.00205	-0.0334	mg/L	0.00205	6.13%
As 188.979†	0.3	0.00102	mg/L	0.001658	0.00102	mg/L	0.001658	162.17%
Ba 233.527†	-21.0	0.00044	mg/L	0.000101	0.00044	mg/L	0.000101	22.97%
Be 234.861†	60.6	0.00020	mg/L	0.000090	0.00020	mg/L	0.000090	45.43%
B 249.677†	-129.8	0.00299	mg/L	0.000277	0.00299	mg/L	0.000277	9.27%
Ca 227.546†	10.0	0.0952	mg/L	0.08083	0.0952	mg/L	0.08083	84.89%
Cd 228.802†	-8.7	-0.00041	mg/L	0.000117	-0.00041	mg/L	0.000117	28.40%
Co 228.616†	-13.8	-0.00088	mg/L	0.000214	-0.00088	mg/L	0.000214	24.26%
Cr 267.716†	10.6	0.00026	mg/L	0.000123	0.00026	mg/L	0.000123	47.36%
Cu 327.393†	159.9	0.00204	mg/L	0.000444	0.00204	mg/L	0.000444	21.80%
Fe 239.562†	20.8	0.00039	mg/L	0.001266	0.00039	mg/L	0.001266	327.74%
Mg 279.077†	17.9	0.00171	mg/L	0.004408	0.00171	mg/L	0.004408	258.19%
Mn 257.610†	230.8	-0.00135	mg/L	0.000062	-0.00135	mg/L	0.000062	4.57%
Mo 202.031†	-3.4	0.00033	mg/L	0.000053	0.00033	mg/L	0.000053	15.92%
Ni 231.604†	-9.3	-0.00010	mg/L	0.000480	-0.00010	mg/L	0.000480	459.38%
Pb 220.353†	4.9	-0.00042	mg/L	0.000864	-0.00042	mg/L	0.000864	205.23%
Sb 206.836†	-0.8	-0.00028	mg/L	0.000233	-0.00028	mg/L	0.000233	82.88%
Se 196.026†	0.5	-0.00386	mg/L	0.003160	-0.00386	mg/L	0.003160	81.80%
Si 251.611†	88.9	0.0172	mg/L	0.00259	0.0172	mg/L	0.00259	15.02%
Sn 189.927†	-17.6	-0.00435	mg/L	0.000348	-0.00435	mg/L	0.000348	8.01%
Ti 334.940†	-146.7	-0.00097	mg/L	0.000195	-0.00097	mg/L	0.000195	20.17%
Tl 190.801†	1.9	-0.00174	mg/L	0.002385	-0.00174	mg/L	0.002385	137.36%
V 290.880†	632.6	0.00501	mg/L	0.001695	0.00501	mg/L	0.001695	33.86%
Zn 206.200†	0.7	-0.00019	mg/L	0.000179	-0.00019	mg/L	0.000179	96.05%
K 766.490†	-40.7	-0.0342	mg/L	0.07176	-0.0342	mg/L	0.07176	210.03%
Na 589.592†	146.6	0.00697	mg/L	0.005731	0.00697	mg/L	0.005731	82.19%
Sr 407.771†	57.2	0.00143	mg/L	0.000056	0.00143	mg/L	0.000056	3.90%
Li 670.784†	-14.8	-0.00399	mg/L	0.000616	-0.00399	mg/L	0.000616	15.42%
P 214.914†	12.0	0.0320	mg/L	0.00968	0.0320	mg/L	0.00968	30.22%

Sequence No.: 75
Sample ID: LCSW 9A WG451856-04
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 155
Date Collected: 11/8/2013 7:00:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW 9A WG451856-04

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: LCSW 9A WG451856-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2307129.8						11197.11	0.49%
YRADIAL	155304.9						1046.78	0.67%
Ga 417.206	864153.0						3738.97	0.43%
GaRADIAL	44899.7						277.03	0.62%
Ag 328.068†	42058.1	0.198	mg/L	0.0032	0.198	mg/L	0.0032	1.62%
Al 396.153†	13141.9	4.91	mg/L	0.050	4.91	mg/L	0.050	1.02%
As 188.979†	262.8	0.189	mg/L	0.0051	0.189	mg/L	0.0051	2.67%
Ba 233.527†	34922.5	0.502	mg/L	0.0083	0.502	mg/L	0.0083	1.65%
Be 234.861†	13412.4	0.0238	mg/L	0.00025	0.0238	mg/L	0.00025	1.06%
B 249.677†	47924.9	0.966	mg/L	0.0233	0.966	mg/L	0.0233	2.41%
Ca 227.546†	775.2	5.05	mg/L	0.035	5.05	mg/L	0.035	0.69%

Approved: November 11, 2013

Cd 228.802†	531.4	0.0228 mg/L	0.00011	0.0228 mg/L	0.00011	0.49%
Co 228.616†	1863.8	0.1000 mg/L	0.00113	0.1000 mg/L	0.00113	1.13%
Cr 267.716†	21763.1	0.248 mg/L	0.0033	0.248 mg/L	0.0033	1.33%
Cu 327.393†	39700.2	0.247 mg/L	0.0038	0.247 mg/L	0.0038	1.55%
Fe 239.562†	5362.9	2.04 mg/L	0.026	2.04 mg/L	0.026	1.29%
Mg 279.077†	5023.9	5.13 mg/L	0.018	5.13 mg/L	0.018	0.34%
Mn 257.610†	128431.7	0.258 mg/L	0.0052	0.258 mg/L	0.0052	2.04%
Mo 202.031†	7369.0	0.504 mg/L	0.0109	0.504 mg/L	0.0109	2.16%
Ni 231.604†	7841.8	0.252 mg/L	0.0072	0.252 mg/L	0.0072	2.85%
Pb 220.353†	1337.1	0.253 mg/L	0.0034	0.253 mg/L	0.0034	1.35%
Sb 206.836†	950.4	0.579 mg/L	0.0034	0.579 mg/L	0.0034	0.58%
Se 196.026†	129.8	0.185 mg/L	0.0098	0.185 mg/L	0.0098	5.27%
Si 251.611†	68260.6	2.44 mg/L	0.038	2.44 mg/L	0.038	1.55%
Sn 189.927†	-51.0	-0.0108 mg/L	0.00099	-0.0108 mg/L	0.00099	9.15%
Ti 334.940†	349399.6	0.494 mg/L	0.0023	0.494 mg/L	0.0023	0.46%
Tl 190.801†	376.4	0.255 mg/L	0.0024	0.255 mg/L	0.0024	0.93%
V 290.880†	81232.6	0.504 mg/L	0.0136	0.504 mg/L	0.0136	2.69%
Zn 206.200†	11807.2	0.500 mg/L	0.0063	0.500 mg/L	0.0063	1.26%
K 766.490†	31501.2	24.5 mg/L	0.33	24.5 mg/L	0.33	1.33%
Na 589.592†	231606.6	24.3 mg/L	0.07	24.3 mg/L	0.07	0.27%
Sr 407.771†	477480.9	0.521 mg/L	0.0036	0.521 mg/L	0.0036	0.70%
Li 670.784†	29786.6	0.500 mg/L	0.0056	0.500 mg/L	0.0056	1.12%
P 214.914†	-114.6	-0.121 mg/L	0.0262	-0.121 mg/L	0.0262	21.58%

Sequence No.: 76 **Autosampler Location: 156**
Sample ID: L1311026007 WG451856-01 **Date Collected: 11/8/2013 7:02:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026007 WG451856-01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026007 WG451856-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2263612.8						14261.75	0.63%
YRADIAL	158642.0						3870.28	2.44%
Ga 417.206	922328.4						4781.83	0.52%
GaRADIAL	47701.0						933.99	1.96%
Ag 328.068†	910.8	0.00504	mg/L	0.000526	0.00504	mg/L	0.000526	10.44%
Al 396.153†	-5.6	-0.0358	mg/L	0.00168	-0.0358	mg/L	0.00168	4.69%
As 188.979†	-7.8	-0.00053	mg/L	0.002115	-0.00053	mg/L	0.002115	402.64%
Ba 233.527†	999.1	0.0151	mg/L	0.00012	0.0151	mg/L	0.00012	0.78%
Be 234.861†	192.9	0.00043	mg/L	0.000017	0.00043	mg/L	0.000017	3.92%
B 249.677†	1126.1	0.0282	mg/L	0.00174	0.0282	mg/L	0.00174	6.18%
Ca 227.546†	32345.7	200	mg/L	1.5	200	mg/L	1.5	0.77%
Cd 228.802†	-9.7	-0.00043	mg/L	0.000114	-0.00043	mg/L	0.000114	26.72%
Co 228.616†	0.8	-0.00002	mg/L	0.000246	-0.00002	mg/L	0.000246	>999.9%
Cr 267.716†	260.4	0.00311	mg/L	0.000285	0.00311	mg/L	0.000285	9.16%
Cu 327.393†	-131.1	0.00021	mg/L	0.000460	0.00021	mg/L	0.000460	218.00%
Fe 239.562†	81.0	0.0189	mg/L	0.00375	0.0189	mg/L	0.00375	19.80%
Mg 279.077†	213909.7	219	mg/L	3.6	219	mg/L	3.6	1.64%
Mn 257.610†	11969.6	0.0223	mg/L	0.00039	0.0223	mg/L	0.00039	1.75%
Mo 202.031†	35.9	0.00303	mg/L	0.000504	0.00303	mg/L	0.000504	16.65%
Ni 231.604†	133.7	0.00450	mg/L	0.000491	0.00450	mg/L	0.000491	10.90%
Pb 220.353†	27.6	0.00385	mg/L	0.002129	0.00385	mg/L	0.002129	55.24%
Sb 206.836†	-3.3	-0.00177	mg/L	0.004146	-0.00177	mg/L	0.004146	233.59%
Se 196.026†	0.2	-0.00428	mg/L	0.010314	-0.00428	mg/L	0.010314	241.25%
Si 251.611†	65150.9	2.34	mg/L	0.022	2.34	mg/L	0.022	0.95%
Sn 189.927†	-308.8	-0.0608	mg/L	0.00076	-0.0608	mg/L	0.00076	1.26%
Ti 334.940†	-23194.7	-0.00365	mg/L	0.000670	-0.00365	mg/L	0.000670	18.39%
Tl 190.801†	-24.0	-0.0194	mg/L	0.00317	-0.0194	mg/L	0.00317	16.38%
V 290.880†	2577.9	0.0114	mg/L	0.00114	0.0114	mg/L	0.00114	9.99%
Zn 206.200†	60.5	0.00236	mg/L	0.000110	0.00236	mg/L	0.000110	4.67%
K 766.490†	19066.8	14.8	mg/L	0.38	14.8	mg/L	0.38	2.58%
Na 589.592†	48494.8	5.08	mg/L	0.035	5.08	mg/L	0.035	0.68%
Sr 407.771†	382287.6	0.411	mg/L	0.0154	0.411	mg/L	0.0154	3.75%

Approved: November 11, 2013

Li 670.784†	1514.7	0.0219	mg/L	0.00033	0.0219	mg/L	0.00033	1.53%
P 214.914†	25.5	0.0484	mg/L	0.00924	0.0484	mg/L	0.00924	19.11%

Sequence No.: 77 **Autosampler Location: 157**
Sample ID: L1311026007DU WG451856-05 **Date Collected: 11/8/2013 7:05:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026007DU WG451856-05

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026007DU WG451856-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2263904.3						12451.23	0.55%
YRADIAL	156022.6						2000.13	1.28%
Ga 417.206	917220.1						11878.25	1.30%
GaRADIAL	47021.7						582.33	1.24%
Ag 328.068†	954.6	0.00523	mg/L	0.000249	0.00523	mg/L	0.000249	4.75%
Al 396.153†	-0.4	-0.0338	mg/L	0.00275	-0.0338	mg/L	0.00275	8.15%
As 188.979†	-10.6	-0.00274	mg/L	0.003033	-0.00274	mg/L	0.003033	110.84%
Ba 233.527†	972.3	0.0147	mg/L	0.00012	0.0147	mg/L	0.00012	0.78%
Be 234.861†	185.4	0.00042	mg/L	0.000040	0.00042	mg/L	0.000040	9.50%
B 249.677†	829.2	0.0222	mg/L	0.00058	0.0222	mg/L	0.00058	2.62%
Ca 227.546†	30957.5	191	mg/L	2.0	191	mg/L	2.0	1.07%
Cd 228.802†	-6.9	-0.00029	mg/L	0.000182	-0.00029	mg/L	0.000182	62.78%
Co 228.616†	0.4	-0.00005	mg/L	0.000469	-0.00005	mg/L	0.000469	>999.9%
Cr 267.716†	243.5	0.00292	mg/L	0.000289	0.00292	mg/L	0.000289	9.93%
Cu 327.393†	-110.0	0.00034	mg/L	0.000534	0.00034	mg/L	0.000534	156.36%
Fe 239.562†	47.1	0.00605	mg/L	0.000353	0.00605	mg/L	0.000353	5.83%
Mg 279.077†	212922.9	218	mg/L	3.7	218	mg/L	3.7	1.69%
Mn 257.610†	11502.7	0.0214	mg/L	0.00017	0.0214	mg/L	0.00017	0.82%
Mo 202.031†	29.9	0.00261	mg/L	0.000438	0.00261	mg/L	0.000438	16.75%
Ni 231.604†	116.9	0.00396	mg/L	0.000269	0.00396	mg/L	0.000269	6.79%
Pb 220.353†	26.9	0.00372	mg/L	0.001908	0.00372	mg/L	0.001908	51.26%
Sb 206.836†	-4.4	-0.00251	mg/L	0.002217	-0.00251	mg/L	0.002217	88.44%
Se 196.026†	-1.8	-0.00716	mg/L	0.005913	-0.00716	mg/L	0.005913	82.61%
Si 251.611†	62446.2	2.24	mg/L	0.017	2.24	mg/L	0.017	0.74%
Sn 189.927†	-310.9	-0.0612	mg/L	0.00051	-0.0612	mg/L	0.00051	0.83%
Ti 334.940†	-22208.6	-0.00354	mg/L	0.000505	-0.00354	mg/L	0.000505	14.28%
Tl 190.801†	-24.1	-0.0194	mg/L	0.00299	-0.0194	mg/L	0.00299	15.41%
V 290.880†	2390.0	0.0102	mg/L	0.00048	0.0102	mg/L	0.00048	4.70%
Zn 206.200†	52.5	0.00202	mg/L	0.000549	0.00202	mg/L	0.000549	27.13%
K 766.490†	19021.5	14.8	mg/L	0.53	14.8	mg/L	0.53	3.62%
Na 589.592†	46876.7	4.91	mg/L	0.050	4.91	mg/L	0.050	1.02%
Sr 407.771†	381086.4	0.410	mg/L	0.0165	0.410	mg/L	0.0165	4.01%
Li 670.784†	1451.6	0.0208	mg/L	0.00114	0.0208	mg/L	0.00114	5.49%
P 214.914†	26.7	0.0499	mg/L	0.00634	0.0499	mg/L	0.00634	12.70%

Sequence No.: 78 **Autosampler Location: 158**
Sample ID: L1311026007MS WG451856-06 **Date Collected: 11/8/2013 7:08:11 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026007MS WG451856-06

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026007MS WG451856-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2223071.8						45802.32	2.06%
YRADIAL	156089.7						1801.12	1.15%

Approved: November 11, 2013

Ga 417.206	882815.8					23233.27	2.63%
GaRADIAL	46265.7					512.71	1.11%
Ag 328.068†	39650.1	0.187	mg/L	0.0033	0.187 mg/L	0.0033	1.74%
Al 396.153†	12839.9	4.79	mg/L	0.133	4.79 mg/L	0.133	2.78%
As 188.979†	243.7	0.180	mg/L	0.0090	0.180 mg/L	0.0090	5.02%
Ba 233.527†	33943.5	0.488	mg/L	0.0029	0.488 mg/L	0.0029	0.60%
Be 234.861†	12485.7	0.0221	mg/L	0.00021	0.0221 mg/L	0.00021	0.95%
B 249.677†	46533.7	0.939	mg/L	0.0101	0.939 mg/L	0.0101	1.07%
Ca 227.546†	32219.0	199	mg/L	3.2	199 mg/L	3.2	1.59%
Cd 228.802†	479.5	0.0206	mg/L	0.00050	0.0206 mg/L	0.00050	2.42%
Co 228.616†	1732.1	0.0929	mg/L	0.00196	0.0929 mg/L	0.00196	2.11%
Cr 267.716†	20850.2	0.238	mg/L	0.0017	0.238 mg/L	0.0017	0.72%
Cu 327.393†	36265.1	0.226	mg/L	0.0040	0.226 mg/L	0.0040	1.78%
Fe 239.562†	5227.3	1.98	mg/L	0.055	1.98 mg/L	0.055	2.77%
Mg 279.077†	210990.8	216	mg/L	0.4	216 mg/L	0.4	0.20%
Mn 257.610†	132582.7	0.266	mg/L	0.0014	0.266 mg/L	0.0014	0.52%
Mo 202.031†	7258.9	0.496	mg/L	0.0085	0.496 mg/L	0.0085	1.71%
Ni 231.604†	7557.2	0.243	mg/L	0.0039	0.243 mg/L	0.0039	1.59%
Pb 220.353†	1272.8	0.240	mg/L	0.0047	0.240 mg/L	0.0047	1.94%
Sb 206.836†	883.9	0.538	mg/L	0.0126	0.538 mg/L	0.0126	2.34%
Se 196.026†	131.1	0.187	mg/L	0.0018	0.187 mg/L	0.0018	0.98%
Si 251.611†	126501.6	4.52	mg/L	0.049	4.52 mg/L	0.049	1.09%
Sn 189.927†	-301.6	-0.0594	mg/L	0.00133	-0.0594 mg/L	0.00133	2.24%
Ti 334.940†	330064.0	0.496	mg/L	0.0030	0.496 mg/L	0.0030	0.61%
Tl 190.801†	316.4	0.214	mg/L	0.0089	0.214 mg/L	0.0089	4.16%
V 290.880†	80774.6	0.496	mg/L	0.0054	0.496 mg/L	0.0054	1.09%
Zn 206.200†	10894.6	0.462	mg/L	0.0088	0.462 mg/L	0.0088	1.91%
K 766.490†	48884.8	38.3	mg/L	0.20	38.3 mg/L	0.20	0.51%
Na 589.592†	271977.9	28.6	mg/L	0.14	28.6 mg/L	0.14	0.49%
Sr 407.771†	831624.7	0.901	mg/L	0.0101	0.901 mg/L	0.0101	1.12%
Li 670.784†	30824.9	0.518	mg/L	0.0052	0.518 mg/L	0.0052	1.00%
P 214.914†	-86.6	-0.0874	mg/L	0.02348	-0.0874 mg/L	0.02348	26.85%

Sequence No.: 79 **Autosampler Location: 159**
Sample ID: L1311026010 **Date Collected: 11/8/2013 7:10:17 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026010

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026010

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2177427.0						9545.10	0.44%
YRADIAL	152368.0						2837.66	1.86%
Ga 417.206	902114.7						1292.08	0.14%
GaRADIAL	46156.4						1390.72	3.01%
Ag 328.068†	1716.3	0.00737	mg/L	0.000317	0.00737	mg/L	0.000317	4.31%
Al 396.153†	-23.3	-0.0426	mg/L	0.00236	-0.0426	mg/L	0.00236	5.54%
As 188.979†	-8.7	0.00134	mg/L	0.002977	0.00134	mg/L	0.002977	221.50%
Ba 233.527†	440.5	0.00705	mg/L	0.000147	0.00705	mg/L	0.000147	2.09%
Be 234.861†	57.8	0.00098	mg/L	0.000013	0.00098	mg/L	0.000013	1.32%
B 249.677†	2162.3	0.0485	mg/L	0.00117	0.0485	mg/L	0.00117	2.41%
Ca 227.546†	49988.2	308	mg/L	2.0	308	mg/L	2.0	0.64%
Cd 228.802†	-2.7	0.00011	mg/L	0.000037	0.00011	mg/L	0.000037	34.86%
Co 228.616†	1095.9	0.0591	mg/L	0.00048	0.0591	mg/L	0.00048	0.82%
Cr 267.716†	302.1	0.00356	mg/L	0.000051	0.00356	mg/L	0.000051	1.43%
Cu 327.393†	-223.2	-0.00039	mg/L	0.000212	-0.00039	mg/L	0.000212	53.80%
Fe 239.562†	918.1	0.335	mg/L	0.0108	0.335	mg/L	0.0108	3.22%
Mg 279.077†	328454.5	336	mg/L	1.1	336	mg/L	1.1	0.33%
Mn 257.610†	4293764.9	8.66	mg/L	0.105	8.66	mg/L	0.105	1.21%
Mo 202.031†	57.5	0.00631	mg/L	0.000342	0.00631	mg/L	0.000342	5.41%
Ni 231.604†	3258.9	0.105	mg/L	0.0008	0.105	mg/L	0.0008	0.80%
Pb 220.353†	29.4	-0.00101	mg/L	0.000762	-0.00101	mg/L	0.000762	75.71%
Sb 206.836†	-9.4	-0.00547	mg/L	0.002070	-0.00547	mg/L	0.002070	37.87%
Se 196.026†	0.5	-0.00636	mg/L	0.002249	-0.00636	mg/L	0.002249	35.36%

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Si 251.611†	47822.6	1.72 mg/L	0.008	1.72 mg/L	0.008	0.44%
Sn 189.927†	-349.7	-0.0687 mg/L	0.00168	-0.0687 mg/L	0.00168	2.45%
Ti 334.940†	-36217.5	-0.00574 mg/L	0.000743	-0.00574 mg/L	0.000743	12.94%
Tl 190.801†	-19.6	-0.0253 mg/L	0.00602	-0.0253 mg/L	0.00602	23.76%
V 290.880†	3073.6	0.0114 mg/L	0.00102	0.0114 mg/L	0.00102	8.98%
Zn 206.200†	770.5	0.0323 mg/L	0.00042	0.0323 mg/L	0.00042	1.31%
K 766.490†	19128.6	14.8 mg/L	0.26	14.8 mg/L	0.26	1.75%
Na 589.592†	1064367.7	113 mg/L	3.6	113 mg/L	3.6	3.18%
Sr 407.771†	2353011.5	2.55 mg/L	0.015	2.55 mg/L	0.015	0.58%
Li 670.784†	4211.3	0.0675 mg/L	0.00226	0.0675 mg/L	0.00226	3.35%
P 214.914†	29.8	0.0536 mg/L	0.00851	0.0536 mg/L	0.00851	15.89%

Sequence No.: 80 **Autosampler Location: 160**
Sample ID: L1311026012 **Date Collected: 11/8/2013 7:13:24 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026012

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026012

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2181370.5						6209.75	0.28%
YRADIAL	155057.9						5035.40	3.25%
Ga 417.206	896653.5						5238.20	0.58%
GaRADIAL	46723.9						1705.04	3.65%
Ag 328.068†	1288.6	0.00609	mg/L	0.000162	0.00609	mg/L	0.000162	2.66%
Al 396.153†	5.0	-0.0318	mg/L	0.00191	-0.0318	mg/L	0.00191	6.00%
As 188.979†	-1.5	0.00523	mg/L	0.003824	0.00523	mg/L	0.003824	73.06%
Ba 233.527†	676.5	0.0105	mg/L	0.00006	0.0105	mg/L	0.00006	0.56%
Be 234.861†	118.0	0.00060	mg/L	0.000025	0.00060	mg/L	0.000025	4.10%
B 249.677†	1844.8	0.0426	mg/L	0.00066	0.0426	mg/L	0.00066	1.55%
Ca 227.546†	40612.3	251	mg/L	0.8	251	mg/L	0.8	0.34%
Cd 228.802†	-10.3	-0.00045	mg/L	0.000094	-0.00045	mg/L	0.000094	20.71%
Co 228.616†	81.2	0.00432	mg/L	0.000450	0.00432	mg/L	0.000450	10.44%
Cr 267.716†	279.0	0.00332	mg/L	0.000222	0.00332	mg/L	0.000222	6.69%
Cu 327.393†	-129.6	0.00019	mg/L	0.000456	0.00019	mg/L	0.000456	243.15%
Fe 239.562†	100.0	0.0255	mg/L	0.00174	0.0255	mg/L	0.00174	6.82%
Mg 279.077†	247326.9	253	mg/L	5.9	253	mg/L	5.9	2.32%
Mn 257.610†	1526082.4	3.08	mg/L	0.029	3.08	mg/L	0.029	0.96%
Mo 202.031†	50.9	0.00468	mg/L	0.000420	0.00468	mg/L	0.000420	8.98%
Ni 231.604†	4969.7	0.160	mg/L	0.0008	0.160	mg/L	0.0008	0.50%
Pb 220.353†	21.4	0.00088	mg/L	0.001769	0.00088	mg/L	0.001769	201.05%
Sb 206.836†	-3.4	-0.00177	mg/L	0.000836	-0.00177	mg/L	0.000836	47.26%
Se 196.026†	-2.4	-0.00888	mg/L	0.007897	-0.00888	mg/L	0.007897	88.96%
Si 251.611†	19360.8	0.704	mg/L	0.0061	0.704	mg/L	0.0061	0.87%
Sn 189.927†	-330.0	-0.0649	mg/L	0.00186	-0.0649	mg/L	0.00186	2.86%
Ti 334.940†	-29241.8	-0.00455	mg/L	0.000724	-0.00455	mg/L	0.000724	15.93%
Tl 190.801†	-25.6	-0.0236	mg/L	0.00627	-0.0236	mg/L	0.00627	26.62%
V 290.880†	2922.2	0.0126	mg/L	0.00015	0.0126	mg/L	0.00015	1.19%
Zn 206.200†	1267.7	0.0534	mg/L	0.00036	0.0534	mg/L	0.00036	0.68%
K 766.490†	19373.2	15.0	mg/L	0.60	15.0	mg/L	0.60	4.02%
Na 589.592†	1001178.2	107	mg/L	4.4	107	mg/L	4.4	4.10%
Sr 407.771†	1824644.9	1.98	mg/L	0.061	1.98	mg/L	0.061	3.08%
Li 670.784†	3020.5	0.0473	mg/L	0.00098	0.0473	mg/L	0.00098	2.07%
P 214.914†	45.3	0.0724	mg/L	0.00516	0.0724	mg/L	0.00516	7.13%

Sequence No.: 81 **Autosampler Location: 161**
Sample ID: L1311026014 **Date Collected: 11/8/2013 7:16:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026014

Approved: November 11, 2013

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026014

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2279765.4						9063.92	0.40%
YRADIAL	157070.4						3453.75	2.20%
Ga 417.206	919022.0						1431.78	0.16%
GaRADIAL	46641.0						1002.55	2.15%
Ag 328.068†	1394.8	0.00646	mg/L	0.000356	0.00646	mg/L	0.000356	5.51%
Al 396.153†	401.5	0.118	mg/L	0.0025	0.118	mg/L	0.0025	2.10%
As 188.979†	-9.0	0.00008	mg/L	0.002853	0.00008	mg/L	0.002853	>999.9%
Ba 233.527†	525.3	0.00831	mg/L	0.000038	0.00831	mg/L	0.000038	0.46%
Be 234.861†	714.7	0.00176	mg/L	0.000025	0.00176	mg/L	0.000025	1.41%
B 249.677†	1464.3	0.0343	mg/L	0.00011	0.0343	mg/L	0.00011	0.34%
Ca 227.546†	42972.2	265	mg/L	5.4	265	mg/L	5.4	2.03%
Cd 228.802†	3.1	0.00059	mg/L	0.000286	0.00059	mg/L	0.000286	48.69%
Co 228.616†	2207.8	0.119	mg/L	0.0007	0.119	mg/L	0.0007	0.61%
Cr 267.716†	285.2	0.00341	mg/L	0.000414	0.00341	mg/L	0.000414	12.16%
Cu 327.393†	4.6	0.00099	mg/L	0.000536	0.00099	mg/L	0.000536	54.38%
Fe 239.562†	53.8	0.00832	mg/L	0.002352	0.00832	mg/L	0.002352	28.26%
Mg 279.077†	211539.3	216	mg/L	4.2	216	mg/L	4.2	1.94%
Mn 257.610†	1933356.0	3.90	mg/L	0.031	3.90	mg/L	0.031	0.80%
Mo 202.031†	49.5	0.00476	mg/L	0.000767	0.00476	mg/L	0.000767	16.12%
Ni 231.604†	7732.0	0.249	mg/L	0.0020	0.249	mg/L	0.0020	0.81%
Pb 220.353†	26.1	0.00126	mg/L	0.001395	0.00126	mg/L	0.001395	110.32%
Sb 206.836†	-6.2	-0.00346	mg/L	0.001290	-0.00346	mg/L	0.001290	37.25%
Se 196.026†	-0.5	-0.00640	mg/L	0.006459	-0.00640	mg/L	0.006459	100.88%
Si 251.611†	49382.0	1.77	mg/L	0.036	1.77	mg/L	0.036	2.04%
Sn 189.927†	-329.9	-0.0649	mg/L	0.00136	-0.0649	mg/L	0.00136	2.10%
Ti 334.940†	-30505.5	-0.00415	mg/L	0.000637	-0.00415	mg/L	0.000637	15.35%
Tl 190.801†	-15.2	-0.0176	mg/L	0.00621	-0.0176	mg/L	0.00621	35.26%
V 290.880†	2437.8	0.0106	mg/L	0.00129	0.0106	mg/L	0.00129	12.21%
Zn 206.200†	8162.8	0.344	mg/L	0.0038	0.344	mg/L	0.0038	1.11%
K 766.490†	18602.6	14.4	mg/L	0.25	14.4	mg/L	0.25	1.76%
Na 589.592†	699547.3	74.1	mg/L	3.07	74.1	mg/L	3.07	4.14%
Sr 407.771†	1818512.6	1.97	mg/L	0.157	1.97	mg/L	0.157	7.96%
Li 670.784†	2302.6	0.0352	mg/L	0.00119	0.0352	mg/L	0.00119	3.38%
P 214.914†	19.2	0.0407	mg/L	0.00769	0.0407	mg/L	0.00769	18.88%

Sequence No.: 82 **Autosampler Location: 162**
Sample ID: L1311026014PS WG452062-01 **Date Collected: 11/8/2013 7:19:36 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026014PS WG452062-01

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026014PS WG452062-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2268136.9						24210.94	1.07%
YRADIAL	160396.6						2295.00	1.43%
Ga 417.206	892000.3						18995.39	2.13%
GaRADIAL	47534.0						79.97	0.17%
Ag 328.068†	39524.9	0.185	mg/L	0.0050	0.185	mg/L	0.0050	2.69%
Al 396.153†	12857.3	4.80	mg/L	0.090	4.80	mg/L	0.090	1.87%
As 188.979†	240.1	0.178	mg/L	0.0026	0.178	mg/L	0.0026	1.46%
Ba 233.527†	32814.2	0.472	mg/L	0.0114	0.472	mg/L	0.0114	2.42%
Be 234.861†	12996.0	0.0234	mg/L	0.00053	0.0234	mg/L	0.00053	2.28%
B 249.677†	46373.0	0.935	mg/L	0.0237	0.935	mg/L	0.0237	2.54%
Ca 227.546†	40682.5	251	mg/L	9.5	251	mg/L	9.5	3.79%
Cd 228.802†	492.7	0.0215	mg/L	0.00089	0.0215	mg/L	0.00089	4.12%
Co 228.616†	3630.8	0.195	mg/L	0.0020	0.195	mg/L	0.0020	1.00%
Cr 267.716†	20210.7	0.230	mg/L	0.0034	0.230	mg/L	0.0034	1.48%

Approved: November 11, 2013

Cu 327.393†	36192.1	0.225 mg/L	0.0075	0.225 mg/L	0.0075	3.33%
Fe 239.562†	5093.9	1.93 mg/L	0.026	1.93 mg/L	0.026	1.34%
Mg 279.077†	194810.4	199 mg/L	3.8	199 mg/L	3.8	1.92%
Mn 257.610†	1868740.1	3.77 mg/L	0.103	3.77 mg/L	0.103	2.74%
Mo 202.031†	7111.8	0.487 mg/L	0.0071	0.487 mg/L	0.0071	1.46%
Ni 231.604†	13740.4	0.442 mg/L	0.0120	0.442 mg/L	0.0120	2.72%
Pb 220.353†	1253.6	0.235 mg/L	0.0016	0.235 mg/L	0.0016	0.70%
Sb 206.836†	881.8	0.537 mg/L	0.0149	0.537 mg/L	0.0149	2.77%
Se 196.026†	121.7	0.173 mg/L	0.0084	0.173 mg/L	0.0084	4.88%
Si 251.611†	109221.5	3.90 mg/L	0.119	3.90 mg/L	0.119	3.05%
Sn 189.927†	-330.5	-0.0650 mg/L	0.00301	-0.0650 mg/L	0.00301	4.63%
Ti 334.940†	316899.7	0.485 mg/L	0.0138	0.485 mg/L	0.0138	2.85%
Tl 190.801†	323.0	0.215 mg/L	0.0086	0.215 mg/L	0.0086	4.00%
V 290.880†	78487.6	0.482 mg/L	0.0082	0.482 mg/L	0.0082	1.71%
Zn 206.200†	17533.3	0.742 mg/L	0.0189	0.742 mg/L	0.0189	2.55%
K 766.490†	47921.3	37.5 mg/L	0.51	37.5 mg/L	0.51	1.36%
Na 589.592†	852678.6	90.5 mg/L	0.74	90.5 mg/L	0.74	0.82%
Sr 407.771†	2068060.8	2.25 mg/L	0.059	2.25 mg/L	0.059	2.61%
Li 670.784†	31969.0	0.537 mg/L	0.0042	0.537 mg/L	0.0042	0.79%
P 214.914†	-96.1	-0.0990 mg/L	0.02607	-0.0990 mg/L	0.02607	26.34%

Sequence No.: 83 **Autosampler Location: 163**
Sample ID: L1311026014DL WG452062-02 **Date Collected: 11/8/2013 7:21:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026014DL WG452062-02

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026014DL WG452062-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2396506.7						30749.37	1.28%
YRADIAL	166895.2						1362.03	0.82%
Ga 417.206	932379.3						14803.78	1.59%
GaRADIAL	47722.5						740.10	1.55%
Ag 328.068†	365.8	0.00240	mg/L	0.000218	0.00240	mg/L	0.000218	9.10%
Al 396.153†	77.2	-0.00439	mg/L	0.001934	-0.00439	mg/L	0.001934	44.03%
As 188.979†	-8.0	-0.00394	mg/L	0.005424	-0.00394	mg/L	0.005424	137.64%
Ba 233.527†	101.2	0.00220	mg/L	0.000060	0.00220	mg/L	0.000060	2.71%
Be 234.861†	294.2	0.00069	mg/L	0.000039	0.00069	mg/L	0.000039	5.55%
B 249.677†	526.9	0.0160	mg/L	0.00105	0.0160	mg/L	0.00105	6.53%
Ca 227.546†	8158.3	50.4	mg/L	0.34	50.4	mg/L	0.34	0.68%
Cd 228.802†	-10.1	-0.00035	mg/L	0.000362	-0.00035	mg/L	0.000362	102.82%
Co 228.616†	438.9	0.0235	mg/L	0.00036	0.0235	mg/L	0.00036	1.55%
Cr 267.716†	106.3	0.00136	mg/L	0.000102	0.00136	mg/L	0.000102	7.54%
Cu 327.393†	225.5	0.00243	mg/L	0.000720	0.00243	mg/L	0.000720	29.68%
Fe 239.562†	16.1	-0.00228	mg/L	0.001162	-0.00228	mg/L	0.001162	50.88%
Mg 279.077†	40254.3	41.2	mg/L	0.54	41.2	mg/L	0.54	1.31%
Mn 257.610†	381168.2	0.767	mg/L	0.0055	0.767	mg/L	0.0055	0.71%
Mo 202.031†	18.8	0.00201	mg/L	0.000325	0.00201	mg/L	0.000325	16.21%
Ni 231.604†	1578.4	0.0509	mg/L	0.00047	0.0509	mg/L	0.00047	0.92%
Pb 220.353†	18.8	0.00174	mg/L	0.000417	0.00174	mg/L	0.000417	23.97%
Sb 206.836†	-2.5	-0.00132	mg/L	0.003477	-0.00132	mg/L	0.003477	263.40%
Se 196.026†	-0.9	-0.00612	mg/L	0.007516	-0.00612	mg/L	0.007516	122.76%
Si 251.611†	9921.1	0.368	mg/L	0.0028	0.368	mg/L	0.0028	0.75%
Sn 189.927†	-223.4	-0.0442	mg/L	0.00075	-0.0442	mg/L	0.00075	1.71%
Ti 334.940†	-6349.1	-0.00220	mg/L	0.000200	-0.00220	mg/L	0.000200	9.08%
Tl 190.801†	0.2	-0.00374	mg/L	0.009549	-0.00374	mg/L	0.009549	255.53%
V 290.880†	1481.8	0.00921	mg/L	0.000379	0.00921	mg/L	0.000379	4.11%
Zn 206.200†	1688.5	0.0711	mg/L	0.00075	0.0711	mg/L	0.00075	1.05%
K 766.490†	3642.2	2.80	mg/L	0.053	2.80	mg/L	0.053	1.90%
Na 589.592†	133198.0	14.0	mg/L	0.44	14.0	mg/L	0.44	3.18%
Sr 407.771†	337241.1	0.367	mg/L	0.0172	0.367	mg/L	0.0172	4.70%
Li 670.784†	465.5	0.00413	mg/L	0.000848	0.00413	mg/L	0.000848	20.54%
P 214.914†	15.8	0.0367	mg/L	0.00830	0.0367	mg/L	0.00830	22.63%

Approved: November 11, 2013

Sequence No.: 84
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 11/8/2013 7:24:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2355048.4						11638.18	0.49%
YRADIAL	164868.7						4783.22	2.90%
Ga 417.206	871770.9						7834.26	0.90%
GaRADIAL	45827.9						1276.73	2.79%
Ag 328.068†	82913.3	0.389	mg/L	0.0067	0.389	mg/L	0.0067	1.72%
QC value within limits for Ag 328.068 Recovery = 97.27%								
Al 396.153†	26509.2	9.94	mg/L	0.050	9.94	mg/L	0.050	0.51%
QC value within limits for Al 396.153 Recovery = 99.35%								
As 188.979†	542.0	0.390	mg/L	0.0016	0.390	mg/L	0.0016	0.41%
QC value within limits for As 188.979 Recovery = 97.47%								
Ba 233.527†	69810.7	1.00	mg/L	0.010	1.00	mg/L	0.010	0.99%
QC value within limits for Ba 233.527 Recovery = 100.36%								
Be 234.861†	27529.1	0.0487	mg/L	0.00071	0.0487	mg/L	0.00071	1.46%
QC value within limits for Be 234.861 Recovery = 97.38%								
B 249.677†	24164.9	0.487	mg/L	0.0094	0.487	mg/L	0.0094	1.93%
QC value within limits for B 249.677 Recovery = 97.44%								
Ca 227.546†	1560.6	10.1	mg/L	0.15	10.1	mg/L	0.15	1.44%
QC value within limits for Ca 227.546 Recovery = 101.21%								
Cd 228.802†	1076.5	0.0462	mg/L	0.00088	0.0462	mg/L	0.00088	1.92%
QC value within limits for Cd 228.802 Recovery = 92.37%								
Co 228.616†	3713.4	0.199	mg/L	0.0011	0.199	mg/L	0.0011	0.57%
QC value within limits for Co 228.616 Recovery = 99.66%								
Cr 267.716†	43519.8	0.496	mg/L	0.0058	0.496	mg/L	0.0058	1.16%
QC value within limits for Cr 267.716 Recovery = 99.19%								
Cu 327.393†	78898.1	0.489	mg/L	0.0091	0.489	mg/L	0.0091	1.85%
QC value within limits for Cu 327.393 Recovery = 97.90%								
Fe 239.562†	10466.9	3.98	mg/L	0.029	3.98	mg/L	0.029	0.74%
QC value within limits for Fe 239.562 Recovery = 99.48%								
Mg 279.077†	9895.5	10.1	mg/L	0.11	10.1	mg/L	0.11	1.09%
QC value within limits for Mg 279.077 Recovery = 101.23%								
Mn 257.610†	256012.5	0.515	mg/L	0.0046	0.515	mg/L	0.0046	0.90%
QC value within limits for Mn 257.610 Recovery = 103.07%								
Mo 202.031†	14550.2	0.995	mg/L	0.0117	0.995	mg/L	0.0117	1.17%
QC value within limits for Mo 202.031 Recovery = 99.45%								
Ni 231.604†	15670.4	0.504	mg/L	0.0035	0.504	mg/L	0.0035	0.70%
QC value within limits for Ni 231.604 Recovery = 100.71%								
Pb 220.353†	2650.5	0.502	mg/L	0.0024	0.502	mg/L	0.0024	0.48%
QC value within limits for Pb 220.353 Recovery = 100.38%								
Sb 206.836†	1887.1	1.15	mg/L	0.014	1.15	mg/L	0.014	1.19%
QC value within limits for Sb 206.836 Recovery = 95.73%								
Se 196.026†	268.8	0.389	mg/L	0.0024	0.389	mg/L	0.0024	0.61%
QC value within limits for Se 196.026 Recovery = 97.14%								
Si 251.611†	137679.1	4.91	mg/L	0.077	4.91	mg/L	0.077	1.57%
QC value within limits for Si 251.611 Recovery = 98.23%								
Sn 189.927†	5131.5	0.994	mg/L	0.0089	0.994	mg/L	0.0089	0.90%
QC value within limits for Sn 189.927 Recovery = 99.38%								
Ti 334.940†	695651.6	0.984	mg/L	0.0071	0.984	mg/L	0.0071	0.73%
QC value within limits for Ti 334.940 Recovery = 98.44%								
Tl 190.801†	760.5	0.517	mg/L	0.0022	0.517	mg/L	0.0022	0.43%
QC value within limits for Tl 190.801 Recovery = 103.49%								
V 290.880†	161346.4	1.00	mg/L	0.010	1.00	mg/L	0.010	1.04%
QC value within limits for V 290.880 Recovery = 100.09%								
Zn 206.200†	23887.3	1.01	mg/L	0.011	1.01	mg/L	0.011	1.10%
QC value within limits for Zn 206.200 Recovery = 101.26%								
K 766.490†	63808.6	50.2	mg/L	0.42	50.2	mg/L	0.42	0.83%
QC value within limits for K 766.490 Recovery = 100.31%								

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Na 589.592†          478673.9        50.5 mg/L          1.95        50.5 mg/L          1.95   3.87%
   QC value within limits for Na 589.592  Recovery = 101.03%
Sr 407.771†          951187.5        1.04 mg/L         0.035        1.04 mg/L         0.035   3.33%
   QC value within limits for Sr 407.771  Recovery = 103.70%
Li 670.784†           60087.3        1.01 mg/L         0.007        1.01 mg/L         0.007   0.67%
   QC value within limits for Li 670.784  Recovery = 101.23%
P 214.914†             8097.9        9.83 mg/L         0.076        9.83 mg/L         0.076   0.78%
   QC value within limits for P 214.914  Recovery = 98.31%
All analyte(s) passed QC.
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Sequence No.: 85 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 11/8/2013 7:26:54 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2406454.7						35762.56	1.49%
YRADIAL	163041.4						2536.85	1.56%
Ga 417.206	877806.7						20002.84	2.28%
GaRADIAL	45657.8						952.45	2.09%
Ag 328.068†	61.4	0.00114	mg/L	0.000123	0.00114	mg/L	0.000123	10.81%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	-0.8	-0.0338	mg/L	0.00175	-0.0338	mg/L	0.00175	5.18%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-3.2	-0.00152	mg/L	0.003570	-0.00152	mg/L	0.003570	234.16%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-12.3	0.00056	mg/L	0.000087	0.00056	mg/L	0.000087	15.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	118.8	0.00030	mg/L	0.000037	0.00030	mg/L	0.000037	12.01%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	270.6	0.0110	mg/L	0.00120	0.0110	mg/L	0.00120	10.86%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	21.3	0.165	mg/L	0.0147	0.165	mg/L	0.0147	8.91%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-7.1	-0.00033	mg/L	0.000078	-0.00033	mg/L	0.000078	23.90%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-6.3	-0.00048	mg/L	0.000144	-0.00048	mg/L	0.000144	30.16%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	4.6	0.00019	mg/L	0.000034	0.00019	mg/L	0.000034	17.72%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	246.0	0.00257	mg/L	0.000309	0.00257	mg/L	0.000309	12.04%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	7.4	-0.00471	mg/L	0.000379	-0.00471	mg/L	0.000379	8.04%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	37.8	0.0220	mg/L	0.01182	0.0220	mg/L	0.01182	53.79%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	308.4	-0.00119	mg/L	0.000069	-0.00119	mg/L	0.000069	5.83%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-1.0	0.00049	mg/L	0.000089	0.00049	mg/L	0.000089	18.08%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-6.0	0.00000	mg/L	0.000254	0.00000	mg/L	0.000254	>999.9%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	9.4	0.00043	mg/L	0.000998	0.00043	mg/L	0.000998	231.28%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.9	0.00139	mg/L	0.000819	0.00139	mg/L	0.000819	59.09%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	2.0	-0.00168	mg/L	0.002801	-0.00168	mg/L	0.002801	166.40%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-64.3	0.0118	mg/L	0.00134	0.0118	mg/L	0.00134	11.41%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	61.5	0.0110	mg/L	0.00218	0.0110	mg/L	0.00218	19.83%
QC value within limits for Sn 189.927 Recovery = Not calculated								

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Ti 334.940†	-144.2	-0.00095	mg/L	0.000139	-0.00095	mg/L	0.000139	14.53%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	2.9	-0.00109	mg/L	0.002557	-0.00109	mg/L	0.002557	235.20%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	364.2	0.00334	mg/L	0.001626	0.00334	mg/L	0.001626	48.65%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-22.8	-0.00118	mg/L	0.000115	-0.00118	mg/L	0.000115	9.74%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	50.6	0.0365	mg/L	0.02242	0.0365	mg/L	0.02242	61.49%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	345.1	0.0278	mg/L	0.02585	0.0278	mg/L	0.02585	93.08%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	262.1	0.00166	mg/L	0.000249	0.00166	mg/L	0.000249	15.04%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	69.6	-0.00256	mg/L	0.001632	-0.00256	mg/L	0.001632	63.65%
QC value within limits for Li 670.784 Recovery = Not calculated								
P 214.914†	16.1	0.0370	mg/L	0.00581	0.0370	mg/L	0.00581	15.70%
QC value within limits for P 214.914 Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 86 **Autosampler Location: 164**
Sample ID: L1311026016 **Date Collected: 11/8/2013 7:29:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026016

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026016

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2236247.2						38234.09	1.71%
YRADIAL	157899.5						3364.81	2.13%
Ga 417.206	910189.7						15279.99	1.68%
GaRADIAL	47482.7						344.45	0.73%
Ag 328.068†	1401.8	0.00689	mg/L	0.001036	0.00689	mg/L	0.001036	15.04%
Al 396.153†	-15.5	-0.0395	mg/L	0.00311	-0.0395	mg/L	0.00311	7.87%
As 188.979†	-11.9	-0.00164	mg/L	0.001042	-0.00164	mg/L	0.001042	63.62%
Ba 233.527†	309.3	0.00517	mg/L	0.000100	0.00517	mg/L	0.000100	1.94%
Be 234.861†	161.7	0.00057	mg/L	0.000024	0.00057	mg/L	0.000024	4.18%
B 249.677†	1505.8	0.0355	mg/L	0.00082	0.0355	mg/L	0.00082	2.29%
Ca 227.546†	45575.2	281	mg/L	10.2	281	mg/L	10.2	3.63%
Cd 228.802†	-8.9	-0.00024	mg/L	0.000170	-0.00024	mg/L	0.000170	71.54%
Co 228.616†	674.6	0.0363	mg/L	0.00092	0.0363	mg/L	0.00092	2.52%
Cr 267.716†	302.5	0.00357	mg/L	0.000135	0.00357	mg/L	0.000135	3.78%
Cu 327.393†	-234.4	-0.00045	mg/L	0.000692	-0.00045	mg/L	0.000692	154.95%
Fe 239.562†	514.5	0.182	mg/L	0.0059	0.182	mg/L	0.0059	3.25%
Mg 279.077†	326962.5	334	mg/L	4.7	334	mg/L	4.7	1.41%
Mn 257.610†	1164535.6	2.35	mg/L	0.027	2.35	mg/L	0.027	1.17%
Mo 202.031†	36.5	0.00355	mg/L	0.000483	0.00355	mg/L	0.000483	13.60%
Ni 231.604†	1508.4	0.0487	mg/L	0.00044	0.0487	mg/L	0.00044	0.91%
Pb 220.353†	27.5	0.00244	mg/L	0.002706	0.00244	mg/L	0.002706	110.97%
Sb 206.836†	-3.9	-0.00216	mg/L	0.001852	-0.00216	mg/L	0.001852	85.82%
Se 196.026†	-3.0	-0.00963	mg/L	0.005504	-0.00963	mg/L	0.005504	57.14%
Si 251.611†	50754.6	1.82	mg/L	0.064	1.82	mg/L	0.064	3.50%
Sn 189.927†	-336.1	-0.0661	mg/L	0.00302	-0.0661	mg/L	0.00302	4.56%
Ti 334.940†	-32315.8	-0.00430	mg/L	0.000726	-0.00430	mg/L	0.000726	16.86%
Tl 190.801†	-32.0	-0.0272	mg/L	0.00392	-0.0272	mg/L	0.00392	14.40%
V 290.880†	2809.7	0.00979	mg/L	0.002237	0.00979	mg/L	0.002237	22.86%
Zn 206.200†	215.9	0.00892	mg/L	0.000309	0.00892	mg/L	0.000309	3.46%
K 766.490†	20065.8	15.6	mg/L	0.28	15.6	mg/L	0.28	1.79%
Na 589.592†	518484.1	54.8	mg/L	0.86	54.8	mg/L	0.86	1.57%
Sr 407.771†	1312722.8	1.42	mg/L	0.042	1.42	mg/L	0.042	2.98%
Li 670.784†	1940.2	0.0291	mg/L	0.00071	0.0291	mg/L	0.00071	2.45%
P 214.914†	19.7	0.0413	mg/L	0.01786	0.0413	mg/L	0.01786	43.23%

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Approved: November 11, 2013

Sequence No.: 87
Sample ID: L1311026019
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 165
Date Collected: 11/8/2013 7:33:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311026019

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026019

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2273734.9						22459.88	0.99%
YRADIAL	158318.3						3994.22	2.52%
Ga 417.206	926993.4						21527.74	2.32%
GaRADIAL	48186.7						405.13	0.84%
Ag 328.068†	1494.7	0.00730	mg/L	0.000715	0.00730	mg/L	0.000715	9.80%
Al 396.153†	-16.1	-0.0397	mg/L	0.00106	-0.0397	mg/L	0.00106	2.67%
As 188.979†	-12.4	-0.00188	mg/L	0.006067	-0.00188	mg/L	0.006067	322.97%
Ba 233.527†	416.2	0.00669	mg/L	0.000041	0.00669	mg/L	0.000041	0.61%
Be 234.861†	150.4	0.00064	mg/L	0.000046	0.00064	mg/L	0.000046	7.14%
B 249.677†	1062.7	0.0267	mg/L	0.00063	0.0267	mg/L	0.00063	2.36%
Ca 227.546†	46372.6	286	mg/L	11.4	286	mg/L	11.4	3.98%
Cd 228.802†	-7.6	-0.00028	mg/L	0.000137	-0.00028	mg/L	0.000137	49.80%
Co 228.616†	189.0	0.0102	mg/L	0.00015	0.0102	mg/L	0.00015	1.50%
Cr 267.716†	263.8	0.00312	mg/L	0.000098	0.00312	mg/L	0.000098	3.14%
Cu 327.393†	-315.5	-0.00093	mg/L	0.000817	-0.00093	mg/L	0.000817	87.85%
Fe 239.562†	811.0	0.297	mg/L	0.0089	0.297	mg/L	0.0089	3.00%
Mg 279.077†	240118.8	246	mg/L	3.1	246	mg/L	3.1	1.28%
Mn 257.610†	1754363.6	3.54	mg/L	0.034	3.54	mg/L	0.034	0.97%
Mo 202.031†	35.2	0.00372	mg/L	0.000911	0.00372	mg/L	0.000911	24.51%
Ni 231.604†	570.4	0.0185	mg/L	0.00059	0.0185	mg/L	0.00059	3.19%
Pb 220.353†	33.0	0.00275	mg/L	0.002426	0.00275	mg/L	0.002426	88.08%
Sb 206.836†	-5.2	-0.00298	mg/L	0.002613	-0.00298	mg/L	0.002613	87.79%
Se 196.026†	-4.5	-0.0121	mg/L	0.00804	-0.0121	mg/L	0.00804	66.18%
Si 251.611†	39271.5	1.41	mg/L	0.048	1.41	mg/L	0.048	3.43%
Sn 189.927†	-325.1	-0.0640	mg/L	0.00144	-0.0640	mg/L	0.00144	2.25%
Ti 334.940†	-33077.6	-0.00464	mg/L	0.000996	-0.00464	mg/L	0.000996	21.45%
Tl 190.801†	-23.8	-0.0229	mg/L	0.00768	-0.0229	mg/L	0.00768	33.47%
V 290.880†	2606.5	0.0108	mg/L	0.00156	0.0108	mg/L	0.00156	14.39%
Zn 206.200†	-16.9	-0.00092	mg/L	0.000112	-0.00092	mg/L	0.000112	12.28%
K 766.490†	18724.8	14.6	mg/L	0.45	14.6	mg/L	0.45	3.09%
Na 589.592†	54577.5	5.72	mg/L	0.016	5.72	mg/L	0.016	0.28%
Sr 407.771†	904170.5	0.977	mg/L	0.0333	0.977	mg/L	0.0333	3.41%
Li 670.784†	1672.5	0.0245	mg/L	0.00047	0.0245	mg/L	0.00047	1.92%
P 214.914†	20.1	0.0418	mg/L	0.00163	0.0418	mg/L	0.00163	3.89%

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Sequence No.: 88
Sample ID: L1311026022
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 166
Date Collected: 11/8/2013 7:36:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311026022

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026022

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2279008.8						21799.36	0.96%
YRADIAL	155684.1						3198.49	2.05%
Ga 417.206	937012.0						8255.67	0.88%
GaRADIAL	47774.9						332.66	0.70%
Ag 328.068†	1317.0	0.00677	mg/L	0.000093	0.00677	mg/L	0.000093	1.37%
Al 396.153†	-2.7	-0.0346	mg/L	0.00141	-0.0346	mg/L	0.00141	4.06%

Approved: November 11, 2013

As 188.979†	-3.9	0.00401 mg/L	0.003074	0.00401 mg/L	0.003074	76.57%
Ba 233.527†	486.2	0.00769 mg/L	0.000033	0.00769 mg/L	0.000033	0.43%
Be 234.861†	252.5	0.00058 mg/L	0.000039	0.00058 mg/L	0.000039	6.68%
B 249.677†	1021.4	0.0259 mg/L	0.00027	0.0259 mg/L	0.00027	1.04%
Ca 227.546†	43831.7	270 mg/L	7.0	270 mg/L	7.0	2.60%
Cd 228.802†	-10.7	-0.00046 mg/L	0.000127	-0.00046 mg/L	0.000127	27.65%
Co 228.616†	102.9	0.00550 mg/L	0.000480	0.00550 mg/L	0.000480	8.73%
Cr 267.716†	254.1	0.00301 mg/L	0.000213	0.00301 mg/L	0.000213	7.09%
Cu 327.393†	-262.2	-0.00060 mg/L	0.000577	-0.00060 mg/L	0.000577	96.83%
Fe 239.562†	984.9	0.362 mg/L	0.0088	0.362 mg/L	0.0088	2.43%
Mg 279.077†	287821.7	294 mg/L	4.0	294 mg/L	4.0	1.37%
Mn 257.610†	628434.9	1.27 mg/L	0.007	1.27 mg/L	0.007	0.58%
Mo 202.031†	27.2	0.00269 mg/L	0.000347	0.00269 mg/L	0.000347	12.88%
Ni 231.604†	726.0	0.0235 mg/L	0.00018	0.0235 mg/L	0.00018	0.75%
Pb 220.353†	21.5	0.00194 mg/L	0.001904	0.00194 mg/L	0.001904	97.92%
Sb 206.836†	-3.9	-0.00215 mg/L	0.003410	-0.00215 mg/L	0.003410	158.48%
Se 196.026†	-2.0	-0.00780 mg/L	0.003349	-0.00780 mg/L	0.003349	42.94%
Si 251.611†	46397.7	1.67 mg/L	0.040	1.67 mg/L	0.040	2.37%
Sn 189.927†	-333.6	-0.0656 mg/L	0.00237	-0.0656 mg/L	0.00237	3.61%
Ti 334.940†	-31458.3	-0.00470 mg/L	0.000354	-0.00470 mg/L	0.000354	7.53%
Tl 190.801†	-20.6	-0.0185 mg/L	0.00308	-0.0185 mg/L	0.00308	16.70%
V 290.880†	2436.5	0.00848 mg/L	0.003965	0.00848 mg/L	0.003965	46.76%
Zn 206.200†	52.9	0.00202 mg/L	0.000391	0.00202 mg/L	0.000391	19.33%
K 766.490†	20560.6	16.0 mg/L	0.57	16.0 mg/L	0.57	3.54%
Na 589.592†	54845.0	5.74 mg/L	0.039	5.74 mg/L	0.039	0.68%
Sr 407.771†	1011090.3	1.09 mg/L	0.039	1.09 mg/L	0.039	3.56%
Li 670.784†	2046.2	0.0309 mg/L	0.00038	0.0309 mg/L	0.00038	1.24%
P 214.914†	23.3	0.0457 mg/L	0.00199	0.0457 mg/L	0.00199	4.35%

Sequence No.: 89 **Autosampler Location: 167**
Sample ID: L1311026025 **Date Collected: 11/8/2013 7:39:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026025

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026025

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2303901.9						20358.23	0.88%
YRADIAL	162289.3						1469.07	0.91%
Ga 417.206	914869.8						6607.67	0.72%
GaRADIAL	47606.2						1216.92	2.56%
Ag 328.068†	1936.1	0.00751	mg/L	0.000396	0.00751	mg/L	0.000396	5.27%
Al 396.153†	1497.3	0.533	mg/L	0.0044	0.533	mg/L	0.0044	0.83%
As 188.979†	-4.4	0.00411	mg/L	0.004364	0.00411	mg/L	0.004364	106.24%
Ba 233.527†	527.5	0.00842	mg/L	0.000099	0.00842	mg/L	0.000099	1.18%
Be 234.861†	1414.6	0.00421	mg/L	0.000039	0.00421	mg/L	0.000039	0.93%
B 249.677†	1308.2	0.0284	mg/L	0.00019	0.0284	mg/L	0.00019	0.65%
Ca 227.546†	48588.7	300	mg/L	6.1	300	mg/L	6.1	2.03%
Cd 228.802†	12.5	0.00271	mg/L	0.000420	0.00271	mg/L	0.000420	15.51%
Co 228.616†	10829.7	0.584	mg/L	0.0032	0.584	mg/L	0.0032	0.55%
Cr 267.716†	318.4	0.00383	mg/L	0.000109	0.00383	mg/L	0.000109	2.85%
Cu 327.393†	46.7	0.00105	mg/L	0.000762	0.00105	mg/L	0.000762	72.94%
Fe 239.562†	106.7	0.0245	mg/L	0.00059	0.0245	mg/L	0.00059	2.39%
Mg 279.077†	340654.1	348	mg/L	7.1	348	mg/L	7.1	2.04%
Mn 257.610†	7925638.4	16.0	mg/L	0.07	16.0	mg/L	0.07	0.43%
Mo 202.031†	36.1	0.00637	mg/L	0.000299	0.00637	mg/L	0.000299	4.69%
Ni 231.604†	28942.4	0.930	mg/L	0.0189	0.930	mg/L	0.0189	2.04%
Pb 220.353†	40.9	-0.00323	mg/L	0.002045	-0.00323	mg/L	0.002045	63.32%
Sb 206.836†	-10.1	-0.00570	mg/L	0.003468	-0.00570	mg/L	0.003468	60.80%
Se 196.026†	2.3	-0.00550	mg/L	0.004364	-0.00550	mg/L	0.004364	79.35%
Si 251.611†	136145.2	4.87	mg/L	0.089	4.87	mg/L	0.089	1.83%
Sn 189.927†	-336.6	-0.0662	mg/L	0.00118	-0.0662	mg/L	0.00118	1.78%
Ti 334.940†	-34739.4	-0.00494	mg/L	0.000270	-0.00494	mg/L	0.000270	5.46%
Tl 190.801†	9.1	-0.0141	mg/L	0.00263	-0.0141	mg/L	0.00263	18.67%

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V 290.880†	2657.1	0.00850 mg/L	0.000873	0.00850 mg/L	0.000873	10.27%
Zn 206.200†	26494.8	1.12 mg/L	0.017	1.12 mg/L	0.017	1.49%
K 766.490†	21679.9	16.8 mg/L	0.37	16.8 mg/L	0.37	2.18%
Na 589.592†	358047.6	37.7 mg/L	0.87	37.7 mg/L	0.87	2.30%
Sr 407.771†	1405388.2	1.52 mg/L	0.037	1.52 mg/L	0.037	2.41%
Li 670.784†	5626.3	0.0914 mg/L	0.00021	0.0914 mg/L	0.00021	0.23%
P 214.914†	21.6	0.0436 mg/L	0.00501	0.0436 mg/L	0.00501	11.47%

Sequence No.: 90 **Autosampler Location: 168**
Sample ID: L1311026029 **Date Collected: 11/8/2013 7:42:19 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026029

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026029

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2341419.5						27175.77	1.16%
YRADIAL	160145.5						4009.15	2.50%
Ga 417.206	948596.3						14097.57	1.49%
GaRADIAL	47978.3						1970.75	4.11%
Ag 328.068†	896.7	0.00486	mg/L	0.000276	0.00486	mg/L	0.000276	5.68%
Al 396.153†	15.0	-0.0280	mg/L	0.00205	-0.0280	mg/L	0.00205	7.34%
As 188.979†	-9.6	-0.00241	mg/L	0.002931	-0.00241	mg/L	0.002931	121.55%
Ba 233.527†	850.0	0.0129	mg/L	0.00020	0.0129	mg/L	0.00020	1.54%
Be 234.861†	332.2	0.00076	mg/L	0.000005	0.00076	mg/L	0.000005	0.71%
B 249.677†	628.0	0.0181	mg/L	0.00040	0.0181	mg/L	0.00040	2.21%
Ca 227.546†	27826.1	172	mg/L	3.2	172	mg/L	3.2	1.86%
Cd 228.802†	-9.1	-0.00035	mg/L	0.000139	-0.00035	mg/L	0.000139	39.68%
Co 228.616†	187.8	0.0100	mg/L	0.00053	0.0100	mg/L	0.00053	5.23%
Cr 267.716†	223.1	0.00268	mg/L	0.000309	0.00268	mg/L	0.000309	11.52%
Cu 327.393†	-28.0	0.00085	mg/L	0.000533	0.00085	mg/L	0.000533	63.02%
Fe 239.562†	189.1	0.0606	mg/L	0.00039	0.0606	mg/L	0.00039	0.65%
Mg 279.077†	187235.5	192	mg/L	0.9	192	mg/L	0.9	0.48%
Mn 257.610†	451620.3	0.909	mg/L	0.0053	0.909	mg/L	0.0053	0.58%
Mo 202.031†	29.0	0.00274	mg/L	0.000298	0.00274	mg/L	0.000298	10.90%
Ni 231.604†	1726.5	0.0557	mg/L	0.00059	0.0557	mg/L	0.00059	1.06%
Pb 220.353†	29.7	0.00372	mg/L	0.000756	0.00372	mg/L	0.000756	20.30%
Sb 206.836†	-4.2	-0.00233	mg/L	0.000475	-0.00233	mg/L	0.000475	20.37%
Se 196.026†	2.0	-0.00185	mg/L	0.001809	-0.00185	mg/L	0.001809	97.61%
Si 251.611†	54512.1	1.96	mg/L	0.026	1.96	mg/L	0.026	1.33%
Sn 189.927†	-299.8	-0.0591	mg/L	0.00067	-0.0591	mg/L	0.00067	1.14%
Ti 334.940†	-20243.4	-0.00365	mg/L	0.000460	-0.00365	mg/L	0.000460	12.59%
Tl 190.801†	-16.1	-0.0149	mg/L	0.00306	-0.0149	mg/L	0.00306	20.50%
V 290.880†	2275.5	0.0102	mg/L	0.00097	0.0102	mg/L	0.00097	9.54%
Zn 206.200†	1599.6	0.0673	mg/L	0.00101	0.0673	mg/L	0.00101	1.50%
K 766.490†	16248.2	12.6	mg/L	0.27	12.6	mg/L	0.27	2.14%
Na 589.592†	37116.3	3.88	mg/L	0.044	3.88	mg/L	0.044	1.14%
Sr 407.771†	454969.4	0.491	mg/L	0.0149	0.491	mg/L	0.0149	3.03%
Li 670.784†	1390.0	0.0198	mg/L	0.00081	0.0198	mg/L	0.00081	4.11%
P 214.914†	25.4	0.0483	mg/L	0.00458	0.0483	mg/L	0.00458	9.47%

Sequence No.: 91 **Autosampler Location: 169**
Sample ID: L1311026031 **Date Collected: 11/8/2013 7:45:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026031

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311026031

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2304535.9						27032.55	1.17%
YRADIAL	159740.6						3287.30	2.06%
Ga 417.206	927867.2						12739.56	1.37%
GaRADIAL	48173.7						152.67	0.32%
Ag 328.068†	874.2	0.00475	mg/L	0.000169	0.00475	mg/L	0.000169	3.55%
Al 396.153†	24.8	-0.0243	mg/L	0.00171	-0.0243	mg/L	0.00171	7.03%
As 188.979†	-10.0	-0.00267	mg/L	0.001439	-0.00267	mg/L	0.001439	53.92%
Ba 233.527†	857.4	0.0131	mg/L	0.00034	0.0131	mg/L	0.00034	2.62%
Be 234.861†	334.0	0.00077	mg/L	0.000024	0.00077	mg/L	0.000024	3.17%
B 249.677†	633.9	0.0182	mg/L	0.00076	0.0182	mg/L	0.00076	4.15%
Ca 227.546†	28222.3	174	mg/L	3.3	174	mg/L	3.3	1.88%
Cd 228.802†	-5.9	-0.00021	mg/L	0.000186	-0.00021	mg/L	0.000186	87.69%
Co 228.616†	182.8	0.00978	mg/L	0.000457	0.00978	mg/L	0.000457	4.68%
Cr 267.716†	238.3	0.00286	mg/L	0.000236	0.00286	mg/L	0.000236	8.25%
Cu 327.393†	-54.9	0.00068	mg/L	0.000629	0.00068	mg/L	0.000629	92.35%
Fe 239.562†	204.4	0.0664	mg/L	0.00320	0.0664	mg/L	0.00320	4.82%
Mg 279.077†	190830.8	195	mg/L	1.3	195	mg/L	1.3	0.65%
Mn 257.610†	464708.6	0.936	mg/L	0.0034	0.936	mg/L	0.0034	0.37%
Mo 202.031†	30.9	0.00287	mg/L	0.000926	0.00287	mg/L	0.000926	32.26%
Ni 231.604†	1765.7	0.0569	mg/L	0.00075	0.0569	mg/L	0.00075	1.32%
Pb 220.353†	26.4	0.00309	mg/L	0.001764	0.00309	mg/L	0.001764	57.06%
Sb 206.836†	-7.0	-0.00403	mg/L	0.001939	-0.00403	mg/L	0.001939	48.13%
Se 196.026†	4.0	0.00098	mg/L	0.011378	0.00098	mg/L	0.011378	>999.9%
Si 251.611†	54819.0	1.97	mg/L	0.029	1.97	mg/L	0.029	1.48%
Sn 189.927†	-304.9	-0.0600	mg/L	0.00043	-0.0600	mg/L	0.00043	0.72%
Ti 334.940†	-20080.1	-0.00306	mg/L	0.000223	-0.00306	mg/L	0.000223	7.29%
Tl 190.801†	-19.0	-0.0169	mg/L	0.00583	-0.0169	mg/L	0.00583	34.41%
V 290.880†	2213.4	0.00973	mg/L	0.001041	0.00973	mg/L	0.001041	10.71%
Zn 206.200†	1637.2	0.0689	mg/L	0.00113	0.0689	mg/L	0.00113	1.64%
K 766.490†	16635.8	12.9	mg/L	0.15	12.9	mg/L	0.15	1.20%
Na 589.592†	37499.5	3.92	mg/L	0.051	3.92	mg/L	0.051	1.30%
Sr 407.771†	465912.3	0.503	mg/L	0.0122	0.503	mg/L	0.0122	2.43%
Li 670.784†	1420.2	0.0203	mg/L	0.00097	0.0203	mg/L	0.00097	4.79%
P 214.914†	20.8	0.0426	mg/L	0.00910	0.0426	mg/L	0.00910	21.34%

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Sequence No.: 92 **Autosampler Location: 170**
Sample ID: L1311026401 WG451856-02 **Date Collected: 11/8/2013 7:48:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026401 WG451856-02

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026401 WG451856-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2411970.8						35236.03	1.46%
YRADIAL	164892.7						6561.23	3.98%
Ga 417.206	924991.0						20242.46	2.19%
GaRADIAL	48064.9						643.28	1.34%
Ag 328.068†	128.8	0.00160	mg/L	0.000103	0.00160	mg/L	0.000103	6.46%
Al 396.153†	638.1	0.208	mg/L	0.0046	0.208	mg/L	0.0046	2.21%
As 188.979†	-10.7	-0.00632	mg/L	0.001260	-0.00632	mg/L	0.001260	19.93%
Ba 233.527†	3115.7	0.0455	mg/L	0.00056	0.0455	mg/L	0.00056	1.22%
Be 234.861†	222.4	0.00038	mg/L	0.000059	0.00038	mg/L	0.000059	15.52%
B 249.677†	286.6	0.0111	mg/L	0.00048	0.0111	mg/L	0.00048	4.28%
Ca 227.546†	4362.6	27.0	mg/L	0.56	27.0	mg/L	0.56	2.08%
Cd 228.802†	-6.5	-0.00027	mg/L	0.000172	-0.00027	mg/L	0.000172	63.18%
Co 228.616†	-1.6	-0.00025	mg/L	0.000210	-0.00025	mg/L	0.000210	84.54%
Cr 267.716†	70.1	0.00091	mg/L	0.000133	0.00091	mg/L	0.000133	14.66%
Cu 327.393†	240.0	0.00256	mg/L	0.000284	0.00256	mg/L	0.000284	11.10%
Fe 239.562†	1282.1	0.481	mg/L	0.0155	0.481	mg/L	0.0155	3.23%
Mg 279.077†	12300.6	12.6	mg/L	0.41	12.6	mg/L	0.41	3.28%
Mn 257.610†	19077.0	0.0367	mg/L	0.00050	0.0367	mg/L	0.00050	1.35%

Approved: November 11, 2013

Mo 202.031†	9.2	0.00120 mg/L	0.000215	0.00120 mg/L	0.000215	17.89%
Ni 231.604†	14.2	0.00065 mg/L	0.000016	0.00065 mg/L	0.000016	2.45%
Pb 220.353†	28.5	0.00403 mg/L	0.001247	0.00403 mg/L	0.001247	30.94%
Sb 206.836†	-2.2	-0.00114 mg/L	0.000986	-0.00114 mg/L	0.000986	86.15%
Se 196.026†	-1.0	-0.00600 mg/L	0.002560	-0.00600 mg/L	0.002560	42.65%
Si 251.611†	66641.3	2.39 mg/L	0.051	2.39 mg/L	0.051	2.13%
Sn 189.927†	-166.2	-0.0332 mg/L	0.00138	-0.0332 mg/L	0.00138	4.16%
Ti 334.940†	293.7	0.00368 mg/L	0.000748	0.00368 mg/L	0.000748	20.33%
Tl 190.801†	-12.6	-0.0114 mg/L	0.00372	-0.0114 mg/L	0.00372	32.64%
V 290.880†	841.5	0.00589 mg/L	0.001134	0.00589 mg/L	0.001134	19.24%
Zn 206.200†	24.8	0.00081 mg/L	0.000051	0.00081 mg/L	0.000051	6.30%
K 766.490†	3298.4	2.54 mg/L	0.084	2.54 mg/L	0.084	3.30%
Na 589.592†	92747.4	9.72 mg/L	0.084	9.72 mg/L	0.084	0.87%
Sr 407.771†	284710.4	0.311 mg/L	0.0075	0.311 mg/L	0.0075	2.42%
Li 670.784†	121.5	-0.00169 mg/L	0.000042	-0.00169 mg/L	0.000042	2.51%
P 214.914†	77.5	0.111 mg/L	0.0114	0.111 mg/L	0.0114	10.23%

Sequence No.: 93 **Autosampler Location: 171**
Sample ID: L1311026401MS WG451856-07 **Date Collected: 11/8/2013 7:51:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026401MS WG451856-07

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026401MS WG451856-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2411293.3						33099.46	1.37%
YRADIAL	166697.3						5449.71	3.27%
Ga 417.206	914310.0						19013.52	2.08%
GaRADIAL	48003.7						1212.26	2.53%
Ag 328.068†	37280.6	0.176	mg/L	0.0039	0.176	mg/L	0.0039	2.24%
Al 396.153†	12606.8	4.71	mg/L	0.129	4.71	mg/L	0.129	2.75%
As 188.979†	238.5	0.173	mg/L	0.0030	0.173	mg/L	0.0030	1.73%
Ba 233.527†	33721.1	0.485	mg/L	0.0080	0.485	mg/L	0.0080	1.66%
Be 234.861†	12104.1	0.0213	mg/L	0.00050	0.0213	mg/L	0.00050	2.33%
B 249.677†	43124.4	0.870	mg/L	0.0181	0.870	mg/L	0.0181	2.09%
Ca 227.546†	4913.3	30.6	mg/L	0.73	30.6	mg/L	0.73	2.39%
Cd 228.802†	463.2	0.0199	mg/L	0.00051	0.0199	mg/L	0.00051	2.58%
Co 228.616†	1661.2	0.0891	mg/L	0.00072	0.0891	mg/L	0.00072	0.81%
Cr 267.716†	19436.1	0.222	mg/L	0.0053	0.222	mg/L	0.0053	2.37%
Cu 327.393†	34159.1	0.213	mg/L	0.0058	0.213	mg/L	0.0058	2.74%
Fe 239.562†	6172.3	2.34	mg/L	0.053	2.34	mg/L	0.053	2.26%
Mg 279.077†	16090.2	16.5	mg/L	0.46	16.5	mg/L	0.46	2.82%
Mn 257.610†	133123.8	0.267	mg/L	0.0048	0.267	mg/L	0.0048	1.78%
Mo 202.031†	6660.4	0.456	mg/L	0.0128	0.456	mg/L	0.0128	2.82%
Ni 231.604†	6906.8	0.222	mg/L	0.0035	0.222	mg/L	0.0035	1.57%
Pb 220.353†	1207.4	0.228	mg/L	0.0004	0.228	mg/L	0.0004	0.17%
Sb 206.836†	852.8	0.519	mg/L	0.0100	0.519	mg/L	0.0100	1.92%
Se 196.026†	112.2	0.160	mg/L	0.0071	0.160	mg/L	0.0071	4.43%
Si 251.611†	125923.8	4.50	mg/L	0.104	4.50	mg/L	0.104	2.30%
Sn 189.927†	-169.8	-0.0339	mg/L	0.00056	-0.0339	mg/L	0.00056	1.65%
Ti 334.940†	317996.9	0.453	mg/L	0.0061	0.453	mg/L	0.0061	1.35%
Tl 190.801†	332.5	0.225	mg/L	0.0054	0.225	mg/L	0.0054	2.40%
V 290.880†	73155.4	0.454	mg/L	0.0060	0.454	mg/L	0.0060	1.33%
Zn 206.200†	10257.3	0.435	mg/L	0.0081	0.435	mg/L	0.0081	1.87%
K 766.490†	31321.6	24.4	mg/L	0.64	24.4	mg/L	0.64	2.63%
Na 589.592†	295240.2	31.1	mg/L	0.04	31.1	mg/L	0.04	0.14%
Sr 407.771†	686628.6	0.748	mg/L	0.0071	0.748	mg/L	0.0071	0.94%
Li 670.784†	27151.1	0.455	mg/L	0.0126	0.455	mg/L	0.0126	2.77%
P 214.914†	-46.4	-0.0387	mg/L	0.03090	-0.0387	mg/L	0.03090	79.79%

Sequence No.: 94 **Autosampler Location: 172**
Sample ID: L1311026403 **Date Collected: 11/8/2013 7:53:30 PM**
Analyst: KHR **Data Type: Original**

Approved: November 11, 2013

Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026403

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026403

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2463670.6						33890.69	1.38%
YRADIAL	166878.7						5907.78	3.54%
Ga 417.206	954125.5						5289.79	0.55%
GaRADIAL	48513.1						1388.29	2.86%
Ag 328.068†	142.3	0.00144	mg/L	0.000412	0.00144	mg/L	0.000412	28.54%
Al 396.153†	82.1	-0.00254	mg/L	0.002287	-0.00254	mg/L	0.002287	90.17%
As 188.979†	-5.5	-0.00256	mg/L	0.002740	-0.00256	mg/L	0.002740	107.08%
Ba 233.527†	3162.5	0.0462	mg/L	0.00056	0.0462	mg/L	0.00056	1.22%
Be 234.861†	192.0	0.00043	mg/L	0.000017	0.00043	mg/L	0.000017	4.04%
B 249.677†	661.7	0.0189	mg/L	0.00190	0.0189	mg/L	0.00190	10.07%
Ca 227.546†	4869.9	30.1	mg/L	0.19	30.1	mg/L	0.19	0.64%
Cd 228.802†	-8.8	-0.00040	mg/L	0.000263	-0.00040	mg/L	0.000263	66.34%
Co 228.616†	-14.3	-0.00091	mg/L	0.000264	-0.00091	mg/L	0.000264	29.08%
Cr 267.716†	48.6	0.00069	mg/L	0.000098	0.00069	mg/L	0.000098	14.22%
Cu 327.393†	294.7	0.00287	mg/L	0.000718	0.00287	mg/L	0.000718	25.05%
Fe 239.562†	73.2	0.0200	mg/L	0.00153	0.0200	mg/L	0.00153	7.66%
Mg 279.077†	17749.6	18.1	mg/L	0.70	18.1	mg/L	0.70	3.86%
Mn 257.610†	2339.8	0.00291	mg/L	0.000053	0.00291	mg/L	0.000053	1.82%
Mo 202.031†	24.8	0.00225	mg/L	0.000646	0.00225	mg/L	0.000646	28.68%
Ni 231.604†	-4.2	0.00006	mg/L	0.000278	0.00006	mg/L	0.000278	443.94%
Pb 220.353†	19.2	0.00228	mg/L	0.000118	0.00228	mg/L	0.000118	5.17%
Sb 206.836†	-1.9	-0.00096	mg/L	0.000426	-0.00096	mg/L	0.000426	44.27%
Se 196.026†	1.0	-0.00309	mg/L	0.005728	-0.00309	mg/L	0.005728	185.31%
Si 251.611†	52142.2	1.87	mg/L	0.007	1.87	mg/L	0.007	0.39%
Sn 189.927†	-171.5	-0.0342	mg/L	0.00062	-0.0342	mg/L	0.00062	1.83%
Ti 334.940†	-3488.2	-0.00120	mg/L	0.000195	-0.00120	mg/L	0.000195	16.27%
Tl 190.801†	-3.0	-0.00506	mg/L	0.001974	-0.00506	mg/L	0.001974	39.04%
V 290.880†	801.8	0.00558	mg/L	0.001738	0.00558	mg/L	0.001738	31.15%
Zn 206.200†	3.5	-0.00006	mg/L	0.000396	-0.00006	mg/L	0.000396	618.87%
K 766.490†	3204.6	2.47	mg/L	0.064	2.47	mg/L	0.064	2.57%
Na 589.592†	49171.5	5.15	mg/L	0.199	5.15	mg/L	0.199	3.86%
Sr 407.771†	412028.2	0.449	mg/L	0.0152	0.449	mg/L	0.0152	3.38%
Li 670.784†	296.5	0.00127	mg/L	0.000779	0.00127	mg/L	0.000779	61.12%
P 214.914†	77.9	0.112	mg/L	0.0111	0.112	mg/L	0.0111	9.90%

Sequence No.: 95 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 11/8/2013 7:56:35 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2452542.7						41819.36	1.71%
YRADIAL	165835.3						2418.32	1.46%
Ga 417.206	914179.1						7647.65	0.84%
GaRADIAL	47171.8						823.78	1.75%
Ag 328.068†	78964.3	0.371	mg/L	0.0033	0.371	mg/L	0.0033	0.89%
QC value within limits for Ag 328.068 Recovery = 92.67%								
Al 396.153†	26025.0	9.76	mg/L	0.108	9.76	mg/L	0.108	1.10%
QC value within limits for Al 396.153 Recovery = 97.55%								
As 188.979†	515.0	0.370	mg/L	0.0055	0.370	mg/L	0.0055	1.48%

Approved: November 11, 2013

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   QC value within limits for As 188.979  Recovery = 92.62%
Ba 233.527†            66470.0       0.956 mg/L        0.0182       0.956 mg/L        0.0182   1.91%
   QC value within limits for Ba 233.527  Recovery = 95.56%
Be 234.861†            26008.4      0.0460 mg/L       0.00060      0.0460 mg/L       0.00060   1.30%
   QC value within limits for Be 234.861  Recovery = 91.91%
B 249.677†             22747.2       0.459 mg/L        0.0046       0.459 mg/L        0.0046   1.00%
   QC value within limits for B 249.677  Recovery = 91.76%
Ca 227.546†             1512.4        9.80 mg/L         0.162        9.80 mg/L         0.162   1.65%
   QC value within limits for Ca 227.546  Recovery = 98.05%
Cd 228.802†             1030.3      0.0442 mg/L       0.00053      0.0442 mg/L       0.00053   1.19%
   QC value less than the lower limit for Cd 228.802  Recovery = 88.45%
Co 228.616†             3589.7       0.193 mg/L        0.0055       0.193 mg/L        0.0055   2.87%
   QC value within limits for Co 228.616  Recovery = 96.31%
Cr 267.716†            41279.5       0.470 mg/L        0.0067       0.470 mg/L        0.0067   1.43%
   QC value within limits for Cr 267.716  Recovery = 94.08%
Cu 327.393†            75118.8       0.466 mg/L        0.0045       0.466 mg/L        0.0045   0.96%
   QC value within limits for Cu 327.393  Recovery = 93.23%
Fe 239.562†            10483.7        3.99 mg/L         0.046        3.99 mg/L         0.046   1.17%
   QC value within limits for Fe 239.562  Recovery = 99.65%
Mg 279.077†             9733.4        9.96 mg/L         0.100        9.96 mg/L         0.100   1.01%
   QC value within limits for Mg 279.077  Recovery = 99.56%
Mn 257.610†           243453.5       0.490 mg/L        0.0091       0.490 mg/L        0.0091   1.86%
   QC value within limits for Mn 257.610  Recovery = 98.00%
Mo 202.031†            13851.2       0.947 mg/L        0.0165       0.947 mg/L        0.0165   1.74%
   QC value within limits for Mo 202.031  Recovery = 94.68%
Ni 231.604†            14862.5       0.478 mg/L        0.0085       0.478 mg/L        0.0085   1.78%
   QC value within limits for Ni 231.604  Recovery = 95.52%
Pb 220.353†             2569.3       0.486 mg/L        0.0136       0.486 mg/L        0.0136   2.80%
   QC value within limits for Pb 220.353  Recovery = 97.30%
Sb 206.836†             1814.5        1.10 mg/L         0.020        1.10 mg/L         0.020   1.81%
   QC value within limits for Sb 206.836  Recovery = 92.05%
Se 196.026†              256.6       0.371 mg/L        0.0063       0.371 mg/L        0.0063   1.70%
   QC value within limits for Se 196.026  Recovery = 92.69%
Si 251.611†           130472.1        4.66 mg/L         0.044        4.66 mg/L         0.044   0.96%
   QC value within limits for Si 251.611  Recovery = 93.11%
Sn 189.927†             4955.1       0.960 mg/L        0.0294       0.960 mg/L        0.0294   3.06%
   QC value within limits for Sn 189.927  Recovery = 95.96%
Ti 334.940†           680537.7       0.963 mg/L        0.0078       0.963 mg/L        0.0078   0.81%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†              728.0       0.495 mg/L        0.0132       0.495 mg/L        0.0132   2.67%
   QC value within limits for Tl 190.801  Recovery = 99.09%
V 290.880†            153248.0       0.951 mg/L        0.0205       0.951 mg/L        0.0205   2.15%
   QC value within limits for V 290.880  Recovery = 95.06%
Zn 206.200†            22607.9       0.958 mg/L        0.0145       0.958 mg/L        0.0145   1.51%
   QC value within limits for Zn 206.200  Recovery = 95.84%
K 766.490†             63130.3        49.6 mg/L          0.54        49.6 mg/L          0.54   1.08%
   QC value within limits for K 766.490  Recovery = 99.23%
Na 589.592†           455009.3        48.0 mg/L          1.09        48.0 mg/L          1.09   2.27%
   QC value within limits for Na 589.592  Recovery = 96.00%
Sr 407.771†           923860.3        1.01 mg/L         0.017        1.01 mg/L         0.017   1.71%
   QC value within limits for Sr 407.771  Recovery = 100.72%
Li 670.784†            59236.4       0.998 mg/L        0.0147       0.998 mg/L        0.0147   1.47%
   QC value within limits for Li 670.784  Recovery = 99.79%
P 214.914†              7850.7        9.53 mg/L         0.316        9.53 mg/L         0.316   3.31%
   QC value within limits for P 214.914  Recovery = 95.31%
QC Failed.  Continue with analysis.

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Sequence No.: 96                                  Autosampler Location: 8
Sample ID: CCB                                    Date Collected: 11/8/2013 7:58:41 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                   174.0 kPa         0.45 L/min

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Mean Data: CCB
                  Mean Corrected         Calib.                        Sample
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Approved: November 11, 2013

Analyte	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	2372556.1				29940.00	1.26%
YRADIAL	165871.9				5952.72	3.59%
Ga 417.206	868886.3				9470.93	1.09%
GaRADIAL	46109.3				2312.30	5.01%
Ag 328.068†	11.3	0.00091 mg/L	0.000161	0.00091 mg/L	0.000161	17.65%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153†	3.3	-0.0323 mg/L	0.00107	-0.0323 mg/L	0.00107	3.30%
QC value within limits for Al 396.153 Recovery = Not calculated						
As 188.979†	2.7	0.00276 mg/L	0.002647	0.00276 mg/L	0.002647	95.91%
QC value within limits for As 188.979 Recovery = Not calculated						
Ba 233.527†	-5.7	0.00066 mg/L	0.000057	0.00066 mg/L	0.000057	8.68%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 234.861†	111.5	0.00029 mg/L	0.000010	0.00029 mg/L	0.000010	3.26%
QC value within limits for Be 234.861 Recovery = Not calculated						
B 249.677†	195.9	0.00953 mg/L	0.001117	0.00953 mg/L	0.001117	11.73%
QC value within limits for B 249.677 Recovery = Not calculated						
Ca 227.546†	14.5	0.123 mg/L	0.0247	0.123 mg/L	0.0247	20.11%
QC value within limits for Ca 227.546 Recovery = Not calculated						
Cd 228.802†	-5.4	-0.00027 mg/L	0.000057	-0.00027 mg/L	0.000057	21.12%
QC value within limits for Cd 228.802 Recovery = Not calculated						
Co 228.616†	-2.5	-0.00027 mg/L	0.000433	-0.00027 mg/L	0.000433	160.82%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	13.1	0.00029 mg/L	0.000118	0.00029 mg/L	0.000118	41.07%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 327.393†	239.2	0.00253 mg/L	0.000173	0.00253 mg/L	0.000173	6.85%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Fe 239.562†	5.0	-0.00562 mg/L	0.001889	-0.00562 mg/L	0.001889	33.60%
QC value within limits for Fe 239.562 Recovery = Not calculated						
Mg 279.077†	36.6	0.0208 mg/L	0.01129	0.0208 mg/L	0.01129	54.31%
QC value within limits for Mg 279.077 Recovery = Not calculated						
Mn 257.610†	311.2	-0.00119 mg/L	0.000027	-0.00119 mg/L	0.000027	2.29%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.0	0.00097 mg/L	0.000094	0.00097 mg/L	0.000094	9.76%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	-7.4	-0.00004 mg/L	0.000108	-0.00004 mg/L	0.000108	258.25%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	11.2	0.00076 mg/L	0.000681	0.00076 mg/L	0.000681	89.83%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	2.0	0.00142 mg/L	0.000225	0.00142 mg/L	0.000225	15.91%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.4	0.00033 mg/L	0.003407	0.00033 mg/L	0.003407	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	13.0	0.0145 mg/L	0.00139	0.0145 mg/L	0.00139	9.56%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	64.7	0.0116 mg/L	0.00033	0.0116 mg/L	0.00033	2.81%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-84.7	-0.00088 mg/L	0.000072	-0.00088 mg/L	0.000072	8.19%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-2.5	-0.00464 mg/L	0.005576	-0.00464 mg/L	0.005576	120.14%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	403.4	0.00358 mg/L	0.000839	0.00358 mg/L	0.000839	23.41%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	-36.9	-0.00177 mg/L	0.000217	-0.00177 mg/L	0.000217	12.27%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	47.3	0.0339 mg/L	0.02307	0.0339 mg/L	0.02307	68.01%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	193.3	0.0119 mg/L	0.02708	0.0119 mg/L	0.02708	228.13%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	113.5	0.00150 mg/L	0.000081	0.00150 mg/L	0.000081	5.39%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	-44.3	-0.00449 mg/L	0.001007	-0.00449 mg/L	0.001007	22.43%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	17.2	0.0383 mg/L	0.01043	0.0383 mg/L	0.01043	27.22%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 97 **Autosampler Location: 173**
Sample ID: L1311026406 **Date Collected: 11/8/2013 8:01:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: November 11, 2013

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026406

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026406

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2416172.9						49822.65	2.06%
YRADIAL	169524.8						2002.66	1.18%
Ga 417.206	927677.1						20475.24	2.21%
GaRADIAL	48324.5						636.48	1.32%
Ag 328.068†	182.4	0.00164	mg/L	0.000641	0.00164	mg/L	0.000641	39.09%
Al 396.153†	19.9	-0.0261	mg/L	0.00260	-0.0261	mg/L	0.00260	9.98%
As 188.979†	-7.9	-0.00424	mg/L	0.003482	-0.00424	mg/L	0.003482	82.15%
Ba 233.527†	3276.3	0.0478	mg/L	0.00097	0.0478	mg/L	0.00097	2.03%
Be 234.861†	160.6	0.00037	mg/L	0.000015	0.00037	mg/L	0.000015	4.12%
B 249.677†	399.4	0.0136	mg/L	0.00082	0.0136	mg/L	0.00082	6.02%
Ca 227.546†	4996.1	30.9	mg/L	0.50	30.9	mg/L	0.50	1.64%
Cd 228.802†	-8.4	-0.00037	mg/L	0.000217	-0.00037	mg/L	0.000217	59.09%
Co 228.616†	-7.3	-0.00053	mg/L	0.000389	-0.00053	mg/L	0.000389	72.96%
Cr 267.716†	59.5	0.00082	mg/L	0.000030	0.00082	mg/L	0.000030	3.65%
Cu 327.393†	205.3	0.00232	mg/L	0.000382	0.00232	mg/L	0.000382	16.50%
Fe 239.562†	96.2	0.0288	mg/L	0.00137	0.0288	mg/L	0.00137	4.77%
Mg 279.077†	17499.6	17.9	mg/L	0.25	17.9	mg/L	0.25	1.38%
Mn 257.610†	3140.5	0.00452	mg/L	0.000084	0.00452	mg/L	0.000084	1.87%
Mo 202.031†	16.3	0.00168	mg/L	0.000521	0.00168	mg/L	0.000521	31.06%
Ni 231.604†	-8.8	-0.00009	mg/L	0.000157	-0.00009	mg/L	0.000157	184.46%
Pb 220.353†	21.2	0.00265	mg/L	0.000817	0.00265	mg/L	0.000817	30.80%
Sb 206.836†	-3.9	-0.00218	mg/L	0.002308	-0.00218	mg/L	0.002308	105.68%
Se 196.026†	-1.8	-0.00714	mg/L	0.002921	-0.00714	mg/L	0.002921	40.93%
Si 251.611†	56292.8	2.02	mg/L	0.026	2.02	mg/L	0.026	1.28%
Sn 189.927†	-162.9	-0.0325	mg/L	0.00153	-0.0325	mg/L	0.00153	4.71%
Ti 334.940†	-3686.9	-0.00136	mg/L	0.000020	-0.00136	mg/L	0.000020	1.48%
Tl 190.801†	-11.3	-0.0106	mg/L	0.00343	-0.0106	mg/L	0.00343	32.37%
V 290.880†	1036.8	0.00704	mg/L	0.000547	0.00704	mg/L	0.000547	7.76%
Zn 206.200†	-2.2	-0.00030	mg/L	0.000351	-0.00030	mg/L	0.000351	115.58%
K 766.490†	3011.3	2.32	mg/L	0.065	2.32	mg/L	0.065	2.80%
Na 589.592†	45342.8	4.75	mg/L	0.076	4.75	mg/L	0.076	1.61%
Sr 407.771†	398336.4	0.434	mg/L	0.0263	0.434	mg/L	0.0263	6.07%
Li 670.784†	275.0	0.00091	mg/L	0.000426	0.00091	mg/L	0.000426	46.83%
P 214.914†	17.0	0.0380	mg/L	0.00888	0.0380	mg/L	0.00888	23.35%

Sequence No.: 98 **Autosampler Location: 174**
Sample ID: L1311026501 **Date Collected: 11/8/2013 8:04:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026501

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026501

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2343438.1						12320.50	0.53%
YRADIAL	158883.8						2658.70	1.67%
Ga 417.206	925936.0						10900.28	1.18%
GaRADIAL	47318.4						944.87	2.00%
Ag 328.068†	435.6	0.00290	mg/L	0.000314	0.00290	mg/L	0.000314	10.84%
Al 396.153†	44.1	-0.0169	mg/L	0.00441	-0.0169	mg/L	0.00441	26.05%
As 188.979†	-14.2	-0.00794	mg/L	0.003221	-0.00794	mg/L	0.003221	40.58%
Ba 233.527†	814.8	0.0124	mg/L	0.00003	0.0124	mg/L	0.00003	0.22%
Be 234.861†	183.8	0.00038	mg/L	0.000006	0.00038	mg/L	0.000006	1.58%
B 249.677†	642.5	0.0184	mg/L	0.00157	0.0184	mg/L	0.00157	8.54%

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Ca 227.546†	11635.3	71.8	mg/L	1.23	71.8	mg/L	1.23	1.72%
Cd 228.802†	-11.2	-0.00046	mg/L	0.000159	-0.00046	mg/L	0.000159	34.27%
Co 228.616†	11.3	0.00049	mg/L	0.000244	0.00049	mg/L	0.000244	49.53%
Cr 267.716†	109.2	0.00137	mg/L	0.000110	0.00137	mg/L	0.000110	8.03%
Cu 327.393†	44.1	0.00132	mg/L	0.000435	0.00132	mg/L	0.000435	32.93%
Fe 239.562†	553.2	0.202	mg/L	0.0008	0.202	mg/L	0.0008	0.40%
Mg 279.077†	38609.4	39.5	mg/L	0.25	39.5	mg/L	0.25	0.64%
Mn 257.610†	38393.0	0.0756	mg/L	0.00021	0.0756	mg/L	0.00021	0.27%
Mo 202.031†	27.8	0.00248	mg/L	0.000276	0.00248	mg/L	0.000276	11.13%
Ni 231.604†	27.4	0.00108	mg/L	0.000077	0.00108	mg/L	0.000077	7.16%
Pb 220.353†	24.1	0.00317	mg/L	0.003163	0.00317	mg/L	0.003163	99.90%
Sb 206.836†	-0.4	-0.00001	mg/L	0.002458	-0.00001	mg/L	0.002458	>999.9%
Se 196.026†	-4.9	-0.0117	mg/L	0.00801	-0.0117	mg/L	0.00801	68.57%
Si 251.611†	67079.0	2.41	mg/L	0.025	2.41	mg/L	0.025	1.05%
Sn 189.927†	-252.3	-0.0499	mg/L	0.00103	-0.0499	mg/L	0.00103	2.07%
Ti 334.940†	-8615.7	-0.00219	mg/L	0.000256	-0.00219	mg/L	0.000256	11.68%
Tl 190.801†	-17.9	-0.0151	mg/L	0.00075	-0.0151	mg/L	0.00075	4.98%
V 290.880†	1301.1	0.00809	mg/L	0.000281	0.00809	mg/L	0.000281	3.47%
Zn 206.200†	-4.6	-0.00041	mg/L	0.000362	-0.00041	mg/L	0.000362	88.30%
K 766.490†	6292.4	4.87	mg/L	0.066	4.87	mg/L	0.066	1.36%
Na 589.592†	26455.3	2.76	mg/L	0.024	2.76	mg/L	0.024	0.86%
Sr 407.771†	326554.7	0.355	mg/L	0.0112	0.355	mg/L	0.0112	3.15%
Li 670.784†	1239.7	0.0172	mg/L	0.00079	0.0172	mg/L	0.00079	4.59%
P 214.914†	17.9	0.0392	mg/L	0.00135	0.0392	mg/L	0.00135	3.45%

Sequence No.: 99 **Autosampler Location: 175**
Sample ID: L1311026601 **Date Collected: 11/8/2013 8:07:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026601

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2315716.0						42087.78	1.82%
YRADIAL	158519.1						2268.37	1.43%
Ga 417.206	936405.6						19426.05	2.07%
GaRADIAL	47505.2						893.43	1.88%
Ag 328.068†	903.0	0.00497	mg/L	0.000179	0.00497	mg/L	0.000179	3.61%
Al 396.153†	45.7	-0.0164	mg/L	0.00229	-0.0164	mg/L	0.00229	14.00%
As 188.979†	-11.8	-0.00382	mg/L	0.003117	-0.00382	mg/L	0.003117	81.51%
Ba 233.527†	1128.2	0.0169	mg/L	0.00015	0.0169	mg/L	0.00015	0.86%
Be 234.861†	239.5	0.00052	mg/L	0.000051	0.00052	mg/L	0.000051	9.77%
B 249.677†	432.3	0.0142	mg/L	0.00039	0.0142	mg/L	0.00039	2.77%
Ca 227.546†	28778.1	178	mg/L	4.2	178	mg/L	4.2	2.36%
Cd 228.802†	-8.9	-0.00037	mg/L	0.000163	-0.00037	mg/L	0.000163	43.77%
Co 228.616†	12.0	0.00057	mg/L	0.000487	0.00057	mg/L	0.000487	85.30%
Cr 267.716†	193.6	0.00233	mg/L	0.000117	0.00233	mg/L	0.000117	5.00%
Cu 327.393†	-143.0	0.00015	mg/L	0.000309	0.00015	mg/L	0.000309	210.34%
Fe 239.562†	476.9	0.172	mg/L	0.0045	0.172	mg/L	0.0045	2.62%
Mg 279.077†	105566.8	108	mg/L	1.4	108	mg/L	1.4	1.27%
Mn 257.610†	207460.1	0.417	mg/L	0.0082	0.417	mg/L	0.0082	1.97%
Mo 202.031†	37.0	0.00318	mg/L	0.000427	0.00318	mg/L	0.000427	13.43%
Ni 231.604†	53.0	0.00190	mg/L	0.000238	0.00190	mg/L	0.000238	12.53%
Pb 220.353†	31.7	0.00439	mg/L	0.001175	0.00439	mg/L	0.001175	26.76%
Sb 206.836†	-4.5	-0.00251	mg/L	0.002733	-0.00251	mg/L	0.002733	108.98%
Se 196.026†	0.2	-0.00445	mg/L	0.005863	-0.00445	mg/L	0.005863	131.61%
Si 251.611†	44498.5	1.60	mg/L	0.033	1.60	mg/L	0.033	2.08%
Sn 189.927†	-300.8	-0.0592	mg/L	0.00019	-0.0592	mg/L	0.00019	0.33%
Ti 334.940†	-20661.2	-0.00336	mg/L	0.000173	-0.00336	mg/L	0.000173	5.14%
Tl 190.801†	-13.2	-0.0125	mg/L	0.00407	-0.0125	mg/L	0.00407	32.45%
V 290.880†	2262.0	0.0123	mg/L	0.00114	0.0123	mg/L	0.00114	9.32%
Zn 206.200†	20.0	0.00064	mg/L	0.000121	0.00064	mg/L	0.000121	18.94%
K 766.490†	14365.4	11.0	mg/L	0.16	11.0	mg/L	0.16	1.41%
Na 589.592†	1096183.2	117	mg/L	1.3	117	mg/L	1.3	1.14%

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Sr 407.771†	575947.2	0.623 mg/L	0.0166	0.623 mg/L	0.0166	2.66%
Li 670.784†	2444.5	0.0376 mg/L	0.00006	0.0376 mg/L	0.00006	0.15%
P 214.914†	27.9	0.0513 mg/L	0.01182	0.0513 mg/L	0.01182	23.06%

Sequence No.: 100 **Autosampler Location: 176**
Sample ID: L1311026603 **Date Collected: 11/8/2013 8:10:55 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026603

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026603

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2317800.0						24490.26	1.06%
YRADIAL	158067.6						1683.72	1.07%
Ga 417.206	924235.4						11819.27	1.28%
GaRADIAL	47016.6						1015.56	2.16%
Ag 328.068†	616.9	0.00356	mg/L	0.000144	0.00356	mg/L	0.000144	4.05%
Al 396.153†	322.8	0.0886	mg/L	0.00400	0.0886	mg/L	0.00400	4.51%
As 188.979†	-6.4	-0.00129	mg/L	0.002685	-0.00129	mg/L	0.002685	207.88%
Ba 233.527†	875.2	0.0133	mg/L	0.00010	0.0133	mg/L	0.00010	0.78%
Be 234.861†	263.2	0.00064	mg/L	0.000026	0.00064	mg/L	0.000026	4.00%
B 249.677†	271.3	0.0109	mg/L	0.00030	0.0109	mg/L	0.00030	2.74%
Ca 227.546†	18637.1	115	mg/L	1.6	115	mg/L	1.6	1.43%
Cd 228.802†	-5.7	-0.00021	mg/L	0.000121	-0.00021	mg/L	0.000121	58.60%
Co 228.616†	219.3	0.0117	mg/L	0.00016	0.0117	mg/L	0.00016	1.38%
Cr 267.716†	145.2	0.00179	mg/L	0.000104	0.00179	mg/L	0.000104	5.78%
Cu 327.393†	-46.7	0.00074	mg/L	0.000608	0.00074	mg/L	0.000608	81.95%
Fe 239.562†	273.0	0.0949	mg/L	0.00505	0.0949	mg/L	0.00505	5.32%
Mg 279.077†	75373.4	77.1	mg/L	1.11	77.1	mg/L	1.11	1.44%
Mn 257.610†	516830.6	1.04	mg/L	0.005	1.04	mg/L	0.005	0.48%
Mo 202.031†	27.6	0.00267	mg/L	0.000559	0.00267	mg/L	0.000559	20.96%
Ni 231.604†	1033.4	0.0334	mg/L	0.00061	0.0334	mg/L	0.00061	1.83%
Pb 220.353†	30.4	0.00378	mg/L	0.000529	0.00378	mg/L	0.000529	13.97%
Sb 206.836†	-3.4	-0.00183	mg/L	0.000308	-0.00183	mg/L	0.000308	16.81%
Se 196.026†	1.2	-0.00316	mg/L	0.009812	-0.00316	mg/L	0.009812	310.34%
Si 251.611†	48002.2	1.73	mg/L	0.029	1.73	mg/L	0.029	1.66%
Sn 189.927†	-269.4	-0.0532	mg/L	0.00149	-0.0532	mg/L	0.00149	2.80%
Ti 334.940†	-13418.0	-0.00250	mg/L	0.000339	-0.00250	mg/L	0.000339	13.56%
Tl 190.801†	-16.9	-0.0155	mg/L	0.00284	-0.0155	mg/L	0.00284	18.32%
V 290.880†	1532.3	0.00857	mg/L	0.001369	0.00857	mg/L	0.001369	15.98%
Zn 206.200†	529.0	0.0221	mg/L	0.00027	0.0221	mg/L	0.00027	1.20%
K 766.490†	15116.6	11.6	mg/L	0.40	11.6	mg/L	0.40	3.41%
Na 589.592†	1368947.0	147	mg/L	5.5	147	mg/L	5.5	3.77%
Sr 407.771†	378273.9	0.410	mg/L	0.0217	0.410	mg/L	0.0217	5.28%
Li 670.784†	1095.5	0.0148	mg/L	0.00019	0.0148	mg/L	0.00019	1.29%
P 214.914†	17.9	0.0392	mg/L	0.00902	0.0392	mg/L	0.00902	23.01%

Sequence No.: 101 **Autosampler Location: 177**
Sample ID: L1311027101 **Date Collected: 11/8/2013 8:14:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311027101

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311027101

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2357114.9						23713.87	1.01%

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YRADIAL	166197.1				5165.06	3.11%
Ga 417.206	935822.4				4206.19	0.45%
GaRADIAL	47813.1				501.81	1.05%
Ag 328.068†	650.4	0.00371 mg/L	0.000331	0.00371 mg/L	0.000331	8.93%
Al 396.153†	-8.1	-0.0367 mg/L	0.00150	-0.0367 mg/L	0.00150	4.08%
As 188.979†	-13.8	-0.00714 mg/L	0.004155	-0.00714 mg/L	0.004155	58.17%
Ba 233.527†	2179.1	0.0320 mg/L	0.00028	0.0320 mg/L	0.00028	0.87%
Be 234.861†	162.5	0.00044 mg/L	0.000012	0.00044 mg/L	0.000012	2.60%
B 249.677†	523.7	0.0161 mg/L	0.00043	0.0161 mg/L	0.00043	2.70%
Ca 227.546†	15465.3	95.4 mg/L	1.47	95.4 mg/L	1.47	1.54%
Cd 228.802†	-12.4	-0.00052 mg/L	0.000142	-0.00052 mg/L	0.000142	27.19%
Co 228.616†	9.3	0.00039 mg/L	0.000561	0.00039 mg/L	0.000561	143.15%
Cr 267.716†	84.5	0.00110 mg/L	0.000059	0.00110 mg/L	0.000059	5.34%
Cu 327.393†	15.4	0.00113 mg/L	0.000546	0.00113 mg/L	0.000546	48.18%
Fe 239.562†	143.2	0.0468 mg/L	0.00274	0.0468 mg/L	0.00274	5.85%
Mg 279.077†	12841.4	13.1 mg/L	0.19	13.1 mg/L	0.19	1.43%
Mn 257.610†	360433.5	0.725 mg/L	0.0064	0.725 mg/L	0.0064	0.88%
Mo 202.031†	38.9	0.00337 mg/L	0.000748	0.00337 mg/L	0.000748	22.18%
Ni 231.604†	22.0	0.00091 mg/L	0.000219	0.00091 mg/L	0.000219	24.17%
Pb 220.353†	28.6	0.00361 mg/L	0.000932	0.00361 mg/L	0.000932	25.80%
Sb 206.836†	-0.2	0.00010 mg/L	0.000995	0.00010 mg/L	0.000995	965.49%
Se 196.026†	-3.3	-0.00955 mg/L	0.006805	-0.00955 mg/L	0.006805	71.27%
Si 251.611†	65052.8	2.33 mg/L	0.021	2.33 mg/L	0.021	0.90%
Sn 189.927†	-271.7	-0.0536 mg/L	0.00127	-0.0536 mg/L	0.00127	2.37%
Ti 334.940†	-11490.3	-0.00271 mg/L	0.000298	-0.00271 mg/L	0.000298	10.98%
Tl 190.801†	-18.2	-0.0160 mg/L	0.00182	-0.0160 mg/L	0.00182	11.38%
V 290.880†	932.7	0.00652 mg/L	0.001064	0.00652 mg/L	0.001064	16.32%
Zn 206.200†	-20.6	-0.00108 mg/L	0.000094	-0.00108 mg/L	0.000094	8.74%
K 766.490†	8938.7	6.93 mg/L	0.124	6.93 mg/L	0.124	1.79%
Na 589.592†	35389.4	3.70 mg/L	0.024	3.70 mg/L	0.024	0.66%
Sr 407.771†	454369.9	0.493 mg/L	0.0292	0.493 mg/L	0.0292	5.91%
Li 670.784†	132.2	-0.00151 mg/L	0.000244	-0.00151 mg/L	0.000244	16.22%
P 214.914†	14.5	0.0350 mg/L	0.00465	0.0350 mg/L	0.00465	13.26%

Sequence No.: 102 **Autosampler Location: 178**
Sample ID: L1311027201 **Date Collected: 11/8/2013 8:17:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311027201

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311027201

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2325207.1						31277.06	1.35%
YRADIAL	163568.0						4014.69	2.45%
Ga 417.206	925785.8						22542.67	2.43%
GaRADIAL	47685.9						132.30	0.28%
Ag 328.068†	768.2	0.00430	mg/L	0.000318	0.00430	mg/L	0.000318	7.38%
Al 396.153†	12.8	-0.0288	mg/L	0.00140	-0.0288	mg/L	0.00140	4.85%
As 188.979†	-16.2	-0.00811	mg/L	0.004625	-0.00811	mg/L	0.004625	57.06%
Ba 233.527†	1096.7	0.0165	mg/L	0.00037	0.0165	mg/L	0.00037	2.27%
Be 234.861†	191.0	0.00043	mg/L	0.000042	0.00043	mg/L	0.000042	9.56%
B 249.677†	743.2	0.0205	mg/L	0.00078	0.0205	mg/L	0.00078	3.80%
Ca 227.546†	21386.5	132	mg/L	3.6	132	mg/L	3.6	2.76%
Cd 228.802†	-5.3	-0.00020	mg/L	0.000192	-0.00020	mg/L	0.000192	96.56%
Co 228.616†	2.1	0.00002	mg/L	0.000159	0.00002	mg/L	0.000159	740.47%
Cr 267.716†	187.4	0.00228	mg/L	0.000206	0.00228	mg/L	0.000206	9.06%
Cu 327.393†	100.9	0.00165	mg/L	0.000711	0.00165	mg/L	0.000711	43.02%
Fe 239.562†	49.4	0.00888	mg/L	0.000927	0.00888	mg/L	0.000927	10.44%
Mg 279.077†	117227.1	120	mg/L	3.3	120	mg/L	3.3	2.79%
Mn 257.610†	23427.3	0.0454	mg/L	0.00090	0.0454	mg/L	0.00090	1.98%
Mo 202.031†	31.8	0.00274	mg/L	0.000535	0.00274	mg/L	0.000535	19.52%
Ni 231.604†	124.0	0.00418	mg/L	0.000199	0.00418	mg/L	0.000199	4.77%
Pb 220.353†	19.4	0.00228	mg/L	0.000978	0.00228	mg/L	0.000978	42.82%
Sb 206.836†	-3.4	-0.00185	mg/L	0.000529	-0.00185	mg/L	0.000529	28.55%

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Se 196.026†	-2.5	-0.00821 mg/L	0.004088	-0.00821 mg/L	0.004088	49.81%
Si 251.611†	62879.4	2.26 mg/L	0.067	2.26 mg/L	0.067	2.96%
Sn 189.927†	-282.2	-0.0557 mg/L	0.00093	-0.0557 mg/L	0.00093	1.67%
Ti 334.940†	-15391.0	-0.00275 mg/L	0.000217	-0.00275 mg/L	0.000217	7.89%
Tl 190.801†	-16.1	-0.0140 mg/L	0.00639	-0.0140 mg/L	0.00639	45.60%
V 290.880†	1882.9	0.00964 mg/L	0.001339	0.00964 mg/L	0.001339	13.89%
Zn 206.200†	62.3	0.00243 mg/L	0.000271	0.00243 mg/L	0.000271	11.14%
K 766.490†	10830.5	8.40 mg/L	0.272	8.40 mg/L	0.272	3.24%
Na 589.592†	34822.7	3.64 mg/L	0.156	3.64 mg/L	0.156	4.29%
Sr 407.771†	647928.7	0.703 mg/L	0.0368	0.703 mg/L	0.0368	5.23%
Li 670.784†	863.3	0.0109 mg/L	0.00074	0.0109 mg/L	0.00074	6.81%
P 214.914†	16.8	0.0379 mg/L	0.01296	0.0379 mg/L	0.01296	34.21%

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Sequence No.: 103 **Autosampler Location: 179**
Sample ID: L1311027401 **Date Collected: 11/8/2013 8:20:11 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311027401

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311027401

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2267172.0						54689.29	2.41%
YRADIAL	157568.9						2346.56	1.49%
Ga 417.206	913404.7						24529.84	2.69%
GaRADIAL	47425.4						1298.19	2.74%
Ag 328.068†	1238.3	0.00638	mg/L	0.000204	0.00638	mg/L	0.000204	3.19%
Al 396.153†	421.6	0.126	mg/L	0.0068	0.126	mg/L	0.0068	5.44%
As 188.979†	-12.2	-0.00263	mg/L	0.004951	-0.00263	mg/L	0.004951	188.41%
Ba 233.527†	1024.9	0.0154	mg/L	0.00016	0.0154	mg/L	0.00016	1.05%
Be 234.861†	237.8	0.00052	mg/L	0.000019	0.00052	mg/L	0.000019	3.59%
B 249.677†	1067.0	0.0269	mg/L	0.00055	0.0269	mg/L	0.00055	2.03%
Ca 227.546†	39885.7	246	mg/L	6.5	246	mg/L	6.5	2.64%
Cd 228.802†	-8.4	-0.00032	mg/L	0.000110	-0.00032	mg/L	0.000110	34.20%
Co 228.616†	150.4	0.00804	mg/L	0.000242	0.00804	mg/L	0.000242	3.00%
Cr 267.716†	244.3	0.00292	mg/L	0.000127	0.00292	mg/L	0.000127	4.37%
Cu 327.393†	-137.1	0.00017	mg/L	0.000320	0.00017	mg/L	0.000320	182.92%
Fe 239.562†	473.4	0.169	mg/L	0.0023	0.169	mg/L	0.0023	1.36%
Mg 279.077†	188487.9	193	mg/L	1.4	193	mg/L	1.4	0.73%
Mn 257.610†	226257.4	0.455	mg/L	0.0099	0.455	mg/L	0.0099	2.18%
Mo 202.031†	41.3	0.00348	mg/L	0.000357	0.00348	mg/L	0.000357	10.25%
Ni 231.604†	929.0	0.0301	mg/L	0.00065	0.0301	mg/L	0.00065	2.17%
Pb 220.353†	30.0	0.00406	mg/L	0.002095	0.00406	mg/L	0.002095	51.58%
Sb 206.836†	-8.9	-0.00523	mg/L	0.002444	-0.00523	mg/L	0.002444	46.76%
Se 196.026†	-0.5	-0.00536	mg/L	0.003491	-0.00536	mg/L	0.003491	65.13%
Si 251.611†	51811.4	1.86	mg/L	0.070	1.86	mg/L	0.070	3.76%
Sn 189.927†	-325.7	-0.0641	mg/L	0.00127	-0.0641	mg/L	0.00127	1.99%
Ti 334.940†	-24189.0	0.00193	mg/L	0.001245	0.00193	mg/L	0.001245	64.70%
Tl 190.801†	-37.4	-0.0288	mg/L	0.00117	-0.0288	mg/L	0.00117	4.06%
V 290.880†	2535.2	0.0118	mg/L	0.00052	0.0118	mg/L	0.00052	4.41%
Zn 206.200†	319.2	0.0133	mg/L	0.00011	0.0133	mg/L	0.00011	0.81%
K 766.490†	18082.0	14.0	mg/L	0.31	14.0	mg/L	0.31	2.22%
Na 589.592†	193963.7	20.4	mg/L	0.52	20.4	mg/L	0.52	2.56%
Sr 407.771†	1212963.4	1.31	mg/L	0.004	1.31	mg/L	0.004	0.33%
Li 670.784†	1805.9	0.0268	mg/L	0.00126	0.0268	mg/L	0.00126	4.71%
P 214.914†	43.7	0.0705	mg/L	0.01632	0.0705	mg/L	0.01632	23.16%

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Sequence No.: 104 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 11/8/2013 8:23:16 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Sheri L. Pabgard

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2378822.7						8471.11	0.36%
YRADIAL	167286.5						5366.02	3.21%
Ga 417.206	885930.9						1288.39	0.15%
GaRADIAL	46692.9						1314.55	2.82%
Ag 328.068†	80701.5	0.379	mg/L	0.0064	0.379	mg/L	0.0064	1.70%
QC value within limits for Ag 328.068 Recovery = 94.68%								
Al 396.153†	25688.5	9.63	mg/L	0.043	9.63	mg/L	0.043	0.45%
QC value within limits for Al 396.153 Recovery = 96.26%								
As 188.979†	524.7	0.377	mg/L	0.0051	0.377	mg/L	0.0051	1.34%
QC value within limits for As 188.979 Recovery = 94.33%								
Ba 233.527†	68091.0	0.979	mg/L	0.0145	0.979	mg/L	0.0145	1.48%
QC value within limits for Ba 233.527 Recovery = 97.90%								
Be 234.861†	26783.0	0.0474	mg/L	0.00087	0.0474	mg/L	0.00087	1.83%
QC value within limits for Be 234.861 Recovery = 94.78%								
B 249.677†	23127.9	0.466	mg/L	0.0082	0.466	mg/L	0.0082	1.76%
QC value within limits for B 249.677 Recovery = 93.30%								
Ca 227.546†	1523.3	9.88	mg/L	0.014	9.88	mg/L	0.014	0.15%
QC value within limits for Ca 227.546 Recovery = 98.80%								
Cd 228.802†	1047.0	0.0449	mg/L	0.00009	0.0449	mg/L	0.00009	0.19%
QC value less than the lower limit for Cd 228.802 Recovery = 89.86%								
Co 228.616†	3630.2	0.195	mg/L	0.0026	0.195	mg/L	0.0026	1.32%
QC value within limits for Co 228.616 Recovery = 97.43%								
Cr 267.716†	42458.6	0.484	mg/L	0.0077	0.484	mg/L	0.0077	1.60%
QC value within limits for Cr 267.716 Recovery = 96.77%								
Cu 327.393†	76834.3	0.477	mg/L	0.0093	0.477	mg/L	0.0093	1.94%
QC value within limits for Cu 327.393 Recovery = 95.34%								
Fe 239.562†	10062.6	3.83	mg/L	0.020	3.83	mg/L	0.020	0.52%
QC value within limits for Fe 239.562 Recovery = 95.63%								
Mg 279.077†	9451.5	9.67	mg/L	0.067	9.67	mg/L	0.067	0.70%
QC value within limits for Mg 279.077 Recovery = 96.68%								
Mn 257.610†	249709.1	0.503	mg/L	0.0089	0.503	mg/L	0.0089	1.78%
QC value within limits for Mn 257.610 Recovery = 100.52%								
Mo 202.031†	14306.7	0.978	mg/L	0.0172	0.978	mg/L	0.0172	1.76%
QC value within limits for Mo 202.031 Recovery = 97.79%								
Ni 231.604†	15339.5	0.493	mg/L	0.0089	0.493	mg/L	0.0089	1.81%
QC value within limits for Ni 231.604 Recovery = 98.59%								
Pb 220.353†	2592.1	0.491	mg/L	0.0058	0.491	mg/L	0.0058	1.18%
QC value within limits for Pb 220.353 Recovery = 98.16%								
Sb 206.836†	1838.0	1.12	mg/L	0.006	1.12	mg/L	0.006	0.52%
QC value within limits for Sb 206.836 Recovery = 93.24%								
Se 196.026†	265.0	0.383	mg/L	0.0095	0.383	mg/L	0.0095	2.49%
QC value within limits for Se 196.026 Recovery = 95.74%								
Si 251.611†	134466.2	4.80	mg/L	0.087	4.80	mg/L	0.087	1.81%
QC value within limits for Si 251.611 Recovery = 95.95%								
Sn 189.927†	5001.5	0.969	mg/L	0.0126	0.969	mg/L	0.0126	1.30%
QC value within limits for Sn 189.927 Recovery = 96.86%								
Ti 334.940†	681486.1	0.964	mg/L	0.0113	0.964	mg/L	0.0113	1.17%
QC value within limits for Ti 334.940 Recovery = 96.43%								
Tl 190.801†	747.4	0.508	mg/L	0.0035	0.508	mg/L	0.0035	0.69%
QC value within limits for Tl 190.801 Recovery = 101.68%								
V 290.880†	157498.6	0.977	mg/L	0.0189	0.977	mg/L	0.0189	1.93%
QC value within limits for V 290.880 Recovery = 97.70%								
Zn 206.200†	23178.1	0.983	mg/L	0.0115	0.983	mg/L	0.0115	1.17%
QC value within limits for Zn 206.200 Recovery = 98.26%								
K 766.490†	61212.0	48.1	mg/L	0.31	48.1	mg/L	0.31	0.65%
QC value within limits for K 766.490 Recovery = 96.17%								
Na 589.592†	454986.7	48.0	mg/L	1.86	48.0	mg/L	1.86	3.87%
QC value within limits for Na 589.592 Recovery = 96.00%								
Sr 407.771†	896109.5	0.977	mg/L	0.0466	0.977	mg/L	0.0466	4.77%
QC value within limits for Sr 407.771 Recovery = 97.70%								
Li 670.784†	57836.5	0.974	mg/L	0.0066	0.974	mg/L	0.0066	0.68%
QC value within limits for Li 670.784 Recovery = 97.43%								
P 214.914†	7926.0	9.62	mg/L	0.156	9.62	mg/L	0.156	1.62%
QC value within limits for P 214.914 Recovery = 96.22%								

Approved: November 11, 2013

QC Failed. Continue with analysis.

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Sequence No.: 105 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 11/8/2013 8:25:21 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2415083.7						49602.26	2.05%
YRADIAL	165910.0						5970.54	3.60%
Ga 417.206	877927.5						15088.99	1.72%
GaRADIAL	46057.4						988.22	2.15%
Ag 328.068†	35.5	0.00102	mg/L	0.000540	0.00102	mg/L	0.000540	52.83%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	6.4	-0.0311	mg/L	0.00677	-0.0311	mg/L	0.00677	21.75%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-1.0	0.00006	mg/L	0.000368	0.00006	mg/L	0.000368	597.67%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	-8.6	0.00062	mg/L	0.000160	0.00062	mg/L	0.000160	25.90%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	98.4	0.00027	mg/L	0.000054	0.00027	mg/L	0.000054	20.21%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	23.6	0.00607	mg/L	0.000709	0.00607	mg/L	0.000709	11.68%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	17.8	0.144	mg/L	0.0403	0.144	mg/L	0.0403	28.07%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-10.0	-0.00046	mg/L	0.000136	-0.00046	mg/L	0.000136	29.39%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-8.3	-0.00058	mg/L	0.000160	-0.00058	mg/L	0.000160	27.59%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	5.5	0.00020	mg/L	0.000098	0.00020	mg/L	0.000098	48.86%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	161.4	0.00205	mg/L	0.000440	0.00205	mg/L	0.000440	21.48%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	7.1	-0.00484	mg/L	0.001333	-0.00484	mg/L	0.001333	27.58%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	266.4	0.256	mg/L	0.4165	0.256	mg/L	0.4165	162.77%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	213.3	-0.00138	mg/L	0.000059	-0.00138	mg/L	0.000059	4.28%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	4.6	0.00087	mg/L	0.000343	0.00087	mg/L	0.000343	39.29%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-6.0	0.00000	mg/L	0.000384	0.00000	mg/L	0.000384	>999.9%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.0	-0.00003	mg/L	0.000166	-0.00003	mg/L	0.000166	642.28%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	1.0	0.00083	mg/L	0.000769	0.00083	mg/L	0.000769	92.74%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.7	-0.00362	mg/L	0.001329	-0.00362	mg/L	0.001329	36.69%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	21.0	0.0148	mg/L	0.00217	0.0148	mg/L	0.00217	14.70%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	63.3	0.0113	mg/L	0.00063	0.0113	mg/L	0.00063	5.56%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-149.2	-0.00096	mg/L	0.000069	-0.00096	mg/L	0.000069	7.20%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	7.0	0.00165	mg/L	0.004520	0.00165	mg/L	0.004520	273.14%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	426.8	0.00372	mg/L	0.001728	0.00372	mg/L	0.001728	46.42%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-35.4	-0.00171	mg/L	0.000313	-0.00171	mg/L	0.000313	18.35%
QC value within limits for Zn 206.200 Recovery = Not calculated								

Approved: November 11, 2013

K 766.490†	46.2	0.0331 mg/L	0.03591	0.0331 mg/L	0.03591	108.60%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	172.1	0.00965 mg/L	0.012720	0.00965 mg/L	0.012720	131.86%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	210.2	0.00160 mg/L	0.000123	0.00160 mg/L	0.000123	7.69%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	6.2	-0.00364 mg/L	0.000803	-0.00364 mg/L	0.000803	22.08%
QC value within limits for Li 670.784 Recovery = Not calculated						
P 214.914†	12.1	0.0322 mg/L	0.01210	0.0322 mg/L	0.01210	37.64%
QC value within limits for P 214.914 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 106 **Autosampler Location: 180**
Sample ID: PBW 2C WG451846-03 **Date Collected: 11/8/2013 8:28:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 2C WG451846-03

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: PBW 2C WG451846-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2375178.9						33290.90	1.40%
YRADIAL	164007.8						4869.07	2.97%
Ga 417.206	866738.8						12485.27	1.44%
GaRADIAL	46050.7						513.99	1.12%
Ag 328.068†	51.9	0.00110	mg/L	0.000447	0.00110	mg/L	0.000447	40.67%
Al 396.153†	-5.6	-0.0356	mg/L	0.00178	-0.0356	mg/L	0.00178	5.00%
As 188.979†	-6.5	-0.00396	mg/L	0.002299	-0.00396	mg/L	0.002299	58.02%
Ba 233.527†	-19.1	0.00047	mg/L	0.000023	0.00047	mg/L	0.000023	4.96%
Be 234.861†	79.4	0.00023	mg/L	0.000019	0.00023	mg/L	0.000019	8.31%
B 249.677†	-129.6	0.00299	mg/L	0.000383	0.00299	mg/L	0.000383	12.81%
Ca 227.546†	15.6	0.130	mg/L	0.0319	0.130	mg/L	0.0319	24.58%
Cd 228.802†	-5.2	-0.00023	mg/L	0.000088	-0.00023	mg/L	0.000088	38.48%
Co 228.616†	-4.8	-0.00040	mg/L	0.000261	-0.00040	mg/L	0.000261	65.64%
Cr 267.716†	3.4	0.00018	mg/L	0.000119	0.00018	mg/L	0.000119	66.90%
Cu 327.393†	120.4	0.00179	mg/L	0.000890	0.00179	mg/L	0.000890	49.62%
Fe 239.562†	7.5	-0.00467	mg/L	0.001048	-0.00467	mg/L	0.001048	22.45%
Mg 279.077†	34.2	0.0183	mg/L	0.00521	0.0183	mg/L	0.00521	28.46%
Mn 257.610†	136.1	-0.00154	mg/L	0.000021	-0.00154	mg/L	0.000021	1.34%
Mo 202.031†	-7.8	0.00003	mg/L	0.000096	0.00003	mg/L	0.000096	325.95%
Ni 231.604†	-18.7	-0.00040	mg/L	0.000391	-0.00040	mg/L	0.000391	97.12%
Pb 220.353†	9.1	0.00037	mg/L	0.000991	0.00037	mg/L	0.000991	269.11%
Sb 206.836†	0.4	0.00046	mg/L	0.001607	0.00046	mg/L	0.001607	352.56%
Se 196.026†	0.4	-0.00404	mg/L	0.004187	-0.00404	mg/L	0.004187	103.68%
Si 251.611†	-40.1	0.0126	mg/L	0.00138	0.0126	mg/L	0.00138	10.97%
Sn 189.927†	-17.1	-0.00426	mg/L	0.001184	-0.00426	mg/L	0.001184	27.78%
Ti 334.940†	-146.6	-0.00096	mg/L	0.000133	-0.00096	mg/L	0.000133	13.84%
Tl 190.801†	-6.8	-0.00752	mg/L	0.003303	-0.00752	mg/L	0.003303	43.94%
V 290.880†	438.6	0.00380	mg/L	0.000730	0.00380	mg/L	0.000730	19.19%
Zn 206.200†	-11.3	-0.00069	mg/L	0.000188	-0.00069	mg/L	0.000188	27.21%
K 766.490†	15.5	0.00935	mg/L	0.016906	0.00935	mg/L	0.016906	180.81%
Na 589.592†	144.2	0.00672	mg/L	0.012924	0.00672	mg/L	0.012924	192.33%
Sr 407.771†	64.9	0.00144	mg/L	0.000076	0.00144	mg/L	0.000076	5.26%
Li 670.784†	-65.5	-0.00485	mg/L	0.001503	-0.00485	mg/L	0.001503	31.00%
P 214.914†	11.6	0.0315	mg/L	0.00944	0.0315	mg/L	0.00944	29.93%

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Sequence No.: 107 **Autosampler Location: 181**
Sample ID: LCSW 2C WG451846-04 **Date Collected: 11/8/2013 8:31:24 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 2C WG451846-04

Approved: November 11, 2013

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: LCSW 2C WG451846-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2393541.3						10992.20	0.46%
YRADIAL	161389.2						3759.61	2.33%
Ga 417.206	891729.5						12174.67	1.37%
GaRADIAL	46441.3						924.62	1.99%
Ag 328.068†	39504.1	0.186	mg/L	0.0047	0.186	mg/L	0.0047	2.54%
Al 396.153†	12373.8	4.62	mg/L	0.111	4.62	mg/L	0.111	2.40%
As 188.979†	251.2	0.181	mg/L	0.0035	0.181	mg/L	0.0035	1.93%
Ba 233.527†	31953.7	0.460	mg/L	0.0109	0.460	mg/L	0.0109	2.38%
Be 234.861†	12498.4	0.0221	mg/L	0.00052	0.0221	mg/L	0.00052	2.35%
B 249.677†	43865.5	0.885	mg/L	0.0243	0.885	mg/L	0.0243	2.74%
Ca 227.546†	717.0	4.67	mg/L	0.153	4.67	mg/L	0.153	3.27%
Cd 228.802†	501.9	0.0215	mg/L	0.00052	0.0215	mg/L	0.00052	2.43%
Co 228.616†	1739.7	0.0933	mg/L	0.00150	0.0933	mg/L	0.00150	1.60%
Cr 267.716†	20067.5	0.229	mg/L	0.0047	0.229	mg/L	0.0047	2.07%
Cu 327.393†	36312.6	0.226	mg/L	0.0063	0.226	mg/L	0.0063	2.77%
Fe 239.562†	5057.0	1.92	mg/L	0.042	1.92	mg/L	0.042	2.19%
Mg 279.077†	4733.5	4.83	mg/L	0.081	4.83	mg/L	0.081	1.68%
Mn 257.610†	118065.5	0.237	mg/L	0.0060	0.237	mg/L	0.0060	2.51%
Mo 202.031†	6721.4	0.460	mg/L	0.0123	0.460	mg/L	0.0123	2.67%
Ni 231.604†	7268.1	0.234	mg/L	0.0058	0.234	mg/L	0.0058	2.48%
Pb 220.353†	1255.9	0.237	mg/L	0.0054	0.237	mg/L	0.0054	2.29%
Sb 206.836†	890.2	0.542	mg/L	0.0085	0.542	mg/L	0.0085	1.57%
Se 196.026†	123.5	0.176	mg/L	0.0062	0.176	mg/L	0.0062	3.54%
Si 251.611†	62873.5	2.25	mg/L	0.061	2.25	mg/L	0.061	2.71%
Sn 189.927†	-52.7	-0.0112	mg/L	0.00063	-0.0112	mg/L	0.00063	5.65%
Ti 334.940†	324605.2	0.459	mg/L	0.0046	0.459	mg/L	0.0046	1.01%
Tl 190.801†	359.2	0.243	mg/L	0.0062	0.243	mg/L	0.0062	2.57%
V 290.880†	74290.3	0.461	mg/L	0.0138	0.461	mg/L	0.0138	2.98%
Zn 206.200†	10939.4	0.464	mg/L	0.0109	0.464	mg/L	0.0109	2.34%
K 766.490†	29204.9	22.7	mg/L	0.71	22.7	mg/L	0.71	3.12%
Na 589.592†	215875.9	22.7	mg/L	0.11	22.7	mg/L	0.11	0.48%
Sr 407.771†	438970.7	0.479	mg/L	0.0037	0.479	mg/L	0.0037	0.77%
Li 670.784†	27995.4	0.470	mg/L	0.0103	0.470	mg/L	0.0103	2.19%
P 214.914†	-112.5	-0.119	mg/L	0.0220	-0.119	mg/L	0.0220	18.48%

Sequence No.: 108 **Autosampler Location: 182**
Sample ID: L1311025602 WG451846-01 **Date Collected: 11/8/2013 8:33:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025602 WG451846-01

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025602 WG451846-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2453364.8						11429.57	0.47%
YRADIAL	166536.2						5499.75	3.30%
Ga 417.206	986578.0						7368.12	0.75%
GaRADIAL	47776.0						1980.91	4.15%
Ag 328.068†	361.7	0.00247	mg/L	0.000271	0.00247	mg/L	0.000271	10.96%
Al 396.153†	16.3	-0.0275	mg/L	0.00164	-0.0275	mg/L	0.00164	5.98%
As 188.979†	-8.7	-0.00397	mg/L	0.004091	-0.00397	mg/L	0.004091	103.01%
Ba 233.527†	2003.4	0.0295	mg/L	0.00026	0.0295	mg/L	0.00026	0.88%
Be 234.861†	279.4	0.00061	mg/L	0.000023	0.00061	mg/L	0.000023	3.67%
B 249.677†	640.2	0.0184	mg/L	0.00116	0.0184	mg/L	0.00116	6.29%
Ca 227.546†	11478.8	70.8	mg/L	0.82	70.8	mg/L	0.82	1.16%
Cd 228.802†	-7.3	-0.00031	mg/L	0.000007	-0.00031	mg/L	0.000007	2.44%
Co 228.616†	36.4	0.00185	mg/L	0.000494	0.00185	mg/L	0.000494	26.72%
Cr 267.716†	132.3	0.00165	mg/L	0.000057	0.00165	mg/L	0.000057	3.44%

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Cu 327.393†	151.6	0.00197	mg/L	0.000267	0.00197	mg/L	0.000267	13.52%
Fe 239.562†	40.0	0.00614	mg/L	0.000344	0.00614	mg/L	0.000344	5.60%
Mg 279.077†	75714.3	77.4	mg/L	0.90	77.4	mg/L	0.90	1.16%
Mn 257.610†	130378.5	0.261	mg/L	0.0025	0.261	mg/L	0.0025	0.94%
Mo 202.031†	32.0	0.00280	mg/L	0.000298	0.00280	mg/L	0.000298	10.65%
Ni 231.604†	341.3	0.0112	mg/L	0.00043	0.0112	mg/L	0.00043	3.82%
Pb 220.353†	29.9	0.00415	mg/L	0.000693	0.00415	mg/L	0.000693	16.70%
Sb 206.836†	-3.9	-0.00217	mg/L	0.000810	-0.00217	mg/L	0.000810	37.35%
Se 196.026†	-3.2	-0.00938	mg/L	0.002284	-0.00938	mg/L	0.002284	24.36%
Si 251.611†	54183.7	1.95	mg/L	0.028	1.95	mg/L	0.028	1.46%
Sn 189.927†	-238.5	-0.0472	mg/L	0.00044	-0.0472	mg/L	0.00044	0.93%
Ti 334.940†	-8588.2	-0.00230	mg/L	0.000098	-0.00230	mg/L	0.000098	4.27%
Tl 190.801†	-7.2	-0.00818	mg/L	0.001715	-0.00818	mg/L	0.001715	20.97%
V 290.880†	1525.0	0.00853	mg/L	0.000538	0.00853	mg/L	0.000538	6.31%
Zn 206.200†	154.2	0.00631	mg/L	0.000290	0.00631	mg/L	0.000290	4.60%
K 766.490†	12560.4	9.69	mg/L	0.223	9.69	mg/L	0.223	2.30%
Na 589.592†	575722.3	60.9	mg/L	1.77	60.9	mg/L	1.77	2.91%
Sr 407.771†	226245.8	0.246	mg/L	0.0142	0.246	mg/L	0.0142	5.80%
Li 670.784†	730.6	0.00861	mg/L	0.000249	0.00861	mg/L	0.000249	2.90%
P 214.914†	17.7	0.0389	mg/L	0.01349	0.0389	mg/L	0.01349	34.64%

Sequence No.: 109 **Autosampler Location: 183**
Sample ID: L1311025602DU WG451846-05 **Date Collected: 11/8/2013 8:36:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025602DU WG451846-05

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025602DU WG451846-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2364757.2						47440.94	2.01%
YRADIAL	169757.8						3075.86	1.81%
Ga 417.206	945321.6						18021.10	1.91%
GaRADIAL	48839.2						952.12	1.95%
Ag 328.068†	417.6	0.00273	mg/L	0.000307	0.00273	mg/L	0.000307	11.22%
Al 396.153†	14.2	-0.0282	mg/L	0.00274	-0.0282	mg/L	0.00274	9.70%
As 188.979†	-11.8	-0.00617	mg/L	0.004901	-0.00617	mg/L	0.004901	79.42%
Ba 233.527†	2003.6	0.0295	mg/L	0.00075	0.0295	mg/L	0.00075	2.56%
Be 234.861†	241.9	0.00055	mg/L	0.000052	0.00055	mg/L	0.000052	9.50%
B 249.677†	383.3	0.0133	mg/L	0.00020	0.0133	mg/L	0.00020	1.49%
Ca 227.546†	11918.0	73.6	mg/L	1.86	73.6	mg/L	1.86	2.53%
Cd 228.802†	-7.6	-0.00031	mg/L	0.000152	-0.00031	mg/L	0.000152	49.22%
Co 228.616†	34.4	0.00174	mg/L	0.000348	0.00174	mg/L	0.000348	20.06%
Cr 267.716†	126.1	0.00158	mg/L	0.000158	0.00158	mg/L	0.000158	10.02%
Cu 327.393†	63.8	0.00143	mg/L	0.000414	0.00143	mg/L	0.000414	28.93%
Fe 239.562†	42.6	0.00718	mg/L	0.000631	0.00718	mg/L	0.000631	8.78%
Mg 279.077†	73266.4	74.9	mg/L	1.42	74.9	mg/L	1.42	1.89%
Mn 257.610†	129512.8	0.259	mg/L	0.0083	0.259	mg/L	0.0083	3.21%
Mo 202.031†	21.9	0.00211	mg/L	0.000362	0.00211	mg/L	0.000362	17.15%
Ni 231.604†	342.8	0.0112	mg/L	0.00028	0.0112	mg/L	0.00028	2.54%
Pb 220.353†	33.5	0.00484	mg/L	0.001402	0.00484	mg/L	0.001402	28.96%
Sb 206.836†	-5.9	-0.00339	mg/L	0.002174	-0.00339	mg/L	0.002174	64.18%
Se 196.026†	-0.1	-0.00484	mg/L	0.007356	-0.00484	mg/L	0.007356	151.96%
Si 251.611†	54333.5	1.95	mg/L	0.063	1.95	mg/L	0.063	3.25%
Sn 189.927†	-234.1	-0.0463	mg/L	0.00246	-0.0463	mg/L	0.00246	5.31%
Ti 334.940†	-8601.4	-0.00191	mg/L	0.000246	-0.00191	mg/L	0.000246	12.89%
Tl 190.801†	-17.0	-0.0147	mg/L	0.00526	-0.0147	mg/L	0.00526	35.70%
V 290.880†	1500.2	0.00844	mg/L	0.002142	0.00844	mg/L	0.002142	25.38%
Zn 206.200†	156.1	0.00639	mg/L	0.000361	0.00639	mg/L	0.000361	5.66%
K 766.490†	12174.4	9.39	mg/L	0.246	9.39	mg/L	0.246	2.61%
Na 589.592†	553902.1	58.5	mg/L	0.72	58.5	mg/L	0.72	1.22%
Sr 407.771†	219427.2	0.238	mg/L	0.0109	0.238	mg/L	0.0109	4.56%
Li 670.784†	730.3	0.00861	mg/L	0.001313	0.00861	mg/L	0.001313	15.25%
P 214.914†	19.8	0.0414	mg/L	0.00445	0.0414	mg/L	0.00445	10.73%

Approved: November 11, 2013

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Sequence No.: 110 **Autosampler Location:** 184
Sample ID: L1311025602MS WG451846-06 **Date Collected:** 11/8/2013 8:39:39 PM
Analyst: KHR **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025602MS WG451846-06

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025602MS WG451846-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2324145.1						5419.83	0.23%
YRADIAL	160478.6						1081.67	0.67%
Ga 417.206	905252.2						8255.32	0.91%
GaRADIAL	47486.3						139.70	0.29%
Ag 328.068†	37858.1	0.178	mg/L	0.0032	0.178	mg/L	0.0032	1.79%
Al 396.153†	11996.2	4.48	mg/L	0.056	4.48	mg/L	0.056	1.24%
As 188.979†	235.5	0.171	mg/L	0.0062	0.171	mg/L	0.0062	3.65%
Ba 233.527†	33548.0	0.483	mg/L	0.0066	0.483	mg/L	0.0066	1.36%
Be 234.861†	12277.6	0.0218	mg/L	0.00018	0.0218	mg/L	0.00018	0.82%
B 249.677†	44228.3	0.892	mg/L	0.0232	0.892	mg/L	0.0232	2.60%
Ca 227.546†	13117.9	81.2	mg/L	1.19	81.2	mg/L	1.19	1.47%
Cd 228.802†	470.2	0.0202	mg/L	0.00031	0.0202	mg/L	0.00031	1.56%
Co 228.616†	1698.2	0.0911	mg/L	0.00131	0.0911	mg/L	0.00131	1.43%
Cr 267.716†	19707.6	0.225	mg/L	0.0009	0.225	mg/L	0.0009	0.38%
Cu 327.393†	34391.5	0.214	mg/L	0.0037	0.214	mg/L	0.0037	1.72%
Fe 239.562†	4931.9	1.87	mg/L	0.036	1.87	mg/L	0.036	1.94%
Mg 279.077†	79084.2	80.9	mg/L	0.55	80.9	mg/L	0.55	0.67%
Mn 257.610†	245624.3	0.494	mg/L	0.0066	0.494	mg/L	0.0066	1.34%
Mo 202.031†	6936.6	0.474	mg/L	0.0055	0.474	mg/L	0.0055	1.15%
Ni 231.604†	7455.2	0.240	mg/L	0.0025	0.240	mg/L	0.0025	1.05%
Pb 220.353†	1224.1	0.231	mg/L	0.0044	0.231	mg/L	0.0044	1.89%
Sb 206.836†	863.8	0.526	mg/L	0.0075	0.526	mg/L	0.0075	1.43%
Se 196.026†	118.4	0.169	mg/L	0.0059	0.169	mg/L	0.0059	3.53%
Si 251.611†	117696.5	4.21	mg/L	0.080	4.21	mg/L	0.080	1.89%
Sn 189.927†	-249.9	-0.0494	mg/L	0.00058	-0.0494	mg/L	0.00058	1.18%
Ti 334.940†	325100.6	0.471	mg/L	0.0044	0.471	mg/L	0.0044	0.94%
Tl 190.801†	326.1	0.220	mg/L	0.0067	0.220	mg/L	0.0067	3.03%
V 290.880†	75699.6	0.468	mg/L	0.0090	0.468	mg/L	0.0090	1.92%
Zn 206.200†	10773.1	0.457	mg/L	0.0046	0.457	mg/L	0.0046	1.01%
K 766.490†	40917.3	31.9	mg/L	0.20	31.9	mg/L	0.20	0.63%
Na 589.592†	752194.7	79.7	mg/L	0.55	79.7	mg/L	0.55	0.69%
Sr 407.771†	661129.9	0.719	mg/L	0.0046	0.719	mg/L	0.0046	0.64%
Li 670.784†	28513.5	0.478	mg/L	0.0036	0.478	mg/L	0.0036	0.74%
P 214.914†	-101.7	-0.106	mg/L	0.0135	-0.106	mg/L	0.0135	12.79%

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Sequence No.: 111 **Autosampler Location:** 185
Sample ID: L1311025604 **Date Collected:** 11/8/2013 8:41:45 PM
Analyst: KHR **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025604

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025604

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2321354.6						24915.93	1.07%
YRADIAL	162068.2						4604.56	2.84%
Ga 417.206	939002.3						14216.18	1.51%
GaRADIAL	48016.8						975.45	2.03%
Ag 328.068†	896.1	0.00486	mg/L	0.000182	0.00486	mg/L	0.000182	3.74%

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Al 396.153†	29.7	-0.0224 mg/L	0.00216	-0.0224 mg/L	0.00216	9.62%
As 188.979†	-13.2	-0.00539 mg/L	0.001519	-0.00539 mg/L	0.001519	28.21%
Ba 233.527†	1504.1	0.0223 mg/L	0.00011	0.0223 mg/L	0.00011	0.47%
Be 234.861†	242.7	0.00059 mg/L	0.000043	0.00059 mg/L	0.000043	7.31%
B 249.677†	550.3	0.0166 mg/L	0.00154	0.0166 mg/L	0.00154	9.30%
Ca 227.546†	25240.7	156 mg/L	2.1	156 mg/L	2.1	1.36%
Cd 228.802†	-3.2	-0.00010 mg/L	0.000142	-0.00010 mg/L	0.000142	145.22%
Co 228.616†	98.5	0.00523 mg/L	0.000292	0.00523 mg/L	0.000292	5.59%
Cr 267.716†	198.1	0.00240 mg/L	0.000116	0.00240 mg/L	0.000116	4.83%
Cu 327.393†	46.3	0.00130 mg/L	0.000391	0.00130 mg/L	0.000391	29.99%
Fe 239.562†	20.5	-0.00160 mg/L	0.001482	-0.00160 mg/L	0.001482	92.79%
Mg 279.077†	90354.3	92.4 mg/L	1.26	92.4 mg/L	1.26	1.36%
Mn 257.610†	319826.6	0.643 mg/L	0.0119	0.643 mg/L	0.0119	1.85%
Mo 202.031†	38.8	0.00335 mg/L	0.000686	0.00335 mg/L	0.000686	20.50%
Ni 231.604†	462.8	0.0151 mg/L	0.00029	0.0151 mg/L	0.00029	1.94%
Pb 220.353†	26.9	0.00335 mg/L	0.000458	0.00335 mg/L	0.000458	13.66%
Sb 206.836†	-6.1	-0.00351 mg/L	0.002392	-0.00351 mg/L	0.002392	68.13%
Se 196.026†	3.4	0.00015 mg/L	0.005946	0.00015 mg/L	0.005946	>999.9%
Si 251.611†	41354.5	1.49 mg/L	0.016	1.49 mg/L	0.016	1.10%
Sn 189.927†	-289.6	-0.0571 mg/L	0.00120	-0.0571 mg/L	0.00120	2.10%
Ti 334.940†	-17946.7	-0.00280 mg/L	0.000525	-0.00280 mg/L	0.000525	18.76%
Tl 190.801†	-20.5	-0.0176 mg/L	0.00597	-0.0176 mg/L	0.00597	33.93%
V 290.880†	2019.7	0.0112 mg/L	0.00107	0.0112 mg/L	0.00107	9.53%
Zn 206.200†	163.1	0.00669 mg/L	0.000314	0.00669 mg/L	0.000314	4.69%
K 766.490†	20666.1	15.9 mg/L	0.48	15.9 mg/L	0.48	3.02%
Na 589.592†	1734388.3	187 mg/L	6.6	187 mg/L	6.6	3.56%
Sr 407.771†	424412.7	0.459 mg/L	0.0104	0.459 mg/L	0.0104	2.27%
Li 670.784†	2815.2	0.0439 mg/L	0.00039	0.0439 mg/L	0.00039	0.88%
P 214.914†	15.7	0.0365 mg/L	0.00733	0.0365 mg/L	0.00733	20.10%

Sequence No.: 112 **Autosampler Location: 186**
Sample ID: L1311025606 **Date Collected: 11/8/2013 8:44:51 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025606

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311025606

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2354231.2						40403.73	1.72%
YRADIAL	169926.1						3687.49	2.17%
Ga 417.206	939843.1						22277.85	2.37%
GaRADIAL	49336.2						1503.03	3.05%
Ag 328.068†	618.9	0.00362	mg/L	0.000127	0.00362	mg/L	0.000127	3.51%
Al 396.153†	231.9	0.0541	mg/L	0.00178	0.0541	mg/L	0.00178	3.29%
As 188.979†	-13.6	-0.00658	mg/L	0.000780	-0.00658	mg/L	0.000780	11.86%
Ba 233.527†	2212.1	0.0325	mg/L	0.00059	0.0325	mg/L	0.00059	1.81%
Be 234.861†	230.6	0.00054	mg/L	0.000061	0.00054	mg/L	0.000061	11.35%
B 249.677†	303.8	0.0117	mg/L	0.00064	0.0117	mg/L	0.00064	5.46%
Ca 227.546†	18686.9	115	mg/L	3.6	115	mg/L	3.6	3.16%
Cd 228.802†	-6.4	-0.00026	mg/L	0.000096	-0.00026	mg/L	0.000096	37.42%
Co 228.616†	10.6	0.00047	mg/L	0.000172	0.00047	mg/L	0.000172	36.43%
Cr 267.716†	145.3	0.00180	mg/L	0.000152	0.00180	mg/L	0.000152	8.47%
Cu 327.393†	-5.5	0.00099	mg/L	0.000293	0.00099	mg/L	0.000293	29.43%
Fe 239.562†	3.4	-0.00750	mg/L	0.001505	-0.00750	mg/L	0.001505	20.06%
Mg 279.077†	61760.0	63.2	mg/L	0.27	63.2	mg/L	0.27	0.43%
Mn 257.610†	156029.5	0.313	mg/L	0.0081	0.313	mg/L	0.0081	2.59%
Mo 202.031†	27.2	0.00249	mg/L	0.000194	0.00249	mg/L	0.000194	7.80%
Ni 231.604†	156.9	0.00524	mg/L	0.000157	0.00524	mg/L	0.000157	2.99%
Pb 220.353†	35.2	0.00513	mg/L	0.002312	0.00513	mg/L	0.002312	45.06%
Sb 206.836†	-3.9	-0.00215	mg/L	0.001114	-0.00215	mg/L	0.001114	51.74%
Se 196.026†	-1.8	-0.00731	mg/L	0.007554	-0.00731	mg/L	0.007554	103.39%
Si 251.611†	43632.0	1.57	mg/L	0.042	1.57	mg/L	0.042	2.65%
Sn 189.927†	-274.9	-0.0542	mg/L	0.00090	-0.0542	mg/L	0.00090	1.65%
Ti 334.940†	-13387.9	-0.00241	mg/L	0.000364	-0.00241	mg/L	0.000364	15.06%

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Tl 190.801†	-23.0	-0.0188	mg/L	0.00484	-0.0188	mg/L	0.00484	25.68%
V 290.880†	1766.5	0.0104	mg/L	0.00222	0.0104	mg/L	0.00222	21.39%
Zn 206.200†	-32.5	-0.00157	mg/L	0.000186	-0.00157	mg/L	0.000186	11.81%
K 766.490†	13857.0	10.6	mg/L	0.18	10.6	mg/L	0.18	1.71%
Na 589.592†	1170029.7	125	mg/L	6.0	125	mg/L	6.0	4.84%
Sr 407.771†	389004.1	0.421	mg/L	0.0097	0.421	mg/L	0.0097	2.29%
Li 670.784†	2115.7	0.0320	mg/L	0.00041	0.0320	mg/L	0.00041	1.28%
P 214.914†	12.8	0.0330	mg/L	0.01359	0.0330	mg/L	0.01359	41.16%

Sequence No.: 113 **Autosampler Location: 187**
Sample ID: L1311025608 **Date Collected: 11/8/2013 8:47:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025608

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025608

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2373119.2						26752.43	1.13%
YRADIAL	170855.4						1874.22	1.10%
Ga 417.206	944908.0						5879.82	0.62%
GaRADIAL	49151.4						905.74	1.84%
Ag 328.068†	366.9	0.00251	mg/L	0.000177	0.00251	mg/L	0.000177	7.05%
Al 396.153†	61.7	-0.0102	mg/L	0.00111	-0.0102	mg/L	0.00111	10.84%
As 188.979†	-7.3	-0.00305	mg/L	0.003800	-0.00305	mg/L	0.003800	124.52%
Ba 233.527†	677.0	0.0105	mg/L	0.00020	0.0105	mg/L	0.00020	1.86%
Be 234.861†	191.2	0.00046	mg/L	0.000026	0.00046	mg/L	0.000026	5.62%
B 249.677†	350.3	0.0126	mg/L	0.00030	0.0126	mg/L	0.00030	2.36%
Ca 227.546†	10671.0	65.9	mg/L	0.82	65.9	mg/L	0.82	1.25%
Cd 228.802†	-6.1	-0.00027	mg/L	0.000112	-0.00027	mg/L	0.000112	42.23%
Co 228.616†	11.6	0.00051	mg/L	0.000496	0.00051	mg/L	0.000496	97.07%
Cr 267.716†	152.6	0.00188	mg/L	0.000132	0.00188	mg/L	0.000132	7.04%
Cu 327.393†	54.6	0.00138	mg/L	0.000538	0.00138	mg/L	0.000538	39.01%
Fe 239.562†	13.2	-0.00434	mg/L	0.000765	-0.00434	mg/L	0.000765	17.64%
Mg 279.077†	89955.7	92.0	mg/L	0.81	92.0	mg/L	0.81	0.88%
Mn 257.610†	140717.4	0.282	mg/L	0.0050	0.282	mg/L	0.0050	1.78%
Mo 202.031†	19.8	0.00197	mg/L	0.000458	0.00197	mg/L	0.000458	23.20%
Ni 231.604†	70.9	0.00248	mg/L	0.000638	0.00248	mg/L	0.000638	25.74%
Pb 220.353†	29.2	0.00400	mg/L	0.000430	0.00400	mg/L	0.000430	10.75%
Sb 206.836†	-3.3	-0.00180	mg/L	0.000139	-0.00180	mg/L	0.000139	7.68%
Se 196.026†	1.7	-0.00225	mg/L	0.004572	-0.00225	mg/L	0.004572	203.58%
Si 251.611†	47613.8	1.71	mg/L	0.027	1.71	mg/L	0.027	1.57%
Sn 189.927†	-235.8	-0.0467	mg/L	0.00155	-0.0467	mg/L	0.00155	3.33%
Ti 334.940†	-7994.8	-0.00220	mg/L	0.000272	-0.00220	mg/L	0.000272	12.34%
Tl 190.801†	-16.2	-0.0142	mg/L	0.00224	-0.0142	mg/L	0.00224	15.80%
V 290.880†	1782.7	0.00975	mg/L	0.000838	0.00975	mg/L	0.000838	8.59%
Zn 206.200†	-18.2	-0.00097	mg/L	0.000329	-0.00097	mg/L	0.000329	33.96%
K 766.490†	13435.6	10.4	mg/L	0.25	10.4	mg/L	0.25	2.40%
Na 589.592†	527183.8	55.7	mg/L	1.17	55.7	mg/L	1.17	2.09%
Sr 407.771†	171697.7	0.186	mg/L	0.0066	0.186	mg/L	0.0066	3.57%
Li 670.784†	618.0	0.00671	mg/L	0.000805	0.00671	mg/L	0.000805	11.99%
P 214.914†	10.4	0.0301	mg/L	0.01368	0.0301	mg/L	0.01368	45.42%

Sequence No.: 114 **Autosampler Location: 188**
Sample ID: L1311025608PS WG452064-01 **Date Collected: 11/8/2013 8:51:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025608PS WG452064-01

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1311025608PS WG452064-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2369965.7						23667.47	1.00%
YRADIAL	165023.5						2067.94	1.25%
Ga 417.206	916852.6						19904.84	2.17%
GaRADIAL	48236.7						531.59	1.10%
Ag 328.068†	38238.6	0.180	mg/L	0.0032	0.180	mg/L	0.0032	1.75%
Al 396.153†	12096.2	4.51	mg/L	0.042	4.51	mg/L	0.042	0.93%
As 188.979†	244.3	0.177	mg/L	0.0045	0.177	mg/L	0.0045	2.52%
Ba 233.527†	32795.6	0.472	mg/L	0.0035	0.472	mg/L	0.0035	0.75%
Be 234.861†	12491.4	0.0222	mg/L	0.00015	0.0222	mg/L	0.00015	0.66%
B 249.677†	45318.6	0.914	mg/L	0.0066	0.914	mg/L	0.0066	0.73%
Ca 227.546†	10633.5	65.8	mg/L	1.20	65.8	mg/L	1.20	1.82%
Cd 228.802†	478.7	0.0205	mg/L	0.00057	0.0205	mg/L	0.00057	2.75%
Co 228.616†	1723.9	0.0925	mg/L	0.00070	0.0925	mg/L	0.00070	0.76%
Cr 267.716†	20164.5	0.230	mg/L	0.0019	0.230	mg/L	0.0019	0.82%
Cu 327.393†	35092.1	0.218	mg/L	0.0025	0.218	mg/L	0.0025	1.16%
Fe 239.562†	4860.7	1.84	mg/L	0.024	1.84	mg/L	0.024	1.31%
Mg 279.077†	84474.2	86.4	mg/L	0.34	86.4	mg/L	0.34	0.40%
Mn 257.610†	242780.9	0.488	mg/L	0.0049	0.488	mg/L	0.0049	1.00%
Mo 202.031†	7078.5	0.484	mg/L	0.0023	0.484	mg/L	0.0023	0.48%
Ni 231.604†	7349.1	0.236	mg/L	0.0008	0.236	mg/L	0.0008	0.35%
Pb 220.353†	1250.7	0.236	mg/L	0.0023	0.236	mg/L	0.0023	0.98%
Sb 206.836†	884.5	0.539	mg/L	0.0116	0.539	mg/L	0.0116	2.15%
Se 196.026†	119.6	0.170	mg/L	0.0086	0.170	mg/L	0.0086	5.04%
Si 251.611†	105597.9	3.77	mg/L	0.043	3.77	mg/L	0.043	1.13%
Sn 189.927†	-216.6	-0.0429	mg/L	0.00021	-0.0429	mg/L	0.00021	0.50%
Ti 334.940†	332986.6	0.480	mg/L	0.0060	0.480	mg/L	0.0060	1.24%
Tl 190.801†	340.1	0.230	mg/L	0.0015	0.230	mg/L	0.0015	0.66%
V 290.880†	77164.2	0.477	mg/L	0.0046	0.477	mg/L	0.0046	0.97%
Zn 206.200†	10896.6	0.462	mg/L	0.0024	0.462	mg/L	0.0024	0.53%
K 766.490†	41424.5	32.3	mg/L	0.21	32.3	mg/L	0.21	0.66%
Na 589.592†	690498.5	73.1	mg/L	0.38	73.1	mg/L	0.38	0.53%
Sr 407.771†	602454.0	0.655	mg/L	0.0064	0.655	mg/L	0.0064	0.97%
Li 670.784†	29020.2	0.487	mg/L	0.0041	0.487	mg/L	0.0041	0.83%
P 214.914†	-100.2	-0.104	mg/L	0.0273	-0.104	mg/L	0.0273	26.23%

Sequence No.: 115 **Autosampler Location: 189**
Sample ID: L1311025608DL WG452064-02 **Date Collected: 11/8/2013 8:53:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025608DL WG452064-02

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025608DL WG452064-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2388323.4						56451.38	2.36%
YRADIAL	161595.9						1489.85	0.92%
Ga 417.206	907388.3						24707.30	2.72%
GaRADIAL	47163.1						636.24	1.35%
Ag 328.068†	44.0	0.00105	mg/L	0.000326	0.00105	mg/L	0.000326	30.89%
Al 396.153†	21.5	-0.0254	mg/L	0.00086	-0.0254	mg/L	0.00086	3.37%
As 188.979†	-7.0	-0.00398	mg/L	0.003530	-0.00398	mg/L	0.003530	88.65%
Ba 233.527†	126.0	0.00255	mg/L	0.000026	0.00255	mg/L	0.000026	1.01%
Be 234.861†	150.3	0.00037	mg/L	0.000068	0.00037	mg/L	0.000068	18.67%
B 249.677†	376.3	0.0132	mg/L	0.00165	0.0132	mg/L	0.00165	12.58%
Ca 227.546†	2089.7	12.9	mg/L	0.42	12.9	mg/L	0.42	3.22%
Cd 228.802†	-8.5	-0.00037	mg/L	0.000032	-0.00037	mg/L	0.000032	8.48%
Co 228.616†	-8.9	-0.00061	mg/L	0.000245	-0.00061	mg/L	0.000245	40.04%
Cr 267.716†	34.8	0.00054	mg/L	0.000122	0.00054	mg/L	0.000122	22.62%
Cu 327.393†	133.4	0.00187	mg/L	0.000425	0.00187	mg/L	0.000425	22.71%
Fe 239.562†	3.6	-0.00655	mg/L	0.001749	-0.00655	mg/L	0.001749	26.69%
Mg 279.077†	18154.2	18.6	mg/L	0.01	18.6	mg/L	0.01	0.07%

Approved: November 11, 2013

Mn 257.610†	27628.4	0.0539 mg/L	0.00173	0.0539 mg/L	0.00173	3.21%
Mo 202.031†	6.5	0.00102 mg/L	0.000520	0.00102 mg/L	0.000520	51.23%
Ni 231.604†	18.2	0.00078 mg/L	0.000398	0.00078 mg/L	0.000398	50.78%
Pb 220.353†	17.6	0.00194 mg/L	0.001647	0.00194 mg/L	0.001647	84.71%
Sb 206.836†	-0.3	0.00001 mg/L	0.002357	0.00001 mg/L	0.002357	>999.9%
Se 196.026†	-2.6	-0.00834 mg/L	0.005705	-0.00834 mg/L	0.005705	68.38%
Si 251.611†	9514.9	0.353 mg/L	0.0136	0.353 mg/L	0.0136	3.86%
Sn 189.927†	-107.7	-0.0218 mg/L	0.00026	-0.0218 mg/L	0.00026	1.20%
Ti 334.940†	-1700.3	-0.00124 mg/L	0.000229	-0.00124 mg/L	0.000229	18.45%
Tl 190.801†	-6.2	-0.00722 mg/L	0.003328	-0.00722 mg/L	0.003328	46.06%
V 290.880†	973.9	0.00664 mg/L	0.000542	0.00664 mg/L	0.000542	8.15%
Zn 206.200†	32.6	0.00116 mg/L	0.000189	0.00116 mg/L	0.000189	16.28%
K 766.490†	2708.7	2.08 mg/L	0.035	2.08 mg/L	0.035	1.69%
Na 589.592†	108501.0	11.4 mg/L	0.13	11.4 mg/L	0.13	1.14%
Sr 407.771†	36330.9	0.0405 mg/L	0.00074	0.0405 mg/L	0.00074	1.83%
Li 670.784†	99.7	-0.00205 mg/L	0.001283	-0.00205 mg/L	0.001283	62.50%
P 214.914†	10.0	0.0296 mg/L	0.01358	0.0296 mg/L	0.01358	45.91%

Sequence No.: 116 **Autosampler Location: 234**
Sample ID: CCV **Date Collected: 11/8/2013 8:56:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2414920.5						20330.99	0.84%
YRADIAL	167727.4						3582.27	2.14%
Ga 417.206	912021.3						15645.66	1.72%
GaRADIAL	46829.0						804.30	1.72%
Ag 328.068†	77955.6	0.366	mg/L	0.0037	0.366	mg/L	0.0037	1.02%
Al 396.153†	25380.8	9.51	mg/L	0.052	9.51	mg/L	0.052	0.54%
As 188.979†	506.0	0.364	mg/L	0.0073	0.364	mg/L	0.0073	1.99%
Ba 233.527†	66491.8	0.956	mg/L	0.0124	0.956	mg/L	0.0124	1.30%
Be 234.861†	25679.9	0.0454	mg/L	0.00062	0.0454	mg/L	0.00062	1.37%
B 249.677†	22529.0	0.455	mg/L	0.0017	0.455	mg/L	0.0017	0.37%
Ca 227.546†	1471.8	9.55	mg/L	0.117	9.55	mg/L	0.117	1.22%
Cd 228.802†	1006.3	0.0432	mg/L	0.00115	0.0432	mg/L	0.00115	2.66%
Co 228.616†	3546.9	0.190	mg/L	0.0007	0.190	mg/L	0.0007	0.36%
Cr 267.716†	41345.2	0.471	mg/L	0.0034	0.471	mg/L	0.0034	0.71%
Cu 327.393†	74220.0	0.461	mg/L	0.0040	0.461	mg/L	0.0040	0.88%
Fe 239.562†	9929.5	3.77	mg/L	0.013	3.77	mg/L	0.013	0.35%
Mg 279.077†	9314.0	9.53	mg/L	0.077	9.53	mg/L	0.077	0.81%
Mn 257.610†	243496.6	0.490	mg/L	0.0052	0.490	mg/L	0.0052	1.06%
Mo 202.031†	13966.2	0.955	mg/L	0.0111	0.955	mg/L	0.0111	1.16%
Ni 231.604†	15022.1	0.483	mg/L	0.0012	0.483	mg/L	0.0012	0.24%
Pb 220.353†	2536.9	0.480	mg/L	0.0025	0.480	mg/L	0.0025	0.53%
Sb 206.836†	1776.3	1.08	mg/L	0.020	1.08	mg/L	0.020	1.84%
Se 196.026†	250.3	0.362	mg/L	0.0077	0.362	mg/L	0.0077	2.14%
Si 251.611†	128930.1	4.60	mg/L	0.042	4.60	mg/L	0.042	0.92%
Sn 189.927†	4900.9	0.949	mg/L	0.0059	0.949	mg/L	0.0059	0.62%
Ti 334.940†	682236.3	0.965	mg/L	0.0066	0.965	mg/L	0.0066	0.68%
Tl 190.801†	720.9	0.491	mg/L	0.0052	0.491	mg/L	0.0052	1.05%
V 290.880†	153747.6	0.954	mg/L	0.0092	0.954	mg/L	0.0092	0.97%
Zn 206.200†	22626.4	0.959	mg/L	0.0081	0.959	mg/L	0.0081	0.84%
K 766.490†	60532.9	47.5	mg/L	0.39	47.5	mg/L	0.39	0.82%
Na 589.592†	451535.3	47.6	mg/L	0.46	47.6	mg/L	0.46	0.97%
Sr 407.771†	900101.9	0.981	mg/L	0.0218	0.981	mg/L	0.0218	2.22%
Li 670.784†	57384.5	0.967	mg/L	0.0042	0.967	mg/L	0.0042	0.43%
P 214.914†	7772.0	9.44	mg/L	0.079	9.44	mg/L	0.079	0.83%

Sequence No.: 117 **Autosampler Location: 235**
Sample ID: CCB **Date Collected: 11/8/2013 8:58:14 PM**

Approved: November 11, 2013

Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2432225.7						45684.15	1.88%
YRADIAL	164247.8						5211.32	3.17%
Ga 417.206	887882.3						18991.01	2.14%
GaRADIAL	46310.5						880.55	1.90%
Ag 328.068†	32.2	0.00101	mg/L	0.000230	0.00101	mg/L	0.000230	22.84%
Al 396.153†	-6.9	-0.0361	mg/L	0.00089	-0.0361	mg/L	0.00089	2.47%
As 188.979†	0.8	0.00140	mg/L	0.001814	0.00140	mg/L	0.001814	129.95%
Ba 233.527†	-16.8	0.00050	mg/L	0.000041	0.00050	mg/L	0.000041	8.25%
Be 234.861†	135.9	0.00033	mg/L	0.000019	0.00033	mg/L	0.000019	5.80%
B 249.677†	252.0	0.0107	mg/L	0.00134	0.0107	mg/L	0.00134	12.58%
Ca 227.546†	18.2	0.146	mg/L	0.0142	0.146	mg/L	0.0142	9.76%
Cd 228.802†	-7.8	-0.00037	mg/L	0.000135	-0.00037	mg/L	0.000135	36.17%
Co 228.616†	-8.2	-0.00058	mg/L	0.000369	-0.00058	mg/L	0.000369	63.91%
Cr 267.716†	-2.1	0.00011	mg/L	0.000168	0.00011	mg/L	0.000168	146.40%
Cu 327.393†	240.0	0.00253	mg/L	0.000193	0.00253	mg/L	0.000193	7.61%
Fe 239.562†	1.9	-0.00680	mg/L	0.000743	-0.00680	mg/L	0.000743	10.93%
Mg 279.077†	24.6	0.00852	mg/L	0.002680	0.00852	mg/L	0.002680	31.47%
Mn 257.610†	88.5	-0.00163	mg/L	0.000052	-0.00163	mg/L	0.000052	3.18%
Mo 202.031†	0.7	0.00061	mg/L	0.000168	0.00061	mg/L	0.000168	27.80%
Ni 231.604†	-8.2	-0.00007	mg/L	0.000267	-0.00007	mg/L	0.000267	403.83%
Pb 220.353†	5.8	-0.00026	mg/L	0.002118	-0.00026	mg/L	0.002118	819.45%
Sb 206.836†	0.9	0.00079	mg/L	0.001358	0.00079	mg/L	0.001358	172.69%
Se 196.026†	1.0	-0.00306	mg/L	0.003492	-0.00306	mg/L	0.003492	114.00%
Si 251.611†	-45.2	0.0124	mg/L	0.00175	0.0124	mg/L	0.00175	14.07%
Sn 189.927†	-13.7	-0.00359	mg/L	0.000305	-0.00359	mg/L	0.000305	8.49%
Ti 334.940†	-215.5	-0.00106	mg/L	0.000065	-0.00106	mg/L	0.000065	6.18%
Tl 190.801†	-4.1	-0.00576	mg/L	0.000540	-0.00576	mg/L	0.000540	9.38%
V 290.880†	360.4	0.00332	mg/L	0.000771	0.00332	mg/L	0.000771	23.24%
Zn 206.200†	-13.0	-0.00076	mg/L	0.000221	-0.00076	mg/L	0.000221	28.93%
K 766.490†	-9.6	-0.0101	mg/L	0.01411	-0.0101	mg/L	0.01411	139.42%
Na 589.592†	325.9	0.0258	mg/L	0.04956	0.0258	mg/L	0.04956	192.41%
Sr 407.771†	168.3	0.00155	mg/L	0.000284	0.00155	mg/L	0.000284	18.27%
Li 670.784†	4.5	-0.00366	mg/L	0.000872	-0.00366	mg/L	0.000872	23.79%
P 214.914†	15.3	0.0360	mg/L	0.01054	0.0360	mg/L	0.01054	29.28%

Sequence No.: 118 **Autosampler Location: 190**
Sample ID: L1311025610 **Date Collected: 11/8/2013 9:01:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025610

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025610

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2281839.7						55798.90	2.45%
YRADIAL	158878.2						1907.63	1.20%
Ga 417.206	918087.1						25397.58	2.77%
GaRADIAL	46861.0						377.77	0.81%
Ag 328.068†	556.6	0.00329	mg/L	0.000289	0.00329	mg/L	0.000289	8.77%
Al 396.153†	96.0	0.00265	mg/L	0.001677	0.00265	mg/L	0.001677	63.38%
As 188.979†	-8.7	-0.00277	mg/L	0.001803	-0.00277	mg/L	0.001803	65.00%
Ba 233.527†	1232.8	0.0184	mg/L	0.00042	0.0184	mg/L	0.00042	2.26%

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Be 234.861†	156.0	0.00045 mg/L	0.000076	0.00045 mg/L	0.000076	17.03%
B 249.677†	323.6	0.0121 mg/L	0.00055	0.0121 mg/L	0.00055	4.51%
Ca 227.546†	20645.7	127 mg/L	4.3	127 mg/L	4.3	3.35%
Cd 228.802†	-7.2	-0.00031 mg/L	0.000046	-0.00031 mg/L	0.000046	14.84%
Co 228.616†	16.0	0.00077 mg/L	0.000339	0.00077 mg/L	0.000339	43.87%
Cr 267.716†	204.7	0.00248 mg/L	0.000328	0.00248 mg/L	0.000328	13.26%
Cu 327.393†	40.5	0.00128 mg/L	0.000305	0.00128 mg/L	0.000305	23.81%
Fe 239.562†	1.0	-0.00994 mg/L	0.001195	-0.00994 mg/L	0.001195	12.02%
Mg 279.077†	136608.5	140 mg/L	0.9	140 mg/L	0.9	0.64%
Mn 257.610†	376396.6	0.757 mg/L	0.0219	0.757 mg/L	0.0219	2.89%
Mo 202.031†	37.5	0.00328 mg/L	0.000821	0.00328 mg/L	0.000821	25.02%
Ni 231.604†	80.2	0.00278 mg/L	0.000137	0.00278 mg/L	0.000137	4.93%
Pb 220.353†	29.5	0.00379 mg/L	0.001906	0.00379 mg/L	0.001906	50.29%
Sb 206.836†	-2.1	-0.00107 mg/L	0.001411	-0.00107 mg/L	0.001411	132.19%
Se 196.026†	-3.1	-0.00933 mg/L	0.013754	-0.00933 mg/L	0.013754	147.44%
Si 251.611†	38282.0	1.38 mg/L	0.045	1.38 mg/L	0.045	3.28%
Sn 189.927†	-281.7	-0.0556 mg/L	0.00251	-0.0556 mg/L	0.00251	4.51%
Ti 334.940†	-14849.4	-0.00267 mg/L	0.000320	-0.00267 mg/L	0.000320	11.98%
Tl 190.801†	-21.2	-0.0181 mg/L	0.00382	-0.0181 mg/L	0.00382	21.12%
V 290.880†	2324.5	0.0119 mg/L	0.00173	0.0119 mg/L	0.00173	14.60%
Zn 206.200†	8.2	0.00015 mg/L	0.000436	0.00015 mg/L	0.000436	288.66%
K 766.490†	15477.0	11.9 mg/L	0.22	11.9 mg/L	0.22	1.86%
Na 589.592†	929515.5	98.8 mg/L	2.25	98.8 mg/L	2.25	2.28%
Sr 407.771†	345135.4	0.373 mg/L	0.0113	0.373 mg/L	0.0113	3.02%
Li 670.784†	1703.0	0.0251 mg/L	0.00037	0.0251 mg/L	0.00037	1.47%
P 214.914†	15.9	0.0368 mg/L	0.01281	0.0368 mg/L	0.01281	34.80%

Sequence No.: 119 **Autosampler Location: 191**
Sample ID: L1311025702 **Date Collected: 11/8/2013 9:04:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025702

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025702

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2341804.6						30631.43	1.31%
YRADIAL	161400.5						3509.98	2.17%
Ga 417.206	920645.7						16059.87	1.74%
GaRADIAL	46984.0						268.80	0.57%
Ag 328.068†	487.9	0.00299	mg/L	0.000205	0.00299	mg/L	0.000205	6.85%
Al 396.153†	47.1	-0.0158	mg/L	0.00234	-0.0158	mg/L	0.00234	14.79%
As 188.979†	-4.1	-0.00044	mg/L	0.000448	-0.00044	mg/L	0.000448	102.34%
Ba 233.527†	402.4	0.00652	mg/L	0.000117	0.00652	mg/L	0.000117	1.80%
Be 234.861†	162.4	0.00042	mg/L	0.000045	0.00042	mg/L	0.000045	10.69%
B 249.677†	690.6	0.0194	mg/L	0.00045	0.0194	mg/L	0.00045	2.31%
Ca 227.546†	12961.9	80.0	mg/L	1.05	80.0	mg/L	1.05	1.31%
Cd 228.802†	-7.4	-0.00033	mg/L	0.000223	-0.00033	mg/L	0.000223	67.98%
Co 228.616†	38.8	0.00199	mg/L	0.000329	0.00199	mg/L	0.000329	16.57%
Cr 267.716†	156.0	0.00192	mg/L	0.000156	0.00192	mg/L	0.000156	8.13%
Cu 327.393†	39.1	0.00128	mg/L	0.000233	0.00128	mg/L	0.000233	18.24%
Fe 239.562†	57.9	0.0129	mg/L	0.00197	0.0129	mg/L	0.00197	15.34%
Mg 279.077†	81665.2	83.5	mg/L	1.48	83.5	mg/L	1.48	1.77%
Mn 257.610†	210320.9	0.422	mg/L	0.0080	0.422	mg/L	0.0080	1.89%
Mo 202.031†	32.0	0.00284	mg/L	0.000369	0.00284	mg/L	0.000369	13.00%
Ni 231.604†	135.1	0.00454	mg/L	0.000248	0.00454	mg/L	0.000248	5.47%
Pb 220.353†	27.4	0.00359	mg/L	0.001666	0.00359	mg/L	0.001666	46.45%
Sb 206.836†	0.8	0.00072	mg/L	0.000907	0.00072	mg/L	0.000907	126.31%
Se 196.026†	-0.7	-0.00570	mg/L	0.006379	-0.00570	mg/L	0.006379	111.84%
Si 251.611†	66491.0	2.38	mg/L	0.049	2.38	mg/L	0.049	2.07%
Sn 189.927†	-245.1	-0.0485	mg/L	0.00090	-0.0485	mg/L	0.00090	1.87%
Ti 334.940†	-9426.4	-0.00211	mg/L	0.000378	-0.00211	mg/L	0.000378	17.92%
Tl 190.801†	-14.1	-0.0130	mg/L	0.00348	-0.0130	mg/L	0.00348	26.85%
V 290.880†	1850.7	0.0104	mg/L	0.00104	0.0104	mg/L	0.00104	10.06%
Zn 206.200†	-27.0	-0.00134	mg/L	0.000487	-0.00134	mg/L	0.000487	36.39%

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K 766.490†	7732.8	5.94	mg/L	0.126	5.94	mg/L	0.126	2.12%
Na 589.592†	511630.7	54.0	mg/L	1.24	54.0	mg/L	1.24	2.30%
Sr 407.771†	455608.7	0.495	mg/L	0.0233	0.495	mg/L	0.0233	4.71%
Li 670.784†	897.3	0.0114	mg/L	0.00091	0.0114	mg/L	0.00091	7.96%
P 214.914†	22.9	0.0452	mg/L	0.00667	0.0452	mg/L	0.00667	14.74%

Sequence No.: 120 **Autosampler Location: 192**
Sample ID: L1311025704 **Date Collected: 11/8/2013 9:07:26 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025704

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025704

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311609.7						31768.26	1.37%
YRADIAL	162430.1						8347.88	5.14%
Ga 417.206	926331.4						12811.71	1.38%
GaRADIAL	47907.6						1369.53	2.86%
Ag 328.068†	728.9	0.00403	mg/L	0.000321	0.00403	mg/L	0.000321	7.97%
Al 396.153†	165.7	0.0291	mg/L	0.01093	0.0291	mg/L	0.01093	37.58%
As 188.979†	-11.2	-0.00457	mg/L	0.002343	-0.00457	mg/L	0.002343	51.26%
Ba 233.527†	487.5	0.00774	mg/L	0.000088	0.00774	mg/L	0.000088	1.13%
Be 234.861†	209.1	0.00050	mg/L	0.000035	0.00050	mg/L	0.000035	7.09%
B 249.677†	249.9	0.0106	mg/L	0.00004	0.0106	mg/L	0.00004	0.33%
Ca 227.546†	20678.0	128	mg/L	3.2	128	mg/L	3.2	2.55%
Cd 228.802†	-4.8	-0.00019	mg/L	0.000108	-0.00019	mg/L	0.000108	57.48%
Co 228.616†	45.6	0.00237	mg/L	0.000267	0.00237	mg/L	0.000267	11.28%
Cr 267.716†	133.0	0.00166	mg/L	0.000169	0.00166	mg/L	0.000169	10.21%
Cu 327.393†	-44.3	0.00074	mg/L	0.000313	0.00074	mg/L	0.000313	41.99%
Fe 239.562†	50.7	0.0106	mg/L	0.00189	0.0106	mg/L	0.00189	17.87%
Mg 279.077†	57166.6	58.5	mg/L	1.34	58.5	mg/L	1.34	2.29%
Mn 257.610†	192071.5	0.386	mg/L	0.0084	0.386	mg/L	0.0084	2.17%
Mo 202.031†	28.0	0.00255	mg/L	0.000205	0.00255	mg/L	0.000205	8.02%
Ni 231.604†	154.4	0.00516	mg/L	0.000307	0.00516	mg/L	0.000307	5.95%
Pb 220.353†	30.7	0.00423	mg/L	0.001105	0.00423	mg/L	0.001105	26.15%
Sb 206.836†	-4.0	-0.00224	mg/L	0.001274	-0.00224	mg/L	0.001274	56.84%
Se 196.026†	-3.2	-0.00940	mg/L	0.010419	-0.00940	mg/L	0.010419	110.78%
Si 251.611†	37552.6	1.35	mg/L	0.032	1.35	mg/L	0.032	2.38%
Sn 189.927†	-290.0	-0.0571	mg/L	0.00161	-0.0571	mg/L	0.00161	2.81%
Ti 334.940†	-14975.7	-0.00282	mg/L	0.000249	-0.00282	mg/L	0.000249	8.82%
Tl 190.801†	-22.7	-0.0187	mg/L	0.00544	-0.0187	mg/L	0.00544	29.08%
V 290.880†	1787.7	0.0107	mg/L	0.00337	0.0107	mg/L	0.00337	31.67%
Zn 206.200†	-38.3	-0.00182	mg/L	0.000136	-0.00182	mg/L	0.000136	7.49%
K 766.490†	8526.0	6.36	mg/L	0.175	6.36	mg/L	0.175	2.76%
Na 589.592†	2309982.0	251	mg/L	10.4	251	mg/L	10.4	4.14%
Sr 407.771†	844176.6	0.917	mg/L	0.0698	0.917	mg/L	0.0698	7.61%
Li 670.784†	5552.9	0.0902	mg/L	0.00030	0.0902	mg/L	0.00030	0.33%
P 214.914†	27.0	0.0502	mg/L	0.00871	0.0502	mg/L	0.00871	17.35%

Sequence No.: 121 **Autosampler Location: 193**
Sample ID: L1311025902 WG451846-02 **Date Collected: 11/8/2013 9:10:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025902 WG451846-02

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025902 WG451846-02

Mean Corrected Calib. Sample

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2365316.9						40681.22	1.72%
YRADIAL	165307.4						3042.58	1.84%
Ga 417.206	932338.3						18425.40	1.98%
GaRADIAL	48071.7						44.91	0.09%
Ag 328.068†	507.1	0.00310	mg/L	0.000163	0.00310	mg/L	0.000163	5.25%
Al 396.153†	-18.6	-0.0407	mg/L	0.00231	-0.0407	mg/L	0.00231	5.67%
As 188.979†	-14.7	-0.00781	mg/L	0.001452	-0.00781	mg/L	0.001452	18.59%
Ba 233.527†	1313.6	0.0196	mg/L	0.00051	0.0196	mg/L	0.00051	2.62%
Be 234.861†	181.1	0.00042	mg/L	0.000047	0.00042	mg/L	0.000047	11.28%
B 249.677†	780.5	0.0213	mg/L	0.00146	0.0213	mg/L	0.00146	6.88%
Ca 227.546†	15241.7	94.0	mg/L	1.62	94.0	mg/L	1.62	1.73%
Cd 228.802†	-7.5	-0.00030	mg/L	0.000100	-0.00030	mg/L	0.000100	33.05%
Co 228.616†	-6.1	-0.00043	mg/L	0.000390	-0.00043	mg/L	0.000390	89.96%
Cr 267.716†	147.9	0.00183	mg/L	0.000212	0.00183	mg/L	0.000212	11.62%
Cu 327.393†	64.3	0.00143	mg/L	0.000600	0.00143	mg/L	0.000600	41.81%
Fe 239.562†	45.3	0.00826	mg/L	0.001023	0.00826	mg/L	0.001023	12.38%
Mg 279.077†	70784.8	72.4	mg/L	1.16	72.4	mg/L	1.16	1.60%
Mn 257.610†	22611.7	0.0438	mg/L	0.00050	0.0438	mg/L	0.00050	1.14%
Mo 202.031†	35.8	0.00302	mg/L	0.000693	0.00302	mg/L	0.000693	22.95%
Ni 231.604†	96.4	0.00330	mg/L	0.000294	0.00330	mg/L	0.000294	8.91%
Pb 220.353†	26.8	0.00369	mg/L	0.000953	0.00369	mg/L	0.000953	25.82%
Sb 206.836†	-0.4	-0.00004	mg/L	0.000176	-0.00004	mg/L	0.000176	407.58%
Se 196.026†	1.9	-0.00185	mg/L	0.010236	-0.00185	mg/L	0.010236	552.05%
Si 251.611†	48473.2	1.74	mg/L	0.027	1.74	mg/L	0.027	1.53%
Sn 189.927†	-263.8	-0.0521	mg/L	0.00047	-0.0521	mg/L	0.00047	0.91%
Ti 334.940†	-11101.3	-0.00237	mg/L	0.000172	-0.00237	mg/L	0.000172	7.28%
Tl 190.801†	-14.9	-0.0131	mg/L	0.00326	-0.0131	mg/L	0.00326	24.90%
V 290.880†	1868.1	0.0108	mg/L	0.00067	0.0108	mg/L	0.00067	6.17%
Zn 206.200†	38.6	0.00143	mg/L	0.000224	0.00143	mg/L	0.000224	15.65%
K 766.490†	8501.6	6.59	mg/L	0.229	6.59	mg/L	0.229	3.48%
Na 589.592†	29435.3	3.08	mg/L	0.267	3.08	mg/L	0.267	8.68%
Sr 407.771†	587178.0	0.638	mg/L	0.0312	0.638	mg/L	0.0312	4.89%
Li 670.784†	492.6	0.00459	mg/L	0.000346	0.00459	mg/L	0.000346	7.53%
P 214.914†	18.5	0.0399	mg/L	0.01188	0.0399	mg/L	0.01188	29.76%

Sequence No.: 122 **Autosampler Location: 194**
Sample ID: L1311025902MS WG451846-07 **Date Collected: 11/8/2013 9:13:37 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025902MS WG451846-07

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025902MS WG451846-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2337044.6						37312.01	1.60%
YRADIAL	160706.1						1641.21	1.02%
Ga 417.206	906985.5						6663.12	0.73%
GaRADIAL	47690.1						429.54	0.90%
Ag 328.068†	36917.4	0.174	mg/L	0.0033	0.174	mg/L	0.0033	1.92%
Al 396.153†	11938.5	4.45	mg/L	0.045	4.45	mg/L	0.045	1.02%
As 188.979†	225.8	0.165	mg/L	0.0018	0.165	mg/L	0.0018	1.09%
Ba 233.527†	32227.4	0.464	mg/L	0.0115	0.464	mg/L	0.0115	2.49%
Be 234.861†	11871.8	0.0210	mg/L	0.00044	0.0210	mg/L	0.00044	2.11%
B 249.677†	43840.6	0.885	mg/L	0.0142	0.885	mg/L	0.0142	1.61%
Ca 227.546†	15721.8	97.2	mg/L	1.58	97.2	mg/L	1.58	1.62%
Cd 228.802†	454.9	0.0195	mg/L	0.00054	0.0195	mg/L	0.00054	2.77%
Co 228.616†	1610.7	0.0864	mg/L	0.00179	0.0864	mg/L	0.00179	2.08%
Cr 267.716†	19347.9	0.221	mg/L	0.0044	0.221	mg/L	0.0044	1.98%
Cu 327.393†	33061.4	0.206	mg/L	0.0028	0.206	mg/L	0.0028	1.34%
Fe 239.562†	4908.9	1.86	mg/L	0.042	1.86	mg/L	0.042	2.25%
Mg 279.077†	74394.7	76.1	mg/L	0.68	76.1	mg/L	0.68	0.90%
Mn 257.610†	135632.0	0.272	mg/L	0.0062	0.272	mg/L	0.0062	2.29%
Mo 202.031†	6767.6	0.463	mg/L	0.0071	0.463	mg/L	0.0071	1.54%
Ni 231.604†	6977.5	0.224	mg/L	0.0031	0.224	mg/L	0.0031	1.40%

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Pb 220.353†	1197.1	0.226 mg/L	0.0024	0.226 mg/L	0.0024	1.06%
Sb 206.836†	837.3	0.510 mg/L	0.0026	0.510 mg/L	0.0026	0.50%
Se 196.026†	117.9	0.168 mg/L	0.0072	0.168 mg/L	0.0072	4.28%
Si 251.611†	107590.7	3.84 mg/L	0.072	3.84 mg/L	0.072	1.87%
Sn 189.927†	-264.0	-0.0521 mg/L	0.00160	-0.0521 mg/L	0.00160	3.07%
Ti 334.940†	315762.7	0.460 mg/L	0.0108	0.460 mg/L	0.0108	2.34%
Tl 190.801†	308.0	0.208 mg/L	0.0074	0.208 mg/L	0.0074	3.54%
V 290.880†	74081.3	0.458 mg/L	0.0123	0.458 mg/L	0.0123	2.67%
Zn 206.200†	10194.3	0.432 mg/L	0.0062	0.432 mg/L	0.0062	1.43%
K 766.490†	36801.1	28.7 mg/L	0.16	28.7 mg/L	0.16	0.57%
Na 589.592†	234693.7	24.7 mg/L	0.23	24.7 mg/L	0.23	0.94%
Sr 407.771†	1023150.7	1.11 mg/L	0.012	1.11 mg/L	0.012	1.03%
Li 670.784†	27653.3	0.464 mg/L	0.0073	0.464 mg/L	0.0073	1.58%
P 214.914†	-75.2	-0.0737 mg/L	0.03252	-0.0737 mg/L	0.03252	44.14%

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Sequence No.: 123 **Autosampler Location: 195**
Sample ID: L1311025904 **Date Collected: 11/8/2013 9:15:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311025904

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311025904

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318706.6						41893.77	1.81%
YRADIAL	164635.6						5207.48	3.16%
Ga 417.206	927396.1						14520.26	1.57%
GaRADIAL	48260.6						921.50	1.91%
Ag 328.068†	583.5	0.00344	mg/L	0.000138	0.00344	mg/L	0.000138	4.01%
Al 396.153†	-16.6	-0.0400	mg/L	0.00339	-0.0400	mg/L	0.00339	8.48%
As 188.979†	-11.7	-0.00507	mg/L	0.003581	-0.00507	mg/L	0.003581	70.68%
Ba 233.527†	984.9	0.0149	mg/L	0.00031	0.0149	mg/L	0.00031	2.06%
Be 234.861†	228.9	0.00050	mg/L	0.000059	0.00050	mg/L	0.000059	11.78%
B 249.677†	860.3	0.0229	mg/L	0.00076	0.0229	mg/L	0.00076	3.33%
Ca 227.546†	19345.1	119	mg/L	2.6	119	mg/L	2.6	2.21%
Cd 228.802†	-5.5	-0.00022	mg/L	0.000136	-0.00022	mg/L	0.000136	60.55%
Co 228.616†	-9.1	-0.00058	mg/L	0.000120	-0.00058	mg/L	0.000120	20.53%
Cr 267.716†	184.7	0.00225	mg/L	0.000274	0.00225	mg/L	0.000274	12.19%
Cu 327.393†	191.6	0.00221	mg/L	0.000322	0.00221	mg/L	0.000322	14.57%
Fe 239.562†	32.0	0.00254	mg/L	0.000933	0.00254	mg/L	0.000933	36.69%
Mg 279.077†	102458.7	105	mg/L	1.8	105	mg/L	1.8	1.70%
Mn 257.610†	4583.4	0.00744	mg/L	0.000162	0.00744	mg/L	0.000162	2.18%
Mo 202.031†	33.7	0.00287	mg/L	0.000401	0.00287	mg/L	0.000401	13.97%
Ni 231.604†	411.8	0.0134	mg/L	0.00053	0.0134	mg/L	0.00053	3.92%
Pb 220.353†	23.1	0.00302	mg/L	0.000581	0.00302	mg/L	0.000581	19.21%
Sb 206.836†	-4.0	-0.00221	mg/L	0.000989	-0.00221	mg/L	0.000989	44.79%
Se 196.026†	2.8	-0.00048	mg/L	0.005367	-0.00048	mg/L	0.005367	>999.9%
Si 251.611†	61807.1	2.22	mg/L	0.055	2.22	mg/L	0.055	2.48%
Sn 189.927†	-284.0	-0.0560	mg/L	0.00168	-0.0560	mg/L	0.00168	3.00%
Ti 334.940†	-14068.9	-0.00277	mg/L	0.000402	-0.00277	mg/L	0.000402	14.52%
Tl 190.801†	-17.0	-0.0145	mg/L	0.00310	-0.0145	mg/L	0.00310	21.29%
V 290.880†	2015.8	0.0109	mg/L	0.00184	0.0109	mg/L	0.00184	16.90%
Zn 206.200†	402.2	0.0168	mg/L	0.00016	0.0168	mg/L	0.00016	0.98%
K 766.490†	11565.4	8.97	mg/L	0.215	8.97	mg/L	0.215	2.39%
Na 589.592†	27920.9	2.92	mg/L	0.035	2.92	mg/L	0.035	1.21%
Sr 407.771†	705092.9	0.765	mg/L	0.0274	0.765	mg/L	0.0274	3.58%
Li 670.784†	1352.4	0.0191	mg/L	0.00109	0.0191	mg/L	0.00109	5.71%
P 214.914†	22.3	0.0445	mg/L	0.00637	0.0445	mg/L	0.00637	14.31%

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Sequence No.: 124 **Autosampler Location: 196**
Sample ID: L1311025906 **Date Collected: 11/8/2013 9:18:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: L1311025906

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311025906

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2439840.3						36031.29	1.48%
YRADIAL	165171.1						2764.31	1.67%
Ga 417.206	960121.4						14625.69	1.52%
GaRADIAL	47815.8						1025.39	2.14%
Ag 328.068†	357.5	0.00233	mg/L	0.000224	0.00233	mg/L	0.000224	9.58%
Al 396.153†	16.6	-0.0273	mg/L	0.00080	-0.0273	mg/L	0.00080	2.91%
As 188.979†	-9.8	-0.00515	mg/L	0.004197	-0.00515	mg/L	0.004197	81.46%
Ba 233.527†	1486.6	0.0221	mg/L	0.00031	0.0221	mg/L	0.00031	1.42%
Be 234.861†	203.5	0.00056	mg/L	0.000018	0.00056	mg/L	0.000018	3.19%
B 249.677†	593.0	0.0175	mg/L	0.00040	0.0175	mg/L	0.00040	2.29%
Ca 227.546†	8625.7	53.3	mg/L	0.71	53.3	mg/L	0.71	1.33%
Cd 228.802†	-3.3	-0.00012	mg/L	0.000038	-0.00012	mg/L	0.000038	31.19%
Co 228.616†	56.5	0.00292	mg/L	0.000430	0.00292	mg/L	0.000430	14.73%
Cr 267.716†	119.5	0.00150	mg/L	0.000086	0.00150	mg/L	0.000086	5.72%
Cu 327.393†	181.6	0.00216	mg/L	0.000098	0.00216	mg/L	0.000098	4.55%
Fe 239.562†	1.9	-0.00809	mg/L	0.001165	-0.00809	mg/L	0.001165	14.40%
Mg 279.077†	61503.7	62.9	mg/L	0.54	62.9	mg/L	0.54	0.86%
Mn 257.610†	531794.0	1.07	mg/L	0.007	1.07	mg/L	0.007	0.66%
Mo 202.031†	22.5	0.00233	mg/L	0.000678	0.00233	mg/L	0.000678	29.14%
Ni 231.604†	581.2	0.0189	mg/L	0.00046	0.0189	mg/L	0.00046	2.46%
Pb 220.353†	27.5	0.00322	mg/L	0.000848	0.00322	mg/L	0.000848	26.34%
Sb 206.836†	-3.8	-0.00210	mg/L	0.002146	-0.00210	mg/L	0.002146	102.30%
Se 196.026†	1.4	-0.00286	mg/L	0.009523	-0.00286	mg/L	0.009523	332.49%
Si 251.611†	64943.8	2.33	mg/L	0.031	2.33	mg/L	0.031	1.35%
Sn 189.927†	-216.5	-0.0429	mg/L	0.00096	-0.0429	mg/L	0.00096	2.23%
Ti 334.940†	-6458.6	-0.00192	mg/L	0.000171	-0.00192	mg/L	0.000171	8.88%
Tl 190.801†	-20.0	-0.0175	mg/L	0.00318	-0.0175	mg/L	0.00318	18.20%
V 290.880†	1475.0	0.00860	mg/L	0.000696	0.00860	mg/L	0.000696	8.09%
Zn 206.200†	103.0	0.00415	mg/L	0.000137	0.00415	mg/L	0.000137	3.31%
K 766.490†	7129.3	5.50	mg/L	0.121	5.50	mg/L	0.121	2.20%
Na 589.592†	252233.9	26.5	mg/L	0.69	26.5	mg/L	0.69	2.59%
Sr 407.771†	257581.8	0.280	mg/L	0.0129	0.280	mg/L	0.0129	4.60%
Li 670.784†	210.8	-0.00018	mg/L	0.000325	-0.00018	mg/L	0.000325	185.22%
P 214.914†	15.1	0.0357	mg/L	0.01256	0.0357	mg/L	0.01256	35.17%

Sequence No.: 125
Sample ID: L1311025908
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 197
Date Collected: 11/8/2013 9:21:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1311025908

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311025908

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2393109.8						40532.35	1.69%
YRADIAL	166226.1						2915.03	1.75%
Ga 417.206	928521.2						11126.76	1.20%
GaRADIAL	47938.6						804.80	1.68%
Ag 328.068†	248.8	0.00196	mg/L	0.000170	0.00196	mg/L	0.000170	8.68%
Al 396.153†	0.0	-0.0336	mg/L	0.00344	-0.0336	mg/L	0.00344	10.23%
As 188.979†	-5.7	-0.00242	mg/L	0.002582	-0.00242	mg/L	0.002582	106.85%
Ba 233.527†	1798.9	0.0266	mg/L	0.00041	0.0266	mg/L	0.00041	1.55%
Be 234.861†	156.1	0.00037	mg/L	0.000043	0.00037	mg/L	0.000043	11.63%
B 249.677†	568.7	0.0170	mg/L	0.00040	0.0170	mg/L	0.00040	2.34%
Ca 227.546†	6852.4	42.3	mg/L	0.55	42.3	mg/L	0.55	1.29%

Approved: November 11, 2013

Cd 228.802†	-4.5	-0.00020	mg/L	0.000029	-0.00020	mg/L	0.000029	14.43%
Co 228.616†	-7.1	-0.00051	mg/L	0.000477	-0.00051	mg/L	0.000477	94.07%
Cr 267.716†	83.1	0.00109	mg/L	0.000145	0.00109	mg/L	0.000145	13.30%
Cu 327.393†	335.0	0.00311	mg/L	0.000301	0.00311	mg/L	0.000301	9.68%
Fe 239.562†	9.9	-0.00458	mg/L	0.001222	-0.00458	mg/L	0.001222	26.68%
Mg 279.077†	39866.8	40.8	mg/L	0.77	40.8	mg/L	0.77	1.89%
Mn 257.610†	10709.3	0.0198	mg/L	0.00041	0.0198	mg/L	0.00041	2.05%
Mo 202.031†	22.5	0.00210	mg/L	0.000412	0.00210	mg/L	0.000412	19.56%
Ni 231.604†	29.9	0.00116	mg/L	0.000474	0.00116	mg/L	0.000474	40.87%
Pb 220.353†	15.2	0.00151	mg/L	0.001396	0.00151	mg/L	0.001396	92.74%
Sb 206.836†	-1.8	-0.00086	mg/L	0.001902	-0.00086	mg/L	0.001902	221.77%
Se 196.026†	-1.1	-0.00623	mg/L	0.008634	-0.00623	mg/L	0.008634	138.51%
Si 251.611†	42059.4	1.51	mg/L	0.018	1.51	mg/L	0.018	1.17%
Sn 189.927†	-206.2	-0.0409	mg/L	0.00109	-0.0409	mg/L	0.00109	2.67%
Ti 334.940†	-5239.0	-0.00184	mg/L	0.000223	-0.00184	mg/L	0.000223	12.11%
Tl 190.801†	-14.9	-0.0130	mg/L	0.00388	-0.0130	mg/L	0.00388	29.86%
V 290.880†	1267.1	0.00788	mg/L	0.000538	0.00788	mg/L	0.000538	6.83%
Zn 206.200†	37.9	0.00139	mg/L	0.000031	0.00139	mg/L	0.000031	2.25%
K 766.490†	6220.1	4.82	mg/L	0.128	4.82	mg/L	0.128	2.66%
Na 589.592†	16259.2	1.70	mg/L	0.011	1.70	mg/L	0.011	0.67%
Sr 407.771†	299524.1	0.326	mg/L	0.0154	0.326	mg/L	0.0154	4.71%
Li 670.784†	240.1	0.00032	mg/L	0.000292	0.00032	mg/L	0.000292	91.32%
P 214.914†	18.0	0.0393	mg/L	0.00395	0.0393	mg/L	0.00395	10.05%

Sequence No.: 126 **Autosampler Location: 198**
Sample ID: L1311026302 **Date Collected: 11/8/2013 9:24:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026302

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026302

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2474555.8						42655.88	1.72%
YRADIAL	164975.2						3696.69	2.24%
Ga 417.206	946179.1						14308.64	1.51%
GaRADIAL	47112.1						911.54	1.93%
Ag 328.068†	203.8	0.00177	mg/L	0.000404	0.00177	mg/L	0.000404	22.91%
Al 396.153†	4.6	-0.0318	mg/L	0.00059	-0.0318	mg/L	0.00059	1.84%
As 188.979†	-9.0	-0.00514	mg/L	0.002684	-0.00514	mg/L	0.002684	52.20%
Ba 233.527†	2992.7	0.0437	mg/L	0.00062	0.0437	mg/L	0.00062	1.41%
Be 234.861†	184.6	0.00041	mg/L	0.000053	0.00041	mg/L	0.000053	12.99%
B 249.677†	345.0	0.0125	mg/L	0.00010	0.0125	mg/L	0.00010	0.83%
Ca 227.546†	4525.8	28.0	mg/L	0.42	28.0	mg/L	0.42	1.52%
Cd 228.802†	-12.2	-0.00053	mg/L	0.000124	-0.00053	mg/L	0.000124	23.36%
Co 228.616†	-10.2	-0.00069	mg/L	0.000239	-0.00069	mg/L	0.000239	34.74%
Cr 267.716†	53.1	0.00074	mg/L	0.000120	0.00074	mg/L	0.000120	16.17%
Cu 327.393†	242.9	0.00255	mg/L	0.000845	0.00255	mg/L	0.000845	33.16%
Fe 239.562†	152.6	0.0504	mg/L	0.00078	0.0504	mg/L	0.00078	1.56%
Mg 279.077†	12647.9	12.9	mg/L	0.18	12.9	mg/L	0.18	1.36%
Mn 257.610†	12965.0	0.0243	mg/L	0.00050	0.0243	mg/L	0.00050	2.04%
Mo 202.031†	10.8	0.00131	mg/L	0.000190	0.00131	mg/L	0.000190	14.55%
Ni 231.604†	1.7	0.00025	mg/L	0.000090	0.00025	mg/L	0.000090	35.86%
Pb 220.353†	22.3	0.00285	mg/L	0.000466	0.00285	mg/L	0.000466	16.35%
Sb 206.836†	-1.9	-0.00096	mg/L	0.002481	-0.00096	mg/L	0.002481	258.50%
Se 196.026†	-2.8	-0.00866	mg/L	0.005174	-0.00866	mg/L	0.005174	59.74%
Si 251.611†	62664.3	2.25	mg/L	0.043	2.25	mg/L	0.043	1.91%
Sn 189.927†	-170.2	-0.0339	mg/L	0.00111	-0.0339	mg/L	0.00111	3.28%
Ti 334.940†	-3348.2	-0.00132	mg/L	0.000262	-0.00132	mg/L	0.000262	19.92%
Tl 190.801†	-6.9	-0.00765	mg/L	0.003573	-0.00765	mg/L	0.003573	46.68%
V 290.880†	753.2	0.00541	mg/L	0.001586	0.00541	mg/L	0.001586	29.33%
Zn 206.200†	-0.4	-0.00023	mg/L	0.000336	-0.00023	mg/L	0.000336	146.19%
K 766.490†	3309.1	2.55	mg/L	0.091	2.55	mg/L	0.091	3.56%
Na 589.592†	97107.4	10.2	mg/L	0.28	10.2	mg/L	0.28	2.78%
Sr 407.771†	289375.0	0.316	mg/L	0.0126	0.316	mg/L	0.0126	4.00%

Approved: November 11, 2013

Li 670.784†	74.8	-0.00248 mg/L	0.000673	-0.00248 mg/L	0.000673	27.19%
P 214.914†	73.7	0.107 mg/L	0.0069	0.107 mg/L	0.0069	6.50%

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Sequence No.: 127 **Autosampler Location: 236**
Sample ID: CCV **Date Collected: 11/8/2013 9:28:04 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2382195.3						29316.45	1.23%
YRADIAL	166478.7						3442.06	2.07%
Ga 417.206	890717.6						2222.19	0.25%
GaRADIAL	46687.3						715.93	1.53%
Ag 328.068†	79031.0	0.371	mg/L	0.0051	0.371	mg/L	0.0051	1.37%
Al 396.153†	25020.8	9.37	mg/L	0.095	9.37	mg/L	0.095	1.02%
As 188.979†	510.4	0.367	mg/L	0.0068	0.367	mg/L	0.0068	1.84%
Ba 233.527†	66630.8	0.958	mg/L	0.0219	0.958	mg/L	0.0219	2.29%
Be 234.861†	26078.2	0.0461	mg/L	0.00069	0.0461	mg/L	0.00069	1.50%
B 249.677†	22532.8	0.455	mg/L	0.0095	0.455	mg/L	0.0095	2.09%
Ca 227.546†	1488.4	9.66	mg/L	0.102	9.66	mg/L	0.102	1.06%
Cd 228.802†	1020.6	0.0438	mg/L	0.00012	0.0438	mg/L	0.00012	0.28%
Co 228.616†	3570.5	0.192	mg/L	0.0041	0.192	mg/L	0.0041	2.12%
Cr 267.716†	41547.8	0.473	mg/L	0.0104	0.473	mg/L	0.0104	2.20%
Cu 327.393†	75229.0	0.467	mg/L	0.0075	0.467	mg/L	0.0075	1.61%
Fe 239.562†	9825.2	3.73	mg/L	0.017	3.73	mg/L	0.017	0.46%
Mg 279.077†	9203.4	9.41	mg/L	0.040	9.41	mg/L	0.040	0.42%
Mn 257.610†	244302.3	0.492	mg/L	0.0116	0.492	mg/L	0.0116	2.35%
Mo 202.031†	13932.5	0.952	mg/L	0.0215	0.952	mg/L	0.0215	2.26%
Ni 231.604†	15021.3	0.483	mg/L	0.0098	0.483	mg/L	0.0098	2.04%
Pb 220.353†	2549.7	0.483	mg/L	0.0108	0.483	mg/L	0.0108	2.24%
Sb 206.836†	1800.3	1.10	mg/L	0.011	1.10	mg/L	0.011	1.03%
Se 196.026†	255.0	0.368	mg/L	0.0059	0.368	mg/L	0.0059	1.61%
Si 251.611†	131041.1	4.68	mg/L	0.068	4.68	mg/L	0.068	1.45%
Sn 189.927†	4930.0	0.955	mg/L	0.0229	0.955	mg/L	0.0229	2.40%
Ti 334.940†	667926.2	0.945	mg/L	0.0169	0.945	mg/L	0.0169	1.78%
Tl 190.801†	731.0	0.497	mg/L	0.0107	0.497	mg/L	0.0107	2.15%
V 290.880†	154344.4	0.957	mg/L	0.0276	0.957	mg/L	0.0276	2.88%
Zn 206.200†	22707.5	0.963	mg/L	0.0222	0.963	mg/L	0.0222	2.31%
K 766.490†	59806.0	47.0	mg/L	0.66	47.0	mg/L	0.66	1.40%
Na 589.592†	433761.3	45.7	mg/L	1.51	45.7	mg/L	1.51	3.30%
Sr 407.771†	858368.1	0.936	mg/L	0.0325	0.936	mg/L	0.0325	3.47%
Li 670.784†	56817.7	0.957	mg/L	0.0126	0.957	mg/L	0.0126	1.31%
P 214.914†	7817.7	9.49	mg/L	0.218	9.49	mg/L	0.218	2.29%

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Sequence No.: 128 **Autosampler Location: 237**
Sample ID: CCB **Date Collected: 11/8/2013 9:30:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2399728.5						11405.75	0.48%
YRADIAL	163935.8						1124.20	0.69%

Approved: November 11, 2013

Ga 417.206	875327.9					9189.54	1.05%
GaRADIAL	45989.8					858.81	1.87%
Ag 328.068†	103.2	0.00134	mg/L	0.000730	0.00134 mg/L	0.000730	54.67%
Al 396.153†	-4.9	-0.0354	mg/L	0.00371	-0.0354 mg/L	0.00371	10.49%
As 188.979†	3.3	0.00316	mg/L	0.003903	0.00316 mg/L	0.003903	123.48%
Ba 233.527†	-11.9	0.00057	mg/L	0.000049	0.00057 mg/L	0.000049	8.60%
Be 234.861†	127.4	0.00032	mg/L	0.000006	0.00032 mg/L	0.000006	1.91%
B 249.677†	77.2	0.00714	mg/L	0.001214	0.00714 mg/L	0.001214	16.99%
Ca 227.546†	17.6	0.142	mg/L	0.0350	0.142 mg/L	0.0350	24.60%
Cd 228.802†	-3.8	-0.00021	mg/L	0.000175	-0.00021 mg/L	0.000175	84.68%
Co 228.616†	-7.5	-0.00054	mg/L	0.000330	-0.00054 mg/L	0.000330	61.06%
Cr 267.716†	1.6	0.00016	mg/L	0.000065	0.00016 mg/L	0.000065	41.42%
Cu 327.393†	135.1	0.00188	mg/L	0.000180	0.00188 mg/L	0.000180	9.56%
Fe 239.562†	2.1	-0.00672	mg/L	0.001491	-0.00672 mg/L	0.001491	22.19%
Mg 279.077†	24.1	0.00798	mg/L	0.004697	0.00798 mg/L	0.004697	58.85%
Mn 257.610†	87.7	-0.00164	mg/L	0.000046	-0.00164 mg/L	0.000046	2.84%
Mo 202.031†	1.5	0.00066	mg/L	0.000513	0.00066 mg/L	0.000513	77.20%
Ni 231.604†	-8.7	-0.00009	mg/L	0.000371	-0.00009 mg/L	0.000371	433.74%
Pb 220.353†	7.5	0.00005	mg/L	0.002125	0.00005 mg/L	0.002125	>999.9%
Sb 206.836†	1.3	0.00103	mg/L	0.000884	0.00103 mg/L	0.000884	85.60%
Se 196.026†	0.0	-0.00457	mg/L	0.001025	-0.00457 mg/L	0.001025	22.41%
Si 251.611†	-15.7	0.0135	mg/L	0.00167	0.0135 mg/L	0.00167	12.40%
Sn 189.927†	-11.5	-0.00316	mg/L	0.000319	-0.00316 mg/L	0.000319	10.07%
Ti 334.940†	-150.4	-0.00097	mg/L	0.000122	-0.00097 mg/L	0.000122	12.64%
Tl 190.801†	-0.6	-0.00341	mg/L	0.003118	-0.00341 mg/L	0.003118	91.55%
V 290.880†	389.0	0.00350	mg/L	0.001098	0.00350 mg/L	0.001098	31.41%
Zn 206.200†	-17.4	-0.00095	mg/L	0.000309	-0.00095 mg/L	0.000309	32.50%
K 766.490†	-9.3	-0.00985	mg/L	0.057030	-0.00985 mg/L	0.057030	579.10%
Na 589.592†	90.6	0.00111	mg/L	0.030620	0.00111 mg/L	0.030620	>999.9%
Sr 407.771†	59.6	0.00144	mg/L	0.000103	0.00144 mg/L	0.000103	7.20%
Li 670.784†	19.9	-0.00340	mg/L	0.001026	-0.00340 mg/L	0.001026	30.14%
P 214.914†	14.0	0.0344	mg/L	0.00701	0.0344 mg/L	0.00701	20.37%

Sequence No.: 129 **Autosampler Location: 199**
Sample ID: L1311026304 **Date Collected: 11/8/2013 9:33:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026304

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026304

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2433023.3						17399.74	0.72%
YRADIAL	168686.0						5449.36	3.23%
Ga 417.206	939060.9						6220.80	0.66%
GaRADIAL	48261.9						1256.14	2.60%
Ag 328.068†	231.8	0.00185	mg/L	0.000208	0.00185	mg/L	0.000208	11.24%
Al 396.153†	41.9	-0.0178	mg/L	0.00307	-0.0178	mg/L	0.00307	17.27%
As 188.979†	-10.1	-0.00587	mg/L	0.000930	-0.00587	mg/L	0.000930	15.83%
Ba 233.527†	3190.8	0.0466	mg/L	0.00041	0.0466	mg/L	0.00041	0.88%
Be 234.861†	175.6	0.00040	mg/L	0.000015	0.00040	mg/L	0.000015	3.63%
B 249.677†	341.2	0.0125	mg/L	0.00024	0.0125	mg/L	0.00024	1.93%
Ca 227.546†	4946.1	30.5	mg/L	0.16	30.5	mg/L	0.16	0.53%
Cd 228.802†	-10.8	-0.00046	mg/L	0.000308	-0.00046	mg/L	0.000308	66.23%
Co 228.616†	-5.8	-0.00045	mg/L	0.000052	-0.00045	mg/L	0.000052	11.58%
Cr 267.716†	50.8	0.00072	mg/L	0.000108	0.00072	mg/L	0.000108	15.05%
Cu 327.393†	146.3	0.00195	mg/L	0.000304	0.00195	mg/L	0.000304	15.61%
Fe 239.562†	23.4	0.00103	mg/L	0.000295	0.00103	mg/L	0.000295	28.77%
Mg 279.077†	17314.5	17.7	mg/L	0.28	17.7	mg/L	0.28	1.58%
Mn 257.610†	2000.2	0.00222	mg/L	0.000038	0.00222	mg/L	0.000038	1.70%
Mo 202.031†	20.9	0.00199	mg/L	0.000427	0.00199	mg/L	0.000427	21.49%
Ni 231.604†	-3.6	0.00008	mg/L	0.000191	0.00008	mg/L	0.000191	231.68%
Pb 220.353†	12.8	0.00107	mg/L	0.003059	0.00107	mg/L	0.003059	285.29%
Sb 206.836†	-1.4	-0.00066	mg/L	0.002059	-0.00066	mg/L	0.002059	312.60%
Se 196.026†	-1.6	-0.00692	mg/L	0.006376	-0.00692	mg/L	0.006376	92.14%

Approved: November 11, 2013

Si 251.611†	52784.7	1.90 mg/L	0.019	1.90 mg/L	0.019	0.99%
Sn 189.927†	-170.3	-0.0340 mg/L	0.00149	-0.0340 mg/L	0.00149	4.38%
Ti 334.940†	-3801.0	-0.00157 mg/L	0.000125	-0.00157 mg/L	0.000125	7.96%
Tl 190.801†	-15.7	-0.0135 mg/L	0.00753	-0.0135 mg/L	0.00753	55.57%
V 290.880†	796.8	0.00556 mg/L	0.000963	0.00556 mg/L	0.000963	17.30%
Zn 206.200†	22.3	0.00073 mg/L	0.000171	0.00073 mg/L	0.000171	23.34%
K 766.490†	3024.2	2.33 mg/L	0.054	2.33 mg/L	0.054	2.33%
Na 589.592†	48685.1	5.10 mg/L	0.150	5.10 mg/L	0.150	2.93%
Sr 407.771†	403451.2	0.440 mg/L	0.0188	0.440 mg/L	0.0188	4.27%
Li 670.784†	293.5	0.00122 mg/L	0.000368	0.00122 mg/L	0.000368	30.14%
P 214.914†	22.4	0.0447 mg/L	0.01304	0.0447 mg/L	0.01304	29.21%

Sequence No.: 130 **Autosampler Location: 200**
Sample ID: L1311026307 **Date Collected: 11/8/2013 9:36:17 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026307

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026307

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2426602.8						7853.35	0.32%
YRADIAL	166944.0						2367.82	1.42%
Ga 417.206	934897.5						5589.83	0.60%
GaRADIAL	47749.6						539.08	1.13%
Ag 328.068†	245.8	0.00192	mg/L	0.000223	0.00192	mg/L	0.000223	11.62%
Al 396.153†	-1.5	-0.0341	mg/L	0.00079	-0.0341	mg/L	0.00079	2.32%
As 188.979†	-7.6	-0.00406	mg/L	0.000947	-0.00406	mg/L	0.000947	23.32%
Ba 233.527†	3281.5	0.0479	mg/L	0.00029	0.0479	mg/L	0.00029	0.61%
Be 234.861†	173.0	0.00040	mg/L	0.000014	0.00040	mg/L	0.000014	3.46%
B 249.677†	263.1	0.0109	mg/L	0.00005	0.0109	mg/L	0.00005	0.49%
Ca 227.546†	4999.5	30.9	mg/L	0.18	30.9	mg/L	0.18	0.58%
Cd 228.802†	-6.9	-0.00030	mg/L	0.000166	-0.00030	mg/L	0.000166	54.54%
Co 228.616†	-16.1	-0.00101	mg/L	0.000283	-0.00101	mg/L	0.000283	28.11%
Cr 267.716†	40.4	0.00060	mg/L	0.000242	0.00060	mg/L	0.000242	40.44%
Cu 327.393†	118.5	0.00178	mg/L	0.000554	0.00178	mg/L	0.000554	31.12%
Fe 239.562†	44.7	0.00913	mg/L	0.001592	0.00913	mg/L	0.001592	17.43%
Mg 279.077†	17631.9	18.0	mg/L	0.29	18.0	mg/L	0.29	1.62%
Mn 257.610†	2418.9	0.00307	mg/L	0.000059	0.00307	mg/L	0.000059	1.91%
Mo 202.031†	12.4	0.00141	mg/L	0.000334	0.00141	mg/L	0.000334	23.77%
Ni 231.604†	-15.6	-0.00030	mg/L	0.000331	-0.00030	mg/L	0.000331	109.07%
Pb 220.353†	16.6	0.00179	mg/L	0.002907	0.00179	mg/L	0.002907	162.54%
Sb 206.836†	0.7	0.00066	mg/L	0.000836	0.00066	mg/L	0.000836	127.18%
Se 196.026†	-1.4	-0.00660	mg/L	0.004892	-0.00660	mg/L	0.004892	74.10%
Si 251.611†	55302.7	1.99	mg/L	0.043	1.99	mg/L	0.043	2.16%
Sn 189.927†	-171.4	-0.0342	mg/L	0.00142	-0.0342	mg/L	0.00142	4.14%
Ti 334.940†	-3782.7	-0.00149	mg/L	0.000358	-0.00149	mg/L	0.000358	23.94%
Tl 190.801†	-13.0	-0.0117	mg/L	0.00188	-0.0117	mg/L	0.00188	16.05%
V 290.880†	845.7	0.00586	mg/L	0.000744	0.00586	mg/L	0.000744	12.70%
Zn 206.200†	-15.5	-0.00087	mg/L	0.000057	-0.00087	mg/L	0.000057	6.60%
K 766.490†	2994.0	2.31	mg/L	0.067	2.31	mg/L	0.067	2.90%
Na 589.592†	47324.6	4.95	mg/L	0.076	4.95	mg/L	0.076	1.54%
Sr 407.771†	406165.4	0.443	mg/L	0.0104	0.443	mg/L	0.0104	2.36%
Li 670.784†	292.7	0.00121	mg/L	0.001485	0.00121	mg/L	0.001485	122.68%
P 214.914†	15.0	0.0356	mg/L	0.01165	0.0356	mg/L	0.01165	32.72%

Sequence No.: 131 **Autosampler Location: 201**
Sample ID: L1311026402 **Date Collected: 11/8/2013 9:39:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026402

Approved: November 11, 2013

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: L1311026402

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2494839.7						14186.14	0.57%
YRADIAL	171090.1						2110.63	1.23%
Ga 417.206	954232.0						10986.12	1.15%
GaRADIAL	48128.2						1496.36	3.11%
Ag 328.068†	224.0	0.00186	mg/L	0.000210	0.00186	mg/L	0.000210	11.28%
Al 396.153†	6.5	-0.0311	mg/L	0.00099	-0.0311	mg/L	0.00099	3.18%
As 188.979†	-5.9	-0.00294	mg/L	0.001418	-0.00294	mg/L	0.001418	48.15%
Ba 233.527†	2783.4	0.0407	mg/L	0.00029	0.0407	mg/L	0.00029	0.71%
Be 234.861†	185.9	0.00041	mg/L	0.000047	0.00041	mg/L	0.000047	11.23%
B 249.677†	261.9	0.0108	mg/L	0.00018	0.0108	mg/L	0.00018	1.62%
Ca 227.546†	4210.6	26.0	mg/L	0.22	26.0	mg/L	0.22	0.83%
Cd 228.802†	-6.7	-0.00030	mg/L	0.000132	-0.00030	mg/L	0.000132	44.22%
Co 228.616†	-9.7	-0.00066	mg/L	0.000260	-0.00066	mg/L	0.000260	39.14%
Cr 267.716†	33.0	0.00051	mg/L	0.000126	0.00051	mg/L	0.000126	24.60%
Cu 327.393†	211.5	0.00235	mg/L	0.000241	0.00235	mg/L	0.000241	10.25%
Fe 239.562†	139.0	0.0452	mg/L	0.00234	0.0452	mg/L	0.00234	5.18%
Mg 279.077†	11730.6	12.0	mg/L	0.12	12.0	mg/L	0.12	0.96%
Mn 257.610†	11969.8	0.0223	mg/L	0.00062	0.0223	mg/L	0.00062	2.77%
Mo 202.031†	7.9	0.00111	mg/L	0.000192	0.00111	mg/L	0.000192	17.40%
Ni 231.604†	8.0	0.00045	mg/L	0.000133	0.00045	mg/L	0.000133	29.37%
Pb 220.353†	24.9	0.00334	mg/L	0.001400	0.00334	mg/L	0.001400	41.88%
Sb 206.836†	-1.7	-0.00081	mg/L	0.000262	-0.00081	mg/L	0.000262	32.41%
Se 196.026†	-3.3	-0.00944	mg/L	0.001700	-0.00944	mg/L	0.001700	18.00%
Si 251.611†	57064.6	2.05	mg/L	0.062	2.05	mg/L	0.062	3.05%
Sn 189.927†	-155.4	-0.0311	mg/L	0.00129	-0.0311	mg/L	0.00129	4.14%
Ti 334.940†	-3100.9	-0.00126	mg/L	0.000108	-0.00126	mg/L	0.000108	8.54%
Tl 190.801†	-12.0	-0.0111	mg/L	0.00339	-0.0111	mg/L	0.00339	30.63%
V 290.880†	455.9	0.00359	mg/L	0.000365	0.00359	mg/L	0.000365	10.17%
Zn 206.200†	3.5	-0.00007	mg/L	0.000399	-0.00007	mg/L	0.000399	595.38%
K 766.490†	3119.7	2.40	mg/L	0.070	2.40	mg/L	0.070	2.90%
Na 589.592†	91395.5	9.58	mg/L	0.337	9.58	mg/L	0.337	3.52%
Sr 407.771†	269014.3	0.294	mg/L	0.0044	0.294	mg/L	0.0044	1.49%
Li 670.784†	50.8	-0.00288	mg/L	0.001290	-0.00288	mg/L	0.001290	44.77%
P 214.914†	66.8	0.0985	mg/L	0.00821	0.0985	mg/L	0.00821	8.33%

Sequence No.: 132 **Autosampler Location: 202**
Sample ID: L1311026404 **Date Collected: 11/8/2013 9:42:27 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026404

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1311026404

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2461531.8						23511.50	0.96%
YRADIAL	169991.7						5861.85	3.45%
Ga 417.206	956334.1						10915.61	1.14%
GaRADIAL	48391.0						400.41	0.83%
Ag 328.068†	112.5	0.00130	mg/L	0.000492	0.00130	mg/L	0.000492	37.78%
Al 396.153†	38.8	-0.0189	mg/L	0.00248	-0.0189	mg/L	0.00248	13.14%
As 188.979†	-5.1	-0.00224	mg/L	0.001733	-0.00224	mg/L	0.001733	77.39%
Ba 233.527†	3118.7	0.0455	mg/L	0.00077	0.0455	mg/L	0.00077	1.70%
Be 234.861†	195.1	0.00044	mg/L	0.000018	0.00044	mg/L	0.000018	4.16%
B 249.677†	214.8	0.00991	mg/L	0.000194	0.00991	mg/L	0.000194	1.96%
Ca 227.546†	4814.4	29.7	mg/L	0.51	29.7	mg/L	0.51	1.72%
Cd 228.802†	-6.2	-0.00028	mg/L	0.000110	-0.00028	mg/L	0.000110	39.14%
Co 228.616†	-1.3	-0.00021	mg/L	0.000294	-0.00021	mg/L	0.000294	141.86%
Cr 267.716†	38.3	0.00058	mg/L	0.000054	0.00058	mg/L	0.000054	9.37%

Approved: November 11, 2013

Cu 327.393†	189.6	0.00222	mg/L	0.000399	0.00222	mg/L	0.000399	18.02%
Fe 239.562†	18.8	-0.00070	mg/L	0.001329	-0.00070	mg/L	0.001329	189.86%
Mg 279.077†	16751.7	17.1	mg/L	0.49	17.1	mg/L	0.49	2.89%
Mn 257.610†	1857.7	0.00194	mg/L	0.000044	0.00194	mg/L	0.000044	2.26%
Mo 202.031†	10.6	0.00129	mg/L	0.000550	0.00129	mg/L	0.000550	42.76%
Ni 231.604†	-2.4	0.00012	mg/L	0.000269	0.00012	mg/L	0.000269	223.15%
Pb 220.353†	18.9	0.00223	mg/L	0.000275	0.00223	mg/L	0.000275	12.35%
Sb 206.836†	-2.2	-0.00111	mg/L	0.001340	-0.00111	mg/L	0.001340	120.81%
Se 196.026†	-1.7	-0.00701	mg/L	0.004489	-0.00701	mg/L	0.004489	64.08%
Si 251.611†	51498.1	1.85	mg/L	0.028	1.85	mg/L	0.028	1.52%
Sn 189.927†	-169.3	-0.0337	mg/L	0.00027	-0.0337	mg/L	0.00027	0.81%
Ti 334.940†	-3818.7	-0.00172	mg/L	0.000286	-0.00172	mg/L	0.000286	16.66%
Tl 190.801†	-13.0	-0.0117	mg/L	0.00784	-0.0117	mg/L	0.00784	66.89%
V 290.880†	868.9	0.00603	mg/L	0.001406	0.00603	mg/L	0.001406	23.33%
Zn 206.200†	-22.2	-0.00115	mg/L	0.000333	-0.00115	mg/L	0.000333	29.06%
K 766.490†	2929.7	2.26	mg/L	0.070	2.26	mg/L	0.070	3.10%
Na 589.592†	48061.5	5.03	mg/L	0.143	5.03	mg/L	0.143	2.84%
Sr 407.771†	391424.0	0.427	mg/L	0.0274	0.427	mg/L	0.0274	6.42%
Li 670.784†	253.3	0.00054	mg/L	0.001271	0.00054	mg/L	0.001271	234.03%
P 214.914†	10.7	0.0305	mg/L	0.00908	0.0305	mg/L	0.00908	29.79%

Sequence No.: 133 **Autosampler Location: 203**
Sample ID: L1311026407 **Date Collected: 11/8/2013 9:45:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026407

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026407

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2426840.5						43665.45	1.80%
YRADIAL	170577.5						2701.68	1.58%
Ga 417.206	935113.2						22729.05	2.43%
GaRADIAL	48684.9						812.89	1.67%
Ag 328.068†	253.8	0.00196	mg/L	0.000261	0.00196	mg/L	0.000261	13.32%
Al 396.153†	-7.3	-0.0364	mg/L	0.00215	-0.0364	mg/L	0.00215	5.90%
As 188.979†	-5.1	-0.00226	mg/L	0.004355	-0.00226	mg/L	0.004355	192.65%
Ba 233.527†	3246.2	0.0474	mg/L	0.00096	0.0474	mg/L	0.00096	2.03%
Be 234.861†	158.0	0.00037	mg/L	0.000030	0.00037	mg/L	0.000030	7.94%
B 249.677†	176.7	0.00914	mg/L	0.000470	0.00914	mg/L	0.000470	5.14%
Ca 227.546†	4947.5	30.6	mg/L	0.66	30.6	mg/L	0.66	2.17%
Cd 228.802†	-8.2	-0.00037	mg/L	0.000051	-0.00037	mg/L	0.000051	13.87%
Co 228.616†	-9.5	-0.00065	mg/L	0.000164	-0.00065	mg/L	0.000164	25.17%
Cr 267.716†	55.6	0.00077	mg/L	0.000273	0.00077	mg/L	0.000273	35.37%
Cu 327.393†	155.8	0.00201	mg/L	0.000727	0.00201	mg/L	0.000727	36.19%
Fe 239.562†	46.0	0.00965	mg/L	0.000804	0.00965	mg/L	0.000804	8.33%
Mg 279.077†	17299.3	17.7	mg/L	0.26	17.7	mg/L	0.26	1.46%
Mn 257.610†	2280.6	0.00279	mg/L	0.000080	0.00279	mg/L	0.000080	2.86%
Mo 202.031†	21.4	0.00202	mg/L	0.000697	0.00202	mg/L	0.000697	34.42%
Ni 231.604†	-8.6	-0.00008	mg/L	0.000215	-0.00008	mg/L	0.000215	273.06%
Pb 220.353†	13.5	0.00120	mg/L	0.002732	0.00120	mg/L	0.002732	228.54%
Sb 206.836†	-1.9	-0.00093	mg/L	0.000765	-0.00093	mg/L	0.000765	82.40%
Se 196.026†	0.6	-0.00377	mg/L	0.004386	-0.00377	mg/L	0.004386	116.43%
Si 251.611†	55406.9	1.99	mg/L	0.033	1.99	mg/L	0.033	1.64%
Sn 189.927†	-175.7	-0.0350	mg/L	0.00163	-0.0350	mg/L	0.00163	4.67%
Ti 334.940†	-3755.4	-0.00150	mg/L	0.000244	-0.00150	mg/L	0.000244	16.21%
Tl 190.801†	-7.2	-0.00788	mg/L	0.001102	-0.00788	mg/L	0.001102	14.00%
V 290.880†	794.2	0.00555	mg/L	0.001755	0.00555	mg/L	0.001755	31.64%
Zn 206.200†	-4.3	-0.00039	mg/L	0.000071	-0.00039	mg/L	0.000071	17.92%
K 766.490†	2917.9	2.25	mg/L	0.035	2.25	mg/L	0.035	1.55%
Na 589.592†	44853.8	4.69	mg/L	0.058	4.69	mg/L	0.058	1.23%
Sr 407.771†	390671.6	0.426	mg/L	0.0091	0.426	mg/L	0.0091	2.13%
Li 670.784†	343.1	0.00206	mg/L	0.000818	0.00206	mg/L	0.000818	39.68%
P 214.914†	7.4	0.0265	mg/L	0.01426	0.0265	mg/L	0.01426	53.92%

Approved: November 11, 2013

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Sequence No.: 134 **Autosampler Location: 204**
Sample ID: L1311026602 **Date Collected: 11/8/2013 9:48:37 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026602

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026602

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2342410.4						24083.30	1.03%
YRADIAL	165605.1						8074.14	4.88%
Ga 417.206	951840.7						10520.94	1.11%
GaRADIAL	48258.0						996.99	2.07%
Ag 328.068†	920.1	0.00498	mg/L	0.000288	0.00498	mg/L	0.000288	5.79%
Al 396.153†	-26.5	-0.0437	mg/L	0.00597	-0.0437	mg/L	0.00597	13.66%
As 188.979†	-12.0	-0.00416	mg/L	0.001602	-0.00416	mg/L	0.001602	38.52%
Ba 233.527†	1119.4	0.0168	mg/L	0.00030	0.0168	mg/L	0.00030	1.79%
Be 234.861†	237.1	0.00055	mg/L	0.000032	0.00055	mg/L	0.000032	5.85%
B 249.677†	314.5	0.0119	mg/L	0.00020	0.0119	mg/L	0.00020	1.65%
Ca 227.546†	28022.8	173	mg/L	3.4	173	mg/L	3.4	1.97%
Cd 228.802†	-7.1	-0.00029	mg/L	0.000135	-0.00029	mg/L	0.000135	46.08%
Co 228.616†	9.9	0.00046	mg/L	0.000115	0.00046	mg/L	0.000115	25.15%
Cr 267.716†	173.4	0.00212	mg/L	0.000142	0.00212	mg/L	0.000142	6.73%
Cu 327.393†	35.6	0.00124	mg/L	0.000210	0.00124	mg/L	0.000210	16.95%
Fe 239.562†	74.4	0.0186	mg/L	0.00252	0.0186	mg/L	0.00252	13.50%
Mg 279.077†	106476.9	109	mg/L	1.5	109	mg/L	1.5	1.41%
Mn 257.610†	190333.1	0.382	mg/L	0.0077	0.382	mg/L	0.0077	2.02%
Mo 202.031†	29.2	0.00264	mg/L	0.000787	0.00264	mg/L	0.000787	29.79%
Ni 231.604†	48.9	0.00177	mg/L	0.000430	0.00177	mg/L	0.000430	24.34%
Pb 220.353†	29.6	0.00401	mg/L	0.004085	0.00401	mg/L	0.004085	101.80%
Sb 206.836†	-2.7	-0.00144	mg/L	0.000856	-0.00144	mg/L	0.000856	59.50%
Se 196.026†	-3.2	-0.00935	mg/L	0.003303	-0.00935	mg/L	0.003303	35.34%
Si 251.611†	42738.5	1.54	mg/L	0.030	1.54	mg/L	0.030	1.95%
Sn 189.927†	-293.0	-0.0577	mg/L	0.00144	-0.0577	mg/L	0.00144	2.50%
Ti 334.940†	-20275.9	-0.00352	mg/L	0.000404	-0.00352	mg/L	0.000404	11.49%
Tl 190.801†	-15.3	-0.0139	mg/L	0.00147	-0.0139	mg/L	0.00147	10.57%
V 290.880†	1871.4	0.00986	mg/L	0.000501	0.00986	mg/L	0.000501	5.09%
Zn 206.200†	-37.4	-0.00178	mg/L	0.000324	-0.00178	mg/L	0.000324	18.25%
K 766.490†	14694.8	11.3	mg/L	0.17	11.3	mg/L	0.17	1.47%
Na 589.592†	1130667.3	121	mg/L	3.4	121	mg/L	3.4	2.82%
Sr 407.771†	574203.9	0.621	mg/L	0.0457	0.621	mg/L	0.0457	7.35%
Li 670.784†	2544.1	0.0393	mg/L	0.00037	0.0393	mg/L	0.00037	0.95%
P 214.914†	19.6	0.0412	mg/L	0.01166	0.0412	mg/L	0.01166	28.31%

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Sequence No.: 135 **Autosampler Location: 205**
Sample ID: L1311026604 **Date Collected: 11/8/2013 9:51:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1311026604

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: L1311026604

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2349406.8						47347.56	2.02%
YRADIAL	163129.8						1179.71	0.72%
Ga 417.206	944266.3						27674.72	2.93%
GaRADIAL	48191.4						838.76	1.74%
Ag 328.068†	732.2	0.00405	mg/L	0.000354	0.00405	mg/L	0.000354	8.73%

Approved: November 11, 2013

Al 396.153†	168.3	0.0300	mg/L	0.00921	0.0300	mg/L	0.00921	30.67%
As 188.979†	-9.5	-0.00344	mg/L	0.002942	-0.00344	mg/L	0.002942	85.49%
Ba 233.527†	919.9	0.0140	mg/L	0.00039	0.0140	mg/L	0.00039	2.83%
Be 234.861†	225.5	0.00060	mg/L	0.000080	0.00060	mg/L	0.000080	13.34%
B 249.677†	223.5	0.0100	mg/L	0.00083	0.0100	mg/L	0.00083	8.25%
Ca 227.546†	19954.3	123	mg/L	3.8	123	mg/L	3.8	3.08%
Cd 228.802†	-6.1	-0.00022	mg/L	0.000035	-0.00022	mg/L	0.000035	16.18%
Co 228.616†	222.9	0.0119	mg/L	0.00023	0.0119	mg/L	0.00023	1.94%
Cr 267.716†	154.0	0.00190	mg/L	0.000215	0.00190	mg/L	0.000215	11.32%
Cu 327.393†	19.2	0.00114	mg/L	0.000484	0.00114	mg/L	0.000484	42.42%
Fe 239.562†	17.4	-0.00259	mg/L	0.000185	-0.00259	mg/L	0.000185	7.14%
Mg 279.077†	80289.6	82.1	mg/L	0.37	82.1	mg/L	0.37	0.45%
Mn 257.610†	529386.6	1.07	mg/L	0.008	1.07	mg/L	0.008	0.76%
Mo 202.031†	33.1	0.00305	mg/L	0.000289	0.00305	mg/L	0.000289	9.50%
Ni 231.604†	1037.5	0.0335	mg/L	0.00064	0.0335	mg/L	0.00064	1.90%
Pb 220.353†	32.9	0.00424	mg/L	0.001855	0.00424	mg/L	0.001855	43.77%
Sb 206.836†	-4.7	-0.00265	mg/L	0.003118	-0.00265	mg/L	0.003118	117.62%
Se 196.026†	3.5	0.00014	mg/L	0.006600	0.00014	mg/L	0.006600	>999.9%
Si 251.611†	50380.6	1.81	mg/L	0.050	1.81	mg/L	0.050	2.75%
Sn 189.927†	-278.1	-0.0548	mg/L	0.00303	-0.0548	mg/L	0.00303	5.53%
Ti 334.940†	-14523.6	-0.00285	mg/L	0.000316	-0.00285	mg/L	0.000316	11.11%
Tl 190.801†	-18.5	-0.0166	mg/L	0.00061	-0.0166	mg/L	0.00061	3.68%
V 290.880†	1730.0	0.00968	mg/L	0.000811	0.00968	mg/L	0.000811	8.38%
Zn 206.200†	363.0	0.0151	mg/L	0.00069	0.0151	mg/L	0.00069	4.56%
K 766.490†	16021.2	12.3	mg/L	0.17	12.3	mg/L	0.17	1.35%
Na 589.592†	1457995.2	156	mg/L	2.4	156	mg/L	2.4	1.55%
Sr 407.771†	397130.3	0.430	mg/L	0.0105	0.430	mg/L	0.0105	2.44%
Li 670.784†	1198.4	0.0165	mg/L	0.00022	0.0165	mg/L	0.00022	1.36%
P 214.914†	21.6	0.0437	mg/L	0.00363	0.0437	mg/L	0.00363	8.31%

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Sequence No.: 136 **Autosampler Location: 238**
Sample ID: CCV **Date Collected: 11/8/2013 9:54:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2430160.2						14710.00	0.61%
YRADIAL	174621.3						943.87	0.54%
Ga 417.206	914023.7						20378.33	2.23%
GaRADIAL	48384.7						336.41	0.70%
Ag 328.068†	76745.3	0.360	mg/L	0.0058	0.360	mg/L	0.0058	1.60%
Al 396.153†	25229.9	9.46	mg/L	0.135	9.46	mg/L	0.135	1.43%
As 188.979†	501.8	0.361	mg/L	0.0103	0.361	mg/L	0.0103	2.86%
Ba 233.527†	64894.1	0.933	mg/L	0.0045	0.933	mg/L	0.0045	0.48%
Be 234.861†	25497.9	0.0451	mg/L	0.00052	0.0451	mg/L	0.00052	1.16%
B 249.677†	21771.7	0.439	mg/L	0.0032	0.439	mg/L	0.0032	0.72%
Ca 227.546†	1471.1	9.54	mg/L	0.183	9.54	mg/L	0.183	1.92%
Cd 228.802†	1005.4	0.0432	mg/L	0.00125	0.0432	mg/L	0.00125	2.89%
Co 228.616†	3519.4	0.189	mg/L	0.0005	0.189	mg/L	0.0005	0.28%
Cr 267.716†	40559.6	0.462	mg/L	0.0052	0.462	mg/L	0.0052	1.11%
Cu 327.393†	73209.6	0.454	mg/L	0.0074	0.454	mg/L	0.0074	1.64%
Fe 239.562†	9818.5	3.73	mg/L	0.053	3.73	mg/L	0.053	1.42%
Mg 279.077†	9214.4	9.42	mg/L	0.125	9.42	mg/L	0.125	1.32%
Mn 257.610†	238317.7	0.480	mg/L	0.0031	0.480	mg/L	0.0031	0.65%
Mo 202.031†	13586.4	0.929	mg/L	0.0012	0.929	mg/L	0.0012	0.13%
Ni 231.604†	14593.0	0.469	mg/L	0.0032	0.469	mg/L	0.0032	0.69%
Pb 220.353†	2524.0	0.478	mg/L	0.0039	0.478	mg/L	0.0039	0.82%
Sb 206.836†	1775.8	1.08	mg/L	0.025	1.08	mg/L	0.025	2.33%
Se 196.026†	247.0	0.357	mg/L	0.0070	0.357	mg/L	0.0070	1.95%
Si 251.611†	126928.7	4.53	mg/L	0.067	4.53	mg/L	0.067	1.47%
Sn 189.927†	4852.7	0.940	mg/L	0.0025	0.940	mg/L	0.0025	0.26%
Ti 334.940†	664544.3	0.940	mg/L	0.0089	0.940	mg/L	0.0089	0.95%

Approved: November 11, 2013

Tl 190.801†	718.4	0.489 mg/L	0.0059	0.489 mg/L	0.0059	1.22%
V 290.880†	150219.9	0.932 mg/L	0.0093	0.932 mg/L	0.0093	0.99%
Zn 206.200†	22064.0	0.935 mg/L	0.0078	0.935 mg/L	0.0078	0.83%
K 766.490†	59982.6	47.1 mg/L	0.81	47.1 mg/L	0.81	1.71%
Na 589.592†	440896.2	46.5 mg/L	0.67	46.5 mg/L	0.67	1.44%
Sr 407.771†	862761.8	0.941 mg/L	0.0158	0.941 mg/L	0.0158	1.68%
Li 670.784†	57398.7	0.967 mg/L	0.0152	0.967 mg/L	0.0152	1.57%
P 214.914†	7700.9	9.35 mg/L	0.021	9.35 mg/L	0.021	0.23%

Sequence No.: 137 **Autosampler Location: 239**
Sample ID: CCB **Date Collected: 11/8/2013 9:56:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2420160.5						15806.30	0.65%
YRADIAL	165373.8						2233.56	1.35%
Ga 417.206	886720.4						9284.92	1.05%
GaRADIAL	46185.2						881.41	1.91%
Ag 328.068†	65.0	0.00116	mg/L	0.000043	0.00116	mg/L	0.000043	3.74%
Al 396.153†	-6.9	-0.0362	mg/L	0.00254	-0.0362	mg/L	0.00254	7.02%
As 188.979†	1.1	0.00159	mg/L	0.005035	0.00159	mg/L	0.005035	317.19%
Ba 233.527†	-8.7	0.00062	mg/L	0.000210	0.00062	mg/L	0.000210	34.05%
Be 234.861†	139.8	0.00034	mg/L	0.000017	0.00034	mg/L	0.000017	5.08%
B 249.677†	-2.3	0.00555	mg/L	0.000889	0.00555	mg/L	0.000889	16.01%
Ca 227.546†	31.3	0.227	mg/L	0.0220	0.227	mg/L	0.0220	9.71%
Cd 228.802†	-9.3	-0.00044	mg/L	0.000269	-0.00044	mg/L	0.000269	60.83%
Co 228.616†	-8.7	-0.00061	mg/L	0.000164	-0.00061	mg/L	0.000164	26.93%
Cr 267.716†	2.3	0.00016	mg/L	0.000050	0.00016	mg/L	0.000050	30.56%
Cu 327.393†	147.3	0.00196	mg/L	0.000408	0.00196	mg/L	0.000408	20.84%
Fe 239.562†	4.4	-0.00587	mg/L	0.001199	-0.00587	mg/L	0.001199	20.44%
Mg 279.077†	32.1	0.0162	mg/L	0.01325	0.0162	mg/L	0.01325	81.96%
Mn 257.610†	225.8	-0.00136	mg/L	0.000327	-0.00136	mg/L	0.000327	24.06%
Mo 202.031†	4.2	0.00085	mg/L	0.000102	0.00085	mg/L	0.000102	12.00%
Ni 231.604†	-6.0	0.00000	mg/L	0.000235	0.00000	mg/L	0.000235	>999.9%
Pb 220.353†	8.0	0.00015	mg/L	0.000230	0.00015	mg/L	0.000230	149.70%
Sb 206.836†	-0.6	-0.00017	mg/L	0.003162	-0.00017	mg/L	0.003162	>999.9%
Se 196.026†	1.5	-0.00239	mg/L	0.007247	-0.00239	mg/L	0.007247	303.82%
Si 251.611†	-11.7	0.0136	mg/L	0.00222	0.0136	mg/L	0.00222	16.26%
Sn 189.927†	-13.9	-0.00363	mg/L	0.000945	-0.00363	mg/L	0.000945	26.06%
Ti 334.940†	-30.9	-0.00078	mg/L	0.000361	-0.00078	mg/L	0.000361	46.07%
Tl 190.801†	1.5	-0.00201	mg/L	0.004249	-0.00201	mg/L	0.004249	211.14%
V 290.880†	402.5	0.00358	mg/L	0.000495	0.00358	mg/L	0.000495	13.83%
Zn 206.200†	-15.2	-0.00086	mg/L	0.000032	-0.00086	mg/L	0.000032	3.67%
K 766.490†	65.0	0.0476	mg/L	0.05350	0.0476	mg/L	0.05350	112.35%
Na 589.592†	326.9	0.0259	mg/L	0.02345	0.0259	mg/L	0.02345	90.66%
Sr 407.771†	103.1	0.00148	mg/L	0.000162	0.00148	mg/L	0.000162	10.96%
Li 670.784†	33.5	-0.00317	mg/L	0.000927	-0.00317	mg/L	0.000927	29.22%
P 214.914†	13.1	0.0334	mg/L	0.01667	0.0334	mg/L	0.01667	49.93%

Sequence No.: 138 **Autosampler Location: 206**
Sample ID: L1309002921 **Date Collected: 11/8/2013 9:59:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1309002921

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Approved: November 11, 2013

Mean Data: L1309002921

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2467848.3						47495.25	1.92%
YRADIAL	168533.7						7007.06	4.16%
Ga 417.206	927012.1						23939.87	2.58%
GaRADIAL	48142.3						1227.42	2.55%
Ag 328.068†	0.8	0.00086	mg/L	0.000345	0.00086	mg/L	0.000345	40.03%
Al 396.153†	3.5	-0.0321	mg/L	0.00127	-0.0321	mg/L	0.00127	3.95%
As 188.979†	0.1	0.00084	mg/L	0.002057	0.00084	mg/L	0.002057	244.40%
Ba 233.527†	-3.8	0.00069	mg/L	0.000022	0.00069	mg/L	0.000022	3.21%
Be 234.861†	209.5	0.00047	mg/L	0.000061	0.00047	mg/L	0.000061	13.17%
B 249.677†	-98.8	0.00361	mg/L	0.000222	0.00361	mg/L	0.000222	6.16%
Ca 227.546†	27.6	0.204	mg/L	0.0461	0.204	mg/L	0.0461	22.64%
Cd 228.802†	-8.7	-0.00041	mg/L	0.000046	-0.00041	mg/L	0.000046	11.24%
Co 228.616†	-11.6	-0.00076	mg/L	0.000371	-0.00076	mg/L	0.000371	48.72%
Cr 267.716†	-5.6	0.00008	mg/L	0.000138	0.00008	mg/L	0.000138	180.63%
Cu 327.393†	228.3	0.00246	mg/L	0.000392	0.00246	mg/L	0.000392	15.93%
Fe 239.562†	7.8	-0.00456	mg/L	0.002126	-0.00456	mg/L	0.002126	46.62%
Mg 279.077†	18.0	0.00177	mg/L	0.006772	0.00177	mg/L	0.006772	382.38%
Mn 257.610†	540.9	-0.00072	mg/L	0.000027	-0.00072	mg/L	0.000027	3.70%
Mo 202.031†	-7.3	0.00006	mg/L	0.000552	0.00006	mg/L	0.000552	941.23%
Ni 231.604†	-16.4	-0.00033	mg/L	0.000233	-0.00033	mg/L	0.000233	70.05%
Pb 220.353†	13.3	0.00116	mg/L	0.000999	0.00116	mg/L	0.000999	86.44%
Sb 206.836†	-2.1	-0.00104	mg/L	0.000579	-0.00104	mg/L	0.000579	55.57%
Se 196.026†	-0.3	-0.00506	mg/L	0.001062	-0.00506	mg/L	0.001062	21.00%
Si 251.611†	927985.3	33.1	mg/L	0.18	33.1	mg/L	0.18	0.56%
Sn 189.927†	-22.4	-0.00528	mg/L	0.001388	-0.00528	mg/L	0.001388	26.28%
Ti 334.940†	-160.2	-0.00097	mg/L	0.000101	-0.00097	mg/L	0.000101	10.37%
Tl 190.801†	0.9	-0.00243	mg/L	0.002869	-0.00243	mg/L	0.002869	118.14%
V 290.880†	331.7	0.00314	mg/L	0.001576	0.00314	mg/L	0.001576	50.20%
Zn 206.200†	820.5	0.0344	mg/L	0.00086	0.0344	mg/L	0.00086	2.51%
K 766.490†	-12.1	-0.0121	mg/L	0.02331	-0.0121	mg/L	0.02331	193.16%
Na 589.592†	290.2	0.0220	mg/L	0.01756	0.0220	mg/L	0.01756	79.74%
Sr 407.771†	41.7	0.00141	mg/L	0.000086	0.00141	mg/L	0.000086	6.09%
Li 670.784†	-42.0	-0.00445	mg/L	0.000500	-0.00445	mg/L	0.000500	11.23%
P 214.914†	17.0	0.0381	mg/L	0.00348	0.0381	mg/L	0.00348	9.12%

Sequence No.: 139 **Autosampler Location: 207**
Sample ID: L1309002930 **Date Collected: 11/8/2013 10:03:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1309002930

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: L1309002930

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2508098.8						24311.58	0.97%
YRADIAL	175019.8						3221.27	1.84%
Ga 417.206	933492.3						6761.71	0.72%
GaRADIAL	49933.3						963.50	1.93%
Ag 328.068†	70.0	0.00118	mg/L	0.000460	0.00118	mg/L	0.000460	39.03%
Al 396.153†	8.6	-0.0302	mg/L	0.00017	-0.0302	mg/L	0.00017	0.58%
As 188.979†	-0.5	0.00044	mg/L	0.004154	0.00044	mg/L	0.004154	937.48%
Ba 233.527†	-8.5	0.00062	mg/L	0.000070	0.00062	mg/L	0.000070	11.31%
Be 234.861†	204.5	0.00046	mg/L	0.000043	0.00046	mg/L	0.000043	9.41%
B 249.677†	-173.4	0.00210	mg/L	0.000289	0.00210	mg/L	0.000289	13.76%
Ca 227.546†	25.0	0.188	mg/L	0.0503	0.188	mg/L	0.0503	26.77%
Cd 228.802†	-3.0	-0.00016	mg/L	0.000142	-0.00016	mg/L	0.000142	91.43%
Co 228.616†	-2.2	-0.00026	mg/L	0.000094	-0.00026	mg/L	0.000094	36.66%
Cr 267.716†	159.5	0.00196	mg/L	0.000074	0.00196	mg/L	0.000074	3.81%
Cu 327.393†	89.8	0.00161	mg/L	0.000351	0.00161	mg/L	0.000351	21.85%
Fe 239.562†	12.9	-0.00264	mg/L	0.001987	-0.00264	mg/L	0.001987	75.41%
Mg 279.077†	18.4	0.00221	mg/L	0.009859	0.00221	mg/L	0.009859	447.09%

Approved: November 11, 2013

Mn 257.610†	232.1	-0.00134	mg/L	0.000026	-0.00134	mg/L	0.000026	1.97%
Mo 202.031†	-13.4	-0.00036	mg/L	0.000439	-0.00036	mg/L	0.000439	123.27%
Ni 231.604†	3.7	0.00031	mg/L	0.000009	0.00031	mg/L	0.000009	2.99%
Pb 220.353†	15.9	0.00166	mg/L	0.000815	0.00166	mg/L	0.000815	49.16%
Sb 206.836†	-2.1	-0.00110	mg/L	0.000165	-0.00110	mg/L	0.000165	15.07%
Se 196.026†	-3.8	-0.0101	mg/L	0.01254	-0.0101	mg/L	0.01254	123.71%
Si 251.611†	854.5	0.0445	mg/L	0.00418	0.0445	mg/L	0.00418	9.39%
Sn 189.927†	-23.6	-0.00552	mg/L	0.000357	-0.00552	mg/L	0.000357	6.47%
Ti 334.940†	-217.7	-0.00106	mg/L	0.000035	-0.00106	mg/L	0.000035	3.28%
Tl 190.801†	3.2	-0.00091	mg/L	0.005419	-0.00091	mg/L	0.005419	592.87%
V 290.880†	35.5	0.00130	mg/L	0.000964	0.00130	mg/L	0.000964	74.03%
Zn 206.200†	854.5	0.0359	mg/L	0.00047	0.0359	mg/L	0.00047	1.32%
K 766.490†	38.4	0.0271	mg/L	0.00530	0.0271	mg/L	0.00530	19.57%
Na 589.592†	57.9	-0.00232	mg/L	0.012305	-0.00232	mg/L	0.012305	529.92%
Sr 407.771†	-46.4	0.00132	mg/L	0.000065	0.00132	mg/L	0.000065	4.89%
Li 670.784†	-8.5	-0.00388	mg/L	0.000766	-0.00388	mg/L	0.000766	19.73%
P 214.914†	64935.7	78.7	mg/L	1.39	78.7	mg/L	1.39	1.77%

Sequence No.: 140 **Autosampler Location: 208**
Sample ID: BLK **Date Collected: 11/8/2013 10:06:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2456980.7						16952.98	0.69%
YRADIAL	167731.2						1962.22	1.17%
Ga 417.206	902615.2						10161.66	1.13%
GaRADIAL	47592.7						473.21	0.99%
Ag 328.068†	116.4	0.00140	mg/L	0.000217	0.00140	mg/L	0.000217	15.51%
Al 396.153†	-3.0	-0.0346	mg/L	0.00146	-0.0346	mg/L	0.00146	4.20%
As 188.979†	0.8	0.00141	mg/L	0.000823	0.00141	mg/L	0.000823	58.52%
Ba 233.527†	-14.5	0.00053	mg/L	0.000049	0.00053	mg/L	0.000049	9.22%
Be 234.861†	146.8	0.00035	mg/L	0.000027	0.00035	mg/L	0.000027	7.61%
B 249.677†	-208.6	0.00141	mg/L	0.000188	0.00141	mg/L	0.000188	13.37%
Ca 227.546†	22.6	0.173	mg/L	0.0277	0.173	mg/L	0.0277	16.04%
Cd 228.802†	-9.7	-0.00046	mg/L	0.000136	-0.00046	mg/L	0.000136	29.64%
Co 228.616†	-9.3	-0.00064	mg/L	0.000103	-0.00064	mg/L	0.000103	16.19%
Cr 267.716†	-3.0	0.00010	mg/L	0.000137	0.00010	mg/L	0.000137	131.36%
Cu 327.393†	122.9	0.00181	mg/L	0.000573	0.00181	mg/L	0.000573	31.70%
Fe 239.562†	5.3	-0.00551	mg/L	0.001094	-0.00551	mg/L	0.001094	19.86%
Mg 279.077†	16.4	0.00015	mg/L	0.002422	0.00015	mg/L	0.002422	>999.9%
Mn 257.610†	43.9	-0.00172	mg/L	0.000035	-0.00172	mg/L	0.000035	2.01%
Mo 202.031†	-11.2	-0.00020	mg/L	0.000215	-0.00020	mg/L	0.000215	105.73%
Ni 231.604†	-11.0	-0.00016	mg/L	0.000144	-0.00016	mg/L	0.000144	91.54%
Pb 220.353†	7.1	-0.00002	mg/L	0.001329	-0.00002	mg/L	0.001329	>999.9%
Sb 206.836†	-1.0	-0.00040	mg/L	0.001449	-0.00040	mg/L	0.001449	363.52%
Se 196.026†	-0.2	-0.00493	mg/L	0.002813	-0.00493	mg/L	0.002813	57.08%
Si 251.611†	427.7	0.0293	mg/L	0.00197	0.0293	mg/L	0.00197	6.72%
Sn 189.927†	-25.0	-0.00578	mg/L	0.001427	-0.00578	mg/L	0.001427	24.68%
Ti 334.940†	-303.1	-0.00118	mg/L	0.000084	-0.00118	mg/L	0.000084	7.16%
Tl 190.801†	0.5	-0.00267	mg/L	0.003435	-0.00267	mg/L	0.003435	128.86%
V 290.880†	378.9	0.00343	mg/L	0.001206	0.00343	mg/L	0.001206	35.14%
Zn 206.200†	-34.5	-0.00167	mg/L	0.000228	-0.00167	mg/L	0.000228	13.62%
K 766.490†	-78.0	-0.0630	mg/L	0.07923	-0.0630	mg/L	0.07923	125.74%
Na 589.592†	53.8	-0.00275	mg/L	0.013679	-0.00275	mg/L	0.013679	497.30%
Sr 407.771†	-81.6	0.00128	mg/L	0.000059	0.00128	mg/L	0.000059	4.64%
Li 670.784†	-51.5	-0.00461	mg/L	0.000840	-0.00461	mg/L	0.000840	18.22%
P 214.914†	126.8	0.171	mg/L	0.0243	0.171	mg/L	0.0243	14.21%

Sequence No.: 141 **Autosampler Location: 209**
Sample ID: BLK **Date Collected: 11/8/2013 10:09:04 PM**

Approved: November 11, 2013

Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	174.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2473639.9						10753.67	0.43%
YRADIAL	168401.7						2368.27	1.41%
Ga 417.206	904456.7						6656.65	0.74%
GaRADIAL	46910.1						174.62	0.37%
Ag 328.068†	90.6	0.00128	mg/L	0.000304	0.00128	mg/L	0.000304	23.82%
Al 396.153†	-2.4	-0.0344	mg/L	0.00151	-0.0344	mg/L	0.00151	4.39%
As 188.979†	1.8	0.00210	mg/L	0.002475	0.00210	mg/L	0.002475	117.78%
Ba 233.527†	-11.2	0.00058	mg/L	0.000108	0.00058	mg/L	0.000108	18.64%
Be 234.861†	137.7	0.00034	mg/L	0.000033	0.00034	mg/L	0.000033	9.86%
B 249.677†	-235.0	0.00088	mg/L	0.000352	0.00088	mg/L	0.000352	40.15%
Ca 227.546†	19.5	0.154	mg/L	0.0460	0.154	mg/L	0.0460	29.84%
Cd 228.802†	-9.1	-0.00043	mg/L	0.000113	-0.00043	mg/L	0.000113	26.18%
Co 228.616†	-7.2	-0.00052	mg/L	0.000542	-0.00052	mg/L	0.000542	103.45%
Cr 267.716†	-1.8	0.00012	mg/L	0.000070	0.00012	mg/L	0.000070	59.28%
Cu 327.393†	81.0	0.00155	mg/L	0.000616	0.00155	mg/L	0.000616	39.72%
Fe 239.562†	5.5	-0.00545	mg/L	0.000474	-0.00545	mg/L	0.000474	8.69%
Mg 279.077†	19.8	0.00356	mg/L	0.001928	0.00356	mg/L	0.001928	54.10%
Mn 257.610†	45.6	-0.00172	mg/L	0.000021	-0.00172	mg/L	0.000021	1.22%
Mo 202.031†	-13.1	-0.00033	mg/L	0.000309	-0.00033	mg/L	0.000309	92.25%
Ni 231.604†	-0.1	0.00019	mg/L	0.000198	0.00019	mg/L	0.000198	104.02%
Pb 220.353†	14.9	0.00146	mg/L	0.001781	0.00146	mg/L	0.001781	121.83%
Sb 206.836†	1.8	0.00131	mg/L	0.000287	0.00131	mg/L	0.000287	21.85%
Se 196.026†	-0.0	-0.00464	mg/L	0.002429	-0.00464	mg/L	0.002429	52.39%
Si 251.611†	329.5	0.0258	mg/L	0.00280	0.0258	mg/L	0.00280	10.84%
Sn 189.927†	-24.8	-0.00574	mg/L	0.001274	-0.00574	mg/L	0.001274	22.19%
Ti 334.940†	-288.4	-0.00116	mg/L	0.000016	-0.00116	mg/L	0.000016	1.34%
Tl 190.801†	0.8	-0.00248	mg/L	0.004625	-0.00248	mg/L	0.004625	186.39%
V 290.880†	266.2	0.00273	mg/L	0.001501	0.00273	mg/L	0.001501	54.91%
Zn 206.200†	-29.6	-0.00146	mg/L	0.000153	-0.00146	mg/L	0.000153	10.48%
K 766.490†	22.2	0.0145	mg/L	0.02058	0.0145	mg/L	0.02058	141.67%
Na 589.592†	-155.0	-0.0246	mg/L	0.00071	-0.0246	mg/L	0.00071	2.89%
Sr 407.771†	-69.8	0.00129	mg/L	0.000022	0.00129	mg/L	0.000022	1.66%
Li 670.784†	10.3	-0.00357	mg/L	0.000469	-0.00357	mg/L	0.000469	13.15%
P 214.914†	60.1	0.0903	mg/L	0.00619	0.0903	mg/L	0.00619	6.86%

Sequence No.: 142 **Autosampler Location: 240**
Sample ID: CCV **Date Collected: 11/8/2013 10:12:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2436667.5						43482.24	1.78%
YRADIAL	174775.3						3565.17	2.04%
Ga 417.206	912160.4						7455.71	0.82%
GaRADIAL	48238.9						1041.44	2.16%
Ag 328.068†	76399.3	0.359	mg/L	0.0112	0.359	mg/L	0.0112	3.11%
Al 396.153†	24327.0	9.11	mg/L	0.140	9.11	mg/L	0.140	1.54%
As 188.979†	495.9	0.357	mg/L	0.0076	0.357	mg/L	0.0076	2.13%
Ba 233.527†	64219.2	0.923	mg/L	0.0361	0.923	mg/L	0.0361	3.91%

Approved: November 11, 2013

Be 234.861†	25088.9	0.0444 mg/L	0.00140	0.0444 mg/L	0.00140	3.15%
B 249.677†	21806.2	0.440 mg/L	0.0182	0.440 mg/L	0.0182	4.14%
Ca 227.546†	1446.9	9.38 mg/L	0.162	9.38 mg/L	0.162	1.72%
Cd 228.802†	992.1	0.0426 mg/L	0.00037	0.0426 mg/L	0.00037	0.87%
Co 228.616†	3435.3	0.184 mg/L	0.0056	0.184 mg/L	0.0056	3.06%
Cr 267.716†	39957.9	0.455 mg/L	0.0149	0.455 mg/L	0.0149	3.27%
Cu 327.393†	72987.1	0.453 mg/L	0.0142	0.453 mg/L	0.0142	3.14%
Fe 239.562†	9453.5	3.59 mg/L	0.031	3.59 mg/L	0.031	0.85%
Mg 279.077†	8793.2	8.99 mg/L	0.137	8.99 mg/L	0.137	1.53%
Mn 257.610†	235241.3	0.473 mg/L	0.0196	0.473 mg/L	0.0196	4.14%
Mo 202.031†	13461.2	0.920 mg/L	0.0352	0.920 mg/L	0.0352	3.83%
Ni 231.604†	14422.4	0.463 mg/L	0.0160	0.463 mg/L	0.0160	3.45%
Pb 220.353†	2466.7	0.467 mg/L	0.0121	0.467 mg/L	0.0121	2.60%
Sb 206.836†	1752.5	1.07 mg/L	0.014	1.07 mg/L	0.014	1.31%
Se 196.026†	247.4	0.357 mg/L	0.0081	0.357 mg/L	0.0081	2.26%
Si 251.611†	126877.5	4.53 mg/L	0.143	4.53 mg/L	0.143	3.17%
Sn 189.927†	4723.3	0.915 mg/L	0.0287	0.915 mg/L	0.0287	3.13%
Ti 334.940†	646305.8	0.914 mg/L	0.0224	0.914 mg/L	0.0224	2.45%
Tl 190.801†	710.8	0.483 mg/L	0.0104	0.483 mg/L	0.0104	2.15%
V 290.880†	148350.2	0.920 mg/L	0.0433	0.920 mg/L	0.0433	4.71%
Zn 206.200†	21630.1	0.917 mg/L	0.0325	0.917 mg/L	0.0325	3.54%
K 766.490†	57332.3	45.0 mg/L	0.71	45.0 mg/L	0.71	1.58%
Na 589.592†	421917.9	44.5 mg/L	0.96	44.5 mg/L	0.96	2.16%
Sr 407.771†	823705.9	0.898 mg/L	0.0198	0.898 mg/L	0.0198	2.21%
Li 670.784†	55218.0	0.930 mg/L	0.0136	0.930 mg/L	0.0136	1.46%
P 214.914†	7589.4	9.21 mg/L	0.302	9.21 mg/L	0.302	3.28%

Sequence No.: 143 **Autosampler Location: 241**
Sample ID: CCB **Date Collected: 11/8/2013 10:14:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2492700.3						45899.99	1.84%
YRADIAL	169013.2						2302.71	1.36%
Ga 417.206	915981.0						20837.33	2.27%
GaRADIAL	46921.2						369.79	0.79%
Ag 328.068†	70.6	0.00118	mg/L	0.000339	0.00118	mg/L	0.000339	28.70%
Al 396.153†	-5.1	-0.0355	mg/L	0.00303	-0.0355	mg/L	0.00303	8.54%
As 188.979†	0.1	0.00083	mg/L	0.003323	0.00083	mg/L	0.003323	400.62%
Ba 233.527†	3.3	0.00079	mg/L	0.000061	0.00079	mg/L	0.000061	7.72%
Be 234.861†	166.6	0.00039	mg/L	0.000025	0.00039	mg/L	0.000025	6.44%
B 249.677†	-31.6	0.00496	mg/L	0.000883	0.00496	mg/L	0.000883	17.79%
Ca 227.546†	14.7	0.124	mg/L	0.0164	0.124	mg/L	0.0164	13.20%
Cd 228.802†	-8.1	-0.00038	mg/L	0.000224	-0.00038	mg/L	0.000224	58.36%
Co 228.616†	-5.1	-0.00041	mg/L	0.000363	-0.00041	mg/L	0.000363	88.43%
Cr 267.716†	-9.5	0.00003	mg/L	0.000138	0.00003	mg/L	0.000138	468.64%
Cu 327.393†	225.2	0.00244	mg/L	0.000303	0.00244	mg/L	0.000303	12.42%
Fe 239.562†	4.7	-0.00576	mg/L	0.001213	-0.00576	mg/L	0.001213	21.07%
Mg 279.077†	16.6	0.00038	mg/L	0.004491	0.00038	mg/L	0.004491	>999.9%
Mn 257.610†	64.6	-0.00168	mg/L	0.000040	-0.00168	mg/L	0.000040	2.37%
Mo 202.031†	6.8	0.00102	mg/L	0.000331	0.00102	mg/L	0.000331	32.30%
Ni 231.604†	-6.3	-0.00001	mg/L	0.000095	-0.00001	mg/L	0.000095	>999.9%
Pb 220.353†	8.0	0.00017	mg/L	0.001284	0.00017	mg/L	0.001284	774.75%
Sb 206.836†	1.8	0.00132	mg/L	0.000399	0.00132	mg/L	0.000399	30.19%
Se 196.026†	0.0	-0.00458	mg/L	0.004573	-0.00458	mg/L	0.004573	99.90%
Si 251.611†	149.9	0.0194	mg/L	0.00154	0.0194	mg/L	0.00154	7.92%
Sn 189.927†	-19.8	-0.00477	mg/L	0.000794	-0.00477	mg/L	0.000794	16.64%
Ti 334.940†	-185.9	-0.00102	mg/L	0.000203	-0.00102	mg/L	0.000203	19.95%
Tl 190.801†	2.1	-0.00164	mg/L	0.004269	-0.00164	mg/L	0.004269	260.66%
V 290.880†	92.3	0.00165	mg/L	0.001471	0.00165	mg/L	0.001471	88.87%
Zn 206.200†	-25.5	-0.00129	mg/L	0.000199	-0.00129	mg/L	0.000199	15.39%

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K 766.490†	27.8	0.0189	mg/L	0.01259	0.0189	mg/L	0.01259 66.73%
Na 589.592†	97.1	0.00179	mg/L	0.017924	0.00179	mg/L	0.017924 >999.9%
Sr 407.771†	174.8	0.00156	mg/L	0.000158	0.00156	mg/L	0.000158 10.11%
Li 670.784†	54.7	-0.00281	mg/L	0.001384	-0.00281	mg/L	0.001384 49.15%
P 214.914†	45.4	0.0725	mg/L	0.01722	0.0725	mg/L	0.01722 23.75%

Sequence No.: 144 **Autosampler Location: 210**
Sample ID: BLK **Date Collected: 11/8/2013 10:17:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2555364.2						8481.00	0.33%
YRADIAL	174193.2						3104.35	1.78%
Ga 417.206	971291.9						6703.27	0.69%
GaRADIAL	50557.8						767.72	1.52%
Ag 328.068†	38.8	0.00103	mg/L	0.000487	0.00103	mg/L	0.000487	47.10%
Al 396.153†	-1.3	-0.0340	mg/L	0.00072	-0.0340	mg/L	0.00072	2.12%
As 188.979†	-3.1	-0.00148	mg/L	0.001995	-0.00148	mg/L	0.001995	134.95%
Ba 233.527†	-2.7	0.00070	mg/L	0.000123	0.00070	mg/L	0.000123	17.53%
Be 234.861†	283.7	0.00060	mg/L	0.000028	0.00060	mg/L	0.000028	4.73%
B 249.677†	-179.0	0.00200	mg/L	0.000181	0.00200	mg/L	0.000181	9.04%
Ca 227.546†	25.5	0.191	mg/L	0.0077	0.191	mg/L	0.0077	4.05%
Cd 228.802†	-10.2	-0.00047	mg/L	0.000136	-0.00047	mg/L	0.000136	29.16%
Co 228.616†	-7.9	-0.00056	mg/L	0.000219	-0.00056	mg/L	0.000219	39.08%
Cr 267.716†	-26.9	-0.00017	mg/L	0.000207	-0.00017	mg/L	0.000207	122.94%
Cu 327.393†	102.0	0.00168	mg/L	0.000622	0.00168	mg/L	0.000622	37.06%
Fe 239.562†	6.4	-0.00511	mg/L	0.004925	-0.00511	mg/L	0.004925	96.45%
Mg 279.077†	11.9	-0.00450	mg/L	0.001887	-0.00450	mg/L	0.001887	41.90%
Mn 257.610†	26.0	-0.00176	mg/L	0.000039	-0.00176	mg/L	0.000039	2.22%
Mo 202.031†	3.8	0.00082	mg/L	0.000402	0.00082	mg/L	0.000402	48.94%
Ni 231.604†	-7.0	-0.00003	mg/L	0.000235	-0.00003	mg/L	0.000235	831.21%
Pb 220.353†	11.2	0.00077	mg/L	0.000372	0.00077	mg/L	0.000372	48.25%
Sb 206.836†	0.3	0.00041	mg/L	0.000810	0.00041	mg/L	0.000810	199.33%
Se 196.026†	4.8	0.00246	mg/L	0.005363	0.00246	mg/L	0.005363	217.88%
Si 251.611†	71.4	0.0166	mg/L	0.00121	0.0166	mg/L	0.00121	7.31%
Sn 189.927†	-21.3	-0.00506	mg/L	0.001158	-0.00506	mg/L	0.001158	22.87%
Ti 334.940†	-217.0	-0.00105	mg/L	0.000059	-0.00105	mg/L	0.000059	5.64%
Tl 190.801†	-1.5	-0.00401	mg/L	0.001906	-0.00401	mg/L	0.001906	47.53%
V 290.880†	115.4	0.00180	mg/L	0.000613	0.00180	mg/L	0.000613	34.08%
Zn 206.200†	-22.1	-0.00115	mg/L	0.000242	-0.00115	mg/L	0.000242	21.05%
K 766.490†	-6.4	-0.00802	mg/L	0.009524	-0.00802	mg/L	0.009524	118.73%
Na 589.592†	3946.6	0.405	mg/L	0.0244	0.405	mg/L	0.0244	6.03%
Sr 407.771†	-87.1	0.00127	mg/L	0.000021	0.00127	mg/L	0.000021	1.62%
Li 670.784†	-35.5	-0.00434	mg/L	0.000129	-0.00434	mg/L	0.000129	2.98%
P 214.914†	94.0	0.131	mg/L	0.0081	0.131	mg/L	0.0081	6.19%

Sequence No.: 145 **Autosampler Location: 211**
Sample ID: BLK **Date Collected: 11/8/2013 10:20:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Mean Corrected Calib. Sample

Approved: November 11, 2013

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2491412.1						17682.46	0.71%
YRADIAL	173250.3						8222.40	4.75%
Ga 417.206	938475.1						9149.05	0.97%
GaRADIAL	49944.6						1242.99	2.49%
Ag 328.068†	30.5	0.00100	mg/L	0.000117	0.00100	mg/L	0.000117	11.76%
Al 396.153†	-2.5	-0.0345	mg/L	0.00260	-0.0345	mg/L	0.00260	7.53%
As 188.979†	-3.3	-0.00161	mg/L	0.003286	-0.00161	mg/L	0.003286	203.90%
Ba 233.527†	-9.2	0.00061	mg/L	0.000104	0.00061	mg/L	0.000104	17.13%
Be 234.861†	255.8	0.00055	mg/L	0.000028	0.00055	mg/L	0.000028	5.01%
B 249.677†	-214.6	0.00129	mg/L	0.000114	0.00129	mg/L	0.000114	8.81%
Ca 227.546†	26.4	0.196	mg/L	0.0300	0.196	mg/L	0.0300	15.29%
Cd 228.802†	-11.3	-0.00051	mg/L	0.000092	-0.00051	mg/L	0.000092	17.96%
Co 228.616†	-3.3	-0.00031	mg/L	0.000163	-0.00031	mg/L	0.000163	52.31%
Cr 267.716†	-3.9	0.00009	mg/L	0.000058	0.00009	mg/L	0.000058	61.18%
Cu 327.393†	78.3	0.00153	mg/L	0.000515	0.00153	mg/L	0.000515	33.61%
Fe 239.562†	3.3	-0.00629	mg/L	0.001056	-0.00629	mg/L	0.001056	16.80%
Mg 279.077†	20.8	0.00459	mg/L	0.007992	0.00459	mg/L	0.007992	174.07%
Mn 257.610†	85.7	-0.00164	mg/L	0.000053	-0.00164	mg/L	0.000053	3.22%
Mo 202.031†	3.1	0.00077	mg/L	0.000441	0.00077	mg/L	0.000441	57.17%
Ni 231.604†	0.2	0.00020	mg/L	0.000216	0.00020	mg/L	0.000216	107.31%
Pb 220.353†	11.7	0.00086	mg/L	0.000698	0.00086	mg/L	0.000698	81.18%
Sb 206.836†	-0.5	-0.00010	mg/L	0.001770	-0.00010	mg/L	0.001770	>999.9%
Se 196.026†	3.2	0.00002	mg/L	0.002918	0.00002	mg/L	0.002918	>999.9%
Si 251.611†	41.9	0.0155	mg/L	0.00089	0.0155	mg/L	0.00089	5.73%
Sn 189.927†	-24.3	-0.00565	mg/L	0.001436	-0.00565	mg/L	0.001436	25.43%
Ti 334.940†	-228.4	-0.00107	mg/L	0.000041	-0.00107	mg/L	0.000041	3.86%
Tl 190.801†	-5.6	-0.00673	mg/L	0.001621	-0.00673	mg/L	0.001621	24.09%
V 290.880†	275.9	0.00279	mg/L	0.001451	0.00279	mg/L	0.001451	51.92%
Zn 206.200†	-14.7	-0.00084	mg/L	0.000389	-0.00084	mg/L	0.000389	46.34%
K 766.490†	-46.5	-0.0390	mg/L	0.03502	-0.0390	mg/L	0.03502	89.69%
Na 589.592†	3878.1	0.398	mg/L	0.0223	0.398	mg/L	0.0223	5.61%
Sr 407.771†	-93.4	0.00127	mg/L	0.000045	0.00127	mg/L	0.000045	3.56%
Li 670.784†	-49.9	-0.00458	mg/L	0.000742	-0.00458	mg/L	0.000742	16.20%
P 214.914†	88.6	0.125	mg/L	0.0096	0.125	mg/L	0.0096	7.73%

Sequence No.: 146 **Autosampler Location: 212**
Sample ID: BLK **Date Collected: 11/8/2013 10:23:18 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2464796.4						17298.62	0.70%
YRADIAL	168894.3						5348.27	3.17%
Ga 417.206	913890.1						12559.16	1.37%
GaRADIAL	48315.4						556.84	1.15%
Ag 328.068†	13.1	0.00091	mg/L	0.000527	0.00091	mg/L	0.000527	57.56%
Al 396.153†	-6.2	-0.0358	mg/L	0.00321	-0.0358	mg/L	0.00321	8.96%
As 188.979†	2.8	0.00283	mg/L	0.001162	0.00283	mg/L	0.001162	41.02%
Ba 233.527†	7.0	0.00084	mg/L	0.000041	0.00084	mg/L	0.000041	4.92%
Be 234.861†	221.2	0.00049	mg/L	0.000035	0.00049	mg/L	0.000035	7.19%
B 249.677†	-229.8	0.00098	mg/L	0.000192	0.00098	mg/L	0.000192	19.55%
Ca 227.546†	22.4	0.172	mg/L	0.0306	0.172	mg/L	0.0306	17.85%
Cd 228.802†	-10.7	-0.00051	mg/L	0.000197	-0.00051	mg/L	0.000197	38.83%
Co 228.616†	-5.5	-0.00043	mg/L	0.000610	-0.00043	mg/L	0.000610	140.72%
Cr 267.716†	-30.1	-0.00020	mg/L	0.000070	-0.00020	mg/L	0.000070	34.40%
Cu 327.393†	58.5	0.00141	mg/L	0.000196	0.00141	mg/L	0.000196	13.87%
Fe 239.562†	1.5	-0.00696	mg/L	0.001489	-0.00696	mg/L	0.001489	21.40%
Mg 279.077†	23.2	0.00709	mg/L	0.004771	0.00709	mg/L	0.004771	67.27%
Mn 257.610†	194.0	-0.00142	mg/L	0.000011	-0.00142	mg/L	0.000011	0.79%
Mo 202.031†	-19.0	-0.00074	mg/L	0.000313	-0.00074	mg/L	0.000313	42.43%
Ni 231.604†	-4.2	0.00006	mg/L	0.000188	0.00006	mg/L	0.000188	334.30%

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Pb 220.353†	6.0	-0.00022	mg/L	0.000523	-0.00022	mg/L	0.000523	241.03%
Sb 206.836†	0.1	0.00029	mg/L	0.001904	0.00029	mg/L	0.001904	653.95%
Se 196.026†	-4.5	-0.0111	mg/L	0.00456	-0.0111	mg/L	0.00456	41.04%
Si 251.611†	60.5	0.0162	mg/L	0.00167	0.0162	mg/L	0.00167	10.30%
Sn 189.927†	-27.2	-0.00621	mg/L	0.001263	-0.00621	mg/L	0.001263	20.35%
Ti 334.940†	-257.0	-0.00111	mg/L	0.000120	-0.00111	mg/L	0.000120	10.79%
Tl 190.801†	7.7	0.00213	mg/L	0.004376	0.00213	mg/L	0.004376	205.51%
V 290.880†	152.9	0.00203	mg/L	0.000993	0.00203	mg/L	0.000993	48.88%
Zn 206.200†	-35.1	-0.00170	mg/L	0.000273	-0.00170	mg/L	0.000273	16.07%
K 766.490†	-12.0	-0.0119	mg/L	0.05627	-0.0119	mg/L	0.05627	471.91%
Na 589.592†	47.9	-0.00337	mg/L	0.016419	-0.00337	mg/L	0.016419	487.36%
Sr 407.771†	-47.8	0.00132	mg/L	0.000039	0.00132	mg/L	0.000039	2.97%
Li 670.784†	-63.1	-0.00481	mg/L	0.000723	-0.00481	mg/L	0.000723	15.04%
P 214.914†	42.9	0.0695	mg/L	0.01027	0.0695	mg/L	0.01027	14.78%

Sequence No.: 147 **Autosampler Location: 213**
Sample ID: BLK **Date Collected: 11/8/2013 10:26:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	172.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2426010.6						60014.13	2.47%
YRADIAL	166168.5						5220.54	3.14%
Ga 417.206	889562.4						19112.69	2.15%
GaRADIAL	47395.6						694.26	1.46%
Ag 328.068†	51.8	0.00110	mg/L	0.000329	0.00110	mg/L	0.000329	29.98%
Al 396.153†	-10.0	-0.0372	mg/L	0.00180	-0.0372	mg/L	0.00180	4.84%
As 188.979†	0.9	0.00147	mg/L	0.002279	0.00147	mg/L	0.002279	154.59%
Ba 233.527†	7.3	0.00085	mg/L	0.000063	0.00085	mg/L	0.000063	7.51%
Be 234.861†	182.3	0.00042	mg/L	0.000080	0.00042	mg/L	0.000080	19.13%
B 249.677†	-251.0	0.00055	mg/L	0.000397	0.00055	mg/L	0.000397	71.82%
Ca 227.546†	19.1	0.151	mg/L	0.0301	0.151	mg/L	0.0301	19.95%
Cd 228.802†	-8.5	-0.00040	mg/L	0.000049	-0.00040	mg/L	0.000049	12.07%
Co 228.616†	-0.0	-0.00014	mg/L	0.000094	-0.00014	mg/L	0.000094	67.47%
Cr 267.716†	-15.2	-0.00003	mg/L	0.000177	-0.00003	mg/L	0.000177	516.09%
Cu 327.393†	41.9	0.00131	mg/L	0.000733	0.00131	mg/L	0.000733	56.02%
Fe 239.562†	2.2	-0.00669	mg/L	0.001710	-0.00669	mg/L	0.001710	25.55%
Mg 279.077†	32.3	0.0164	mg/L	0.00815	0.0164	mg/L	0.00815	49.63%
Mn 257.610†	211.8	-0.00139	mg/L	0.000011	-0.00139	mg/L	0.000011	0.78%
Mo 202.031†	-10.7	-0.00017	mg/L	0.000251	-0.00017	mg/L	0.000251	144.82%
Ni 231.604†	-4.5	0.00005	mg/L	0.000521	0.00005	mg/L	0.000521	>999.9%
Pb 220.353†	9.9	0.00051	mg/L	0.000717	0.00051	mg/L	0.000717	140.58%
Sb 206.836†	-4.1	-0.00228	mg/L	0.002273	-0.00228	mg/L	0.002273	99.78%
Se 196.026†	0.4	-0.00399	mg/L	0.002761	-0.00399	mg/L	0.002761	69.16%
Si 251.611†	41.5	0.0155	mg/L	0.00080	0.0155	mg/L	0.00080	5.14%
Sn 189.927†	-26.3	-0.00603	mg/L	0.000869	-0.00603	mg/L	0.000869	14.41%
Ti 334.940†	-175.5	-0.00100	mg/L	0.000047	-0.00100	mg/L	0.000047	4.72%
Tl 190.801†	4.7	0.00015	mg/L	0.003284	0.00015	mg/L	0.003284	>999.9%
V 290.880†	309.4	0.00300	mg/L	0.001880	0.00300	mg/L	0.001880	62.63%
Zn 206.200†	-38.1	-0.00183	mg/L	0.000037	-0.00183	mg/L	0.000037	2.04%
K 766.490†	-17.9	-0.0166	mg/L	0.02331	-0.0166	mg/L	0.02331	140.30%
Na 589.592†	1313.3	0.129	mg/L	0.0847	0.129	mg/L	0.0847	65.55%
Sr 407.771†	75.3	0.00145	mg/L	0.000041	0.00145	mg/L	0.000041	2.80%
Li 670.784†	-46.8	-0.00453	mg/L	0.001304	-0.00453	mg/L	0.001304	28.77%
P 214.914†	34.4	0.0591	mg/L	0.00544	0.0591	mg/L	0.00544	9.19%

Sequence No.: 148 **Autosampler Location: 214**
Sample ID: BLK **Date Collected: 11/8/2013 10:29:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: November 11, 2013

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2470069.8						7623.32	0.31%
YRADIAL	168441.1						2571.28	1.53%
Ga 417.206	900171.9						6177.54	0.69%
GaRADIAL	48129.9						410.37	0.85%
Ag 328.068†	73.0	0.00119	mg/L	0.000162	0.00119	mg/L	0.000162	13.54%
Al 396.153†	-3.0	-0.0346	mg/L	0.00169	-0.0346	mg/L	0.00169	4.90%
As 188.979†	2.2	0.00237	mg/L	0.003610	0.00237	mg/L	0.003610	152.43%
Ba 233.527†	13.4	0.00093	mg/L	0.000202	0.00093	mg/L	0.000202	21.64%
Be 234.861†	207.2	0.00046	mg/L	0.000006	0.00046	mg/L	0.000006	1.39%
B 249.677†	-263.3	0.00031	mg/L	0.000162	0.00031	mg/L	0.000162	52.73%
Ca 227.546†	18.0	0.145	mg/L	0.0309	0.145	mg/L	0.0309	21.39%
Cd 228.802†	-9.7	-0.00046	mg/L	0.000049	-0.00046	mg/L	0.000049	10.76%
Co 228.616†	-5.0	-0.00041	mg/L	0.000208	-0.00041	mg/L	0.000208	51.20%
Cr 267.716†	-13.4	-0.00001	mg/L	0.000191	-0.00001	mg/L	0.000191	>999.9%
Cu 327.393†	-29.3	0.00087	mg/L	0.001020	0.00087	mg/L	0.001020	117.34%
Fe 239.562†	5.6	-0.00539	mg/L	0.000320	-0.00539	mg/L	0.000320	5.94%
Mg 279.077†	37.2	0.0214	mg/L	0.00851	0.0214	mg/L	0.00851	39.80%
Mn 257.610†	229.6	-0.00135	mg/L	0.000089	-0.00135	mg/L	0.000089	6.61%
Mo 202.031†	-14.0	-0.00040	mg/L	0.000181	-0.00040	mg/L	0.000181	45.70%
Ni 231.604†	-2.1	0.00013	mg/L	0.000278	0.00013	mg/L	0.000278	219.75%
Pb 220.353†	7.9	0.00014	mg/L	0.000587	0.00014	mg/L	0.000587	410.32%
Sb 206.836†	0.0	0.00022	mg/L	0.001591	0.00022	mg/L	0.001591	736.98%
Se 196.026†	-1.7	-0.00707	mg/L	0.001147	-0.00707	mg/L	0.001147	16.22%
Si 251.611†	-10.8	0.0137	mg/L	0.00110	0.0137	mg/L	0.00110	8.05%
Sn 189.927†	-28.9	-0.00654	mg/L	0.000669	-0.00654	mg/L	0.000669	10.24%
Ti 334.940†	-213.4	-0.00106	mg/L	0.000127	-0.00106	mg/L	0.000127	12.03%
Tl 190.801†	9.0	0.00300	mg/L	0.002867	0.00300	mg/L	0.002867	95.67%
V 290.880†	232.4	0.00252	mg/L	0.000993	0.00252	mg/L	0.000993	39.35%
Zn 206.200†	-43.8	-0.00206	mg/L	0.000216	-0.00206	mg/L	0.000216	10.46%
K 766.490†	-9.5	-0.0101	mg/L	0.05452	-0.0101	mg/L	0.05452	539.85%
Na 589.592†	772.2	0.0725	mg/L	0.08696	0.0725	mg/L	0.08696	119.91%
Sr 407.771†	131.1	0.00151	mg/L	0.000196	0.00151	mg/L	0.000196	12.92%
Li 670.784†	-42.8	-0.00446	mg/L	0.000154	-0.00446	mg/L	0.000154	3.44%
P 214.914†	37.0	0.0623	mg/L	0.00724	0.0623	mg/L	0.00724	11.62%

Sequence No.: 149
Sample ID: BLK
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 215
Date Collected: 11/8/2013 10:32:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2480582.3						50301.26	2.03%
YRADIAL	170673.9						3383.49	1.98%
Ga 417.206	907874.7						16565.45	1.82%
GaRADIAL	48724.7						143.07	0.29%
Ag 328.068†	54.7	0.00111	mg/L	0.000161	0.00111	mg/L	0.000161	14.50%
Al 396.153†	-4.2	-0.0351	mg/L	0.00052	-0.0351	mg/L	0.00052	1.50%
As 188.979†	0.2	0.00092	mg/L	0.002303	0.00092	mg/L	0.002303	250.37%
Ba 233.527†	5.8	0.00082	mg/L	0.000080	0.00082	mg/L	0.000080	9.72%
Be 234.861†	215.1	0.00048	mg/L	0.000044	0.00048	mg/L	0.000044	9.15%
B 249.677†	-274.3	0.00009	mg/L	0.000206	0.00009	mg/L	0.000206	224.89%
Ca 227.546†	20.7	0.161	mg/L	0.0242	0.161	mg/L	0.0242	15.01%

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Cd 228.802†	-11.1	-0.00052	mg/L	0.000329	-0.00052	mg/L	0.000329	63.74%
Co 228.616†	-13.1	-0.00084	mg/L	0.000209	-0.00084	mg/L	0.000209	24.86%
Cr 267.716†	-19.0	-0.00008	mg/L	0.000108	-0.00008	mg/L	0.000108	139.62%
Cu 327.393†	46.9	0.00134	mg/L	0.000416	0.00134	mg/L	0.000416	31.04%
Fe 239.562†	3.2	-0.00632	mg/L	0.001295	-0.00632	mg/L	0.001295	20.48%
Mg 279.077†	30.0	0.0140	mg/L	0.00314	0.0140	mg/L	0.00314	22.35%
Mn 257.610†	247.0	-0.00132	mg/L	0.000102	-0.00132	mg/L	0.000102	7.78%
Mo 202.031†	-11.6	-0.00023	mg/L	0.000335	-0.00023	mg/L	0.000335	142.68%
Ni 231.604†	-5.7	0.00001	mg/L	0.000288	0.00001	mg/L	0.000288	>999.9%
Pb 220.353†	7.8	0.00012	mg/L	0.001432	0.00012	mg/L	0.001432	>999.9%
Sb 206.836†	-2.8	-0.00152	mg/L	0.002004	-0.00152	mg/L	0.002004	131.93%
Se 196.026†	1.4	-0.00259	mg/L	0.002330	-0.00259	mg/L	0.002330	90.10%
Si 251.611†	16.7	0.0146	mg/L	0.00137	0.0146	mg/L	0.00137	9.36%
Sn 189.927†	-31.1	-0.00697	mg/L	0.001375	-0.00697	mg/L	0.001375	19.73%
Ti 334.940†	-353.3	-0.00125	mg/L	0.000019	-0.00125	mg/L	0.000019	1.50%
Tl 190.801†	1.4	-0.00206	mg/L	0.003115	-0.00206	mg/L	0.003115	151.20%
V 290.880†	273.2	0.00278	mg/L	0.001416	0.00278	mg/L	0.001416	50.97%
Zn 206.200†	-37.8	-0.00182	mg/L	0.000045	-0.00182	mg/L	0.000045	2.50%
K 766.490†	-6.3	-0.00767	mg/L	0.035750	-0.00767	mg/L	0.035750	466.11%
Na 589.592†	1741.3	0.174	mg/L	0.1119	0.174	mg/L	0.1119	64.25%
Sr 407.771†	114.5	0.00150	mg/L	0.000147	0.00150	mg/L	0.000147	9.83%
Li 670.784†	-55.2	-0.00467	mg/L	0.001229	-0.00467	mg/L	0.001229	26.29%
P 214.914†	37.5	0.0629	mg/L	0.01001	0.0629	mg/L	0.01001	15.91%

Sequence No.: 150 **Autosampler Location: 216**
Sample ID: BLK **Date Collected: 11/8/2013 10:35:26 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2430846.6						39322.96	1.62%
YRADIAL	172028.3						4606.37	2.68%
Ga 417.206	883279.3						10482.18	1.19%
GaRADIAL	48968.3						717.28	1.46%
Ag 328.068†	104.8	0.00134	mg/L	0.000324	0.00134	mg/L	0.000324	24.13%
Al 396.153†	-12.3	-0.0381	mg/L	0.00170	-0.0381	mg/L	0.00170	4.45%
As 188.979†	-2.7	-0.00118	mg/L	0.002477	-0.00118	mg/L	0.002477	210.26%
Ba 233.527†	2.7	0.00078	mg/L	0.000227	0.00078	mg/L	0.000227	29.13%
Be 234.861†	171.5	0.00040	mg/L	0.000054	0.00040	mg/L	0.000054	13.57%
B 249.677†	-281.7	-0.00007	mg/L	0.000370	-0.00007	mg/L	0.000370	560.14%
Ca 227.546†	23.5	0.179	mg/L	0.0414	0.179	mg/L	0.0414	23.20%
Cd 228.802†	-4.9	-0.00023	mg/L	0.000148	-0.00023	mg/L	0.000148	64.16%
Co 228.616†	-6.7	-0.00050	mg/L	0.000075	-0.00050	mg/L	0.000075	15.04%
Cr 267.716†	-18.9	-0.00008	mg/L	0.000037	-0.00008	mg/L	0.000037	48.63%
Cu 327.393†	16.5	0.00115	mg/L	0.000509	0.00115	mg/L	0.000509	44.12%
Fe 239.562†	2.2	-0.00670	mg/L	0.000414	-0.00670	mg/L	0.000414	6.18%
Mg 279.077†	29.4	0.0134	mg/L	0.00216	0.0134	mg/L	0.00216	16.11%
Mn 257.610†	165.8	-0.00148	mg/L	0.000038	-0.00148	mg/L	0.000038	2.59%
Mo 202.031†	-17.2	-0.00061	mg/L	0.000588	-0.00061	mg/L	0.000588	95.71%
Ni 231.604†	0.8	0.00022	mg/L	0.000193	0.00022	mg/L	0.000193	87.05%
Pb 220.353†	10.8	0.00068	mg/L	0.001664	0.00068	mg/L	0.001664	244.00%
Sb 206.836†	2.0	0.00145	mg/L	0.002281	0.00145	mg/L	0.002281	157.24%
Se 196.026†	-3.5	-0.00972	mg/L	0.001814	-0.00972	mg/L	0.001814	18.66%
Si 251.611†	-9.6	0.0137	mg/L	0.00088	0.0137	mg/L	0.00088	6.43%
Sn 189.927†	-27.3	-0.00623	mg/L	0.001327	-0.00623	mg/L	0.001327	21.31%
Ti 334.940†	-247.9	-0.00110	mg/L	0.000036	-0.00110	mg/L	0.000036	3.26%
Tl 190.801†	-3.7	-0.00549	mg/L	0.001705	-0.00549	mg/L	0.001705	31.06%
V 290.880†	306.1	0.00298	mg/L	0.000809	0.00298	mg/L	0.000809	27.14%
Zn 206.200†	-44.4	-0.00209	mg/L	0.000091	-0.00209	mg/L	0.000091	4.33%
K 766.490†	-7.0	-0.00810	mg/L	0.026543	-0.00810	mg/L	0.026543	327.70%
Na 589.592†	549.9	0.0492	mg/L	0.06841	0.0492	mg/L	0.06841	138.94%
Sr 407.771†	112.4	0.00149	mg/L	0.000148	0.00149	mg/L	0.000148	9.92%

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Li 670.784†	-53.7	-0.00465 mg/L	0.000306	-0.00465 mg/L	0.000306	6.59%
P 214.914†	35.5	0.0605 mg/L	0.00643	0.0605 mg/L	0.00643	10.62%

Sequence No.: 151 **Autosampler Location: 217**
Sample ID: BLK **Date Collected: 11/8/2013 10:38:28 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2484828.2						46876.51	1.89%
YRADIAL	169582.8						1338.19	0.79%
Ga 417.206	910770.4						20382.77	2.24%
GaRADIAL	48322.7						940.31	1.95%
Ag 328.068†	28.8	0.00099	mg/L	0.000666	0.00099	mg/L	0.000666	67.37%
Al 396.153†	3.0	-0.0323	mg/L	0.00090	-0.0323	mg/L	0.00090	2.79%
As 188.979†	-1.9	-0.00061	mg/L	0.000864	-0.00061	mg/L	0.000864	142.50%
Ba 233.527†	11.3	0.00090	mg/L	0.000079	0.00090	mg/L	0.000079	8.73%
Be 234.861†	204.4	0.00046	mg/L	0.000033	0.00046	mg/L	0.000033	7.28%
B 249.677†	-285.9	-0.00015	mg/L	0.000088	-0.00015	mg/L	0.000088	59.19%
Ca 227.546†	23.8	0.180	mg/L	0.0272	0.180	mg/L	0.0272	15.06%
Cd 228.802†	-6.1	-0.00029	mg/L	0.000093	-0.00029	mg/L	0.000093	32.60%
Co 228.616†	-6.0	-0.00046	mg/L	0.000090	-0.00046	mg/L	0.000090	19.48%
Cr 267.716†	-29.8	-0.00020	mg/L	0.000044	-0.00020	mg/L	0.000044	22.01%
Cu 327.393†	20.8	0.00118	mg/L	0.000507	0.00118	mg/L	0.000507	43.01%
Fe 239.562†	2.8	-0.00646	mg/L	0.000365	-0.00646	mg/L	0.000365	5.65%
Mg 279.077†	26.6	0.0105	mg/L	0.00326	0.0105	mg/L	0.00326	30.97%
Mn 257.610†	198.4	-0.00141	mg/L	0.000026	-0.00141	mg/L	0.000026	1.81%
Mo 202.031†	-15.7	-0.00051	mg/L	0.000663	-0.00051	mg/L	0.000663	129.42%
Ni 231.604†	0.4	0.00021	mg/L	0.000380	0.00021	mg/L	0.000380	182.42%
Pb 220.353†	6.3	-0.00016	mg/L	0.002002	-0.00016	mg/L	0.002002	>999.9%
Sb 206.836†	-1.1	-0.00045	mg/L	0.000183	-0.00045	mg/L	0.000183	40.44%
Se 196.026†	-2.2	-0.00784	mg/L	0.005261	-0.00784	mg/L	0.005261	67.13%
Si 251.611†	-10.6	0.0137	mg/L	0.00162	0.0137	mg/L	0.00162	11.84%
Sn 189.927†	-28.9	-0.00655	mg/L	0.001193	-0.00655	mg/L	0.001193	18.23%
Ti 334.940†	-316.9	-0.00120	mg/L	0.000073	-0.00120	mg/L	0.000073	6.07%
Tl 190.801†	1.4	-0.00205	mg/L	0.004614	-0.00205	mg/L	0.004614	224.97%
V 290.880†	269.2	0.00275	mg/L	0.000431	0.00275	mg/L	0.000431	15.67%
Zn 206.200†	-43.6	-0.00206	mg/L	0.000362	-0.00206	mg/L	0.000362	17.58%
K 766.490†	33.6	0.0232	mg/L	0.02798	0.0232	mg/L	0.02798	120.40%
Na 589.592†	821.2	0.0777	mg/L	0.07004	0.0777	mg/L	0.07004	90.19%
Sr 407.771†	32.2	0.00140	mg/L	0.000030	0.00140	mg/L	0.000030	2.13%
Li 670.784†	-49.9	-0.00458	mg/L	0.000413	-0.00458	mg/L	0.000413	9.02%
P 214.914†	30.6	0.0545	mg/L	0.00307	0.0545	mg/L	0.00307	5.63%

Sequence No.: 152 **Autosampler Location: 218**
Sample ID: BLK **Date Collected: 11/8/2013 10:41:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2463599.0						35339.85	1.43%
YRADIAL	171509.6						6700.24	3.91%

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Ga 417.206	904423.0					12394.25	1.37%
GaRADIAL	48815.5					1549.44	3.17%
Ag 328.068†	137.3	0.00149	mg/L	0.000257	0.00149 mg/L	0.000257	17.21%
Al 396.153†	-6.9	-0.0360	mg/L	0.00345	-0.0360 mg/L	0.00345	9.57%
As 188.979†	0.3	0.00102	mg/L	0.003320	0.00102 mg/L	0.003320	323.91%
Ba 233.527†	-0.5	0.00073	mg/L	0.000043	0.00073 mg/L	0.000043	5.87%
Be 234.861†	196.8	0.00044	mg/L	0.000025	0.00044 mg/L	0.000025	5.65%
B 249.677†	-309.8	-0.00063	mg/L	0.000264	-0.00063 mg/L	0.000264	42.25%
Ca 227.546†	23.8	0.180	mg/L	0.0191	0.180 mg/L	0.0191	10.57%
Cd 228.802†	-8.5	-0.00040	mg/L	0.000171	-0.00040 mg/L	0.000171	42.76%
Co 228.616†	-8.7	-0.00061	mg/L	0.000248	-0.00061 mg/L	0.000248	40.86%
Cr 267.716†	-25.0	-0.00015	mg/L	0.000133	-0.00015 mg/L	0.000133	90.60%
Cu 327.393†	150.1	0.00198	mg/L	0.000254	0.00198 mg/L	0.000254	12.86%
Fe 239.562†	-2.5	-0.00847	mg/L	0.001845	-0.00847 mg/L	0.001845	21.78%
Mg 279.077†	20.5	0.00428	mg/L	0.003145	0.00428 mg/L	0.003145	73.43%
Mn 257.610†	160.2	-0.00149	mg/L	0.000087	-0.00149 mg/L	0.000087	5.85%
Mo 202.031†	-20.4	-0.00084	mg/L	0.000555	-0.00084 mg/L	0.000555	66.45%
Ni 231.604†	-4.1	0.00006	mg/L	0.000135	0.00006 mg/L	0.000135	212.20%
Pb 220.353†	13.1	0.00112	mg/L	0.001450	0.00112 mg/L	0.001450	129.80%
Sb 206.836†	0.4	0.00044	mg/L	0.000322	0.00044 mg/L	0.000322	73.94%
Se 196.026†	-4.2	-0.0107	mg/L	0.00405	-0.0107 mg/L	0.00405	37.70%
Si 251.611†	-18.5	0.0134	mg/L	0.00070	0.0134 mg/L	0.00070	5.21%
Sn 189.927†	-26.1	-0.00600	mg/L	0.000742	-0.00600 mg/L	0.000742	12.37%
Ti 334.940†	-193.8	-0.00102	mg/L	0.000061	-0.00102 mg/L	0.000061	5.97%
Tl 190.801†	2.3	-0.00151	mg/L	0.002515	-0.00151 mg/L	0.002515	166.43%
V 290.880†	189.2	0.00226	mg/L	0.000940	0.00226 mg/L	0.000940	41.65%
Zn 206.200†	-39.9	-0.00190	mg/L	0.000068	-0.00190 mg/L	0.000068	3.57%
K 766.490†	21.1	0.0135	mg/L	0.01875	0.0135 mg/L	0.01875	138.46%
Na 589.592†	1291.2	0.127	mg/L	0.0668	0.127 mg/L	0.0668	52.62%
Sr 407.771†	119.3	0.00150	mg/L	0.000104	0.00150 mg/L	0.000104	6.94%
Li 670.784†	-28.4	-0.00422	mg/L	0.000329	-0.00422 mg/L	0.000329	7.80%
P 214.914†	30.5	0.0544	mg/L	0.01691	0.0544 mg/L	0.01691	31.07%

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Sequence No.: 153 **Autosampler Location: 219**
Sample ID: BLK **Date Collected: 11/8/2013 10:44:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLK

Analyte	Back Pressure	Flow
All	173.0 kPa	0.45 L/min

Mean Data: BLK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2481139.8						36331.59	1.46%
YRADIAL	168339.0						5555.81	3.30%
Ga 417.206	913100.1						13433.88	1.47%
GaRADIAL	47936.9						1225.25	2.56%
Ag 328.068†	100.1	0.00132	mg/L	0.000576	0.00132	mg/L	0.000576	43.70%
Al 396.153†	-8.2	-0.0365	mg/L	0.00263	-0.0365	mg/L	0.00263	7.19%
As 188.979†	0.5	0.00114	mg/L	0.003526	0.00114	mg/L	0.003526	310.24%
Ba 233.527†	7.5	0.00085	mg/L	0.000140	0.00085	mg/L	0.000140	16.52%
Be 234.861†	211.2	0.00047	mg/L	0.000030	0.00047	mg/L	0.000030	6.37%
B 249.677†	-289.2	-0.00021	mg/L	0.000359	-0.00021	mg/L	0.000359	168.84%
Ca 227.546†	23.1	0.176	mg/L	0.0169	0.176	mg/L	0.0169	9.60%
Cd 228.802†	-10.3	-0.00048	mg/L	0.000198	-0.00048	mg/L	0.000198	41.11%
Co 228.616†	-1.8	-0.00024	mg/L	0.000278	-0.00024	mg/L	0.000278	117.58%
Cr 267.716†	-20.2	-0.00009	mg/L	0.000133	-0.00009	mg/L	0.000133	144.99%
Cu 327.393†	49.3	0.00135	mg/L	0.000566	0.00135	mg/L	0.000566	41.77%
Fe 239.562†	1.5	-0.00697	mg/L	0.001134	-0.00697	mg/L	0.001134	16.27%
Mg 279.077†	21.9	0.00574	mg/L	0.001933	0.00574	mg/L	0.001933	33.67%
Mn 257.610†	153.8	-0.00150	mg/L	0.000056	-0.00150	mg/L	0.000056	3.70%
Mo 202.031†	-15.0	-0.00047	mg/L	0.000350	-0.00047	mg/L	0.000350	74.88%
Ni 231.604†	-5.4	0.00002	mg/L	0.000130	0.00002	mg/L	0.000130	688.13%
Pb 220.353†	12.9	0.00108	mg/L	0.000426	0.00108	mg/L	0.000426	39.65%
Sb 206.836†	-0.7	-0.00024	mg/L	0.000398	-0.00024	mg/L	0.000398	165.17%
Se 196.026†	-2.1	-0.00765	mg/L	0.006606	-0.00765	mg/L	0.006606	86.35%

Approved: November 11, 2013

Si 251.611†	-36.2	0.0128 mg/L	0.00136	0.0128 mg/L	0.00136	10.63%
Sn 189.927†	-26.0	-0.00598 mg/L	0.000871	-0.00598 mg/L	0.000871	14.56%
Ti 334.940†	-385.3	-0.00129 mg/L	0.000037	-0.00129 mg/L	0.000037	2.84%
Tl 190.801†	5.7	0.00077 mg/L	0.002820	0.00077 mg/L	0.002820	365.29%
V 290.880†	149.8	0.00201 mg/L	0.001583	0.00201 mg/L	0.001583	78.69%
Zn 206.200†	-43.9	-0.00207 mg/L	0.000389	-0.00207 mg/L	0.000389	18.78%
K 766.490†	-12.2	-0.0122 mg/L	0.03255	-0.0122 mg/L	0.03255	267.03%
Na 589.592†	872.5	0.0830 mg/L	0.04817	0.0830 mg/L	0.04817	58.02%
Sr 407.771†	-21.8	0.00135 mg/L	0.000068	0.00135 mg/L	0.000068	5.03%
Li 670.784†	-22.3	-0.00412 mg/L	0.001043	-0.00412 mg/L	0.001043	25.32%
P 214.914†	25.5	0.0483 mg/L	0.00990	0.0483 mg/L	0.00990	20.49%

Approved: November 11, 2013

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L13110337
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG452303 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 74639
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 30-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 11:35
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	NI.111813.113504
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	0.00745		0.00100	0.000500
Barium, Total	7440-39-3	0.0974		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00361		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00211		0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00284		0.00200	0.00100
Nickel, Total	7440-02-0	0.00470		0.00400	0.00200
Selenium, Total	7782-49-2	0.0268		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 16-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 12:38
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	NI.111813.123804
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	0.00291		0.00100	0.000500
Barium, Total	7440-39-3	0.0638		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00155	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00117	J	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00824		0.00200	0.00100
Nickel, Total	7440-02-0	0.00266	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0105		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
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

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL 26-1113-1	**Prep Method:**	3015	**Prep Date:**	11/11/2013 12:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	11/18/2013 09:55
Workgroup #:	WG452303	**Analyst:**	JYH	**Run Date:**	11/18/2013 12:41
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	NI.111813.124109
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	0.00155		0.00100	0.000500
Barium, Total	7440-39-3	0.0627		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00926		0.00200	0.00100
Cobalt, Total	7440-48-4	0.000830	J	0.00100	0.000500
Copper, Total	7440-50-8	0.00352		0.00200	0.00100
Lead, Total	7439-92-1	0.000810	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0231		0.00200	0.00100
Nickel, Total	7440-02-0	0.0105		0.00400	0.00200
Selenium, Total	7782-49-2	0.0111		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
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 NexION 300X

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	100
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/L)	0.25

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	200
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/kg)	40

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	40
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	50

50 ug/kg = 0.050 mg/kg

Perkin Elmer NexION ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - LLICV
QC Std 4 - ICSA
QC Std 5 - ICSAB
QC Std 6 - CCV
QC Std 7 - CCB
QC Std 8 - LLCCV

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.00005	0.05	0.1
Sb	10	0	0.00005	0.05	0.1
As	10	0	0.00005	0.05	0.1
Ba	10	0	0.00005	0.05	0.1
Be	10	0	0.00005	0.05	0.1
Ca	1000	0	0.005	5	10
Cd	10	0	0.0005	0.05	0.1
Cr	10	0	0.0005	0.05	0.1
Co	10	0	0.0005	0.05	0.1
Cu	10	0	0.0005	0.05	0.1
Fe	1000	0	0.005	5	10
Pb	10	0	0.00005	0.05	0.1
Mg	1000	0	0.005	5	10
Mn	10	0	0.00005	0.05	0.1
Ni	10	0	0.00005	0.05	0.1
K	1000	0	0.005	5	10
Se	10	0	0.00005	0.05	0.1
Ag	10	0	0.00005	0.05	0.1
Na	1000	0	0.005	5	10
Tl	10	0	0.00005	0.05	0.1
V	10	0	0.00005	0.05	0.1
U	1000	0	0.00005	0.05	0.1
Zn	10	0	0.00005	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG452233
Analyst: VC
Spike Analyst: VC
Run Date: 11/11/2013 12:33
Method: 3015
Balance: BAL016
Instrument: MW-2
Instrument Start: 11/11/2013 13:02

SOP: ME407 Revison 14
Spike Solution: STD60087
Spike Witness: ERP
HNO3 Lot #: COA16631
Digestion Tubes Lot #: COA16971
MS Filters- fisher-Lot#R RGT26840

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG452233-03	BLANK	1	40 mL	100 mL	204.088 g	204.066 g		
2	WG452233-04	LCS	1	40 mL	100 mL	205.158 g	205.138 g	.25 mL	
3	L13110337-01	SAMP	1	40 mL	100 mL	204.818 g	204.803 g		11/15/13
4	L13110337-02	SAMP	1	40 mL	100 mL	205.884 g	205.852 g		11/15/13
5	L13110337-03	SAMP	1	40 mL	100 mL	206.446 g	206.421 g		11/15/13
6	L13110368-01	SAMP	1	40 mL	100 mL	204.853 g	204.82 g		11/18/13
7	WG452233-01	REF	1	40 mL	100 mL	206.292 g	206.265 g		
8	L13110368-03	RS01	1	40 mL	100 mL	206.292 g	206.265 g		11/18/13
9	L13110368-04	SAMP	1	40 mL	100 mL	204.812 g	204.756 g		11/18/13
10	L13110368-05	SAMP	1	40 mL	100 mL	208.562 g	208.534 g		11/18/13
11	WG452233-05	MS	1	40 mL	100 mL	204.515 g	204.487 g	.25 mL	
12	L13110368-06	MS01	1	40 mL	100 mL	204.515 g	204.487 g	.25 mL	11/18/13
13	WG452233-06	MSD	1	40 mL	100 mL	205.487 g	205.467 g	.25 mL	
14	L13110368-07	SD01	1	40 mL	100 mL	205.487 g	205.467 g	.25 mL	11/18/13
15	L13110398-01	SAMP	1	40 mL	100 mL	203.238 g	203.214 g		11/18/13
16	WG452233-02	REF	2	40 mL	100 mL	205.431 g	205.405 g		
17	L13110472-01	SAMP	2	40 mL	100 mL	205.431 g	205.405 g		11/15/13
18	L13110505-01	SAMP	1	40 mL	100 mL	206.312 g	206.29 g		11/15/13
19	L13110505-02	SAMP	1	40 mL	100 mL	204.35 g	204.322 g		11/15/13
20	L13110505-03	SAMP	1	40 mL	100 mL	204.441 g	204.418 g		11/15/13
21	L13110505-04	SAMP	1	40 mL	100 mL	205.961 g	205.933 g		11/15/13
22	L13110505-05	SAMP	1	40 mL	100 mL	205.541 g	205.496 g		11/15/13
23	L13110505-06	SAMP	1	40 mL	100 mL	203.468 g	203.442 g		11/15/13
24	L13110514-01	SAMP	1	40 mL	100 mL	206.305 g	206.278 g		11/15/13
25	L13110518-03	SAMP	1	40 mL	100 mL	204.58 g	204.554 g		11/18/13
26	WG452233-07	DUP	1	40 mL	100 mL	204.471 g	204.446 g		

Analyst: Vicki Collins

Reviewer: Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 3195517
Report generated: 11/11/2013 13:56

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.111813.094319	Blank	Blank		1		11/18/13 09:43
2	NI.111813.094625	WG453213-01	Calibration Point		1		11/18/13 09:46
3	NI.111813.094929	WG453213-02	Calibration Point		1		11/18/13 09:49
4	NI.111813.095235	WG453213-03	Calibration Point		1		11/18/13 09:52
5	NI.111813.095540	WG453213-04	Calibration Point		1		11/18/13 09:55
6	NI.111813.095847	WG453213-05	Initial Calibration Verification		1		11/18/13 09:58
7	NI.111813.100154	WG453213-06	Initial Calib Blank		1		11/18/13 10:01
8	NI.111813.100500	WG453213-07	Low Level Initial Calibration V		1		11/18/13 10:05
9	NI.111813.100805	WG453213-08	Interference Check		1		11/18/13 10:08
10	NI.111813.101110	WG453213-09	Interference Check		1		11/18/13 10:11
11	NI.111813.101417	WG453213-10	CCV		1		11/18/13 10:14
12	NI.111813.101721	WG453213-11	CCB		1		11/18/13 10:17
13	NI.111813.102049	WG452233-03	Method/Prep Blank	40/100	1		11/18/13 10:20
14	NI.111813.102354	WG452233-04	Laboratory Control S	40/100	1		11/18/13 10:23
15	NI.111813.102659	WG452233-01	Reference Sample		1	L13110368-03	11/18/13 10:26
16	NI.111813.103004	WG452233-05	Matrix Spike	40/100	1	L13110368-03	11/18/13 10:30
17	NI.111813.103309	WG452233-06	Matrix Spike Duplica	40/100	1	L13110368-03	11/18/13 10:33
18	NI.111813.103613	L13110368-01	POWDP09-131105	40/100	1		11/18/13 10:36
19	NI.111813.103918	WG452303-01	Post Digestion Spike		1	L13110368-01	11/18/13 10:39
20	NI.111813.104413	WG452303-02	Serial Dilution		5	L13110368-01	11/18/13 10:44
21	NI.111813.104718	WG452303-02	Serial Dilution		25	L13110368-01	11/18/13 10:47
22	NI.111813.105025	WG453213-12	CCV		1		11/18/13 10:50
23	NI.111813.105330	WG453213-13	CCB		1		11/18/13 10:53
24	NI.111813.105637	L13110505-01	FCMW08-131106	40/100	1		11/18/13 10:56
25	NI.111813.105942	L13110505-02	VDGMW03-131106	40/100	1		11/18/13 10:59
26	NI.111813.110246	L13110505-03	8001MW56-131106	40/100	1		11/18/13 11:02
27	NI.111813.110551	L13110505-04	VDGMW05-131106	40/100	1		11/18/13 11:05
28	NI.111813.110856	L13110505-05	8001DP36-131105	40/100	1		11/18/13 11:08
29	NI.111813.111202	L13110505-06	8001DP59-131105	40/100	1		11/18/13 11:12
30	NI.111813.111506	L13110514-01	8001DP57-131107	40/100	1		11/18/13 11:15
31	NI.111813.111811	L13110518-03	AV-OU7-EB1-110713	40/100	1		11/18/13 11:18
32	NI.111813.112242	WG452233-01	Reference Sample		100	L13110368-03	11/18/13 11:22
33	NI.111813.112547	WG452233-05	Matrix Spike	40/100	100	L13110368-03	11/18/13 11:25
34	NI.111813.112853	WG453213-14	CCV		1		11/18/13 11:28

Page: 1 Approved: November 19, 2013

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.111813.113158	WG453213-15	CCB		1		11/18/13 11:31
36	NI.111813.113504	L13110337-01	MPL 30-1113-1	40/100	1		11/18/13 11:35
37	NI.111813.113904	WG452233-06	Matrix Spike Duplica	40/100	100	L13110368-03	11/18/13 11:39
38	NI.111813.114434	L13110505-02	VDGMW03-131106	40/100	100		11/18/13 11:44
39	NI.111813.114739	L13110505-03	8001MW56-131106	40/100	100		11/18/13 11:47
40	NI.111813.115043	L13110505-04	VDGMW05-131106	40/100	100		11/18/13 11:50
41	NI.111813.115348	L13110505-05	8001DP36-131105	40/100	100		11/18/13 11:53
42	NI.111813.115653	L13110505-06	8001DP59-131105	40/100	50		11/18/13 11:56
43	NI.111813.115957	L13110368-01	POWDP09-131105	40/100	50		11/18/13 11:59
44	NI.111813.120302	WG452303-01	Post Digestion Spike		50	L13110368-01	11/18/13 12:03
45	NI.111813.120607	WG452303-02	Serial Dilution		250	L13110368-01	11/18/13 12:06
46	NI.111813.120914	WG453213-16	CCV		1		11/18/13 12:09
47	NI.111813.121218	WG453213-17	CCB		1		11/18/13 12:12
48	NI.111813.121525	L13110368-04	POWMW20-131105	40/100	1		11/18/13 12:15
49	NI.111813.121830	L13110368-05	DUP-01-131105	40/100	1		11/18/13 12:18
50	NI.111813.122142	L13110398-01	CS22SB017-01-01EB	40/100	1		11/18/13 12:21
51	NI.111813.122446	L13110514-01	8001DP57-131107	40/100	50		11/18/13 12:24
52	NI.111813.122752	WG453213-18	CCV		1		11/18/13 12:27
53	NI.111813.123057	WG453213-19	CCB		1		11/18/13 12:30
54	NI.111813.123403	WG453213-20	Low Level Continuing Calibra		1		11/18/13 12:34
55	NI.111813.123804	L13110337-02	MPL 16-1113-1	40/100	1		11/18/13 12:38
56	NI.111813.124109	L13110337-03	MPL 26-1113-1	40/100	1		11/18/13 12:41
57	NI.111813.124414	WG452233-02	Reference Sample		1	L13110472-01	11/18/13 12:44
58	NI.111813.124718	WG452233-07	Duplicate	40/100	1	L13110472-01	11/18/13 12:47
59	NI.111813.125025	WG453213-21	CCV		1		11/18/13 12:50
60	NI.111813.125330	WG453213-22	CCB		1		11/18/13 12:53
61	NI.111813.131018	WG452687-04	Method/Prep Blank	40/100	1		11/18/13 13:10
62	NI.111813.131349	WG452687-05	Laboratory Control S	40/100	1		11/18/13 13:13
63	NI.111813.131653	WG452687-01	Reference Sample		5	L13110630-01	11/18/13 13:16
64	NI.111813.131958	WG452687-06	Matrix Spike	40/100	5	L13110630-01	11/18/13 13:19
65	NI.111813.132303	WG452687-07	Matrix Spike Duplica	40/100	5	L13110630-01	11/18/13 13:23
66	NI.111813.132609	L13110793-01	OUTFALL 002 COMP	40/100	1		11/18/13 13:26
67	NI.111813.132914	L13110793-03	OUTFALL 003 COMP	40/100	1		11/18/13 13:29
68	NI.111813.133218	WG453185-01	Post Digestion Spike		1	L13110793-03	11/18/13 13:32

Page: 2 Approved: November 19, 2013

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	NI.111813.133523	WG453185-02	Serial Dilution		5	L13110793-03	11/18/13 13:35
70	NI.111813.133828	WG453185-02	Serial Dilution		25	L13110793-03	11/18/13 13:38
71	NI.111813.134135	WG453213-23	CCV		1		11/18/13 13:41
72	NI.111813.134440	WG453213-24	CCB		1		11/18/13 13:44
73	NI.111813.134746	L13110793-05	OUTFALL 004 COMP	40/100	1		11/18/13 13:47
74	NI.111813.135708	L13110793-08	OUTFALL 203 COMP	40/100	1		11/18/13 13:57
75	NI.111813.140014	L13110793-09	OUTFALL 103 COMP		1		11/18/13 14:00
76	NI.111813.140318	WG452687-03	Reference Sample		1	L13110793-13	11/18/13 14:03
77	NI.111813.140623	WG452687-10	Duplicate	40/100	1	L13110793-13	11/18/13 14:06
78	NI.111813.140929	L13110793-09	OUTFALL 103 COMP	40/100	1		11/18/13 14:09
79	NI.111813.141458	L13110793-01	OUTFALL 002 COMP	40/100	25		11/18/13 14:14
80	NI.111813.141803	L13110793-03	OUTFALL 003 COMP		25		11/18/13 14:18
81	NI.111813.142108	WG453185-01	Post Digestion Spike		25	L13110793-03	11/18/13 14:21
82	NI.111813.142413	WG453185-02	Serial Dilution		125	L13110793-03	11/18/13 14:24
83	NI.111813.142720	WG453213-25	CCV		1		11/18/13 14:27
84	NI.111813.143024	WG453213-26	QC Std 7		1		11/18/13 14:30
85	NI.111813.143856	WG453213-27	CCB		1		11/18/13 14:38
86	NI.111813.144201	L13110793-08	OUTFALL 203 COMP		1		11/18/13 14:42
87	NI.111813.144700	WG452687-02	Reference Sample		5	L13110630-02	11/18/13 14:47
88	NI.111813.145005	L13110630-03	GW2H13-MW-3-D	40/100	5		11/18/13 14:50
89	NI.111813.145421	L13110793-08	OUTFALL 203 COMP	40/100	5000		11/18/13 14:54
90	NI.111813.145726	WG452687-03	Reference Sample		1	L13110793-13	11/18/13 14:57
91	NI.111813.150030	WG452687-10	Duplicate	40/100	1	L13110793-13	11/18/13 15:00
92	NI.111813.150335	L13110793-03	OUTFALL 003 COMP		25		11/18/13 15:03
93	NI.111813.150640	WG453185-01	Post Digestion Spike		25	L13110793-03	11/18/13 15:06
94	NI.111813.151320	L13110793-03	OUTFALL 003 COMP	40/100	25		11/18/13 15:13
95	NI.111813.151633	WG453185-02	Serial Dilution		125	L13110793-03	11/18/13 15:16
96	NI.111813.151940	WG453213-28	CCV		1		11/18/13 15:19
97	NI.111813.152245	WG453213-29	CCB		1		11/18/13 15:22
98	NI.111813.152649	L13110630-04	GW2H13-MW-3-ZD	40/100	5		11/18/13 15:26
99	NI.111813.152954	WG452687-08	Matrix Spike	40/100	5	L13110630-02	11/18/13 15:29
100	NI.111813.153259	WG452687-09	Matrix Spike Duplica	40/100	5	L13110630-02	11/18/13 15:32
101	NI.111813.153604	L13110630-09	GW2H13-MW-3D	40/100	5		11/18/13 15:36
102	NI.111813.153908	L13110630-10	GW2H13-MW-3D-Z		5		11/18/13 15:39

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	NI.111813.154213	L13110630-11	GW2H13-MW-4	40/100	5		11/18/13 15:42
104	NI.111813.154518	L13110763-12	DWVF2		1		11/18/13 15:45
105	NI.111813.154823	L13110763-16	UWVF1		1		11/18/13 15:48
106	NI.111813.155127	L13110772-01	LRD01	40/100	1		11/18/13 15:51
107	NI.111813.155433	L13110772-02	LRD01	40/100	1		11/18/13 15:54
108	NI.111813.155739	WG453213-30	CCV		1		11/18/13 15:57
109	NI.111813.160044	WG453213-31	CCB		1		11/18/13 16:00
110	NI.111813.161249	WG452939-03	Method/Prep Blank	40/100	1		11/18/13 16:12
111	NI.111813.161554	WG452939-04	Laboratory Control S	40/100	1		11/18/13 16:15
112	NI.111813.161859	WG452939-01	Reference Sample		5	L13110630-38	11/18/13 16:18
113	NI.111813.162204	WG452939-05	Matrix Spike	40/100	5	L13110630-38	11/18/13 16:22
114	NI.111813.162508	WG452939-06	Matrix Spike Duplica	40/100	5	L13110630-38	11/18/13 16:25
115	NI.111813.162813	L13110874-01	MW-37102113-01	40/100	1		11/18/13 16:28
116	NI.111813.163146	L13110874-02	MW-44102113	40/100	1		11/18/13 16:31
117	NI.111813.163451	L13110874-03	MW-21102113	40/100	1		11/18/13 16:34
118	NI.111813.163756	WG453208-01	Post Digestion Spike		1	L13110874-03	11/18/13 16:37
119	NI.111813.164100	WG453208-02	Serial Dilution		5	L13110874-03	11/18/13 16:41
120	NI.111813.164407	WG453213-32	CCV		1		11/18/13 16:44
121	NI.111813.164712	WG453213-33	CCB		1		11/18/13 16:47
122	NI.111813.165018	L13110630-32	GW2H13-MW-44D-Z	40/100	5		11/18/13 16:50
123	NI.111813.165929	L13110630-33	GW2H13-MW-46	40/100	5		11/18/13 16:59
124	NI.111813.170234	L13110630-34	GW2H13-MW-46-Z	40/100	5		11/18/13 17:02
125	NI.111813.170539	L13110630-35	GW2H13-MW-46D	40/100	5		11/18/13 17:05
126	NI.111813.170844	L13110630-36	GW2H13-MW-46D-Z	40/100	5		11/18/13 17:08
127	NI.111813.171148	L13110630-37	GW2H13-MW-47	40/100	5		11/18/13 17:11
128	NI.111813.171453	L13110630-39	GW2H13-MW-57	40/100	5		11/18/13 17:14
129	NI.111813.171758	L13110767-01	NBD01	40/100	1		11/18/13 17:17
130	NI.111813.172102	L13110767-02	NBD01	40/100	1		11/18/13 17:21
131	NI.111813.172407	WG452939-02	Reference Sample		1	L13110767-06	11/18/13 17:24
132	NI.111813.172714	WG453213-34	CCV		1		11/18/13 17:27
133	NI.111813.173018	WG453213-35	CCB		1		11/18/13 17:30
134	NI.111813.173324	WG452939-07	Duplicate	40/100	1	L13110767-06	11/18/13 17:33
135	NI.111813.173629	L13110767-07	ALD02	40/100	1		11/18/13 17:36
136	NI.111813.173934	L13110767-08	ALD01	40/100	1		11/18/13 17:39

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	NI.111813.174238	L13110767-09	ALD01	40/100	1		11/18/13 17:42
138	NI.111813.174544	L13110767-10	NBD05	40/100	1		11/18/13 17:45
139	NI.111813.174849	L13110767-11	NBD05	40/100	1		11/18/13 17:48
140	NI.111813.175154	L13110465-01	MPL 29-1113-1	40/100	1		11/18/13 17:51
141	NI.111813.175458	L13110465-02	MPL 7-1113-1	40/100	1		11/18/13 17:54
142	NI.111813.175803	L13110465-03	MPL 5-1113-1	40/100	1		11/18/13 17:58
143	NI.111813.180108	L13110557-01	LF003-SW0312-02	40/100	1		11/18/13 18:01
144	NI.111813.180415	WG453213-36	CCV		1		11/18/13 18:04
145	NI.111813.180720	WG453213-37	CCB		1		11/18/13 18:07
146	NI.111813.181027	L13110557-02	LF003-SW0312-02DUP	40/100	1		11/18/13 18:10
147	NI.111813.181332	WG452456-02	Reference Sample		1	L13110584-01	11/18/13 18:13
148	NI.111813.181637	WG452456-08	Matrix Spike	40/100	1	L13110584-01	11/18/13 18:16
149	NI.111813.181941	WG452456-09	Matrix Spike Duplica	40/100	1	L13110584-01	11/18/13 18:19
150	NI.111813.182246	L13110600-01	DP005-SW0513-02	40/100	1		11/18/13 18:22
151	NI.111813.182550	L13110600-02	DP005-SW0514-02	40/100	1		11/18/13 18:25
152	NI.111813.182855	L13110601-01	LF003-MW0309-02	40/100	1		11/18/13 18:28
153	NI.111813.183200	L13110763-12	DWVF2	40/100	1		11/18/13 18:32
154	NI.111813.183504	L13110763-16	UWVF1	40/100	1		11/18/13 18:35
155	NI.111813.183809	L13110630-10	GW2H13-MW-3D-Z	40/100	5		11/18/13 18:38
156	NI.111813.184116	WG453213-38	CCV		1		11/18/13 18:41
157	NI.111813.184421	WG453213-39	CCB		1		11/18/13 18:44
158	NI.111813.184727	WG452353-02	Method/Prep Blank	.5/200	1		11/18/13 18:47
159	NI.111813.185031	WG452353-03	Laboratory Control S	.5/200	1		11/18/13 18:50
160	NI.111813.185336	L13110398-02	CS22SB017-01-01NS		100		11/18/13 18:53
161	NI.111813.185641	L13110398-03	CS22SB017-02-01NS	.504/200	100		11/18/13 18:56
162	NI.111813.185946	L13110398-04	CS22SB017-03-01NS	.512/200	100		11/18/13 18:59
163	NI.111813.190250	L13110398-05	CS22SB017-04-01NS	.505/200	100		11/18/13 19:02
164	NI.111813.190555	L13110398-06	CS22SB018-01-01NS	.506/200	100		11/18/13 19:05
165	NI.111813.190900	L13110398-07	CS22SB018-02-01NS	.503/200	100		11/18/13 19:09
166	NI.111813.191205	WG452574-03	Post Digestion Spike		100	L13110398-07	11/18/13 19:12
167	NI.111813.191510	WG452574-04	Serial Dilution		500	L13110398-07	11/18/13 19:15
168	NI.111813.191817	WG453213-40	CCV		1		11/18/13 19:18
169	NI.111813.192121	WG453213-41	CCB		1		11/18/13 19:21
170	NI.111813.192428	L13110398-08	CS22SB018-03-01NS	.512/200	100		11/18/13 19:24

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 111813A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 0
Maintenance Log ID: 48198

Calibration Std: STD61268 ICV Std: STD61269 Post Spike: STD60309
ICSA: STD61270 ICSAB: STD61271 Int. Std: RGT28155
CCV: STD60963 LLCCV: STD61224 Tuning Sol : STD61267
Stannous : Hydroxylamine :

Workgroups: 452303,453185,453208,452576,452574

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	NI.111813.192733	L13110398-09	CS22SB018-04-01NS	.504/200	100		11/18/13 19:27
172	NI.111813.193038	L13110398-10	CS22SB018-05-01NS	.513/200	100		11/18/13 19:30
173	NI.111813.193343	L13110452-01	CS22SB019-01-01NS	.507/200	100		11/18/13 19:33
174	NI.111813.193647	L13110452-02	CS22SB019-02-01NS	.511/200	100		11/18/13 19:36
175	NI.111813.193952	L13110452-03	CS22SB019-03-01NS	.503/200	100		11/18/13 19:39
176	NI.111813.194257	L13110452-04	CS22SB019-04-01NS	.523/200	100		11/18/13 19:42
177	NI.111813.194602	L13110452-05	CS22SB019-02-01FD	.505/200	100		11/18/13 19:46
178	NI.111813.194906	L13110452-06	CS22SB020-01-01NS		100	WG452353-01	11/18/13 19:49
179	NI.111813.195211	L13110452-07	CS22SB020-01-01NS	.5/200	100	WG452353-04	11/18/13 19:52
180	NI.111813.195518	WG453213-42	CCV		1		11/18/13 19:55
181	NI.111813.195823	WG453213-43	CCB		1		11/18/13 19:58
182	NI.111813.200129	L13110452-08	CS22SB020-01-01NS	.521/200	100	WG452353-05	11/18/13 20:01
183	NI.111813.200434	L13110452-09	CS22SB020-02-01NS	.517/200	100		11/18/13 20:04
184	NI.111813.200739	L13110452-11	CS22SB020-03-01NS	.511/200	100		11/18/13 20:07
185	NI.111813.201044	L13110452-12	CS22SB021-01-01NS	.52/200	100		11/18/13 20:10
186	NI.111813.201349	WG453213-44	CCV		1		11/18/13 20:13
187	NI.111813.201654	WG453213-45	CCB		1		11/18/13 20:16
188	NI.111813.202000	WG453213-46	Low Level Continuing Calibra		1		11/18/13 20:20

Comments

Seq.	Rerun	Dil.	Reason	Analytes
102			Sample probe was not in position,rerun.JYH	
104			Sample probe was not in position,rerun.JYH	
105			Sample probe was not in position,rerun.JYH	
115			Sequence 115-119: wrong sample labels.JYH	

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Microbac Laboratories Inc.

Data Checklist

Date: 18-NOV-2013
Analyst: JYH
Analyst: NA
Method: 6020/6020A/200.8
Instrument: ICP-MS2
Curve Workgroup: 453213
Runlog ID: 57150
Analytical Workgroups: 452303,453185,453208,452576,452574

Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	337,368,398,505,514,518,793,630
	874,465,557,584,600,601,452
Client Forms	X
Level X	
Level 3	398
Level 4	337,368,505,514,518,874,465,557,584
	600,601,452
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	SLP
Comments	

Primary Reviewer:
19-NOV-2013

Secondary Reviewer:
19-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-19-2013 15:01:01

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG452303

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/11/2013	6.1	180		11/18/13	13.1	180	
MPL 16-1113-1	02	11/05/13					11/11/2013	6	180		11/18/13	13	180	
MPL 26-1113-1	03	11/05/13					11/11/2013	5.9	180		11/18/13	12.9	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3207381
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: NI.111813.102049
Prep Date: 11/11/13 12:33
Analyzed Date: 11/18/13 10:20
Analyst: JYH

Work Group: WG452303
Blank Sample ID: WG452233-03
Instrument ID: ICP-MS2
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG452233-04	NI.111813.102354	11/18/13 10:23	01
MPL 30-1113-1	L13110337-01	NI.111813.113504	11/18/13 11:35	01
MPL 16-1113-1	L13110337-02	NI.111813.123804	11/18/13 12:38	01
MPL 26-1113-1	L13110337-03	NI.111813.124109	11/18/13 12:41	01
DUP	WG452233-07	NI.111813.124718	11/18/13 12:47	01

Report Name: BLANK_SUMMARY
PDF File ID: 3207382
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/11/13 12:33 Sample ID: WG452233-03
Instrument ID: ICP-MS2 Run Date: 11/18/13 10:20 Prep Method: 3015
File ID: NI.111813.102049 Analyst: JYH Method: 6020
Workgroup (AAB#): WG452303 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-18-NOV-13

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
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: 3207383
18-NOV-2013 13:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/18/2013 Sample ID: WG452233-04
Instrument ID: ICP-MS2 Run Time: 10:23 Prep Method: 3015
File ID: NI.111813.102354 Analyst: JYH Method: 6020
Workgroup (AAB#): WG452303 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60087 Cal ID: ICP-MS-18-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0622	99.5	80 - 120	
Arsenic, Total	0.0625	0.0632	101	80 - 120	
Barium, Total	0.0625	0.0636	102	80 - 120	
Cadmium, Total	0.0625	0.0627	100	80 - 120	
Chromium, Total	0.0625	0.0634	101	80 - 120	
Cobalt, Total	0.0625	0.0650	104	80 - 120	
Copper, Total	0.0625	0.0658	105	80 - 120	
Lead, Total	0.0625	0.0622	99.5	80 - 120	
Manganese, Total	0.0625	0.0647	104	80 - 120	
Nickel, Total	0.0625	0.0649	104	80 - 120	
Selenium, Total	0.0625	0.0637	102	80 - 120	
Silver, Total	0.0625	0.0660	106	80 - 120	
Thallium, Total	0.0625	0.0632	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3207384
Report generated: 11/18/2013 13:47

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

Loginnum: L13110337 Cal ID: ICP-MS2- Worknum: WG452303
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: WG452233-01 File ID: NI.111813.102659 Dil: 1 Matrix: WATER
Sample ID: WG452233-05 MS File ID: NI.111813.103004 Dil: 1 Units: mg/L
Sample ID: WG452233-06 MSD File ID: NI.111813.103309 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Dissolved	ND	0.0625	0.0634	101	0.0625	0.0646	103	1.90	80 - 120	20	
Arsenic, Dissolved	0.00441	0.0625	0.0794	120	0.0625	0.0822	124	3.49	80 - 120	20	*
Barium, Dissolved	0.0168	0.0625	0.0853	110	0.0625	0.0876	113	2.63	80 - 120	20	
Cadmium, Dissolved	ND	0.0625	0.0600	95.9	0.0625	0.0626	100	4.36	80 - 120	20	
Chromium, Dissolved	ND	0.0625	0.0651	104	0.0625	0.0666	107	2.36	80 - 120	20	
Cobalt, Dissolved	0.00341	0.0625	0.0681	104	0.0625	0.0703	107	3.21	80 - 120	20	
Copper, Dissolved	0.0111	0.0625	0.0677	90.5	0.0625	0.0676	90.4	0.147	80 - 120	20	
Lead, Dissolved	ND	0.0625	0.0631	101	0.0625	0.0646	103	2.32	80 - 120	20	
Nickel, Dissolved	0.0334	0.0625	0.0809	76.0	0.0625	0.0777	70.8	4.06	80 - 120	20	*
Selenium, Dissolved	0.0135	0.0625	0.0938	128	0.0625	0.0855	115	9.20	80 - 120	20	*
Silver, Dissolved	ND	0.0625	0.0561	89.8	0.0625	0.0596	95.4	6.09	80 - 120	20	
Thallium, Dissolved	0.000105	0.0625	0.0645	103	0.0625	0.0665	106	3.11	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: 3207385
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Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L13110337 Cal ID: ICP-MS2 - Worknum: WG452303
Instrument ID: ICP-MS2 Contract #: Method: 6020
Parent ID: WG452233-01 File ID: NI.111813.112242 Dil: 100 Matrix: WATER
Sample ID: WG452233-05 MS File ID: NI.111813.112547 Dil: 100 Units: mg/L
Sample ID: WG452233-06 MSD File ID: NI.111813.113904 Dil: 100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Manganese, Dissolved	10.6	0.0625	7.72	-4690	0.0625	5.88	-7630	27.0	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: 3207385
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13110337 **Worknum:** WG452303
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG452303-02 **File ID:** NI.111813.104413 **Dil:** 5 **Units:** ug/L
Sample: L13110368-01 **File ID:** NI.111813.103613 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	1.36	X	1.54	F	13.70	
Barium	6.52	X	6.51	X	0.15	
Cadmium	ND	U	ND	U		
Chromium	0.881	X	2.36	F	168.00	
Cobalt	0.537	X	ND	U		
Copper	6.26	X	9.15	X	46.10	
Lead	ND	U	ND	U		
Manganese	232		196		15.40	E
Nickel	13.8	X	14.3	X	3.60	
Selenium	10.0	X	10.2	X	1.44	
Silver	ND	U	ND	U		
Thallium	0.0710	F	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 3207379
11/18/2013 13:47

Microbac Laboratories Inc.
Serial Dilution Report

Login: L13110337 **Worknum:** WG452303
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG452303-02 **File ID:** NI.111813.120607 **Dil:** 250 **Units:** ug/L
Sample: L13110368-01 **File ID:** NI.111813.115957 **Dil:** 50

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	ND	U	ND	U		
Barium	ND	U	ND	U		
Cadmium	ND	U	ND	U		
Chromium	ND	U	ND	U		
Cobalt	ND	U	ND	U		
Copper	ND	U	ND	U		
Lead	ND	U	ND	U		
Manganese	193	X	178	F	8.14	
Nickel	ND	U	ND	U		
Selenium	11.6	F	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: 3207379
11/18/2013 13:47

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13110337 **Worknum:** WG452303
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG452303-01 **File ID:** NI.111813.103918 **Dil:** 1 **Units:** ug/L
Sample ID: L13110368-01 **File ID:** NI.111813.103613 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	50.3		0	U	50	100.6	75 - 125	
ARSENIC	55.1		1.36		50	107.6	75 - 125	
BARIUM	56.8		6.52		50	100.6	75 - 125	
CADMIUM	47.8		0	U	50	95.7	75 - 125	
CHROMIUM	57.3		0.881		50	112.8	75 - 125	
COBALT	55.3		0.537		50	109.5	75 - 125	
COPPER	53.0		6.26		50	93.5	75 - 125	
LEAD	52.5		0	U	50	105.1	75 - 125	
MANGANESE	298		232		50	132.7	75 - 125	N
NICKEL	61.7		13.8		50	95.8	75 - 125	
SELENIUM	74.4		10.0		50	128.8	75 - 125	N
SILVER	45.3		0	U	50	90.6	75 - 125	
THALLIUM	53.7		0.0710	F	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: 3207380
Report generated: 11/18/2013 13:47

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13110337 **Worknum:** WG452303
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG452303-01 **File ID:** NI.111813.120302 **Dil:** 50 **Units:** ug/L
Sample ID: L13110368-01 **File ID:** NI.111813.115957 **Dil:** 50 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	48.4		0	U	50	96.8	75 - 125	
ARSENIC	50.0		0	U	50	100.0	75 - 125	
BARIUM	50.2		0	U	50	100.5	75 - 125	
CADMIUM	49.4		0	U	50	98.8	75 - 125	
CHROMIUM	48.1		0	U	50	96.3	75 - 125	
COBALT	49.7		0	U	50	99.4	75 - 125	
COPPER	50.6		0	U	50	101.1	75 - 125	
LEAD	48.2		0	U	50	96.4	75 - 125	
MANGANESE	55.0		3.87		50	102.3	75 - 125	
NICKEL	49.7		0	U	50	99.5	75 - 125	
SELENIUM	50.1		0.232	F	50	99.7	75 - 125	
SILVER	51.4		0	U	50	102.9	75 - 125	
THALLIUM	49.8		0	U	50	99.6	75 - 125	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 3207380
Report generated: 11/18/2013 13:47

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	L13110337	Workgroup (AAB#):	WG452303
Analytical Method:	6020	Instrument ID:	ICP-MS2
ICAL Worknum:	WG453213	Initial Calibration Date:	18-NOV-2013 09:55

	WG453213-01		WG453213-02		WG453213-03		WG453213-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	6.20	.4	140	50	137000	100	266000	.999985	
ARSENIC	0	-287	.4	-240	50	74700	100	146000	.999999	
BARIUM	0	8.30	.4	117	50	94700	100	184000	.999996	
CADMIUM	0	1.30	.4	119	50	113000	100	220000	.999991	
CHROMIUM	0	4880	.4	5150	50	358000	100	685000	.999982	
COBALT	0	92.0	.4	622	50	484000	100	931000	.99997	
COPPER	0	152	.4	294	50	136000	100	262000	.999969	
LEAD	0	197	.4	514	50	293000	100	569000	.999997	
MANGANESE	0	1170	.4	2590	50	703000	100	1330000	.999893	
NICKEL	0	534	.4	702	50	143000	100	273000	.999958	
SELENIUM	0	-26.9	.4	-38.1	50	7600	100	15000	.999995	
SILVER	0	46.3	.4	440	50	347000	100	652000	.9998	
THALLIUM	0	2.00	.4	321	50	311000	100	599000	.999979	

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: 3207388
Report generated: 18-NOV-2013 13:47

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13110337
Instrument ID: ICP-MS2
File ID: NI.111813.100154
Workgroup (AAB#): WG452303
Matrix: WATER

Run Date: 11/18/2013
Run Time: 10:01
Analyst: JYH
Cal ID: ICP-MS2 - 18-NOV-13

Sample ID: WG453213-06
Method: 6020
Units: ug/L

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: 3207390
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-11
Instrument ID: ICP-MS2
Run Time: 10:17
Method: 6020
File ID: NI.111813.101721
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-13
Instrument ID: ICP-MS2
Run Time: 10:53
Method: 6020
File ID: NI.111813.105330
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337 Run Date: 11/18/2013 Sample ID: WG453213-15
Instrument ID: ICP-MS2 Run Time: 11:31 Method: 6020
File ID: NI.111813.113158 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG452303 Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-17
Instrument ID: ICP-MS2
Run Time: 12:12
Method: 6020
File ID: NI.111813.121218
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-19
Instrument ID: ICP-MS2
Run Time: 12:30
Method: 6020
File ID: NI.111813.123057
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-22
Instrument ID: ICP-MS2
Run Time: 12:53
Method: 6020
File ID: NI.111813.125330
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3207393
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)

(Alternate Source)

Login Number: L13110337 Run Date: 11/18/2013 Sample ID: WG453213-05

Instrument ID: ICP-MS2 Run Time: 09:58 Method: 6020

File ID: NI.111813.095847 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG452303 Cal ID: ICP-MS - 18-NOV-13

QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	50.7	101	90 - 110	
Arsenic		50	51.0	102	90 - 110	
Barium		50	50.7	101	90 - 110	
Cadmium		50	50.6	101	90 - 110	
Chromium		50	50.1	100	90 - 110	
Cobalt		50	50.4	101	90 - 110	
Copper		50	50.7	101	90 - 110	
Lead		50	50.7	101	90 - 110	
Manganese		50	50.9	102	90 - 110	
Nickel		50	50.7	101	90 - 110	
Selenium		50	51.5	103	90 - 110	
Silver		50	51.0	102	90 - 110	
Thallium		50	50.4	101	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 3207389
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-10
Instrument ID: ICP-MS2
Run Time: 10:14
Method: 6020
File ID: NI.111813.101417
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0499	mg/L	99.9	90 - 110		
Arsenic		0.0500	0.0501	mg/L	100	90 - 110		
Barium		0.0500	0.0502	mg/L	100	90 - 110		
Cadmium		0.0500	0.0503	mg/L	101	90 - 110		
Chromium		0.0500	0.0501	mg/L	100	90 - 110		
Cobalt		0.0500	0.0503	mg/L	101	90 - 110		
Copper		0.0500	0.0508	mg/L	102	90 - 110		
Lead		0.0500	0.0495	mg/L	99.1	90 - 110		
Manganese		0.0500	0.0509	mg/L	102	90 - 110		
Nickel		0.0500	0.0499	mg/L	99.8	90 - 110		
Selenium		0.0500	0.0509	mg/L	102	90 - 110		
Silver		0.0500	0.0512	mg/L	102	90 - 110		
Thallium		0.0500	0.0502	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3207392
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-12
Instrument ID: ICP-MS2
Run Time: 10:50
Method: 6020
File ID: NI.111813.105025
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0487	mg/L	97.4	90 - 110		
Arsenic		0.0500	0.0497	mg/L	99.4	90 - 110		
Barium		0.0500	0.0497	mg/L	99.5	90 - 110		
Cadmium		0.0500	0.0499	mg/L	99.9	90 - 110		
Chromium		0.0500	0.0496	mg/L	99.1	90 - 110		
Cobalt		0.0500	0.0508	mg/L	102	90 - 110		
Copper		0.0500	0.0507	mg/L	101	90 - 110		
Lead		0.0500	0.0487	mg/L	97.5	90 - 110		
Manganese		0.0500	0.0509	mg/L	102	90 - 110		
Nickel		0.0500	0.0503	mg/L	101	90 - 110		
Selenium		0.0500	0.0506	mg/L	101	90 - 110		
Silver		0.0500	0.0516	mg/L	103	90 - 110		
Thallium		0.0500	0.0498	mg/L	99.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-14
Instrument ID: ICP-MS2
Run Time: 11:28
Method: 6020
File ID: NI.111813.112853
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0481	mg/L	96.2	90 - 110		
Arsenic		0.0500	0.0496	mg/L	99.1	90 - 110		
Barium		0.0500	0.0502	mg/L	100	90 - 110		
Cadmium		0.0500	0.0503	mg/L	101	90 - 110		
Chromium		0.0500	0.0494	mg/L	98.8	90 - 110		
Cobalt		0.0500	0.0510	mg/L	102	90 - 110		
Copper		0.0500	0.0502	mg/L	100	90 - 110		
Lead		0.0500	0.0482	mg/L	96.4	90 - 110		
Manganese		0.0500	0.0517	mg/L	103	90 - 110		
Nickel		0.0500	0.0492	mg/L	98.4	90 - 110		
Selenium		0.0500	0.0508	mg/L	102	90 - 110		
Silver		0.0500	0.0518	mg/L	104	90 - 110		
Thallium		0.0500	0.0499	mg/L	99.8	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-16
Instrument ID: ICP-MS2
Run Time: 12:09
Method: 6020
File ID: NI.111813.120914
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0486	mg/L	97.2	90 - 110		
Arsenic		0.0500	0.0504	mg/L	101	90 - 110		
Barium		0.0500	0.0504	mg/L	101	90 - 110		
Cadmium		0.0500	0.0505	mg/L	101	90 - 110		
Chromium		0.0500	0.0483	mg/L	96.5	90 - 110		
Cobalt		0.0500	0.0504	mg/L	101	90 - 110		
Copper		0.0500	0.0503	mg/L	101	90 - 110		
Lead		0.0500	0.0482	mg/L	96.5	90 - 110		
Manganese		0.0500	0.0506	mg/L	101	90 - 110		
Nickel		0.0500	0.0500	mg/L	100	90 - 110		
Selenium		0.0500	0.0508	mg/L	102	90 - 110		
Silver		0.0500	0.0524	mg/L	105	90 - 110		
Thallium		0.0500	0.0500	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3207392
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337 Run Date: 11/18/2013 Sample ID: WG453213-18
Instrument ID: ICP-MS2 Run Time: 12:27 Method: 6020
File ID: NI.111813.122752 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG452303 Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0485	mg/L	97.0	90 - 110		
Arsenic		0.0500	0.0495	mg/L	99.0	90 - 110		
Barium		0.0500	0.0501	mg/L	100	90 - 110		
Cadmium		0.0500	0.0497	mg/L	99.5	90 - 110		
Chromium		0.0500	0.0480	mg/L	96.0	90 - 110		
Cobalt		0.0500	0.0497	mg/L	99.4	90 - 110		
Copper		0.0500	0.0500	mg/L	100	90 - 110		
Lead		0.0500	0.0486	mg/L	97.2	90 - 110		
Manganese		0.0500	0.0508	mg/L	102	90 - 110		
Nickel		0.0500	0.0491	mg/L	98.3	90 - 110		
Selenium		0.0500	0.0502	mg/L	100	90 - 110		
Silver		0.0500	0.0522	mg/L	104	90 - 110		
Thallium		0.0500	0.0503	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3207392
Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/18/2013
Sample ID: WG453213-21
Instrument ID: ICP-MS2
Run Time: 12:50
Method: 6020
File ID: NI.111813.125025
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG452303
Cal ID: ICP-MS - 18-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0493	mg/L	98.6	90 - 110		
Arsenic		0.0500	0.0503	mg/L	101	90 - 110		
Barium		0.0500	0.0502	mg/L	100	90 - 110		
Cadmium		0.0500	0.0503	mg/L	101	90 - 110		
Chromium		0.0500	0.0481	mg/L	96.3	90 - 110		
Cobalt		0.0500	0.0502	mg/L	100	90 - 110		
Copper		0.0500	0.0502	mg/L	100	90 - 110		
Lead		0.0500	0.0488	mg/L	97.6	90 - 110		
Manganese		0.0500	0.0509	mg/L	102	90 - 110		
Nickel		0.0500	0.0493	mg/L	98.7	90 - 110		
Selenium		0.0500	0.0506	mg/L	101	90 - 110		
Silver		0.0500	0.0525	mg/L	105	90 - 110		
Thallium		0.0500	0.0502	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Report generated 11/18/2013 13:47

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L13110337 **Workgroup (AAB#):** WG452303
Instrument ID: ICP-MS2 **Method:** 6020
Sol. A : WG453213-08 **File ID:** NI.111813.100805 **Units:** ug/L
Sol. AB : WG453213-09 **File ID:** NI.111813.101110 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0508	NS	100	96.4	96.4	
Arsenic	NS	-0.00750	NS	100	96.3	96.3	
Barium	NS	0.0510	NS	100	97.3	97.3	
Cadmium	NS	0.0330	NS	100	96.0	96.0	
Chromium	NS	0.0495	NS	100	93.3	93.3	
Cobalt	NS	0.0234	NS	100	94.3	94.3	
Copper	NS	0.268	NS	100	94.9	94.9	
Lead	NS	0.0270	NS	100	95.1	95.1	
Manganese	NS	0.0378	NS	100	94.8	94.8	
Nickel	NS	0.564	NS	100	94.7	94.7	
Selenium	NS	-0.0403	NS	100	95.1	95.1	
Silver	NS	-0.00120	NS	100	91.1	91.1	
Thallium	NS	0.0101	NS	100	95.6	95.6	

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: 3207391
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Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L13110337 **Analytical Method:** 6020
Analytical Workgroup: WG452303 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 18-NOV-2013 09:46

			BISMUTH	GERMANIUM	INDIUM	LITHIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L13110337-01	SAMP	18-NOV-2013 11:35	99.542	99.354	98.426	103.208
L13110337-02	SAMP	18-NOV-2013 12:38	100.305	101.029	101.167	106.158
L13110337-03	SAMP	18-NOV-2013 12:41	96.346	98.77	97.296	101.967
L13110368-01	SAMP	18-NOV-2013 10:36	80.111	87.835	83.396	**155.221**
L13110368-01	SAMP	18-NOV-2013 11:59	94.844	94.56	94.486	96.673
WG452233-01	REF	18-NOV-2013 10:26	77.876	85.841	81.593	**149.606**
WG452233-01	REF	18-NOV-2013 11:22	99.432	95.285	94.765	96.62
WG452233-02	REF	18-NOV-2013 12:44	98.518	99.801	99.552	105.511
WG452233-03	BLANK	18-NOV-2013 10:20	97.275	92.251	92.747	92.876
WG452233-04	LCS	18-NOV-2013 10:23	107	107.482	106.647	105.222
WG452233-05	MS	18-NOV-2013 10:30	86.544	91.819	88.224	**130.967**
WG452233-05	MS	18-NOV-2013 11:25	99.981	95.979	95.802	95.432
WG452233-06	MSD	18-NOV-2013 10:33	90.559	96.306	92.507	**120.504**
WG452233-06	MSD	18-NOV-2013 11:39	97.27	91.941	91.823	93.9
WG452233-07	DUP	18-NOV-2013 12:47	97.447	100.076	99.251	103.077
WG452303-01	PSPK	18-NOV-2013 10:39	81.615	91.838	86.321	**163.859**
WG452303-01	PSPK	18-NOV-2013 12:03	104.278	106.487	106.283	108.371
WG452303-02	SERIAL	18-NOV-2013 10:44	91.288	93.934	91.33	111.464
WG452303-02	SERIAL	18-NOV-2013 12:06	97.989	94.944	95.323	95.042
WG453213-05	ICV	18-NOV-2013 09:58	103.026	103.006	103.056	99.178
WG453213-06	ICB	18-NOV-2013 10:01	103.321	102.817	102.736	101.222
WG453213-07	LLICV	18-NOV-2013 10:05	103.285	102.653	103.427	100.67
WG453213-08	ICS	18-NOV-2013 10:08	97.882	96.849	95.56	94.321
WG453213-09	ICS	18-NOV-2013 10:11	103.112	105.034	102.558	101.96
WG453213-10	CCV	18-NOV-2013 10:14	104.579	103.898	103.966	101.977
WG453213-11	CCB	18-NOV-2013 10:17	104.793	103.578	104.357	103.138
WG453213-12	CCV	18-NOV-2013 10:50	105.911	105.71	105.209	106.511
WG453213-13	CCB	18-NOV-2013 10:53	106.517	103.855	105.04	105.005
WG453213-14	CCV	18-NOV-2013 11:28	103.116	101.944	101.87	103.043
WG453213-15	CCB	18-NOV-2013 11:31	104.098	101.595	102.438	104.723
WG453213-16	CCV	18-NOV-2013 12:09	103.753	102.866	103.697	103.269
WG453213-17	CCB	18-NOV-2013 12:12	105.178	102.488	103.466	102.588
WG453213-18	CCV	18-NOV-2013 12:27	101.874	102.348	103.007	104.496
WG453213-19	CCB	18-NOV-2013 12:30	103.964	102.808	105.08	103.662
WG453213-20	LLCCV	18-NOV-2013 12:34	104.1	104.004	105.214	108.299
WG453213-21	CCV	18-NOV-2013 12:50	102.446	101.457	102.609	103.092
WG453213-22	CCB	18-NOV-2013 12:53	101.316	98.629	100.317	100.193

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: 3207387
Report generated: 11/18/2013 13:47

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L13110337 **Date:** 07/25/2013
Insturment ID: ICP-MS2 **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Uranium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 3207386
Report generated: 11/18/2013 13:47

2.1.2.3 Raw Data

MassCal File Name

Mass Calibration File Name Default.tun
MassCal File Path C:\NexIONData\MassCal\Default.tun
Peak Search Window: 1.00

Sample Information

Sample Date/Time: Monday, November 18, 2013 08:45:21

Mass Calibration and Resolution

Analyte	E Mass	Meas Mass	Mass C DAC Val	Res DAC Value	Meas Peak WCustom Res
Li	7.016	6.975	1323	2025	0.708
Mg	23.985	23.975	4501	2021	0.681
Co	58.933	58.925	11685	2020	0.707
In	114.904	114.925	22869	2026	0.693
U	238.050	238.025	47457	2040	0.702

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	2.974
5.575	1.087
5.625	1.347
5.675	2.194
5.725	1.409
5.775	1.286
5.825	1.576
5.875	1.593
5.925	1.101
5.975	1.372
6.025	0.848
6.075	2.730
6.125	1.659
6.175	2.090
6.225	6.697
6.275	47.140
6.325	149.071
6.375	55.902
6.425	58.330
6.475	14.582
6.525	7.792
6.575	2.894
6.625	1.965
6.675	2.449
6.725	1.821
6.775	1.964
6.825	1.370

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Kym H. Rhoden

6.875	2.586
6.925	1.809
6.975	1.782
7.025	1.392
7.075	0.836
7.125	1.304
7.175	1.681
7.225	0.137
7.275	2.719
7.325	17.303
7.375	79.756
7.425	70.711
7.475	70.711
7.525	37.268
7.575	71.261
7.625	91.287
7.675	86.603
7.725	108.653
7.775	69.722
7.825	70.711
7.875	100.000
7.925	70.711
7.975	104.583
8.025	136.931
8.075	70.711
8.125	223.607
8.175	223.607
8.225	223.607
8.275	149.071
8.325	81.441
8.375	122.475
8.425	113.855
8.475	108.327
22.525	136.931
22.575	37.268
22.625	39.033
22.675	21.123
22.725	10.012
22.775	7.655
22.825	40.074
22.875	28.895
22.925	28.579
22.975	14.697
23.025	17.642
23.075	20.758
23.125	17.678
23.175	32.168

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23.225	38.662
23.275	16.458
23.325	21.066
23.375	15.247
23.425	31.553
23.475	18.006
23.525	2.566
23.575	0.909
23.625	1.044
23.675	1.152
23.725	0.964
23.775	0.989
23.825	0.788
23.875	0.850
23.925	0.762
23.975	0.898
24.025	0.883
24.075	1.016
24.125	0.930
24.175	1.296
24.225	1.518
24.275	1.118
24.325	11.777
24.375	86.715
24.425	34.468
24.475	5.974
24.525	5.036
24.575	1.647
24.625	1.298
24.675	1.630
24.725	1.399
24.775	1.734
24.825	1.379
24.875	1.239
24.925	0.322
24.975	0.962
25.025	0.874
25.075	1.041
25.125	1.244
25.175	1.369
25.225	1.203
25.275	10.323
25.325	59.265
25.375	66.069
25.425	46.566
25.475	12.192
57.525	9.085

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57.575	5.707
57.625	3.807
57.675	2.861
57.725	1.132
57.775	2.446
57.825	0.850
57.875	2.587
57.925	2.139
57.975	0.903
58.025	1.360
58.075	1.526
58.125	1.527
58.175	2.367
58.225	3.315
58.275	9.897
58.325	35.614
58.375	34.401
58.425	40.000
58.475	20.467
58.525	8.839
58.575	3.574
58.625	2.477
58.675	1.209
58.725	2.149
58.775	2.053
58.825	1.551
58.875	1.586
58.925	2.661
58.975	1.922
59.025	2.528
59.075	1.822
59.125	2.770
59.175	1.712
59.225	1.904
59.275	11.112
59.325	43.853
59.375	55.902
59.425	51.349
59.475	31.022
59.525	6.456
59.575	7.364
59.625	4.661
59.675	3.822
59.725	5.288
59.775	3.414
59.825	2.523
59.875	4.321

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59.925	2.980
59.975	1.470
60.025	4.642
60.075	3.213
60.125	2.182
60.175	3.400
60.225	4.366
60.275	17.000
60.325	46.481
60.375	162.980
60.425	70.711
60.475	94.786
113.525	6.201
113.575	5.581
113.625	7.027
113.675	2.408
113.725	2.438
113.775	3.232
113.825	2.981
113.875	2.254
113.925	2.548
113.975	1.862
114.025	2.036
114.075	2.318
114.125	1.076
114.175	4.091
114.225	6.809
114.275	16.037
114.325	74.689
114.375	15.798
114.425	13.572
114.475	5.678
114.525	2.850
114.575	1.193
114.625	1.893
114.675	0.913
114.725	1.176
114.775	1.161
114.825	1.069
114.875	1.005
114.925	1.681
114.975	1.524
115.025	1.606
115.075	1.288
115.125	0.784
115.175	1.833
115.225	2.502

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115.275	9.876
115.325	30.234
115.375	43.301
115.425	24.164
115.475	28.674
115.525	7.403
115.575	3.888
115.625	10.953
115.675	2.856
115.725	3.184
115.775	2.829
115.825	2.483
115.875	2.164
115.925	4.710
115.975	3.829
116.025	5.054
116.075	2.786
116.125	4.214
116.175	9.345
116.225	7.650
116.275	26.791
116.325	52.973
116.375	57.051
116.425	25.000
116.475	41.110
236.525	
236.575	48.290
236.625	50.990
236.675	15.811
236.725	31.419
236.775	33.333
236.825	41.110
236.875	40.406
236.925	48.922
236.975	40.745
237.025	31.181
237.075	29.881
237.125	41.211
237.175	32.401
237.225	26.503
237.275	60.028
237.325	52.705
237.375	24.786
237.425	47.574
237.475	34.583
237.525	26.394
237.575	15.674

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237.625	11.379
237.675	2.123
237.725	4.223
237.775	1.012
237.825	1.998
237.875	1.084
237.925	0.730
237.975	1.188
238.025	0.469
238.075	0.862
238.125	0.878
238.175	1.099
238.225	1.500
238.275	1.147
238.325	1.713
238.375	2.317
238.425	6.895
238.475	8.078
238.525	8.862
238.575	24.686
238.625	5.734
238.675	52.915
238.725	25.650
238.775	35.355
238.825	33.159
238.875	30.292
238.925	28.284
238.975	36.780
239.025	36.991
239.075	30.292
239.125	17.815
239.175	52.759
239.225	24.164
239.275	35.951
239.325	35.110
239.375	41.110
239.425	12.087
239.475	39.510

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Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, November 18, 2013 08:50:44
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\110713\Daily Performance Check.666
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 33
Current Dead Time (ns): 33

Torch Z position (mm): 0.50

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	7497.7	7497.721	32.868	0.4	Standard
	Mg	24.0	914415.3	914415.309	3904.680	0.4	Standard
	In	114.9	82093.3	82093.337	512.733	0.6	Standard
	U	238.1	52431.2	52431.232	398.701	0.8	Standard
⌈	CeO	155.9	1807.8	0.021	0.000	2.2	Standard
| >	Ce	139.9	84694.5	84694.523	257.764	0.3	Standard
⌊	Ce++	70.0	1267.9	0.015	0.000	0.9	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
0.94	Nebulizer Gas Flow STD/KED [NEB]
1.40	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-8.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
5.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.01	DRC Mode NEB
-7.00	DRC Mode QRO
-1.50	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.70	Cell Gas A
200.00	Axial Field Voltage
-17.00	KED Mode CRO
-12.00	KED Mode QRO
-5.00	KED Mode Cell Entrance Voltage
-23.00	KED Mode Cell Exit Voltage
3.00	KED Cell Gas A
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: Daily Performance Check
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Lynn H. Rhoden

SmartTune Wizard - Summary

```
Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Start Time: 11/18/2013 8:50:43 AM
End Time: 11/18/2013 8:52:47 AM

Daily Performance Check - [Passed]  Optimum value(s): N/A
        Obtained Intensity (Be 9.0122): 7497.72
        Obtained Intensity (Mg 23.985): 914415.31
        Obtained Intensity (In 114.904): 82093.34
        Obtained Intensity (U 238.05): 52431.23
        Obtained Intensity (Bkgd 220): 0.00
        Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1807.84 / 84694.52)
        Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.015 (=1267.85 / 84694.52)
```

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SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Optimization Status

Start Time: 11/18/2013 8:50:43 AM

Daily Performance Check
        Optimization Settings:
                Method: C:\NexIONData\Method\ESI Daily Performance.mth.
                Intensity Criterion: Be 9.0122 > 2000
                Intensity Criterion: Mg 23.985 > 15000
                Intensity Criterion: In 114.904 > 40000
                Intensity Criterion: U 238.05 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
                Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9.0122): 7497.72
                Obtained Intensity (Mg 23.985): 914415.31
                Obtained Intensity (In 114.904): 82093.34
                Obtained Intensity (U 238.05): 52431.23
                Obtained Intensity (Bkgd 220): 0.00
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1807.84 / 84694.52)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.015 (=1267.85 / 84694.52)
[Passed]  Optimum value(s): N/A

End Time: 11/18/2013 8:52:47 AM
```


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Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Monday, November 18, 2013 09:43:19
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	269614.4	0.3				ug/L		Standard
	Be	9	23.3	65.5				ug/L		Standard
	Al	27	1170.0	3.5				ug/L		Standard
	Sc	45	26873.8	1.3				ug/L		Standard
	Ti	47	25.0	35.6				ug/L		Standard
	V	51	1685.5	1.5				ug/L		Standard
	Cr	52	6097.6	1.7				ug/L		Standard
	Cr	53	193.3	14.2				ug/L		Standard
	Mn	55	1232.4	2.7				ug/L		Standard
	Co	59	105.7	6.1				ug/L		Standard
	Ni	60	556.0	1.0				ug/L		Standard
	Cu	65	124.3	5.1				ug/L		Standard
	Zn	66	195.7	2.8				ug/L		Standard
>	Ge	72	473313.2	1.2				ug/L		Standard
	As	75	-286.0	11.2				ug/L		Standard
	Se	82	-33.1	19.9				ug/L		Standard
	Se-1	77	85.7	8.8				ug/L		Standard
>	Ga	71	35.0	24.7				mg/L		Standard
	Rb	85	13.3	57.3				ug/L		Standard
	Y	89	439493.1	0.7				ug/L		Standard
>	Rh	103	5.0	0.0				ug/L		Standard
	Mo	98	9.6	6.4				ug/L		Standard
	Ag	107	53.0	5.0				ug/L		Standard
	Cd	111	1.0	101.1				mg/L		Standard
	Cd	114	31.9	88.0				ug/L		Standard
>	In	115	494305.4	0.9				ug/L		Standard
	Sn	118	53.3	25.3				ug/L		Standard
	Sb	123	6.8	16.6				ug/L		Standard
	Ba	135	10.7	5.4				ug/L		Standard
	Ce	140	10.0	50.0				ug/L		Standard
>	Tb	159	538218.8	1.4				ug/L		Standard
	Ho	165	8.3	91.7				ug/L		Standard
	Tl	203	1.3	43.3				ug/L		Standard
	Tl	205	3.3	173.2				ug/L		Standard
	Pb	206	79.7	8.9				ug/L		Standard
	Pb	207	73.0	4.1				ug/L		Standard
	Pb	208	190.0	6.9				ug/L		Standard
	U	238	0.0					ug/L		Standard
>	Bi	209	276439.2	0.9				ug/L		Standard

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	Na	23	1.7	173.2	mg/L	Standard
	Mg	24	36.7	7.9	mg/L	Standard
	K	39	3.3	173.2	mg/L	Standard
	Ca	43	43.3	17.6	mg/L	Standard
	Fe	54	262.4	4.3	mg/L	Standard
	Fe	57	65.0	13.3	mg/L	Standard
>	**Sc-1**	45	26873.8	1.3	mg/L	Standard
	Cl	35	141022.1	1.9	ug/L	Standard
	Kr	83	75.0	3.5	ug/L	Standard
	Br	81	2810.3	4.9	ug/L	Standard
	P	31	458975.8	3.7	ug/L	Standard
	S	34	103378.1	0.6	ug/L	Standard
	Sr	88	30.0	57.7	ug/L	Standard
	C	12	3.3	173.2	mg/L	Standard
	N	14	0.0		mg/L	Standard
	Hg	202	0.0		mg/L	Standard
	Dy	164	9.5	107.6	mg/L	Standard
	Ho-1	165	8.3	91.7	mg/L	Standard
	Er	166	10.0	100.0	mg/L	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Monday, November 18, 2013 09:46:25
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	263021.5	3.2				ug/L	269614	Standard
	Be	9	23.3	24.7				ug/L	23	Standard
	Al	27	1076.7	7.0				ug/L	1170	Standard
	Sc	45	27828.9	0.7				ug/L	26874	Standard
	Ti	47	22.0	4.5				ug/L	25	Standard
	V	51	1370.0	4.5				ug/L	1686	Standard
	Cr	52	4880.8	0.4				ug/L	6098	Standard
	Cr	53	181.7	20.3				ug/L	193	Standard
	Mn	55	1174.7	1.2				ug/L	1232	Standard
	Co	59	92.0	9.7				ug/L	106	Standard
	Ni	60	534.0	4.3				ug/L	556	Standard
	Cu	65	152.0	9.6				ug/L	124	Standard
	Zn	66	188.7	9.0				ug/L	196	Standard
>	Ge	72	478011.8	0.7				ug/L	473313	Standard
	As	75	-287.3	9.7				ug/L	-286	Standard
	Se	82	-26.9	11.6				ug/L	-33	Standard
	Se-1	77	78.3	11.9				ug/L	86	Standard
>	Ga	71	23.3	81.1				mg/L	35	Standard
	Rb	85	21.7	35.3				ug/L	13	Standard
	Y	89	443327.9	2.3				ug/L	439493	Standard
>	Rh	103	5.0	100.0				ug/L	5	Standard
	Mo	98	6.6	8.8				ug/L	10	Standard
	Ag	107	46.3	18.1				ug/L	53	Standard
	Cd	111	1.3	115.8				mg/L	1	Standard
	Cd	114	17.1	42.7				ug/L	32	Standard
>	In	115	493911.3	0.4				ug/L	494305	Standard
	Sn	118	47.7	27.4				ug/L	53	Standard
	Sb	123	6.2	19.1				ug/L	7	Standard
	Ba	135	8.3	25.0				ug/L	11	Standard
	Ce	140	8.3	91.7				ug/L	10	Standard
>	Tb	159	540879.9	1.7				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	2.0	0.0				ug/L	1	Standard
	Tl	205	5.0	173.2				ug/L	3	Standard
	Pb	206	93.0	12.4				ug/L	80	Standard
	Pb	207	60.3	18.8				ug/L	73	Standard
	Pb	208	196.7	2.3				ug/L	190	Standard
	U	238	0.3	173.2				ug/L	0	Standard
>	Bi	209	279567.5	1.1				ug/L	276439	Standard

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	Na	23	0.0		mg/L	2	Standard
	Mg	24	40.0	12.5	mg/L	37	Standard
	K	39	0.0		mg/L	3	Standard
	Ca	43	28.3	53.9	mg/L	43	Standard
	Fe	54	261.2	6.8	mg/L	262	Standard
	Fe	57	51.7	24.4	mg/L	65	Standard
>	**Sc-1**	45	27828.9	0.7	mg/L	26874	Standard
	Cl	35	141838.9	1.3	ug/L	141022	Standard
	Kr	83	68.0	11.1	ug/L	75	Standard
	Br	81	3090.3	2.3	ug/L	2810	Standard
	P	31	456192.7	4.4	ug/L	458976	Standard
	S	34	103057.7	1.1	ug/L	103378	Standard
	Sr	88	30.0	44.1	ug/L	30	Standard
	C	12	3.3	173.2	mg/L	3	Standard
	N	14	0.0		mg/L	0	Standard
	Hg	202	0.0		mg/L	0	Standard
	Dy	164	6.3	86.9	mg/L	10	Standard
	Ho-1	165	1.7	173.2	mg/L	8	Standard
	Er	166	6.7	173.2	mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 1
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Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Monday, November 18, 2013 09:49:29
Number of Replicates: 3
Autosampler Position: 2
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	275038.0	2.2				ug/L	269614	Standard
	Be	9	200.0	32.5				ug/L	23	Standard
	Al	27	12221.6	0.3				ug/L	1170	Standard
	Sc	45	27391.4	2.4				ug/L	26874	Standard
	Ti	47	51.0	8.5				ug/L	25	Standard
	V	51	1664.0	3.7				ug/L	1686	Standard
	Cr	52	5149.5	2.0				ug/L	6098	Standard
	Cr	53	241.7	20.7				ug/L	193	Standard
	Mn	55	2588.6	2.6				ug/L	1232	Standard
	Co	59	621.7	4.8				ug/L	106	Standard
	Ni	60	702.0	0.9				ug/L	556	Standard
	Cu	65	294.0	0.9				ug/L	124	Standard
	Zn	66	362.0	3.4				ug/L	196	Standard
>	Ge	72	484398.7	1.2				ug/L	473313	Standard
	As	75	-240.0	14.8				ug/L	-286	Standard
	Se	82	-38.1	29.7				ug/L	-33	Standard
	Se-1	77	89.3	12.0				ug/L	86	Standard
>	Ga	71	25.0	20.0				mg/L	35	Standard
	Rb	85	20.0	0.0				ug/L	13	Standard
	Y	89	455488.2	1.8				ug/L	439493	Standard
>	Rh	103	3.3	86.6				ug/L	5	Standard
	Mo	98	460.5	4.4				ug/L	10	Standard
	Ag	107	439.7	2.9				ug/L	53	Standard
	Cd	111	118.8	3.2				mg/L	1	Standard
	Cd	114	337.8	10.6				ug/L	32	Standard
>	In	115	506419.1	0.1				ug/L	494305	Standard
	Sn	118	142.7	6.3				ug/L	53	Standard
	Sb	123	139.9	4.5				ug/L	7	Standard
	Ba	135	117.3	17.1				ug/L	11	Standard
	Ce	140	15.0	57.7				ug/L	10	Standard
>	Tb	159	548880.7	1.9				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	320.7	8.4				ug/L	1	Standard
	Tl	205	385.0	19.2				ug/L	3	Standard
	Pb	206	242.3	5.6				ug/L	80	Standard
	Pb	207	195.0	8.1				ug/L	73	Standard
	Pb	208	514.0	1.9				ug/L	190	Standard
	U	238	196.7	11.4				ug/L	0	Standard
>	Bi	209	283612.4	0.2				ug/L	276439	Standard

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	Na	23	1.7	173.2	mg/L	2	Standard
	Mg	24	36.7	39.4	mg/L	37	Standard
	K	39	6.7	114.6	mg/L	3	Standard
	Ca	43	36.7	67.3	mg/L	43	Standard
	Fe	54	275.7	8.2	mg/L	262	Standard
	Fe	57	60.0	28.9	mg/L	65	Standard
>	**Sc-1**	45	27391.4	2.4	mg/L	26874	Standard
	Cl	35	140758.2	1.2	ug/L	141022	Standard
	Kr	83	81.3	13.6	ug/L	75	Standard
	Br	81	3333.7	8.0	ug/L	2810	Standard
	P	31	453327.2	2.2	ug/L	458976	Standard
	S	34	103819.6	2.0	ug/L	103378	Standard
	Sr	88	25.0	20.0	ug/L	30	Standard
	C	12	3.3	173.2	mg/L	3	Standard
	N	14	0.0		mg/L	0	Standard
	Hg	202	3.3	173.2	mg/L	0	Standard
	Dy	164	9.7	100.8	mg/L	10	Standard
	Ho-1	165	1.7	173.2	mg/L	8	Standard
	Er	166	6.7	86.6	mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Monday, November 18, 2013 09:52:35
Number of Replicates: 3
Autosampler Position: 3
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	270234.3	2.2				ug/L	269614	Standard
	Be	9	146329.9	0.9	**50.0000**	0.963	1.9	ug/L	23	Standard
	Al	27	10548066.7	1.1	**50.0000**	1.032	2.1	ug/L	1170	Standard
	Sc	45	27319.6	1.7				ug/L	26874	Standard
	Ti	47	26205.3	2.0	**100.0000**	1.519	1.5	ug/L	25	Standard
	V	51	365561.0	1.0	**50.0000**	0.790	1.6	ug/L	1686	Standard
	Cr	52	357670.1	2.3	**50.0000**	1.048	2.1	ug/L	6098	Standard
	Cr	53	65123.0	2.1	**50.0000**	0.972	1.9	ug/L	193	Standard
	Mn	55	703193.3	1.2	**50.0000**	0.720	1.4	ug/L	1232	Standard
	Co	59	484183.0	0.8	**50.0000**	0.575	1.1	ug/L	106	Standard
	Ni	60	142770.3	1.9	**50.0000**	1.023	2.0	ug/L	556	Standard
	Cu	65	136307.7	0.6	**50.0000**	0.278	0.6	ug/L	124	Standard
	Zn	66	74613.6	1.7	**50.0000**	0.800	1.6	ug/L	196	Standard
>	Ge	72	489228.3	0.9				ug/L	473313	Standard
	As	75	74659.7	1.5	**50.0000**	0.908	1.8	ug/L	-286	Standard
	Se	82	7604.9	1.7	**50.0000**	0.997	2.0	ug/L	-33	Standard
	Se-1	77	5684.4	1.2	**50.0000**	0.894	1.8	ug/L	86	Standard
>	Ga	71	58.3	34.6				mg/L	35	Standard
	Rb	85	1173.4	5.4				ug/L	13	Standard
	Y	89	448825.8	0.6				ug/L	439493	Standard
>	Rh	103	38.3	49.4				ug/L	5	Standard
	Mo	98	402585.9	1.0	**100.0000**	1.420	1.4	ug/L	10	Standard
	Ag	107	347059.0	0.7	**50.0000**	0.502	1.0	ug/L	53	Standard
	Cd	111	113380.5	1.6	**50.0000**	0.849	1.7	mg/L	1	Standard
	Cd	114	289635.8	1.0	**50.0000**	0.708	1.4	ug/L	32	Standard
>	In	115	509156.9	0.6				ug/L	494305	Standard
	Sn	118	68385.4	2.2	**50.0000**	1.290	2.6	ug/L	53	Standard
	Sb	123	137304.8	0.8	**50.0000**	0.535	1.1	ug/L	7	Standard
	Ba	135	94659.8	0.9	**50.0000**	0.487	1.0	ug/L	11	Standard
	Ce	140	50.0	20.0				ug/L	10	Standard
>	Tb	159	555799.0	0.4				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	311133.8	0.4	**50.0000**	0.312	0.6	ug/L	1	Standard
	Tl	205	382062.1	0.5	**50.0000**	0.176	0.4	ug/L	3	Standard
	Pb	206	133016.0	0.4	**50.0000**	0.301	0.6	ug/L	80	Standard
	Pb	207	119655.0	0.7	**50.0000**	0.466	0.9	ug/L	73	Standard
	Pb	208	293195.2	0.6	**50.0000**	0.344	0.7	ug/L	190	Standard
	U	238	189950.3	1.0	**50.0000**	0.596	1.2	ug/L	0	Standard
>	Bi	209	285077.2	0.2				ug/L	276439	Standard

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	Na	23	25.0	20.0	**5.0000**	0.994	19.9	mg/L	2	Standard
	Mg	24	4992.5	1.9	**5.0000**	0.090	1.8	mg/L	37	Standard
	K	39	88.3	19.9	**5.0000**	0.998	20.0	mg/L	3	Standard
	Ca	43	56.7	44.4	**5.0000**	6.040	120.8	mg/L	43	Standard
	Fe	54	10810.1	3.2	**5.0000**	0.236	4.7	mg/L	262	Standard
	Fe	57	3048.6	3.9	**5.0000**	0.207	4.1	mg/L	65	Standard
>	**Sc-1**	45	27319.6	1.7				mg/L	26874	Standard
	Cl	35	141727.1	0.4				ug/L	141022	Standard
	Kr	83	90.7	5.2				ug/L	75	Standard
	Br	81	3163.7	5.1				ug/L	2810	Standard
	P	31	485838.2	2.7				ug/L	458976	Standard
	S	34	120912.2	0.6				ug/L	103378	Standard
	Sr	88	31.7	39.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	2.7	221.0				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	8	Standard
	Er	166	13.3	114.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: Standard 4
Sample Date/Time: Monday, November 18, 2013 09:55:40
Number of Replicates: 3
Autosampler Position: 4
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	259985.7	2.3				ug/L	269614	Standard
	Be	9	290828.4	1.6	**101.6242**	1.735	1.7	ug/L	23	Standard
	Al	27	20155480.5	1.8	**99.6468**	0.469	0.5	ug/L	1170	Standard
	Sc	45	26725.2	1.5				ug/L	26874	Standard
	Ti	47	50064.6	0.1	**197.8870**	1.342	0.7	ug/L	25	Standard
	V	51	704099.8	2.2	**99.4106**	2.327	2.3	ug/L	1686	Standard
	Cr	52	685475.3	3.4	**99.4086**	3.225	3.2	ug/L	6098	Standard
	Cr	53	124996.8	0.2	**99.2185**	0.476	0.5	ug/L	193	Standard
	Mn	55	1331577.2	1.7	**98.5387**	1.720	1.7	ug/L	1232	Standard
	Co	59	930613.7	3.1	**99.2216**	2.874	2.9	ug/L	106	Standard
	Ni	60	273144.5	1.7	**99.0817**	1.274	1.3	ug/L	556	Standard
	Cu	65	261819.9	1.0	**99.2135**	0.524	0.5	ug/L	124	Standard
	Zn	66	143851.3	0.5	**99.4683**	0.277	0.3	ug/L	196	Standard
>	**Ge**	72	477565.7	0.6				ug/L	473313	Standard
	As	75	145574.7	1.8	**99.8273**	1.555	1.6	ug/L	-286	Standard
	Se	82	14991.0	1.3	**100.3257**	1.121	1.1	ug/L	-33	Standard
	Se-1	77	11017.7	0.1	**100.0083**	0.545	0.5	ug/L	86	Standard
>	**Ga**	71	106.7	31.2				mg/L	35	Standard
	Rb	85	2210.2	4.3				ug/L	13	Standard
	Y	89	435741.6	1.9				ug/L	439493	Standard
>	**Rh**	103	40.0	25.0				ug/L	5	Standard
	Mo	98	785048.6	2.3	**199.6886**	5.479	2.7	ug/L	10	Standard
	Ag	107	652195.3	1.6	**98.0005**	2.222	2.3	ug/L	53	Standard
	Cd	111	219878.1	1.1	**99.5686**	2.049	2.1	mg/L	1	Standard
	Cd	114	551289.9	1.3	**98.6367**	2.161	2.2	ug/L	32	Standard
>	**In**	115	498047.6	1.0				ug/L	494305	Standard
	Sn	118	130113.2	2.5	**98.6417**	3.303	3.3	ug/L	53	Standard
	Sb	123	265721.6	0.9	**99.4615**	1.511	1.5	ug/L	7	Standard
	Ba	135	184063.8	1.5	**99.7051**	1.919	1.9	ug/L	11	Standard
	Ce	140	70.0	14.3				ug/L	10	Standard
>	**Tb**	159	546812.7	1.8				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	599261.6	0.1	**99.3534**	0.391	0.4	ug/L	1	Standard
	Tl	205	744090.2	0.5	**99.9091**	0.966	1.0	ug/L	3	Standard
	Pb	206	257990.3	0.7	**99.7223**	0.962	1.0	ug/L	80	Standard
	Pb	207	232763.0	0.8	**99.8658**	1.242	1.2	ug/L	73	Standard
	Pb	208	568931.7	1.4	**99.7456**	1.756	1.8	ug/L	190	Standard
	U	238	373160.1	1.6	**100.3434**	2.049	2.0	ug/L	0	Standard
>	**Bi**	209	278118.7	0.5				ug/L	276439	Standard

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	Na	23	33.3	8.7	**8.2074**	0.741	9.0	mg/L	2	Standard
	Mg	24	9819.8	0.8	**10.0427**	0.101	1.0	mg/L	37	Standard
	K	39	185.0	20.4	**10.5491**	2.062	19.5	mg/L	3	Standard
	Ca	43	65.0	27.7	**8.5281**	4.931	57.8	mg/L	43	Standard
	Fe	54	20499.7	2.8	**9.9012**	0.142	1.4	mg/L	262	Standard
	Fe	57	5699.4	4.9	**9.8203**	0.636	6.5	mg/L	65	Standard
>	**Sc-1**	45	26725.2	1.5				mg/L	26874	Standard
	Cl	35	136606.3	3.8				ug/L	141022	Standard
	Kr	83	84.0	4.3				ug/L	75	Standard
	Br	81	2906.9	10.0				ug/L	2810	Standard
	P	31	475983.5	4.0				ug/L	458976	Standard
	S	34	112548.7	4.6				ug/L	103378	Standard
	Sr	88	30.0	16.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	-0.5	173.2				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	8	Standard
	Er	166	10.0	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Na	23	Correlation coefficient < 0.998
Corr. Coef.	Ca	43	Correlation coefficient < 0.998

Sample ID: Standard 4
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Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Monday, November 18, 2013 09:58:47
Number of Replicates: 3
Autosampler Position: 201
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	267397.3	0.8				ug/L	269614	Standard
	Be	9	150103.2	0.4	**50.9821**	0.583	1.1	ug/L	23	Standard
	Al	27	10488424.7	0.4	**50.4120**	0.499	1.0	ug/L	1170	Standard
	Sc	45	27344.7	1.0				ug/L	26874	Standard
	Ti	47	25897.5	2.0	**100.2102**	1.057	1.1	ug/L	25	Standard
	V	51	362288.8	2.4	**50.0080**	0.781	1.6	ug/L	1686	Standard
	Cr	52	355266.7	2.4	**50.1237**	0.740	1.5	ug/L	6098	Standard
	Cr	53	64853.5	1.3	**50.3548**	0.202	0.4	ug/L	193	Standard
	Mn	55	703342.3	1.6	**50.9136**	0.318	0.6	ug/L	1232	Standard
	Co	59	482902.0	2.5	**50.4226**	0.741	1.5	ug/L	106	Standard
	Ni	60	142913.5	0.3	**50.6858**	0.349	0.7	ug/L	556	Standard
	Cu	65	136560.7	1.6	**50.6587**	0.302	0.6	ug/L	124	Standard
	Zn	66	75912.4	0.9	**51.3227**	0.432	0.8	ug/L	196	Standard
>	Ge	72	487542.6	1.0				ug/L	473313	Standard
	As	75	75721.4	1.7	**50.9658**	0.432	0.8	ug/L	-286	Standard
	Se	82	7832.9	2.3	**51.4911**	0.753	1.5	ug/L	-33	Standard
	Se-1	77	5673.1	1.3	**50.0659**	0.501	1.0	ug/L	86	Standard
>	Ga	71	66.7	30.3				mg/L	35	Standard
	Rb	85	1215.0	5.4				ug/L	13	Standard
	Y	89	444111.7	0.9				ug/L	439493	Standard
>	Rh	103	25.0	52.9				ug/L	5	Standard
	Mo	98	404663.2	2.0	**100.6127**	1.483	1.5	ug/L	10	Standard
	Ag	107	347041.9	0.7	**50.9711**	0.267	0.5	ug/L	53	Standard
	Cd	111	114341.4	1.4	**50.6138**	0.533	1.1	mg/L	1	Standard
	Cd	114	292502.4	1.8	**51.1536**	0.663	1.3	ug/L	32	Standard
>	In	115	509411.2	0.6				ug/L	494305	Standard
	Sn	118	68958.3	1.4	**51.0786**	0.956	1.9	ug/L	53	Standard
	Sb	123	138608.9	1.0	**50.7200**	0.411	0.8	ug/L	7	Standard
	Ba	135	95751.3	0.4	**50.7010**	0.361	0.7	ug/L	11	Standard
	Ce	140	46.7	16.4				ug/L	10	Standard
>	Tb	159	552371.1	1.2				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	311104.9	0.7	**50.3664**	0.310	0.6	ug/L	1	Standard
	Tl	205	394450.2	0.4	**51.7178**	0.234	0.5	ug/L	3	Standard
	Pb	206	134038.7	1.5	**50.5731**	0.810	1.6	ug/L	80	Standard
	Pb	207	120808.4	0.8	**50.5974**	0.357	0.7	ug/L	73	Standard
	Pb	208	296472.1	0.6	**50.7361**	0.280	0.6	ug/L	190	Standard
	U	238	190614.6	0.8	**50.0493**	0.386	0.8	ug/L	0	Standard
>	Bi	209	284804.8	0.1				ug/L	276439	Standard

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	Na	23	16.7	75.5	**3.8117**	3.237	84.9	mg/L	2	Standard
	Mg	24	5200.9	2.8	**5.1839**	0.199	3.8	mg/L	37	Standard
	K	39	83.3	9.2	**4.4376**	0.399	9.0	mg/L	3	Standard
	Ca	43	45.0	22.2	**2.4824**	2.962	119.3	mg/L	43	Standard
	Fe	54	10890.2	2.1	**5.0811**	0.135	2.6	mg/L	262	Standard
	Fe	57	2992.0	4.6	**4.9875**	0.209	4.2	mg/L	65	Standard
>	**Sc-1**	45	27344.7	1.0				mg/L	26874	Standard
	Cl	35	143060.3	1.2				ug/L	141022	Standard
	Kr	83	84.0	8.6				ug/L	75	Standard
	Br	81	2947.0	9.0				ug/L	2810	Standard
	P	31	483770.7	1.1				ug/L	458976	Standard
	S	34	117216.7	1.3				ug/L	103378	Standard
	Sr	88	26.7	10.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	-0.5	100.0				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	8	Standard
	Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		99.178	
	Be	9	101.964		
	Al	27	100.824		
	Sc	45			
	Ti	47	100.210		
	V	51	100.016		
	Cr	52	100.247		
	Cr	53			
	Mn	55	101.827		
	Co	59	100.845		
	Ni	60	101.372		
	Cu	65	101.317		
	Zn	66	102.645		
>	Ge	72		103.006	
	As	75	101.932		
	Se	82	102.982		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	100.613	
|	Ag	107	101.942	
|	Cd	111	101.228	
|	Cd	114		
|>	In	115		103.056
|	Sn	118	102.157	
|	Sb	123	101.440	
⌊	Ba	135	101.402	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.733	
|	Tl	205		
|	Pb	206	101.146	
|	Pb	207	101.195	
|	Pb	208	101.472	
|	U	238	100.099	
⌊>	Bi	209		103.026
⌈	Na	23	76.234	
|	Mg	24	103.678	
|	K	39	88.752	
|	Ca	43	49.648	
|	Fe	54	101.622	
|	Fe	57	99.751	
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	
QC Std 1	K	39	
QC Std 1	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Monday, November 18, 2013 10:01:54
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	272907.7	1.1				ug/L	269614	Standard
	Be	9	90.0	34.7	**0.0138**	0.010	73.2	ug/L	23	Standard
	Al	27	1708.4	35.6	**0.0009**	0.003	309.9	ug/L	1170	Standard
	Sc	45	27296.2	1.8				ug/L	26874	Standard
	Ti	47	26.7	21.3	**0.0047**	0.022	472.3	ug/L	25	Standard
	V	51	1304.2	9.6	**-0.0009**	0.018	1982.5	ug/L	1686	Standard
	Cr	52	4473.3	2.0	**-0.0504**	0.015	30.0	ug/L	6098	Standard
	Cr	53	193.3	8.3	**0.0117**	0.013	113.7	ug/L	193	Standard
	Mn	55	1199.7	18.8	**-0.0519**	0.017	32.3	ug/L	1232	Standard
	Co	59	206.3	65.8	**0.0063**	0.014	228.9	ug/L	106	Standard
	Ni	60	507.0	6.9	**-0.0207**	0.013	64.7	ug/L	556	Standard
	Cu	65	162.3	3.8	**0.0005**	0.002	402.3	ug/L	124	Standard
	Zn	66	175.7	5.5	**-0.0778**	0.006	7.6	ug/L	196	Standard
>	**Ge**	72	486647.9	0.5				ug/L	473313	Standard
	As	75	-261.1	16.9	**0.0366**	0.029	78.3	ug/L	-286	Standard
	Se	82	-34.9	25.9	**0.0723**	0.058	80.0	ug/L	-33	Standard
	Se-1	77	91.3	23.0	**0.0639**	0.185	289.2	ug/L	86	Standard
>	**Ga**	71	31.7	24.1				mg/L	35	Standard
	Rb	85	18.3	41.7				ug/L	13	Standard
	Y	89	444301.1	2.5				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	181.9	80.5	**0.0301**	0.036	120.7	ug/L	10	Standard
	Ag	107	152.3	92.0	**0.0074**	0.021	277.4	ug/L	53	Standard
	Cd	111	6.5	46.7	**0.0000**	0.001	16808.9	mg/L	1	Standard
	Cd	114	14.7	70.6	**-0.0069**	0.002	26.4	ug/L	32	Standard
>	**In**	115	507827.7	1.3				ug/L	494305	Standard
	Sn	118	72.7	13.8	**-0.0023**	0.008	358.6	ug/L	53	Standard
	Sb	123	346.6	27.1	**0.1260**	0.036	28.5	ug/L	7	Standard
	Ba	135	12.0	50.0	**-0.0062**	0.003	51.1	ug/L	11	Standard
	Ce	140	13.3	21.7				ug/L	10	Standard
>	**Tb**	159	547203.2	1.0				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	52.0	95.0	**0.0063**	0.008	128.3	ug/L	1	Standard
	Tl	205	63.3	106.0	**0.0076**	0.009	116.4	ug/L	3	Standard
	Pb	206	118.0	38.1	**0.0026**	0.017	664.2	ug/L	80	Standard
	Pb	207	109.3	49.1	**0.0137**	0.023	166.6	ug/L	73	Standard
	Pb	208	231.0	12.9	**0.0011**	0.005	501.4	ug/L	190	Standard
	U	238	22.0	46.1	**0.0039**	0.003	69.2	ug/L	0	Standard
>	**Bi**	209	285620.9	1.2				ug/L	276439	Standard

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	Na	23	3.3	173.2	**0.4066**	1.445	355.4	mg/L	2	Standard
	Mg	24	35.0	51.5	**0.0033**	0.018	550.9	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2853**	0.166	58.2	mg/L	3	Standard
	Ca	43	48.3	6.0	**3.4301**	0.584	17.0	mg/L	43	Standard
	Fe	54	281.3	11.6	**0.0082**	0.014	171.6	mg/L	262	Standard
	Fe	57	66.7	18.9	**0.0165**	0.020	118.6	mg/L	65	Standard
>	**Sc-1**	45	27296.2	1.8				mg/L	26874	Standard
	Cl	35	142266.9	1.5				ug/L	141022	Standard
	Kr	83	76.0	11.4				ug/L	75	Standard
	Br	81	3303.7	4.3				ug/L	2810	Standard
	P	31	489915.2	1.1				ug/L	458976	Standard
	S	34	113555.6	1.2				ug/L	103378	Standard
	Sr	88	36.7	7.9				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	6.5	93.0				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.222	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		102.817	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	102.736
	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	103.321
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Na	23	
QC Std 2	K	39	
QC Std 2	Ca	43	

Sample ID: QC Std 2
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Method 6020 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Monday, November 18, 2013 10:05:00
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	271421.4	1.2				ug/L	269614	Standard
	Be	9	676.7	3.7	**0.2104**	0.009	4.2	ug/L	23	Standard
	Al	27	1190.0	1.5	**-0.0015**	0.000	9.3	ug/L	1170	Standard
	Sc	45	27358.0	1.9				ug/L	26874	Standard
	Ti	47	19.0	19.0	**-0.0249**	0.014	55.9	ug/L	25	Standard
	V	51	3953.3	2.8	**0.3675**	0.012	3.4	ug/L	1686	Standard
	Cr	52	10040.7	1.4	**0.7497**	0.018	2.4	ug/L	6098	Standard
	Cr	53	1148.4	3.5	**0.7580**	0.029	3.8	ug/L	193	Standard
	Mn	55	8116.8	1.0	**0.4521**	0.006	1.3	ug/L	1232	Standard
	Co	59	3796.8	3.1	**0.3826**	0.010	2.7	ug/L	106	Standard
	Ni	60	4922.8	1.8	**1.5573**	0.036	2.3	ug/L	556	Standard
	Cu	65	2294.8	0.8	**0.7954**	0.006	0.8	ug/L	124	Standard
	Zn	66	9988.0	2.0	**6.6044**	0.128	1.9	ug/L	196	Standard
>	**Ge**	72	485871.9	0.5				ug/L	473313	Standard
	As	75	270.2	5.0	**0.3936**	0.008	2.1	ug/L	-286	Standard
	Se	82	24.9	28.4	**0.4642**	0.047	10.0	ug/L	-33	Standard
	Se-1	77	129.7	3.1	**0.4104**	0.039	9.5	ug/L	86	Standard
>	**Ga**	71	18.3	15.7				mg/L	35	Standard
	Rb	85	18.3	103.3				ug/L	13	Standard
	Y	89	452399.1	2.6				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	45.9	33.7	**-0.0039**	0.004	98.2	ug/L	10	Standard
	Ag	107	2826.6	3.3	**0.3988**	0.012	3.1	ug/L	53	Standard
	Cd	111	525.0	2.5	**0.2287**	0.006	2.5	mg/L	1	Standard
	Cd	114	1256.7	4.4	**0.2096**	0.009	4.2	ug/L	32	Standard
>	**In**	115	511245.5	0.5				ug/L	494305	Standard
	Sn	118	61.3	5.7	**-0.0111**	0.003	24.6	ug/L	53	Standard
	Sb	123	1208.3	1.4	**0.4391**	0.006	1.4	ug/L	7	Standard
	Ba	135	1346.4	2.9	**0.6980**	0.019	2.8	ug/L	11	Standard
	Ce	140	6.7	114.6				ug/L	10	Standard
>	**Tb**	159	551840.4	1.0				ug/L	538219	Standard
	Ho	165	8.3	91.7				ug/L	8	Standard
	Tl	203	492.7	7.2	**0.0775**	0.007	8.6	ug/L	1	Standard
	Tl	205	578.3	10.1	**0.0750**	0.009	11.4	ug/L	3	Standard
	Pb	206	625.3	3.6	**0.1936**	0.007	3.4	ug/L	80	Standard
	Pb	207	536.7	4.0	**0.1924**	0.011	5.7	ug/L	73	Standard
	Pb	208	1325.4	4.0	**0.1880**	0.008	4.1	ug/L	190	Standard
	U	238	1514.4	3.9	**0.3947**	0.012	3.0	ug/L	0	Standard
>	**Bi**	209	285521.0	1.1				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	30.0	44.1	**-0.0018**	0.013	754.6	mg/L	37	Standard
K	39	1.7	173.2	**-0.2831**	0.170	60.0	mg/L	3	Standard
Ca	43	28.3	36.7	**-2.2616**	2.998	132.6	mg/L	43	Standard
Fe	54	255.0	13.1	**-0.0045**	0.017	373.2	mg/L	262	Standard
Fe	57	66.7	33.8	**0.0164**	0.038	232.0	mg/L	65	Standard
Sc-1	45	27358.0	1.9				mg/L	26874	Standard
Cl	35	139591.5	0.9				ug/L	141022	Standard
Kr	83	76.0	4.7				ug/L	75	Standard
Br	81	3173.7	6.4				ug/L	2810	Standard
P	31	484202.1	2.7				ug/L	458976	Standard
S	34	107755.2	1.1				ug/L	103378	Standard
Sr	88	28.3	36.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	2.7	221.0				mg/L	10	Standard
Ho-1	165	8.3	91.7				mg/L	8	Standard
Er	166	13.3	114.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		100.670	
Be	9	105.220		
Al	27	-0.149		
Sc	45			
Ti	47			
V	51	91.887		
Cr	52	93.718		
Cr	53			
Mn	55	90.414		
Co	59	95.640		
Ni	60	97.330		
Cu	65	99.420		
Zn	66	105.671		
> Ge	72		102.653	
As	75	98.407		
Se	82	116.062		
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98		
	Ag	107	99.695	
	Cd	111	95.279	
	Cd	114		
>	In	115		103.427
	Sn	118		
	Sb	123	109.767	
	Ba	135	93.066	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.841	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	93.996	
	U	238	98.680	
>	Bi	209		103.285
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Al	27	

Sample ID: QC Std 3
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Method 6020 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Monday, November 18, 2013 10:08:05
Number of Replicates: 3
Autosampler Position: 203
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	254303.8	4.2				ug/L	269614	Standard
	Be	9	40.0	33.1	**-0.0019**	0.004	214.7	ug/L	23	Standard
	Al	27	8940832.2	1.1	**45.2212**	1.357	3.0	ug/L	1170	Standard
	Sc	45	25650.0	1.9				ug/L	26874	Standard
	Ti	47	24682.8	0.6	**101.5957**	1.237	1.2	ug/L	25	Standard
	V	51	672.1	18.7	**-0.0829**	0.019	22.7	ug/L	1686	Standard
	Cr	52	4870.1	0.6	**0.0495**	0.008	17.1	ug/L	6098	Standard
	Cr	53	2141.8	5.3	**1.6349**	0.104	6.4	ug/L	193	Standard
	Mn	55	2291.8	2.9	**0.0378**	0.005	13.0	ug/L	1232	Standard
	Co	59	349.0	3.7	**0.0234**	0.002	6.6	ug/L	106	Standard
	Ni	60	2022.5	3.7	**0.5644**	0.033	5.8	ug/L	556	Standard
	Cu	65	829.0	5.2	**0.2676**	0.019	7.1	ug/L	124	Standard
	Zn	66	1665.8	2.8	**1.0053**	0.040	4.0	ug/L	196	Standard
>	**Ge**	72	458398.1	0.6				ug/L	473313	Standard
	As	75	-307.7	22.4	**-0.0075**	0.049	655.5	ug/L	-286	Standard
	Se	82	-49.1	23.8	**-0.0403**	0.080	197.9	ug/L	-33	Standard
	Se-1	77	292.0	10.0	**2.0281**	0.296	14.6	ug/L	86	Standard
>	**Ga**	71	181.7	17.9				mg/L	35	Standard
	Rb	85	3332.0	1.9				ug/L	13	Standard
	Y	89	419602.7	0.7				ug/L	439493	Standard
>	**Rh**	103	0.0					ug/L	5	Standard
	Mo	98	345829.5	1.1	**92.7361**	1.196	1.3	ug/L	10	Standard
	Ag	107	86.7	21.6	**-0.0012**	0.003	240.6	ug/L	53	Standard
	Cd	111	75.1	23.3	**0.0330**	0.008	25.6	mg/L	1	Standard
	Cd	114	889.7	7.7	**0.1584**	0.014	8.6	ug/L	32	Standard
>	**In**	115	472358.9	0.7				ug/L	494305	Standard
	Sn	118	74.3	10.9	**0.0030**	0.006	204.0	ug/L	53	Standard
	Sb	123	132.4	4.4	**0.0508**	0.003	5.0	ug/L	7	Standard
	Ba	135	111.3	11.2	**0.0510**	0.007	13.2	ug/L	11	Standard
	Ce	140	900.0	8.9				ug/L	10	Standard
>	**Tb**	159	528643.3	1.2				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	71.7	17.3	**0.0101**	0.002	22.1	ug/L	1	Standard
	Tl	205	100.0	8.7	**0.0131**	0.001	10.0	ug/L	3	Standard
	Pb	206	172.7	10.2	**0.0267**	0.007	25.4	ug/L	80	Standard
	Pb	207	134.7	7.0	**0.0273**	0.004	13.7	ug/L	73	Standard
	Pb	208	362.7	7.2	**0.0270**	0.005	19.3	ug/L	190	Standard
	U	238	1.3	43.3	**-0.0015**	0.000	10.9	ug/L	0	Standard
>	**Bi**	209	270585.2	0.8				ug/L	276439	Standard

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	Na	23	66.7	11.5	**17.5550**	1.887	10.8	mg/L	2	Standard
	Mg	24	10959.0	1.9	**11.6850**	0.340	2.9	mg/L	37	Standard
	K	39	70.0	7.1	**3.9410**	0.389	9.9	mg/L	3	Standard
	Ca	43	101.7	27.1	**20.5273**	8.579	41.8	mg/L	43	Standard
	Fe	54	22070.6	1.2	**11.1279**	0.345	3.1	mg/L	262	Standard
	Fe	57	6136.2	1.2	**11.0243**	0.297	2.7	mg/L	65	Standard
>	**Sc-1**	45	25650.0	1.9				mg/L	26874	Standard
	Cl	35	136599.7	0.4				ug/L	141022	Standard
	Kr	83	98.0	9.7				ug/L	75	Standard
	Br	81	2927.0	6.4				ug/L	2810	Standard
	P	31	280222.1	2.6				ug/L	458976	Standard
	S	34	99051.1	2.0				ug/L	103378	Standard
	Sr	88	36.7	67.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	-0.6	43.3				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	8	Standard
	Er	166	13.3	43.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		94.321	
	Be	9			
	Al	27	0.904		
	Sc	45			
	Ti	47	101.596		
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.849	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	92.736	
	Ag	107		
	Cd	111		
	Cd	114		
>	In	115		95.560
	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		97.882
	Na	23	140.440	
	Mg	24	233.700	
	K	39	78.819	
	Ca	43	136.849	
	Fe	54	89.023	
	Fe	57	88.195	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Al	27	
QC Std 4	Na	23	
QC Std 4	Mg	24	
QC Std 4	K	39	
QC Std 4	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Monday, November 18, 2013 10:11:10
Number of Replicates: 3
Autosampler Position: 204
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	274898.8	2.2				ug/L	269614	Standard
	Be	9	292620.5	1.1	**96.7020**	1.359	1.4	ug/L	23	Standard
	Al	27	8346923.2	1.7	**39.0239**	0.323	0.8	ug/L	1170	Standard
	Sc	45	27346.3	1.9				ug/L	26874	Standard
	Ti	47	23478.8	2.2	**89.0929**	1.865	2.1	ug/L	25	Standard
	V	51	672437.7	2.0	**91.1839**	1.716	1.9	ug/L	1686	Standard
	Cr	52	670252.2	1.4	**93.3393**	1.621	1.7	ug/L	6098	Standard
	Cr	53	122810.8	1.7	**93.6365**	1.592	1.7	ug/L	193	Standard
	Mn	55	1334151.7	1.3	**94.8416**	1.708	1.8	ug/L	1232	Standard
	Co	59	920678.0	0.7	**94.3027**	0.932	1.0	ug/L	106	Standard
	Ni	60	271676.0	1.4	**94.6662**	1.586	1.7	ug/L	556	Standard
	Cu	65	260821.7	1.3	**94.9467**	1.533	1.6	ug/L	124	Standard
	Zn	66	145317.9	1.1	**96.5232**	1.332	1.4	ug/L	196	Standard
>	Ge	72	497139.4	0.6				ug/L	473313	Standard
	As	75	146206.4	0.7	**96.3238**	0.897	0.9	ug/L	-286	Standard
	Se	82	14782.5	0.9	**95.0549**	1.255	1.3	ug/L	-33	Standard
	Se-1	77	10944.3	0.8	**95.3956**	0.862	0.9	ug/L	86	Standard
>	Ga	71	268.3	15.6				mg/L	35	Standard
	Rb	85	3332.0	2.7				ug/L	13	Standard
	Y	89	451646.0	0.4				ug/L	439493	Standard
>	Rh	103	51.7	20.1				ug/L	5	Standard
	Mo	98	332865.8	1.3	**83.1642**	0.798	1.0	ug/L	10	Standard
	Ag	107	616965.8	2.2	**91.0629**	1.598	1.8	ug/L	53	Standard
	Cd	111	215895.0	0.8	**96.0351**	0.370	0.4	mg/L	1	Standard
	Cd	114	534231.0	2.2	**93.8891**	1.629	1.7	ug/L	32	Standard
>	In	115	506947.3	0.5				ug/L	494305	Standard
	Sn	118	330.3	4.8	**0.1897**	0.011	5.7	ug/L	53	Standard
	Sb	123	262099.7	0.8	**96.3748**	0.339	0.4	ug/L	7	Standard
	Ba	135	182761.8	1.3	**97.2514**	0.928	1.0	ug/L	11	Standard
	Ce	140	776.7	1.6				ug/L	10	Standard
>	Tb	159	553963.1	1.4				ug/L	538219	Standard
	Ho	165	10.0	100.0				ug/L	8	Standard
	Tl	203	590871.0	0.3	**95.5849**	0.767	0.8	ug/L	1	Standard
	Tl	205	731727.5	0.3	**95.8615**	0.339	0.4	ug/L	3	Standard
	Pb	206	258783.3	0.6	**97.5986**	0.775	0.8	ug/L	80	Standard
	Pb	207	231257.5	0.8	**96.8049**	0.247	0.3	ug/L	73	Standard
	Pb	208	555798.4	0.6	**95.0720**	0.700	0.7	ug/L	190	Standard
	U	238	365571.4	1.2	**95.9109**	1.169	1.2	ug/L	0	Standard
>	Bi	209	285041.3	0.6				ug/L	276439	Standard

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Na	23	45.0	11.1	**10.9589**	1.156	10.5	mg/L	2	Standard
Mg	24	10225.1	3.2	**10.2180**	0.168	1.6	mg/L	37	Standard
K	39	53.3	19.5	**2.7100**	0.650	24.0	mg/L	3	Standard
Ca	43	103.3	35.0	**19.0643**	10.342	54.3	mg/L	43	Standard
Fe	54	21349.8	1.7	**10.0814**	0.021	0.2	mg/L	262	Standard
Fe	57	5741.1	4.0	**9.6611**	0.394	4.1	mg/L	65	Standard
> **Sc-1**	45	27346.3	1.9				mg/L	26874	Standard
Cl	35	140508.6	1.6				ug/L	141022	Standard
Kr	83	106.3	7.3				ug/L	75	Standard
Br	81	3017.0	6.7				ug/L	2810	Standard
P	31	442930.8	2.8				ug/L	458976	Standard
S	34	98972.3	1.7				ug/L	103378	Standard
Sr	88	23.3	24.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	99.7				mg/L	10	Standard
Ho-1	165	10.0	100.0				mg/L	8	Standard
Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		101.960	
Be	9	96.702		
Al	27	0.780		
Sc	45			
Ti	47	89.093		
V	51	91.184		
Cr	52	93.339		
Cr	53			
Mn	55	94.842		
Co	59	94.303		
Ni	60	94.666		
Cu	65	94.947		
Zn	66	96.523		
> Ge	72		105.034	
As	75	96.324		
Se	82	95.055		
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	83.164	
	Ag	107	91.063	
	Cd	111	96.035	
	Cd	114		
>	In	115		102.558
	Sn	118		
	Sb	123	96.375	
	Ba	135	97.251	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.585	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	95.072	
	U	238	95.911	
>	Bi	209		103.112
	Na	23	87.671	
	Mg	24	204.360	
	K	39	54.201	
	Ca	43	127.095	
	Fe	54	80.651	
	Fe	57	77.288	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Al	27	
QC Std 5	Mg	24	
QC Std 5	K	39	
QC Std 5	Ca	43	
QC Std 5	Fe	57	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 10:14:17
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	274945.7	1.0				ug/L	269614	Standard
	Be	9	149864.2	1.0	**49.5000**	0.208	0.4	ug/L	23	Standard
	Al	27	10478566.0	1.3	**48.9789**	0.399	0.8	ug/L	1170	Standard
	Sc	45	26892.2	1.7				ug/L	26874	Standard
	Ti	47	25901.5	1.3	**99.3709**	0.791	0.8	ug/L	25	Standard
	V	51	357122.6	2.6	**48.8675**	0.847	1.7	ug/L	1686	Standard
	Cr	52	357863.3	2.0	**50.0570**	0.563	1.1	ug/L	6098	Standard
	Cr	53	64093.6	0.7	**49.3379**	0.441	0.9	ug/L	193	Standard
	Mn	55	708741.8	1.8	**50.8633**	0.424	0.8	ug/L	1232	Standard
	Co	59	485963.7	0.9	**50.3129**	0.415	0.8	ug/L	106	Standard
	Ni	60	141969.1	1.3	**49.9125**	0.314	0.6	ug/L	556	Standard
	Cu	65	138094.2	1.5	**50.7884**	0.359	0.7	ug/L	124	Standard
	Zn	66	74741.9	1.2	**50.0913**	0.321	0.6	ug/L	196	Standard
>	Ge	72	491762.8	0.9				ug/L	473313	Standard
	As	75	75036.6	1.3	**50.0757**	0.209	0.4	ug/L	-286	Standard
	Se	82	7805.9	0.9	**50.8810**	0.054	0.1	ug/L	-33	Standard
	Se-1	77	5698.4	1.5	**49.8527**	0.302	0.6	ug/L	86	Standard
>	Ga	71	65.0	33.5				mg/L	35	Standard
	Rb	85	1256.7	5.3				ug/L	13	Standard
	Y	89	453874.9	1.0				ug/L	439493	Standard
>	Rh	103	18.3	41.7				ug/L	5	Standard
	Mo	98	406964.3	1.7	**100.3045**	1.633	1.6	ug/L	10	Standard
	Ag	107	351754.1	0.7	**51.2106**	0.157	0.3	ug/L	53	Standard
	Cd	111	114678.9	1.6	**50.3204**	0.774	1.5	mg/L	1	Standard
	Cd	114	290510.0	0.7	**50.3623**	0.193	0.4	ug/L	32	Standard
>	In	115	513907.6	0.5				ug/L	494305	Standard
	Sn	118	69169.5	1.1	**50.7825**	0.328	0.6	ug/L	53	Standard
	Sb	123	137688.6	1.0	**49.9432**	0.557	1.1	ug/L	7	Standard
	Ba	135	95613.1	1.3	**50.1834**	0.572	1.1	ug/L	11	Standard
	Ce	140	48.3	58.8				ug/L	10	Standard
>	Tb	159	556627.1	1.8				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	314561.8	0.5	**50.1720**	0.355	0.7	ug/L	1	Standard
	Tl	205	393061.7	0.9	**50.7709**	0.220	0.4	ug/L	3	Standard
	Pb	206	137005.0	0.4	**50.9269**	0.392	0.8	ug/L	80	Standard
	Pb	207	123658.9	1.0	**51.0229**	0.143	0.3	ug/L	73	Standard
	Pb	208	293870.9	0.8	**49.5438**	0.108	0.2	ug/L	190	Standard
	U	238	191309.6	0.7	**49.4871**	0.236	0.5	ug/L	0	Standard
>	Bi	209	289096.5	0.9				ug/L	276439	Standard

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	Na	23	23.3	44.6	**5.6110**	2.802	49.9	mg/L	2	Standard
	Mg	24	5172.6	6.8	**5.2425**	0.366	7.0	mg/L	37	Standard
	K	39	75.0	0.0	**4.0317**	0.076	1.9	mg/L	3	Standard
	Ca	43	46.7	27.0	**3.1478**	3.514	111.6	mg/L	43	Standard
	Fe	54	10564.5	1.6	**5.0117**	0.169	3.4	mg/L	262	Standard
	Fe	57	3128.7	3.7	**5.3087**	0.107	2.0	mg/L	65	Standard
>	**Sc-1**	45	26892.2	1.7				mg/L	26874	Standard
	Cl	35	133439.0	0.6				ug/L	141022	Standard
	Kr	83	82.7	15.6				ug/L	75	Standard
	Br	81	3180.3	8.1				ug/L	2810	Standard
	P	31	451468.2	1.3				ug/L	458976	Standard
	S	34	107724.9	0.9				ug/L	103378	Standard
	Sr	88	30.0	33.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	0.0					mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	8	Standard
	Er	166	0.0					mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.977	
	Be	9	99.000		
	Al	27	97.958		
	Sc	45			
	Ti	47	99.371		
	V	51	97.735		
	Cr	52	100.114		
	Cr	53			
	Mn	55	101.727		
	Co	59	100.626		
	Ni	60	99.825		
	Cu	65	101.577		
	Zn	66	100.183		
>	Ge	72		103.898	
	As	75	100.151		
	Se	82	101.762		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	100.305	
|	Ag	107	102.421	
|	Cd	111	100.641	
|	Cd	114		
|>	In	115		103.966
|	Sn	118	101.565	
|	Sb	123	99.886	
⌊	Ba	135	100.367	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.344	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	99.088	
|	U	238	98.974	
⌊>	Bi	209		104.579
⌈	Na	23		
|	Mg	24		
|	K	39		
|	Ca	43		
|	Fe	54		
|	Fe	57		
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 10:17:21
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	278075.6	1.5				ug/L	269614	Standard
	Be	9	233.3	57.2	**0.0598**	0.043	71.5	ug/L	23	Standard
	Al	27	8627.2	91.8	**0.0324**	0.036	111.7	ug/L	1170	Standard
	Sc	45	27356.3	1.6				ug/L	26874	Standard
	Ti	47	37.3	46.6	**0.0453**	0.068	150.7	ug/L	25	Standard
	V	51	1374.7	7.7	**0.0074**	0.014	189.2	ug/L	1686	Standard
	Cr	52	4839.1	0.3	**-0.0030**	0.008	278.3	ug/L	6098	Standard
	Cr	53	278.3	24.5	**0.0766**	0.054	71.1	ug/L	193	Standard
	Mn	55	1389.7	4.7	**-0.0388**	0.004	10.9	ug/L	1232	Standard
	Co	59	133.0	27.9	**-0.0015**	0.004	255.3	ug/L	106	Standard
	Ni	60	581.7	26.6	**0.0046**	0.056	1227.7	ug/L	556	Standard
	Cu	65	256.0	54.6	**0.0348**	0.052	150.6	ug/L	124	Standard
	Zn	66	280.3	20.6	**-0.0078**	0.041	522.9	ug/L	196	Standard
>	**Ge**	72	490250.7	1.0				ug/L	473313	Standard
	As	75	-267.2	18.6	**0.0340**	0.032	93.2	ug/L	-286	Standard
	Se	82	-38.7	13.0	**0.0492**	0.034	68.8	ug/L	-33	Standard
	Se-1	77	99.0	7.1	**0.1268**	0.063	49.9	ug/L	86	Standard
>	**Ga**	71	16.7	45.8				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	13	Standard
	Y	89	455337.2	1.9				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	119.7	24.4	**0.0142**	0.007	49.6	ug/L	10	Standard
	Ag	107	104.0	51.0	**0.0001**	0.008	11985.8	ug/L	53	Standard
	Cd	111	28.1	111.0	**0.0093**	0.013	144.8	mg/L	1	Standard
	Cd	114	81.5	113.4	**0.0045**	0.016	348.0	ug/L	32	Standard
>	**In**	115	515842.0	1.0				ug/L	494305	Standard
	Sn	118	70.0	17.3	**-0.0052**	0.009	165.4	ug/L	53	Standard
	Sb	123	407.9	38.4	**0.1460**	0.057	39.2	ug/L	7	Standard
	Ba	135	112.0	19.7	**0.0460**	0.011	23.8	ug/L	11	Standard
	Ce	140	8.3	34.6				ug/L	10	Standard
>	**Tb**	159	549480.6	1.3				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	61.0	72.1	**0.0076**	0.007	92.5	ug/L	1	Standard
	Tl	205	203.3	134.4	**0.0256**	0.035	138.1	ug/L	3	Standard
	Pb	206	110.0	8.1	**-0.0011**	0.003	299.8	ug/L	80	Standard
	Pb	207	94.3	9.6	**0.0068**	0.004	54.4	ug/L	73	Standard
	Pb	208	326.0	64.5	**0.0166**	0.036	215.1	ug/L	190	Standard
	U	238	107.3	90.6	**0.0259**	0.025	97.2	ug/L	0	Standard
>	**Bi**	209	289688.5	0.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	46.7	37.6	**0.0149**	0.018	117.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2855**	0.166	58.1	mg/L	3	Standard
Ca	43	21.7	81.0	**-4.1227**	5.110	124.0	mg/L	43	Standard
Fe	54	285.9	8.9	**0.0101**	0.010	103.7	mg/L	262	Standard
Fe	57	73.3	7.9	**0.0278**	0.009	33.2	mg/L	65	Standard
Sc-1	45	27356.3	1.6				mg/L	26874	Standard
Cl	35	141191.5	1.1				ug/L	141022	Standard
Kr	83	88.7	3.6				ug/L	75	Standard
Br	81	3053.6	8.6				ug/L	2810	Standard
P	31	466347.5	3.7				ug/L	458976	Standard
S	34	107751.8	1.0				ug/L	103378	Standard
Sr	88	21.7	13.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	-0.6	86.6				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	13.3	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		103.138	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		103.578	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	104.357
	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	104.793
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: PBW 87 WG452233-03
Sample Date/Time: Monday, November 18, 2013 10:20:49
Number of Replicates: 3
Autosampler Position: 301
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	250407.3	0.7				ug/L	269614	Standard
	Be	9	83.3	40.0	**0.0141**	0.012	85.0	ug/L	23	Standard
	Al	27	2233.5	60.2	**0.0043**	0.007	159.2	ug/L	1170	Standard
	Sc	45	24830.3	2.8				ug/L	26874	Standard
	Ti	47	18.7	8.2	**-0.0180**	0.007	37.2	ug/L	25	Standard
	V	51	1272.2	11.9	**0.0147**	0.022	149.4	ug/L	1686	Standard
	Cr	52	4342.6	2.5	**0.0021**	0.015	683.9	ug/L	6098	Standard
	Cr	53	210.0	27.0	**0.0433**	0.049	112.9	ug/L	193	Standard
	Mn	55	945.7	67.3	**-0.0627**	0.051	81.0	ug/L	1232	Standard
	Co	59	294.3	116.4	**0.0188**	0.040	210.8	ug/L	106	Standard
	Ni	60	491.0	2.1	**-0.0064**	0.005	82.0	ug/L	556	Standard
	Cu	65	90.7	21.1	**-0.0223**	0.008	34.3	ug/L	124	Standard
	Zn	66	670.7	86.3	**0.3112**	0.440	141.3	ug/L	196	Standard
>	**Ge**	72	436637.0	0.7				ug/L	473313	Standard
	As	75	-239.8	17.8	**0.0325**	0.031	96.2	ug/L	-286	Standard
	Se	82	-30.2	40.9	**0.0807**	0.089	109.7	ug/L	-33	Standard
	Se-1	77	73.3	3.9	**-0.0218**	0.025	115.9	ug/L	86	Standard
>	**Ga**	71	26.7	21.7				mg/L	35	Standard
	Rb	85	25.0	121.7				ug/L	13	Standard
	Y	89	398830.2	1.6				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	258.6	150.1	**0.0564**	0.107	190.7	ug/L	10	Standard
	Ag	107	286.0	130.3	**0.0318**	0.061	191.8	ug/L	53	Standard
	Cd	111	9.3	32.8	**0.0017**	0.002	89.9	mg/L	1	Standard
	Cd	114	28.7	107.1	**-0.0039**	0.006	154.3	ug/L	32	Standard
>	**In**	115	458455.3	0.1				ug/L	494305	Standard
	Sn	118	50.0	41.8	**-0.0152**	0.017	113.7	ug/L	53	Standard
	Sb	123	110.2	62.7	**0.0433**	0.028	65.0	ug/L	7	Standard
	Ba	135	52.3	141.8	**0.0183**	0.044	238.7	ug/L	11	Standard
	Ce	140	15.0	66.7				ug/L	10	Standard
>	**Tb**	159	499557.1	0.7				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	230.7	160.1	**0.0372**	0.063	169.2	ug/L	1	Standard
	Tl	205	90.0	111.0	**0.0118**	0.014	117.0	ug/L	3	Standard
	Pb	206	189.0	88.1	**0.0335**	0.066	197.1	ug/L	80	Standard
	Pb	207	168.0	90.7	**0.0423**	0.067	158.7	ug/L	73	Standard
	Pb	208	227.3	34.7	**0.0028**	0.014	503.6	ug/L	190	Standard
	U	238	33.7	139.8	**0.0075**	0.013	174.4	ug/L	0	Standard
>	**Bi**	209	268907.4	0.8				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	50.0	26.5	**0.0231**	0.013	56.3	mg/L	37	Standard
K	39	5.0	100.0	**-0.0570**	0.325	571.3	mg/L	3	Standard
Ca	43	46.7	16.4	**4.2890**	2.450	57.1	mg/L	43	Standard
Fe	54	94.1	43.8	**-0.0765**	0.023	29.9	mg/L	262	Standard
Fe	57	68.3	22.4	**0.0315**	0.031	97.3	mg/L	65	Standard
> **Sc-1**	45	24830.3	2.8				mg/L	26874	Standard
Cl	35	129948.9	4.2				ug/L	141022	Standard
Kr	83	72.0	14.5				ug/L	75	Standard
Br	81	2586.9	8.0				ug/L	2810	Standard
P	31	140130.1	1.2				ug/L	458976	Standard
S	34	104798.0	2.7				ug/L	103378	Standard
Sr	88	26.7	75.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	13.0	89.8				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		92.876	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.251	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.747
	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	97.275
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 87 WG452233-03
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Method 6020 - Summary Report

Sample ID: LCSW 87 WG452233-04
Sample Date/Time: Monday, November 18, 2013 10:23:54
Number of Replicates: 3
Autosampler Position: 302
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	283694.2	2.7				ug/L	269614	Standard
	Be	9	79313.9	3.3	**25.3818**	0.517	2.0	ug/L	23	Standard
	Al	27	6014.5	2.5	**0.0201**	0.001	5.4	ug/L	1170	Standard
	Sc	45	28346.5	3.1				ug/L	26874	Standard
	Ti	47	24.3	19.0	**-0.0085**	0.017	200.0	ug/L	25	Standard
	V	51	190714.2	0.8	**25.1417**	0.272	1.1	ug/L	1686	Standard
	Cr	52	190116.2	1.7	**25.3705**	0.256	1.0	ug/L	6098	Standard
	Cr	53	34218.7	5.5	**25.3900**	1.283	5.1	ug/L	193	Standard
	Mn	55	373981.6	1.2	**25.8774**	0.244	0.9	ug/L	1232	Standard
	Co	59	260090.5	2.3	**26.0198**	0.398	1.5	ug/L	106	Standard
	Ni	60	76689.3	2.0	**25.9663**	0.412	1.6	ug/L	556	Standard
	Cu	65	74063.0	2.5	**26.3005**	0.476	1.8	ug/L	124	Standard
	Zn	66	40200.6	1.9	**25.9482**	0.353	1.4	ug/L	196	Standard
>	Ge	72	508726.9	0.9				ug/L	473313	Standard
	As	75	39039.0	1.9	**25.2899**	0.428	1.7	ug/L	-286	Standard
	Se	82	4022.6	1.1	**25.4974**	0.279	1.1	ug/L	-33	Standard
	Se-1	77	3015.0	5.0	**25.1230**	1.090	4.3	ug/L	86	Standard
>	Ga	71	41.7	36.7				mg/L	35	Standard
	Rb	85	61.7	49.5				ug/L	13	Standard
	Y	89	471837.0	1.6				ug/L	439493	Standard
>	Rh	103	20.0	25.0				ug/L	5	Standard
	Mo	98	58.6	16.7	**-0.0011**	0.002	204.1	ug/L	10	Standard
	Ag	107	186027.1	1.0	**26.3950**	0.247	0.9	ug/L	53	Standard
	Cd	111	58659.9	1.1	**25.0908**	0.257	1.0	mg/L	1	Standard
	Cd	114	144331.1	1.0	**24.3875**	0.278	1.1	ug/L	32	Standard
>	In	115	527159.9	0.2				ug/L	494305	Standard
	Sn	118	117.0	6.8	**0.0274**	0.006	20.3	ug/L	53	Standard
	Sb	123	70377.3	1.1	**24.8849**	0.262	1.1	ug/L	7	Standard
	Ba	135	49699.7	1.5	**25.4232**	0.332	1.3	ug/L	11	Standard
	Ce	140	50.0	17.3				ug/L	10	Standard
>	Tb	159	564358.4	0.1				ug/L	538219	Standard
	Ho	165	13.3	21.7				ug/L	8	Standard
	Tl	203	162250.5	0.6	**25.2908**	0.091	0.4	ug/L	1	Standard
	Tl	205	205455.6	2.0	**25.9369**	0.495	1.9	ug/L	3	Standard
	Pb	206	72253.2	1.0	**26.2284**	0.260	1.0	ug/L	80	Standard
	Pb	207	61248.2	0.9	**24.6832**	0.220	0.9	ug/L	73	Standard
	Pb	208	151048.3	1.3	**24.8698**	0.320	1.3	ug/L	190	Standard
	U	238	93974.9	1.5	**23.7576**	0.375	1.6	ug/L	0	Standard
>	Bi	209	295791.0	0.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	66.7	38.5	**0.0331**	0.027	81.9	mg/L	37	Standard
K	39	5.0	0.0	**-0.1020**	0.009	8.5	mg/L	3	Standard
Ca	43	21.7	48.0	**-4.3400**	2.987	68.8	mg/L	43	Standard
Fe	54	301.9	18.6	**0.0133**	0.030	222.4	mg/L	262	Standard
Fe	57	46.7	32.7	**-0.0201**	0.025	125.4	mg/L	65	Standard
Sc-1	45	28346.5	3.1				mg/L	26874	Standard
Cl	35	149309.8	2.7				ug/L	141022	Standard
Kr	83	83.3	6.0				ug/L	75	Standard
Br	81	3303.7	8.5				ug/L	2810	Standard
P	31	500865.5	2.5				ug/L	458976	Standard
S	34	107809.1	2.8				ug/L	103378	Standard
Sr	88	25.0	0.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	0	Standard
Dy	164	9.8	104.1				mg/L	10	Standard
Ho-1	165	13.3	21.7				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		105.222	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		107.482	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	106.647
	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	107.000
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 87 WG452233-04
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Method 6020 - Summary Report

Sample ID: L1311036803 WG452233-01
Sample Date/Time: Monday, November 18, 2013 10:26:59
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	403360.3	0.5				ug/L	269614	Standard
	Be	9	71.7	17.6	**0.0001**	0.003	4041.6	ug/L	23	Standard
	Al	27	308544204.9	1.9	**983.2085**	18.610	1.9	ug/L	1170	Standard
	Sc	45	23743.6	0.4				ug/L	26874	Standard
	Ti	47	423.7	13.1	**1.8726**	0.281	15.0	ug/L	25	Standard
	V	51	3066.6	2.4	**0.3278**	0.007	2.1	ug/L	1686	Standard
	Cr	52	6179.3	4.6	**0.3689**	0.037	10.1	ug/L	6098	Standard
	Cr	53	1041.7	10.8	**0.8336**	0.098	11.7	ug/L	193	Standard
	Mn	55	57726760.2	1.3	**5028.0658**	18.977	0.4	ug/L	1232	Standard
	Co	59	10988.3	1.1	**1.3620**	0.010	0.7	ug/L	106	Standard
	Ni	60	31767.3	2.5	**13.3697**	0.177	1.3	ug/L	556	Standard
	Cu	65	10092.1	11.5	**4.4345**	0.469	10.6	ug/L	124	Standard
	Zn	66	11972.4	11.5	**9.5451**	1.014	10.6	ug/L	196	Standard
>	**Ge**	72	406296.6	1.2				ug/L	473313	Standard
	As	75	1931.1	26.1	**1.7623**	0.391	22.2	ug/L	-286	Standard
	Se	82	654.0	33.9	**5.4176**	1.688	31.2	ug/L	-33	Standard
	Se-1	77	210.3	5.9	**1.5049**	0.108	7.1	ug/L	86	Standard
>	**Ga**	71	570.0	21.3				mg/L	35	Standard
	Rb	85	44137.5	1.1				ug/L	13	Standard
	Y	89	381838.9	1.5				ug/L	439493	Standard
>	**Rh**	103	1666.8	4.5				ug/L	5	Standard
	Mo	98	3295.4	2.7	**1.0198**	0.018	1.8	ug/L	10	Standard
	Ag	107	84.3	22.0	**0.0007**	0.003	504.1	ug/L	53	Standard
	Cd	111	25.2	12.6	**0.0112**	0.002	15.4	mg/L	1	Standard
	Cd	114	46.7	19.2	**0.0009**	0.002	239.3	ug/L	32	Standard
>	**In**	115	403317.8	1.5				ug/L	494305	Standard
	Sn	118	122.0	9.7	**0.0578**	0.010	17.0	ug/L	53	Standard
	Sb	123	180.8	5.4	**0.0821**	0.004	5.3	ug/L	7	Standard
	Ba	135	10065.7	0.9	**6.7212**	0.044	0.6	ug/L	11	Standard
	Ce	140	2406.9	2.2				ug/L	10	Standard
>	**Tb**	159	471001.0	1.1				ug/L	538219	Standard
	Ho	165	105.0	36.0				ug/L	8	Standard
	Tl	203	206.7	7.8	**0.0421**	0.004	8.7	ug/L	1	Standard
	Tl	205	270.0	14.0	**0.0461**	0.006	13.0	ug/L	3	Standard
	Pb	206	127.0	3.1	**0.0216**	0.002	10.5	ug/L	80	Standard
	Pb	207	109.7	13.7	**0.0287**	0.008	28.4	ug/L	73	Standard
	Pb	208	272.0	6.3	**0.0232**	0.004	18.2	ug/L	190	Standard
	U	238	97812.1	1.4	**33.9772**	0.427	1.3	ug/L	0	Standard
>	**Bi**	209	215279.8	1.2				ug/L	276439	Standard

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	Na	23	395.0	11.6	**114.7737**	13.667	11.9	mg/L	2	Standard
	Mg	24	533156.7	0.4	**615.6058**	4.998	0.8	mg/L	37	Standard
	K	39	86.7	12.0	**5.3919**	0.677	12.6	mg/L	3	Standard
	Ca	43	415.0	11.5	**125.4823**	15.148	12.1	mg/L	43	Standard
	Fe	54	442.5	10.7	**0.1173**	0.027	22.9	mg/L	262	Standard
	Fe	57	1016.7	3.5	**1.8931**	0.064	3.4	mg/L	65	Standard
>	**Sc-1**	45	23743.6	0.4				mg/L	26874	Standard
	Cl	35	1784814.2	1.1				ug/L	141022	Standard
	Kr	83	383.3	18.2				ug/L	75	Standard
	Br	81	60182.7	2.7				ug/L	2810	Standard
	P	31	404357.4	1.8				ug/L	458976	Standard
	S	34	95003.7	2.7				ug/L	103378	Standard
	Sr	88	10016.6	1.3				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	68.2	25.2				mg/L	10	Standard
	Ho-1	165	105.0	36.0				mg/L	8	Standard
	Er	166	36.7	15.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		149.606	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.841	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	81.593
|	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	77.876
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311036806S WG452233-05
Sample Date/Time: Monday, November 18, 2013 10:30:04
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	353106.5	1.9				ug/L	269614	Standard
	Be	9	67583.7	1.2	**17.3771**	0.488	2.8	ug/L	23	Standard
	Al	27	167101504.8	1.6	**608.2902**	3.188	0.5	ug/L	1170	Standard
	Sc	45	24940.5	1.9				ug/L	26874	Standard
	Ti	47	895.0	5.9	**3.7903**	0.221	5.8	ug/L	25	Standard
	V	51	175644.3	2.1	**27.1174**	0.513	1.9	ug/L	1686	Standard
	Cr	52	166475.3	0.9	**26.0236**	0.170	0.7	ug/L	6098	Standard
	Cr	53	30213.4	2.9	**26.2500**	0.682	2.6	ug/L	193	Standard
	Mn	55	44325272.1	1.6	**3609.3187**	49.093	1.4	ug/L	1232	Standard
	Co	59	232572.5	1.2	**27.2383**	0.240	0.9	ug/L	106	Standard
	Ni	60	81535.8	0.7	**32.3667**	0.127	0.4	ug/L	556	Standard
	Cu	65	65102.2	1.3	**27.0655**	0.274	1.0	ug/L	124	Standard
	Zn	66	42584.1	2.3	**32.2233**	0.675	2.1	ug/L	196	Standard
>	Ge	72	434590.2	0.3				ug/L	473313	Standard
	As	75	41955.4	1.7	**31.7602**	0.471	1.5	ug/L	-286	Standard
	Se	82	5074.3	3.3	**37.5050**	1.154	3.1	ug/L	-33	Standard
	Se-1	77	3193.0	2.4	**31.3325**	0.674	2.2	ug/L	86	Standard
>	Ga	71	646.7	16.1				mg/L	35	Standard
	Rb	85	27511.6	1.7				ug/L	13	Standard
	Y	89	407146.9	1.4				ug/L	439493	Standard
>	Rh	103	980.0	3.2				ug/L	5	Standard
	Mo	98	17327.3	1.8	**5.0185**	0.105	2.1	ug/L	10	Standard
	Ag	107	130887.9	0.5	**22.4477**	0.151	0.7	ug/L	53	Standard
	Cd	111	46387.1	0.7	**23.9846**	0.136	0.6	mg/L	1	Standard
	Cd	114	113902.6	1.6	**23.2637**	0.282	1.2	ug/L	32	Standard
>	In	115	436094.4	0.4				ug/L	494305	Standard
	Sn	118	86.7	9.3	**0.0186**	0.007	35.9	ug/L	53	Standard
	Sb	123	59329.4	0.7	**25.3589**	0.074	0.3	ug/L	7	Standard
	Ba	135	55173.3	1.0	**34.1215**	0.345	1.0	ug/L	11	Standard
	Ce	140	480.0	13.3				ug/L	10	Standard
>	Tb	159	500542.1	0.7				ug/L	538219	Standard
	Ho	165	45.0	0.0				ug/L	8	Standard
	Tl	203	133795.8	0.6	**25.7853**	0.163	0.6	ug/L	1	Standard
	Tl	205	167652.5	0.7	**26.1686**	0.325	1.2	ug/L	3	Standard
	Pb	206	60240.2	0.6	**27.0385**	0.279	1.0	ug/L	80	Standard
	Pb	207	51959.6	1.2	**25.8914**	0.359	1.4	ug/L	73	Standard
	Pb	208	123972.2	0.2	**25.2373**	0.128	0.5	ug/L	190	Standard
	U	238	137350.1	0.9	**42.9339**	0.625	1.5	ug/L	0	Standard
>	Bi	209	239242.7	0.6				ug/L	276439	Standard

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	Na	23	346.7	6.0	**95.7737**	4.647	4.9	mg/L	2	Standard
	Mg	24	297618.0	0.6	**327.1947**	5.403	1.7	mg/L	37	Standard
	K	39	80.0	6.3	**4.6981**	0.407	8.7	mg/L	3	Standard
	Ca	43	351.7	11.6	**99.3558**	13.595	13.7	mg/L	43	Standard
	Fe	54	1072.2	6.8	**0.4360**	0.045	10.2	mg/L	262	Standard
	Fe	57	876.7	2.8	**1.5370**	0.043	2.8	mg/L	65	Standard
>	**Sc-1**	45	24940.5	1.9				mg/L	26874	Standard
	Cl	35	1095337.5	0.7				ug/L	141022	Standard
	Kr	83	322.0	7.3				ug/L	75	Standard
	Br	81	72908.7	6.0				ug/L	2810	Standard
	P	31	491537.4	3.1				ug/L	458976	Standard
	S	34	85500.6	0.6				ug/L	103378	Standard
	Sr	88	4794.1	1.2				ug/L	30	Standard
	C	12	6.7	86.6				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	11.7	54.1				mg/L	10	Standard
	Ho-1	165	45.0	0.0				mg/L	8	Standard
	Er	166	33.3	45.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		130.967	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.819	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	88.224
	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	86.544
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311036807SD WG452233-06
Sample Date/Time: Monday, November 18, 2013 10:33:09
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	324894.9	0.7				ug/L	269614	Standard
	Be	9	73499.5	0.4	**20.5358**	0.168	0.8	ug/L	23	Standard
	Al	27	98108406.1	0.7	**388.1286**	0.886	0.2	ug/L	1170	Standard
	Sc	45	26032.3	1.6				ug/L	26874	Standard
	Ti	47	1353.7	4.2	**5.5096**	0.228	4.1	ug/L	25	Standard
	V	51	184822.4	0.6	**27.2061**	0.141	0.5	ug/L	1686	Standard
	Cr	52	178671.0	0.3	**26.6452**	0.158	0.6	ug/L	6098	Standard
	Cr	53	31713.2	1.2	**26.2712**	0.396	1.5	ug/L	193	Standard
	Mn	55	36788803.0	0.4	**2856.1088**	14.952	0.5	ug/L	1232	Standard
	Co	59	251894.7	0.6	**28.1278**	0.225	0.8	ug/L	106	Standard
	Ni	60	82138.1	1.5	**31.0795**	0.533	1.7	ug/L	556	Standard
	Cu	65	68180.4	2.1	**27.0257**	0.610	2.3	ug/L	124	Standard
	Zn	66	43090.2	2.2	**31.0815**	0.739	2.4	ug/L	196	Standard
>	Ge	72	455830.9	0.3				ug/L	473313	Standard
	As	75	45575.2	1.1	**32.8867**	0.431	1.3	ug/L	-286	Standard
	Se	82	4850.0	0.5	**34.2048**	0.200	0.6	ug/L	-33	Standard
	Se-1	77	3150.3	1.1	**29.4295**	0.292	1.0	ug/L	86	Standard
>	Ga	71	725.0	13.8				mg/L	35	Standard
	Rb	85	18516.3	2.1				ug/L	13	Standard
	Y	89	419741.7	1.1				ug/L	439493	Standard
>	Rh	103	591.7	8.5				ug/L	5	Standard
	Mo	98	25989.3	1.1	**7.1851**	0.084	1.2	ug/L	10	Standard
	Ag	107	145846.3	0.5	**23.8571**	0.303	1.3	ug/L	53	Standard
	Cd	111	50808.0	1.0	**25.0538**	0.055	0.2	mg/L	1	Standard
	Cd	114	123850.6	2.1	**24.1245**	0.405	1.7	ug/L	32	Standard
>	In	115	457267.8	0.8				ug/L	494305	Standard
	Sn	118	73.7	6.4	**0.0044**	0.003	77.0	ug/L	53	Standard
	Sb	123	63404.9	1.1	**25.8462**	0.176	0.7	ug/L	7	Standard
	Ba	135	59390.8	0.8	**35.0293**	0.009	0.0	ug/L	11	Standard
	Ce	140	148.3	19.8				ug/L	10	Standard
>	Tb	159	522805.6	1.0				ug/L	538219	Standard
	Ho	165	11.7	107.9				ug/L	8	Standard
	Tl	203	144429.4	0.2	**26.6009**	0.098	0.4	ug/L	1	Standard
	Tl	205	181556.9	2.8	**27.0832**	0.846	3.1	ug/L	3	Standard
	Pb	206	65184.9	0.6	**27.9624**	0.301	1.1	ug/L	80	Standard
	Pb	207	55531.6	0.4	**26.4455**	0.241	0.9	ug/L	73	Standard
	Pb	208	132759.0	0.7	**25.8293**	0.288	1.1	ug/L	190	Standard
	U	238	114174.9	1.1	**34.1071**	0.533	1.6	ug/L	0	Standard
>	Bi	209	250339.9	0.5				ug/L	276439	Standard

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	Na	23	265.0	11.8	**70.0803**	8.581	12.2	mg/L	2	Standard
	Mg	24	194701.5	1.4	**205.0552**	4.310	2.1	mg/L	37	Standard
	K	39	40.0	12.5	**2.0531**	0.342	16.6	mg/L	3	Standard
	Ca	43	271.7	16.1	**70.6985**	12.169	17.2	mg/L	43	Standard
	Fe	54	1632.3	3.2	**0.6937**	0.035	5.1	mg/L	262	Standard
	Fe	57	946.7	4.4	**1.5933**	0.068	4.3	mg/L	65	Standard
>	**Sc-1**	45	26032.3	1.6				mg/L	26874	Standard
	Cl	35	756661.1	0.6				ug/L	141022	Standard
	Kr	83	306.3	11.4				ug/L	75	Standard
	Br	81	55481.4	2.8				ug/L	2810	Standard
	P	31	563899.9	2.2				ug/L	458976	Standard
	S	34	86186.1	1.1				ug/L	103378	Standard
	Sr	88	2695.2	2.9				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	19.0	91.0				mg/L	10	Standard
	Ho-1	165	11.7	107.9				mg/L	8	Standard
	Er	166	20.0	0.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		120.504	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.306	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	92.507
|	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	90.559
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1311036807SD WG452233-06
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Method 6020 - Summary Report

Sample ID: L1311036801
Sample Date/Time: Monday, November 18, 2013 10:36:13
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	418498.0	2.4				ug/L	269614	Standard
	Be	9	146.7	90.6	**0.0159**	0.029	183.6	ug/L	23	Standard
	Al	27	282143696.7	1.1	**866.7346**	12.397	1.4	ug/L	1170	Standard
	Sc	45	23623.4	0.8				ug/L	26874	Standard
	Ti	47	163.0	6.4	**0.6416**	0.046	7.1	ug/L	25	Standard
	V	51	3996.8	1.8	**0.4674**	0.009	2.0	ug/L	1686	Standard
	Cr	52	9372.2	0.4	**0.8809**	0.016	1.8	ug/L	6098	Standard
	Cr	53	1383.4	11.2	**1.1237**	0.137	12.2	ug/L	193	Standard
	Mn	55	2726835.6	1.5	**231.9822**	2.394	1.0	ug/L	1232	Standard
	Co	59	4511.0	3.6	**0.5372**	0.016	3.0	ug/L	106	Standard
	Ni	60	33489.6	1.9	**13.7830**	0.304	2.2	ug/L	556	Standard
	Cu	65	14509.9	0.9	**6.2601**	0.017	0.3	ug/L	124	Standard
	Zn	66	12102.5	0.6	**9.4352**	0.093	1.0	ug/L	196	Standard
>	**Ge**	72	415732.5	0.7				ug/L	473313	Standard
	As	75	1458.3	14.3	**1.3581**	0.162	11.9	ug/L	-286	Standard
	Se	82	1271.0	5.0	**10.0433**	0.488	4.9	ug/L	-33	Standard
	Se-1	77	685.7	7.8	**6.4507**	0.609	9.4	ug/L	86	Standard
>	**Ga**	71	115.0	17.4				mg/L	35	Standard
	Rb	85	60656.2	1.1				ug/L	13	Standard
	Y	89	388578.9	1.7				ug/L	439493	Standard
>	**Rh**	103	2203.5	4.8				ug/L	5	Standard
	Mo	98	2543.4	1.9	**0.7664**	0.012	1.6	ug/L	10	Standard
	Ag	107	92.3	47.7	**0.0018**	0.008	448.9	ug/L	53	Standard
	Cd	111	162.5	12.6	**0.0860**	0.011	12.7	mg/L	1	Standard
	Cd	114	415.5	11.1	**0.0803**	0.010	12.0	ug/L	32	Standard
>	**In**	115	412230.5	0.4				ug/L	494305	Standard
	Sn	118	105.0	10.0	**0.0398**	0.009	23.3	ug/L	53	Standard
	Sb	123	241.6	32.0	**0.1077**	0.035	32.1	ug/L	7	Standard
	Ba	135	9979.0	2.1	**6.5189**	0.161	2.5	ug/L	11	Standard
	Ce	140	3933.8	7.5				ug/L	10	Standard
>	**Tb**	159	477282.7	0.8				ug/L	538219	Standard
	Ho	165	110.0	24.1				ug/L	8	Standard
	Tl	203	351.3	8.0	**0.0710**	0.005	7.4	ug/L	1	Standard
	Tl	205	506.7	52.7	**0.0845**	0.044	52.4	ug/L	3	Standard
	Pb	206	373.3	2.5	**0.1394**	0.003	2.2	ug/L	80	Standard
	Pb	207	268.3	5.1	**0.1125**	0.006	5.7	ug/L	73	Standard
	Pb	208	829.0	23.9	**0.1440**	0.042	29.4	ug/L	190	Standard
	U	238	157578.7	1.6	**53.2158**	1.166	2.2	ug/L	0	Standard
>	**Bi**	209	221457.4	0.8				ug/L	276439	Standard

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Na	23	476.7	4.0	**139.2584**	5.149	3.7	mg/L	2	Standard
Mg	24	429429.9	1.6	**498.4006**	11.620	2.3	mg/L	37	Standard
K	39	43.3	81.0	**2.5317**	2.369	93.6	mg/L	3	Standard
Ca	43	436.7	7.0	**133.3814**	10.852	8.1	mg/L	43	Standard
Fe	54	210.4	5.3	**-0.0100**	0.007	65.6	mg/L	262	Standard
Fe	57	920.0	0.9	**1.7132**	0.015	0.9	mg/L	65	Standard
> **Sc-1**	45	23623.4	0.8				mg/L	26874	Standard
Cl	35	1742388.5	0.5				ug/L	141022	Standard
Kr	83	282.7	5.9				ug/L	75	Standard
Br	81	35541.6	0.4				ug/L	2810	Standard
P	31	409359.6	0.1				ug/L	458976	Standard
S	34	108320.8	0.6				ug/L	103378	Standard
Sr	88	10515.3	4.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	0	Standard
Dy	164	60.1	42.0				mg/L	10	Standard
Ho-1	165	110.0	24.1				mg/L	8	Standard
Er	166	66.7	17.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		155.221	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		87.835	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	83.396
|	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	80.111
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311036801PS WG452303-01
Sample Date/Time: Monday, November 18, 2013 10:39:18
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	441787.0	3.6				ug/L	269614	Standard
	Be	9	130276.2	2.1	**26.7855**	0.672	2.5	ug/L	23	Standard
	Al	27	298033870.6	1.0	**867.6323**	22.124	2.5	ug/L	1170	Standard
	Sc	45	24611.6	1.5				ug/L	26874	Standard
	Ti	47	184.3	17.1	**0.7017**	0.133	19.0	ug/L	25	Standard
	V	51	375755.7	2.2	**58.2108**	1.387	2.4	ug/L	1686	Standard
	Cr	52	361390.5	2.0	**57.2948**	1.367	2.4	ug/L	6098	Standard
	Cr	53	58917.7	1.7	**51.3137**	0.897	1.7	ug/L	193	Standard
	Mn	55	3665652.9	1.0	**298.3148**	4.057	1.4	ug/L	1232	Standard
	Co	59	471900.4	1.4	**55.2741**	0.862	1.6	ug/L	106	Standard
	Ni	60	154995.7	2.5	**61.6951**	1.432	2.3	ug/L	556	Standard
	Cu	65	127432.7	1.3	**53.0254**	0.519	1.0	ug/L	124	Standard
	Zn	66	74477.6	0.6	**56.4944**	0.291	0.5	ug/L	196	Standard
>	Ge	72	434679.5	0.4				ug/L	473313	Standard
	As	75	73063.0	1.1	**55.1415**	0.522	0.9	ug/L	-286	Standard
	Se	82	10114.2	0.5	**74.4456**	0.538	0.7	ug/L	-33	Standard
	Se-1	77	6931.9	1.1	**68.8979**	1.077	1.6	ug/L	86	Standard
>	Ga	71	173.3	1.7				mg/L	35	Standard
	Rb	85	65685.5	2.4				ug/L	13	Standard
	Y	89	411530.8	0.8				ug/L	439493	Standard
>	Rh	103	2360.2	1.9				ug/L	5	Standard
	Mo	98	2846.5	0.3	**0.8299**	0.001	0.2	ug/L	10	Standard
	Ag	107	258404.6	0.7	**45.3091**	0.412	0.9	ug/L	53	Standard
	Cd	111	90519.6	0.8	**47.8377**	0.326	0.7	mg/L	1	Standard
	Cd	114	219279.1	1.0	**45.7835**	0.466	1.0	ug/L	32	Standard
>	In	115	426691.3	0.3				ug/L	494305	Standard
	Sn	118	178.7	4.0	**0.1017**	0.006	5.8	ug/L	53	Standard
	Sb	123	115144.8	0.6	**50.3027**	0.368	0.7	ug/L	7	Standard
	Ba	135	89904.3	0.6	**56.8342**	0.333	0.6	ug/L	11	Standard
	Ce	140	4474.0	4.3				ug/L	10	Standard
>	Tb	159	492966.2	0.2				ug/L	538219	Standard
	Ho	165	118.3	4.9				ug/L	8	Standard
	Tl	203	262892.8	0.3	**53.7271**	0.051	0.1	ug/L	1	Standard
	Tl	205	331228.1	0.4	**54.8216**	0.083	0.2	ug/L	3	Standard
	Pb	206	115688.3	0.8	**55.1038**	0.361	0.7	ug/L	80	Standard
	Pb	207	104092.7	0.1	**55.0372**	0.137	0.2	ug/L	73	Standard
	Pb	208	243208.5	0.7	**52.5415**	0.316	0.6	ug/L	190	Standard
	U	238	339894.1	0.1	**112.6619**	0.385	0.3	ug/L	0	Standard
>	Bi	209	225615.4	0.3				ug/L	276439	Standard

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	Na	23	560.0	25.5	**156.7096**	38.016	24.3	mg/L	2	Standard
	Mg	24	446151.7	2.0	**496.9588**	5.823	1.2	mg/L	37	Standard
	K	39	53.3	28.6	**3.0426**	0.961	31.6	mg/L	3	Standard
	Ca	43	438.3	2.9	**128.1093**	4.044	3.2	mg/L	43	Standard
	Fe	54	289.7	9.6	**0.0275**	0.015	53.8	mg/L	262	Standard
	Fe	57	1053.4	1.7	**1.8923**	0.025	1.3	mg/L	65	Standard
>	**Sc-1**	45	24611.6	1.5				mg/L	26874	Standard
	Cl	35	1787937.3	0.2				ug/L	141022	Standard
	Kr	83	324.0	4.1				ug/L	75	Standard
	Br	81	36253.3	2.7				ug/L	2810	Standard
	P	31	559378.9	1.7				ug/L	458976	Standard
	S	34	109522.8	0.3				ug/L	103378	Standard
	Sr	88	11829.6	0.6				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	74.8	39.2				mg/L	10	Standard
	Ho-1	165	118.3	4.9				mg/L	8	Standard
	Er	166	40.0	43.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		163.859	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.838	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	86.321
|	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	81.615
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
U 238 Upper, S, EEE	U	238	

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Method 6020 - Summary Report

Sample ID: L1311036801SDL WG452303-02
Sample Date/Time: Monday, November 18, 2013 10:44:13
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	300523.3	3.4				ug/L	269614	Standard
	Be	9	76.7	19.9	**0.0072**	0.005	74.0	ug/L	23	Standard
	Al	27	62413929.0	0.8	**267.0995**	7.091	2.7	ug/L	1170	Standard
	Sc	45	24271.1	2.4				ug/L	26874	Standard
	Ti	47	46.0	4.3	**0.0966**	0.009	9.8	ug/L	25	Standard
	V	51	2287.7	3.1	**0.1656**	0.011	6.9	ug/L	1686	Standard
	Cr	52	7413.8	2.9	**0.4714**	0.030	6.3	ug/L	6098	Standard
	Cr	53	593.3	4.6	**0.3674**	0.022	6.0	ug/L	193	Standard
	Mn	55	494958.5	1.1	**39.2585**	0.248	0.6	ug/L	1232	Standard
	Co	59	974.7	3.8	**0.0963**	0.004	3.8	ug/L	106	Standard
	Ni	60	7830.7	1.2	**2.8558**	0.023	0.8	ug/L	556	Standard
	Cu	65	4638.0	1.1	**1.8291**	0.017	0.9	ug/L	124	Standard
	Zn	66	4854.1	1.5	**3.4154**	0.069	2.0	ug/L	196	Standard
>	**Ge**	72	444601.2	0.5				ug/L	473313	Standard
	As	75	131.9	37.9	**0.3089**	0.037	11.9	ug/L	-286	Standard
	Se	82	242.3	6.0	**2.0375**	0.110	5.4	ug/L	-33	Standard
	Se-1	77	208.0	5.5	**1.2881**	0.115	8.9	ug/L	86	Standard
>	**Ga**	71	23.3	49.5				mg/L	35	Standard
	Rb	85	13070.6	3.3				ug/L	13	Standard
	Y	89	407670.0	0.3				ug/L	439493	Standard
>	**Rh**	103	476.7	10.7				ug/L	5	Standard
	Mo	98	546.8	2.9	**0.1382**	0.004	3.0	ug/L	10	Standard
	Ag	107	74.0	44.7	**-0.0027**	0.006	203.8	ug/L	53	Standard
	Cd	111	41.0	20.3	**0.0176**	0.004	23.5	mg/L	1	Standard
	Cd	114	78.5	11.1	**0.0060**	0.002	28.1	ug/L	32	Standard
>	**In**	115	451447.1	0.2				ug/L	494305	Standard
	Sn	118	54.7	4.6	**-0.0107**	0.002	20.6	ug/L	53	Standard
	Sb	123	106.3	13.5	**0.0424**	0.006	13.8	ug/L	7	Standard
	Ba	135	2199.2	2.7	**1.3018**	0.035	2.7	ug/L	11	Standard
	Ce	140	911.7	3.0				ug/L	10	Standard
>	**Tb**	159	507594.7	2.1				ug/L	538219	Standard
	Ho	165	26.7	28.6				ug/L	8	Standard
	Tl	203	109.7	9.5	**0.0179**	0.002	10.5	ug/L	1	Standard
	Tl	205	180.0	23.7	**0.0259**	0.006	24.1	ug/L	3	Standard
	Pb	206	146.3	5.1	**0.0205**	0.003	13.8	ug/L	80	Standard
	Pb	207	130.3	8.8	**0.0296**	0.006	19.1	ug/L	73	Standard
	Pb	208	314.3	5.7	**0.0224**	0.004	17.0	ug/L	190	Standard
	U	238	33217.7	0.5	**9.8424**	0.105	1.1	ug/L	0	Standard
>	**Bi**	209	252354.6	0.6				ug/L	276439	Standard

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Na	23	126.7	12.7	**35.6870**	4.303	12.1	mg/L	2	Standard
Mg	24	96261.5	1.3	**108.7621**	3.784	3.5	mg/L	37	Standard
K	39	13.3	114.6	**0.4738**	0.975	205.9	mg/L	3	Standard
Ca	43	160.0	10.8	**40.9928**	6.436	15.7	mg/L	43	Standard
Fe	54	124.0	30.6	**-0.0599**	0.019	31.7	mg/L	262	Standard
Fe	57	280.0	10.7	**0.4405**	0.070	16.0	mg/L	65	Standard
> **Sc-1**	45	24271.1	2.4				mg/L	26874	Standard
Cl	35	565570.3	1.0				ug/L	141022	Standard
Kr	83	135.3	10.0				ug/L	75	Standard
Br	81	9206.1	3.2				ug/L	2810	Standard
P	31	208015.2	1.8				ug/L	458976	Standard
S	34	106555.1	1.0				ug/L	103378	Standard
Sr	88	1608.4	4.2				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	28.4	35.3				mg/L	10	Standard
Ho-1	165	26.7	28.6				mg/L	8	Standard
Er	166	33.3	34.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		111.464	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.934	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	91.330
|	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	91.288
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	

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Method 6020 - Summary Report

Sample ID: L1311036801SDL WG452303-02
Sample Date/Time: Monday, November 18, 2013 10:47:18
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	347245.7	17.7				ug/L	269614	Standard
	Be	9	55.0	27.3	**-0.0011**	0.006	511.9	ug/L	23	Standard
	Al	27	4630.8	49.0	**0.0095**	0.005	55.9	ug/L	1170	Standard
	Sc	45	31349.5	14.5				ug/L	26874	Standard
	Ti	47	16.0	22.5	**-0.0464**	0.005	10.6	ug/L	25	Standard
	V	51	1921.5	31.9	**0.0534**	0.098	183.5	ug/L	1686	Standard
	Cr	52	6851.0	31.2	**0.1746**	0.352	201.9	ug/L	6098	Standard
	Cr	53	233.3	11.8	**0.0186**	0.036	194.2	ug/L	193	Standard
	Mn	55	1627.1	26.0	**-0.0352**	0.038	107.2	ug/L	1232	Standard
	Co	59	104.0	21.7	**-0.0059**	0.003	51.6	ug/L	106	Standard
	Ni	60	649.3	15.0	**0.0001**	0.053	88082.4	ug/L	556	Standard
	Cu	65	673.3	24.4	**0.1599**	0.076	47.7	ug/L	124	Standard
	Zn	66	595.0	7.8	**0.1522**	0.063	41.1	ug/L	196	Standard
>	Ge	72	571962.6	13.1				ug/L	473313	Standard
	As	75	-303.6	36.0	**0.0326**	0.077	236.1	ug/L	-286	Standard
	Se	82	-54.7	48.2	**-0.0089**	0.161	1813.2	ug/L	-33	Standard
	Se-1	77	78.7	19.7	**-0.1384**	0.191	137.6	ug/L	86	Standard
>	Ga	71	20.0	50.0				mg/L	35	Standard
	Rb	85	26.7	39.0				ug/L	13	Standard
	Y	89	512436.4	12.7				ug/L	439493	Standard
>	Rh	103	10.0	50.0				ug/L	5	Standard
	Mo	98	13.2	8.5	**-0.0123**	0.001	4.6	ug/L	10	Standard
	Ag	107	51.0	7.8	**-0.0085**	0.001	7.0	ug/L	53	Standard
	Cd	111	0.7	177.7	**-0.0026**	0.000	17.6	mg/L	1	Standard
	Cd	114	10.7	147.8	**-0.0080**	0.002	26.4	ug/L	32	Standard
>	In	115	593816.8	13.0				ug/L	494305	Standard
	Sn	118	96.3	23.9	**0.0067**	0.022	326.4	ug/L	53	Standard
	Sb	123	78.0	14.8	**0.0231**	0.004	17.5	ug/L	7	Standard
	Ba	135	7.7	19.9	**-0.0090**	0.001	7.6	ug/L	11	Standard
	Ce	140	8.3	91.7				ug/L	10	Standard
>	Tb	159	662647.1	19.9				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	8.7	46.6	**-0.0010**	0.001	57.5	ug/L	1	Standard
	Tl	205	18.3	78.7	**0.0014**	0.002	135.9	ug/L	3	Standard
	Pb	206	114.0	18.1	**-0.0071**	0.001	18.8	ug/L	80	Standard
	Pb	207	89.3	25.6	**-0.0019**	0.004	197.5	ug/L	73	Standard
	Pb	208	251.3	15.2	**-0.0034**	0.002	50.4	ug/L	190	Standard
	U	238	49.3	50.7	**0.0095**	0.007	76.6	ug/L	0	Standard
>	Bi	209	352926.7	20.1				ug/L	276439	Standard

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	Na	23	1.7	173.2	**-0.1108**	0.549	495.1	mg/L	2	Standard
	Mg	24	113.3	70.4	**0.0729**	0.085	116.7	mg/L	37	Standard
	K	39	3.3	173.2	**-0.2364**	0.251	106.1	mg/L	3	Standard
	Ca	43	21.7	66.6	**-5.1275**	3.358	65.5	mg/L	43	Standard
	Fe	54	229.3	48.1	**-0.0253**	0.057	225.8	mg/L	262	Standard
	Fe	57	73.3	20.8	**0.0132**	0.026	200.6	mg/L	65	Standard
>	**Sc-1**	45	31349.5	14.5				mg/L	26874	Standard
	Cl	35	150164.3	34.6				ug/L	141022	Standard
	Kr	83	134.7	31.8				ug/L	75	Standard
	Br	81	2736.9	38.3				ug/L	2810	Standard
	P	31	352934.5	40.4				ug/L	458976	Standard
	S	34	86669.7	31.1				ug/L	103378	Standard
	Sr	88	33.3	37.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	12.7	50.0				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	8	Standard
	Er	166	13.3	114.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		128.793	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		120.842	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	120.132
|	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	127.669
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ge 72 Int Std for sample	Ge	72	Rerun sample
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 10:50:25
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	287169.8	1.9				ug/L	269614	Standard
	Be	9	155495.7	2.0	**49.1780**	0.845	1.7	ug/L	23	Standard
	Al	27	10252979.8	0.7	**45.8920**	0.639	1.4	ug/L	1170	Standard
	Sc	45	26715.2	1.7				ug/L	26874	Standard
	Ti	47	26540.6	1.5	**100.0775**	1.437	1.4	ug/L	25	Standard
	V	51	367259.5	1.1	**49.3991**	0.481	1.0	ug/L	1686	Standard
	Cr	52	360453.3	2.3	**49.5510**	1.136	2.3	ug/L	6098	Standard
	Cr	53	63705.3	1.2	**48.1932**	0.596	1.2	ug/L	193	Standard
	Mn	55	721854.0	1.9	**50.9186**	0.965	1.9	ug/L	1232	Standard
	Co	59	499240.5	1.5	**50.7995**	0.692	1.4	ug/L	106	Standard
	Ni	60	145696.9	1.1	**50.3476**	0.534	1.1	ug/L	556	Standard
	Cu	65	140378.0	0.8	**50.7449**	0.427	0.8	ug/L	124	Standard
	Zn	66	76929.5	1.0	**50.6757**	0.464	0.9	ug/L	196	Standard
>	Ge	72	500341.1	0.2				ug/L	473313	Standard
	As	75	75750.9	0.9	**49.6886**	0.463	0.9	ug/L	-286	Standard
	Se	82	7894.8	0.1	**50.5798**	0.125	0.2	ug/L	-33	Standard
	Se-1	77	5747.4	0.5	**49.4153**	0.370	0.7	ug/L	86	Standard
>	Ga	71	83.3	18.3				mg/L	35	Standard
	Rb	85	1103.4	9.2				ug/L	13	Standard
	Y	89	464956.6	0.9				ug/L	439493	Standard
>	Rh	103	36.7	51.6				ug/L	5	Standard
	Mo	98	423865.3	2.0	**103.2375**	2.145	2.1	ug/L	10	Standard
	Ag	107	358896.2	0.4	**51.6338**	0.267	0.5	ug/L	53	Standard
	Cd	111	115184.9	0.5	**49.9452**	0.309	0.6	mg/L	1	Standard
	Cd	114	289331.8	0.9	**49.5660**	0.521	1.1	ug/L	32	Standard
>	In	115	520052.1	0.2				ug/L	494305	Standard
	Sn	118	69964.8	0.6	**50.7605**	0.310	0.6	ug/L	53	Standard
	Sb	123	135873.0	0.9	**48.7018**	0.447	0.9	ug/L	7	Standard
	Ba	135	95893.8	0.3	**49.7363**	0.205	0.4	ug/L	11	Standard
	Ce	140	41.7	13.9				ug/L	10	Standard
>	Tb	159	560257.6	1.0				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	316235.1	0.5	**49.8042**	0.461	0.9	ug/L	1	Standard
	Tl	205	408622.1	1.0	**52.1185**	0.679	1.3	ug/L	3	Standard
	Pb	206	141934.4	0.6	**52.0951**	0.351	0.7	ug/L	80	Standard
	Pb	207	127604.4	0.6	**51.9893**	0.007	0.0	ug/L	73	Standard
	Pb	208	292752.2	0.8	**48.7333**	0.166	0.3	ug/L	190	Standard
	U	238	193471.4	0.7	**49.4158**	0.074	0.1	ug/L	0	Standard
>	Bi	209	292778.7	0.6				ug/L	276439	Standard

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	Na	23	18.3	68.6	**4.3175**	3.280	76.0	mg/L	2	Standard
	Mg	24	4930.8	4.4	**5.0299**	0.259	5.2	mg/L	37	Standard
	K	39	68.3	8.4	**3.6679**	0.379	10.3	mg/L	3	Standard
	Ca	43	46.7	34.4	**3.2700**	4.782	146.2	mg/L	43	Standard
	Fe	54	10953.2	1.0	**5.2351**	0.103	2.0	mg/L	262	Standard
	Fe	57	3095.3	2.0	**5.2899**	0.194	3.7	mg/L	65	Standard
>	**Sc-1**	45	26715.2	1.7				mg/L	26874	Standard
	Cl	35	157068.6	0.6				ug/L	141022	Standard
	Kr	83	106.7	6.8				ug/L	75	Standard
	Br	81	3233.7	5.9				ug/L	2810	Standard
	P	31	506192.6	2.2				ug/L	458976	Standard
	S	34	120890.5	2.3				ug/L	103378	Standard
	Sr	88	28.3	10.2				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	9.7	2.9				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.511	
	Be	9	98.356		
	Al	27	91.784		
	Sc	45			
	Ti	47	100.078		
	V	51	98.798		
	Cr	52	99.102		
	Cr	53			
	Mn	55	101.837		
	Co	59	101.599		
	Ni	60	100.695		
	Cu	65	101.490		
	Zn	66	101.351		
>	Ge	72		105.710	
	As	75	99.377		
	Se	82	101.160		
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89			
> Rh	103			
Mo	98	103.237		
Ag	107	103.268		
Cd	111	99.890		
Cd	114			
> In	115			105.209
Sn	118	101.521		
Sb	123	97.404		
Ba	135	99.473		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	99.608		
Tl	205			
Pb	206			
Pb	207			
Pb	208	97.467		
U	238	98.832		
> Bi	209			105.911
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 10:53:30
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	283107.7	1.8				ug/L	269614	Standard
	Be	9	96.7	18.2	**0.0150**	0.006	38.0	ug/L	23	Standard
	Al	27	19515.9	126.3	**0.0812**	0.111	136.6	ug/L	1170	Standard
	Sc	45	26486.5	0.3				ug/L	26874	Standard
	Ti	47	22.3	11.3	**-0.0130**	0.010	77.6	ug/L	25	Standard
	V	51	1265.0	10.1	**-0.0082**	0.017	209.5	ug/L	1686	Standard
	Cr	52	4619.4	1.3	**-0.0361**	0.009	24.5	ug/L	6098	Standard
	Cr	53	221.7	17.5	**0.0320**	0.030	92.5	ug/L	193	Standard
	Mn	55	4861.8	116.9	**0.2101**	0.407	194.0	ug/L	1232	Standard
	Co	59	209.3	58.1	**0.0063**	0.013	199.1	ug/L	106	Standard
	Ni	60	770.0	4.0	**0.0703**	0.011	15.6	ug/L	556	Standard
	Cu	65	833.7	4.9	**0.2472**	0.015	6.3	ug/L	124	Standard
	Zn	66	554.3	6.8	**0.1760**	0.027	15.1	ug/L	196	Standard
>	**Ge**	72	491561.4	0.4				ug/L	473313	Standard
	As	75	-280.2	17.9	**0.0255**	0.034	132.7	ug/L	-286	Standard
	Se	82	-31.3	39.0	**0.0978**	0.080	82.0	ug/L	-33	Standard
	Se-1	77	94.0	8.5	**0.0798**	0.069	85.9	ug/L	86	Standard
>	**Ga**	71	40.0	12.5				mg/L	35	Standard
	Rb	85	66.7	89.5				ug/L	13	Standard
	Y	89	459160.2	0.3				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	163.4	39.1	**0.0247**	0.016	63.4	ug/L	10	Standard
	Ag	107	184.0	74.3	**0.0115**	0.020	171.3	ug/L	53	Standard
	Cd	111	73.7	134.8	**0.0291**	0.043	148.6	mg/L	1	Standard
	Cd	114	205.8	125.2	**0.0259**	0.044	171.3	ug/L	32	Standard
>	**In**	115	519218.3	1.1				ug/L	494305	Standard
	Sn	118	94.0	18.5	**0.0120**	0.013	106.9	ug/L	53	Standard
	Sb	123	307.9	23.1	**0.1091**	0.026	23.9	ug/L	7	Standard
	Ba	135	148.7	52.3	**0.0647**	0.040	62.5	ug/L	11	Standard
	Ce	140	3.3	86.6				ug/L	10	Standard
>	**Tb**	159	557141.9	0.3				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	155.3	118.0	**0.0221**	0.029	129.3	ug/L	1	Standard
	Tl	205	68.3	92.1	**0.0080**	0.008	99.9	ug/L	3	Standard
	Pb	206	145.3	41.1	**0.0111**	0.022	194.5	ug/L	80	Standard
	Pb	207	129.0	34.5	**0.0202**	0.018	88.6	ug/L	73	Standard
	Pb	208	233.3	12.1	**0.0002**	0.005	1862.4	ug/L	190	Standard
	U	238	43.0	76.2	**0.0090**	0.008	91.8	ug/L	0	Standard
>	**Bi**	209	294453.7	0.5				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	85.0	66.8	**0.0560**	0.058	104.4	mg/L	37	Standard
K	39	3.3	86.6	**-0.1822**	0.172	94.6	mg/L	3	Standard
Ca	43	21.7	48.0	**-3.9618**	3.066	77.4	mg/L	43	Standard
Fe	54	304.3	15.9	**0.0237**	0.024	102.3	mg/L	262	Standard
Fe	57	81.7	9.4	**0.0465**	0.013	28.7	mg/L	65	Standard
> **Sc-1**	45	26486.5	0.3				mg/L	26874	Standard
Cl	35	155490.5	1.1				ug/L	141022	Standard
Kr	83	100.3	11.1				ug/L	75	Standard
Br	81	3003.6	8.4				ug/L	2810	Standard
P	31	508525.8	2.3				ug/L	458976	Standard
S	34	119123.2	1.4				ug/L	103378	Standard
Sr	88	35.0	37.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	9.5	182.0				mg/L	10	Standard
Ho-1	165	5.0	100.0				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		105.005	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		103.855	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	105.040
	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	106.517
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311050501
Sample Date/Time: Monday, November 18, 2013 10:56:37
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	454960.7	1.6				ug/L	269614	Standard
	Be	9	90.0	9.6	**0.0019**	0.001	78.6	ug/L	23	Standard
	Al	27	198938334.9	0.9	**562.1761**	14.071	2.5	ug/L	1170	Standard
	Sc	45	24149.2	2.1				ug/L	26874	Standard
	Ti	47	165.3	7.2	**0.6336**	0.050	8.0	ug/L	25	Standard
	V	51	3425.9	1.5	**0.3609**	0.006	1.7	ug/L	1686	Standard
	Cr	52	11194.1	1.3	**1.1400**	0.017	1.5	ug/L	6098	Standard
	Cr	53	1096.7	5.3	**0.8376**	0.055	6.5	ug/L	193	Standard
	Mn	55	363743.5	1.2	**30.0597**	0.250	0.8	ug/L	1232	Standard
	Co	59	3838.5	3.0	**0.4432**	0.012	2.7	ug/L	106	Standard
	Ni	60	29866.1	1.9	**11.9606**	0.182	1.5	ug/L	556	Standard
	Cu	65	11223.2	1.2	**4.7079**	0.071	1.5	ug/L	124	Standard
	Zn	66	22412.2	1.2	**17.2001**	0.265	1.5	ug/L	196	Standard
>	Ge	72	426263.0	0.4				ug/L	473313	Standard
	As	75	1978.2	4.5	**1.7283**	0.063	3.7	ug/L	-286	Standard
	Se	82	916.6	3.8	**7.1518**	0.237	3.3	ug/L	-33	Standard
	Se-1	77	190.0	4.0	**1.1914**	0.074	6.2	ug/L	86	Standard
>	Ga	71	38.3	49.4				mg/L	35	Standard
	Rb	85	24027.4	2.3				ug/L	13	Standard
	Y	89	403653.1	0.8				ug/L	439493	Standard
>	Rh	103	1990.1	6.3				ug/L	5	Standard
	Mo	98	5004.8	1.8	**1.4757**	0.030	2.0	ug/L	10	Standard
	Ag	107	64.3	1.8	**-0.0037**	0.000	6.1	ug/L	53	Standard
	Cd	111	50.3	9.0	**0.0238**	0.002	9.9	mg/L	1	Standard
	Cd	114	147.1	5.8	**0.0214**	0.002	8.2	ug/L	32	Standard
>	In	115	425282.8	0.3				ug/L	494305	Standard
	Sn	118	108.7	4.7	**0.0401**	0.004	10.8	ug/L	53	Standard
	Sb	123	172.6	8.8	**0.0742**	0.007	8.8	ug/L	7	Standard
	Ba	135	8231.6	1.0	**5.2097**	0.065	1.3	ug/L	11	Standard
	Ce	140	1063.4	6.4				ug/L	10	Standard
>	Tb	159	484128.1	0.5				ug/L	538219	Standard
	Ho	165	151.7	6.9				ug/L	8	Standard
	Tl	203	144.3	8.3	**0.0276**	0.002	8.6	ug/L	1	Standard
	Tl	205	156.7	6.6	**0.0254**	0.002	7.1	ug/L	3	Standard
	Pb	206	208.7	3.2	**0.0583**	0.004	6.1	ug/L	80	Standard
	Pb	207	182.0	6.0	**0.0649**	0.006	8.9	ug/L	73	Standard
	Pb	208	449.0	2.3	**0.0593**	0.002	3.3	ug/L	190	Standard
	U	238	185420.0	0.6	**61.8758**	0.331	0.5	ug/L	0	Standard
>	Bi	209	224094.1	0.5				ug/L	276439	Standard

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	Na	23	435.0	5.3	**124.2656**	5.539	4.5	mg/L	2	Standard
	Mg	24	361775.0	0.8	**410.7672**	6.330	1.5	mg/L	37	Standard
	K	39	31.7	24.1	**1.6952**	0.506	29.8	mg/L	3	Standard
	Ca	43	481.7	9.4	**144.6394**	13.174	9.1	mg/L	43	Standard
	Fe	54	235.5	21.9	**0.0011**	0.028	2553.5	mg/L	262	Standard
	Fe	57	1003.4	11.4	**1.8374**	0.259	14.1	mg/L	65	Standard
>	**Sc-1**	45	24149.2	2.1				mg/L	26874	Standard
	Cl	35	1467490.9	1.2				ug/L	141022	Standard
	Kr	83	232.7	1.1				ug/L	75	Standard
	Br	81	93293.8	6.4				ug/L	2810	Standard
	P	31	473011.1	1.6				ug/L	458976	Standard
	S	34	109202.2	1.3				ug/L	103378	Standard
	Sr	88	9442.9	3.1				ug/L	30	Standard
	C	12	6.7	173.2				mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	140.3	13.7				mg/L	10	Standard
	Ho-1	165	151.7	6.9				mg/L	8	Standard
	Er	166	133.3	33.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		168.745	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.059	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	86.036
|	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	81.065
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	

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Method 6020 - Summary Report

Sample ID: L1311050502
Sample Date/Time: Monday, November 18, 2013 10:59:42
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	525378.5	1.7				ug/L	269614	Standard
	Be	9	98.3	2.9	**0.0009**	0.001	77.7	ug/L	23	Standard
	Al	27	203676772.4	1.7	**498.2896**	0.300	0.1	ug/L	1170	Standard
	Sc	45	23608.4	2.2				ug/L	26874	Standard
	Ti	47	157.7	3.9	**0.6117**	0.029	4.8	ug/L	25	Standard
	V	51	3672.2	6.1	**0.4098**	0.036	8.8	ug/L	1686	Standard
	Cr	52	10657.1	2.2	**1.0819**	0.041	3.8	ug/L	6098	Standard
	Cr	53	1261.7	7.4	**1.0034**	0.081	8.1	ug/L	193	Standard
	Mn	55	1930243.0	0.4	**162.8459**	0.454	0.3	ug/L	1232	Standard
	Co	59	6565.4	0.1	**0.7824**	0.002	0.2	ug/L	106	Standard
	Ni	60	54526.3	1.3	**22.3815**	0.238	1.1	ug/L	556	Standard
	Cu	65	14593.4	0.7	**6.2451**	0.057	0.9	ug/L	124	Standard
	Zn	66	11804.6	2.3	**9.1221**	0.236	2.6	ug/L	196	Standard
>	Ge	72	419126.6	0.2				ug/L	473313	Standard
	As	75	14428.3	16.3	**11.4602**	1.815	15.8	ug/L	-286	Standard
	Se	82	77629.3	0.6	**590.4985**	4.767	0.8	ug/L	-33	Standard
	Se-1	77	54645.0	1.4	**568.6922**	9.267	1.6	ug/L	86	Standard
>	Ga	71	105.0	0.0				mg/L	35	Standard
	Rb	85	45797.5	1.8				ug/L	13	Standard
	Y	89	404151.4	1.2				ug/L	439493	Standard
>	Rh	103	2121.8	2.2				ug/L	5	Standard
	Mo	98	2839.8	1.4	**0.8489**	0.019	2.3	ug/L	10	Standard
	Ag	107	136.0	21.8	**0.0094**	0.005	53.8	ug/L	53	Standard
	Cd	111	102.6	15.9	**0.0526**	0.008	15.8	mg/L	1	Standard
	Cd	114	254.4	13.1	**0.0451**	0.008	17.1	ug/L	32	Standard
>	In	115	416380.4	1.1				ug/L	494305	Standard
	Sn	118	83.3	2.8	**0.0192**	0.001	7.5	ug/L	53	Standard
	Sb	123	123.2	16.0	**0.0536**	0.008	15.4	ug/L	7	Standard
	Ba	135	16450.9	1.0	**10.6486**	0.220	2.1	ug/L	11	Standard
	Ce	140	4018.9	1.8				ug/L	10	Standard
>	Tb	159	474093.4	1.0				ug/L	538219	Standard
	Ho	165	300.0	19.6				ug/L	8	Standard
	Tl	203	396.7	9.4	**0.0801**	0.007	8.7	ug/L	1	Standard
	Tl	205	445.0	14.1	**0.0740**	0.010	13.0	ug/L	3	Standard
	Pb	206	130.0	9.3	**0.0209**	0.005	26.2	ug/L	80	Standard
	Pb	207	102.3	23.9	**0.0228**	0.013	55.1	ug/L	73	Standard
	Pb	208	247.7	10.5	**0.0159**	0.005	31.8	ug/L	190	Standard
	U	238	111893.3	0.5	**37.6269**	0.613	1.6	ug/L	0	Standard
>	Bi	209	222405.6	1.2				ug/L	276439	Standard

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Na	23	613.3	15.2	**179.1303**	23.772	13.3	mg/L	2	Standard
Mg	24	375195.6	1.0	**435.7859**	8.226	1.9	mg/L	37	Standard
K	39	66.7	8.7	**4.0839**	0.334	8.2	mg/L	3	Standard
Ca	43	605.0	4.4	**188.9294**	10.275	5.4	mg/L	43	Standard
Fe	54	194.0	22.3	**-0.0187**	0.026	139.4	mg/L	262	Standard
Fe	57	1055.0	4.5	**1.9809**	0.110	5.5	mg/L	65	Standard
> **Sc-1**	45	23608.4	2.2				mg/L	26874	Standard
Cl	35	1381726.1	0.5				ug/L	141022	Standard
Kr	83	259.0	1.8				ug/L	75	Standard
Br	81	107094.8	6.2				ug/L	2810	Standard
P	31	454538.4	1.6				ug/L	458976	Standard
S	34	108332.6	1.1				ug/L	103378	Standard
Sr	88	9498.0	3.4				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	402.0	7.9				mg/L	10	Standard
Ho-1	165	300.0	19.6				mg/L	8	Standard
Er	166	306.7	10.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		194.863	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		88.552	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	84.235
|	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	80.454
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Se 82 Upper, S, EEE	Se	82	
Se-1 77 Upper, S, EEE	Se-1	77	

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Method 6020 - Summary Report

Sample ID: L1311050503
Sample Date/Time: Monday, November 18, 2013 11:02:46
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	407958.3	2.6				ug/L	269614	Standard
	Be	9	73.3	20.8	**0.0003**	0.004	1170.9	ug/L	23	Standard
	Al	27	97162193.1	0.3	**306.2751**	8.857	2.9	ug/L	1170	Standard
	Sc	45	24201.0	2.9				ug/L	26874	Standard
	Ti	47	172.0	3.2	**0.6562**	0.023	3.5	ug/L	25	Standard
	V	51	5995.1	1.4	**0.7593**	0.013	1.7	ug/L	1686	Standard
	Cr	52	12794.4	1.4	**1.3826**	0.023	1.7	ug/L	6098	Standard
	Cr	53	3940.5	2.3	**3.3377**	0.074	2.2	ug/L	193	Standard
	Mn	55	833021.8	0.8	**68.3871**	0.407	0.6	ug/L	1232	Standard
	Co	59	4789.1	1.8	**0.5515**	0.009	1.6	ug/L	106	Standard
	Ni	60	37088.0	1.6	**14.7634**	0.200	1.4	ug/L	556	Standard
	Cu	65	10859.6	1.1	**4.5110**	0.037	0.8	ug/L	124	Standard
	Zn	66	12339.4	1.1	**9.2930**	0.097	1.0	ug/L	196	Standard
>	Ge	72	430206.4	0.3				ug/L	473313	Standard
	As	75	12686.9	8.9	**9.8486**	0.848	8.6	ug/L	-286	Standard
	Se	82	68767.3	0.9	**509.6455**	3.599	0.7	ug/L	-33	Standard
	Se-1	77	48545.0	0.7	**492.0807**	2.305	0.5	ug/L	86	Standard
>	Ga	71	71.7	33.0				mg/L	35	Standard
	Rb	85	20337.0	2.3				ug/L	13	Standard
	Y	89	403916.7	0.8				ug/L	439493	Standard
>	Rh	103	1180.0	10.6				ug/L	5	Standard
	Mo	98	2108.9	1.5	**0.6051**	0.007	1.2	ug/L	10	Standard
	Ag	107	50.0	16.4	**-0.0063**	0.001	22.1	ug/L	53	Standard
	Cd	111	102.8	24.0	**0.0509**	0.013	24.9	mg/L	1	Standard
	Cd	114	274.9	17.3	**0.0474**	0.010	20.3	ug/L	32	Standard
>	In	115	430704.6	0.6				ug/L	494305	Standard
	Sn	118	129.7	13.3	**0.0573**	0.014	25.3	ug/L	53	Standard
	Sb	123	156.7	3.2	**0.0663**	0.003	3.9	ug/L	7	Standard
	Ba	135	17868.9	0.9	**11.1806**	0.057	0.5	ug/L	11	Standard
	Ce	140	628.3	9.0				ug/L	10	Standard
>	Tb	159	494405.6	0.8				ug/L	538219	Standard
	Ho	165	56.7	48.6				ug/L	8	Standard
	Tl	203	324.3	3.1	**0.0623**	0.002	3.4	ug/L	1	Standard
	Tl	205	408.3	21.1	**0.0650**	0.014	21.3	ug/L	3	Standard
	Pb	206	131.3	4.5	**0.0189**	0.002	13.1	ug/L	80	Standard
	Pb	207	112.7	6.7	**0.0259**	0.004	15.7	ug/L	73	Standard
	Pb	208	266.7	1.8	**0.0176**	0.001	5.0	ug/L	190	Standard
	U	238	39636.1	1.4	**12.7654**	0.147	1.2	ug/L	0	Standard
>	Bi	209	232162.8	0.4				ug/L	276439	Standard

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Na	23	588.3	17.0	**168.4546**	33.291	19.8	mg/L	2	Standard
Mg	24	314619.6	0.2	**356.5887**	10.658	3.0	mg/L	37	Standard
K	39	70.0	7.1	**4.1973**	0.350	8.3	mg/L	3	Standard
Ca	43	525.0	1.6	**158.3182**	2.069	1.3	mg/L	43	Standard
Fe	54	261.4	18.9	**0.0146**	0.024	168.2	mg/L	262	Standard
Fe	57	958.4	11.0	**1.7482**	0.255	14.6	mg/L	65	Standard
> **Sc-1**	45	24201.0	2.9				mg/L	26874	Standard
Cl	35	858602.1	0.4				ug/L	141022	Standard
Kr	83	224.3	2.2				ug/L	75	Standard
Br	81	95437.2	6.9				ug/L	2810	Standard
P	31	493120.3	2.2				ug/L	458976	Standard
S	34	91901.2	1.4				ug/L	103378	Standard
Sr	88	5497.7	3.8				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	16.7	34.6				mg/L	0	Standard
Dy	164	31.4	81.6				mg/L	10	Standard
Ho-1	165	56.7	48.6				mg/L	8	Standard
Er	166	40.0	25.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		151.312	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.893	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	87.133
|	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	83.983
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Se 82 Upper, S, EEE	Se	82	
Se-1 77 Upper, S, EEE	Se-1	77	

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Method 6020 - Summary Report

Sample ID: L1311050504
Sample Date/Time: Monday, November 18, 2013 11:05:51
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	666741.3	2.5				ug/L	269614	Standard
	Be	9	123.3	75.0	**0.0005**	0.012	2228.8	ug/L	23	Standard
	Al	27	340340694.0	2.5	**656.1150**	6.495	1.0	ug/L	1170	Standard
	Sc	45	21076.3	2.0				ug/L	26874	Standard
	Ti	47	229.3	17.7	**1.0628**	0.201	18.9	ug/L	25	Standard
	V	51	4036.5	3.3	**0.5496**	0.026	4.8	ug/L	1686	Standard
	Cr	52	8959.6	0.9	**0.9850**	0.012	1.2	ug/L	6098	Standard
	Cr	53	1438.4	11.0	**1.3259**	0.163	12.3	ug/L	193	Standard
	Mn	55	6779872.1	0.9	**643.6179**	4.166	0.6	ug/L	1232	Standard
	Co	59	9070.4	1.4	**1.2240**	0.018	1.5	ug/L	106	Standard
	Ni	60	65811.0	1.7	**30.4490**	0.408	1.3	ug/L	556	Standard
	Cu	65	18926.2	2.4	**9.1356**	0.247	2.7	ug/L	124	Standard
	Zn	66	12141.9	5.9	**10.5830**	0.671	6.3	ug/L	196	Standard
>	Ge	72	372714.2	0.3				ug/L	473313	Standard
	As	75	14981.8	3.2	**13.3477**	0.406	3.0	ug/L	-286	Standard
	Se	82	67985.3	1.0	**581.5263**	3.859	0.7	ug/L	-33	Standard
	Se-1	77	47263.6	0.7	**553.0887**	2.890	0.5	ug/L	86	Standard
>	Ga	71	233.3	8.9				mg/L	35	Standard
	Rb	85	12808.7	0.9				ug/L	13	Standard
	Y	89	355784.2	1.3				ug/L	439493	Standard
>	Rh	103	2585.2	9.2				ug/L	5	Standard
	Mo	98	3932.5	2.9	**1.3691**	0.037	2.7	ug/L	10	Standard
	Ag	107	86.7	15.2	**0.0030**	0.003	87.7	ug/L	53	Standard
	Cd	111	206.6	5.2	**0.1265**	0.006	5.0	mg/L	1	Standard
	Cd	114	532.0	10.7	**0.1222**	0.014	11.1	ug/L	32	Standard
>	In	115	359862.2	0.4				ug/L	494305	Standard
	Sn	118	113.3	4.2	**0.0625**	0.005	7.4	ug/L	53	Standard
	Sb	123	117.4	7.5	**0.0593**	0.005	7.8	ug/L	7	Standard
	Ba	135	8368.3	1.6	**6.2612**	0.076	1.2	ug/L	11	Standard
	Ce	140	3088.6	3.4				ug/L	10	Standard
>	Tb	159	424593.7	0.3				ug/L	538219	Standard
	Ho	165	241.7	13.1				ug/L	8	Standard
	Tl	203	294.0	8.2	**0.0688**	0.006	8.5	ug/L	1	Standard
	Tl	205	331.7	21.1	**0.0641**	0.014	21.5	ug/L	3	Standard
	Pb	206	123.7	11.0	**0.0277**	0.008	28.2	ug/L	80	Standard
	Pb	207	101.7	5.8	**0.0314**	0.004	12.0	ug/L	73	Standard
	Pb	208	241.3	10.2	**0.0232**	0.006	26.8	ug/L	190	Standard
	U	238	230794.3	1.0	**90.2591**	1.098	1.2	ug/L	0	Standard
>	Bi	209	191222.1	0.2				ug/L	276439	Standard

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Na	23	428.3	2.4	**140.3536**	6.179	4.4	mg/L	2	Standard
Mg	24	751835.4	2.1	**978.1559**	24.713	2.5	mg/L	37	Standard
K	39	46.7	12.4	**3.1280**	0.495	15.8	mg/L	3	Standard
Ca	43	433.3	7.4	**149.6588**	14.893	10.0	mg/L	43	Standard
Fe	54	177.2	6.2	**-0.0166**	0.005	32.6	mg/L	262	Standard
Fe	57	1028.4	5.0	**2.1702**	0.082	3.8	mg/L	65	Standard
> **Sc-1**	45	21076.3	2.0				mg/L	26874	Standard
Cl	35	2846439.2	1.7				ug/L	141022	Standard
Kr	83	355.7	13.9				ug/L	75	Standard
Br	81	51825.2	2.7				ug/L	2810	Standard
P	31	371171.7	1.1				ug/L	458976	Standard
S	34	99587.9	1.4				ug/L	103378	Standard
Sr	88	15533.0	3.6				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	184.6	6.0				mg/L	10	Standard
Ho-1	165	241.7	13.1				mg/L	8	Standard
Er	166	183.3	6.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		247.294	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		78.746	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	72.802
	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	69.173
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Se 82 Upper, S, EEE	Se	82	
Se-1 77 Upper, S, EEE	Se-1	77	

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Method 6020 - Summary Report

Sample ID: L1311050505
Sample Date/Time: Monday, November 18, 2013 11:08:56
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	351491.0	3.0				ug/L	269614	Standard
	Be	9	48.3	36.3	**-0.0035**	0.005	140.2	ug/L	23	Standard
	Al	27	92688690.8	0.8	**339.1599**	11.247	3.3	ug/L	1170	Standard
	Sc	45	24778.6	1.6				ug/L	26874	Standard
	Ti	47	149.0	8.1	**0.5344**	0.054	10.2	ug/L	25	Standard
	V	51	2308.8	3.9	**0.1688**	0.012	6.9	ug/L	1686	Standard
	Cr	52	8415.7	1.5	**0.6290**	0.025	4.0	ug/L	6098	Standard
	Cr	53	2303.5	7.2	**1.8285**	0.152	8.3	ug/L	193	Standard
	Mn	55	3008712.5	0.4	**239.4061**	2.261	0.9	ug/L	1232	Standard
	Co	59	4766.1	2.9	**0.5307**	0.018	3.5	ug/L	106	Standard
	Ni	60	15801.2	1.6	**5.9695**	0.130	2.2	ug/L	556	Standard
	Cu	65	6994.0	9.0	**2.7901**	0.271	9.7	ug/L	124	Standard
	Zn	66	9197.1	7.0	**6.6502**	0.514	7.7	ug/L	196	Standard
>	**Ge**	72	444517.2	0.6				ug/L	473313	Standard
	As	75	1937.1	3.7	**1.6361**	0.058	3.6	ug/L	-286	Standard
	Se	82	1169.0	3.8	**8.6820**	0.362	4.2	ug/L	-33	Standard
	Se-1	77	621.0	4.3	**5.3473**	0.290	5.4	ug/L	86	Standard
>	**Ga**	71	86.7	20.3				mg/L	35	Standard
	Rb	85	11706.2	1.9				ug/L	13	Standard
	Y	89	416112.5	1.6				ug/L	439493	Standard
>	**Rh**	103	738.4	8.5				ug/L	5	Standard
	Mo	98	6991.0	2.9	**1.9634**	0.074	3.8	ug/L	10	Standard
	Ag	107	53.7	12.4	**-0.0060**	0.001	19.0	ug/L	53	Standard
	Cd	111	26.6	22.3	**0.0105**	0.003	29.4	mg/L	1	Standard
	Cd	114	76.8	23.4	**0.0058**	0.004	61.1	ug/L	32	Standard
>	**In**	115	447706.3	1.0				ug/L	494305	Standard
	Sn	118	119.7	2.1	**0.0446**	0.002	5.0	ug/L	53	Standard
	Sb	123	345.8	5.4	**0.1425**	0.007	4.8	ug/L	7	Standard
	Ba	135	23324.3	0.1	**14.0440**	0.129	0.9	ug/L	11	Standard
	Ce	140	2421.9	8.3				ug/L	10	Standard
>	**Tb**	159	500435.8	1.2				ug/L	538219	Standard
	Ho	165	58.3	27.6				ug/L	8	Standard
	Tl	203	99.7	5.8	**0.0168**	0.001	6.6	ug/L	1	Standard
	Tl	205	123.3	35.0	**0.0183**	0.007	36.3	ug/L	3	Standard
	Pb	206	144.7	14.6	**0.0221**	0.009	42.2	ug/L	80	Standard
	Pb	207	129.0	6.1	**0.0313**	0.004	12.3	ug/L	73	Standard
	Pb	208	292.0	3.9	**0.0202**	0.002	11.5	ug/L	190	Standard
	U	238	30676.4	0.8	**9.4317**	0.075	0.8	ug/L	0	Standard
>	**Bi**	209	243182.3	0.0				ug/L	276439	Standard

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	Na	23	300.0	16.1	**83.5381**	14.593	17.5	mg/L	2	Standard
	Mg	24	233318.0	1.6	**258.1449**	4.398	1.7	mg/L	37	Standard
	K	39	30.0	28.9	**1.5308**	0.538	35.1	mg/L	3	Standard
	Ca	43	266.7	6.0	**73.2822**	3.792	5.2	mg/L	43	Standard
	Fe	54	759.4	1.7	**0.2742**	0.007	2.4	mg/L	262	Standard
	Fe	57	670.0	11.8	**1.1613**	0.165	14.2	mg/L	65	Standard
>	**Sc-1**	45	24778.6	1.6				mg/L	26874	Standard
	Cl	35	804460.1	0.4				ug/L	141022	Standard
	Kr	83	220.7	24.2				ug/L	75	Standard
	Br	81	59382.8	1.6				ug/L	2810	Standard
	P	31	509770.4	0.2				ug/L	458976	Standard
	S	34	95062.3	0.6				ug/L	103378	Standard
	Sr	88	3453.7	5.4				ug/L	30	Standard
	C	12	13.3	86.6				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	0	Standard
	Dy	164	63.2	43.3				mg/L	10	Standard
	Ho-1	165	58.3	27.6				mg/L	8	Standard
	Er	166	73.3	47.9				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		130.368	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.916	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.573
|	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	87.970
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311050506
Sample Date/Time: Monday, November 18, 2013 11:12:02
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	454145.8	0.6				ug/L	269614	Standard
	Be	9	73.3	32.2	**-0.0014**	0.005	348.2	ug/L	23	Standard
	Al	27	257114965.8	1.0	**727.6809**	3.512	0.5	ug/L	1170	Standard
	Sc	45	22989.1	2.7				ug/L	26874	Standard
	Ti	47	155.7	5.2	**0.6190**	0.040	6.4	ug/L	25	Standard
	V	51	3030.3	6.8	**0.3178**	0.036	11.4	ug/L	1686	Standard
	Cr	52	15182.9	0.4	**1.8935**	0.010	0.5	ug/L	6098	Standard
	Cr	53	3583.8	3.3	**3.1824**	0.129	4.1	ug/L	193	Standard
	Mn	55	865657.0	1.1	**74.6532**	1.238	1.7	ug/L	1232	Standard
	Co	59	4022.2	2.3	**0.4847**	0.013	2.6	ug/L	106	Standard
	Ni	60	27315.6	1.3	**11.3749**	0.225	2.0	ug/L	556	Standard
	Cu	65	11237.5	1.2	**4.9080**	0.084	1.7	ug/L	124	Standard
	Zn	66	10580.0	1.3	**8.3484**	0.074	0.9	ug/L	196	Standard
>	Ge	72	409635.4	0.6				ug/L	473313	Standard
	As	75	3609.1	17.5	**3.0923**	0.513	16.6	ug/L	-286	Standard
	Se	82	13295.1	1.2	**103.7264**	1.658	1.6	ug/L	-33	Standard
	Se-1	77	9138.8	0.2	**96.6847**	0.500	0.5	ug/L	86	Standard
>	Ga	71	91.7	19.2				mg/L	35	Standard
	Rb	85	18873.4	1.9				ug/L	13	Standard
	Y	89	386311.2	0.4				ug/L	439493	Standard
>	Rh	103	1520.1	4.3				ug/L	5	Standard
	Mo	98	9235.2	0.9	**2.8626**	0.036	1.2	ug/L	10	Standard
	Ag	107	49.3	8.4	**-0.0059**	0.001	13.7	ug/L	53	Standard
	Cd	111	51.9	15.0	**0.0259**	0.004	17.3	mg/L	1	Standard
	Cd	114	194.7	7.8	**0.0332**	0.003	9.6	ug/L	32	Standard
>	In	115	406551.1	0.6				ug/L	494305	Standard
	Sn	118	258.3	1.9	**0.1836**	0.003	1.7	ug/L	53	Standard
	Sb	123	104.8	6.1	**0.0466**	0.003	6.8	ug/L	7	Standard
	Ba	135	14461.2	0.7	**9.5849**	0.130	1.4	ug/L	11	Standard
	Ce	140	770.0	2.8				ug/L	10	Standard
>	Tb	159	466770.8	0.1				ug/L	538219	Standard
	Ho	165	110.0	32.8				ug/L	8	Standard
	Tl	203	253.3	5.0	**0.0520**	0.003	5.3	ug/L	1	Standard
	Tl	205	251.7	22.2	**0.0428**	0.009	21.4	ug/L	3	Standard
	Pb	206	118.0	4.5	**0.0169**	0.002	13.2	ug/L	80	Standard
	Pb	207	93.0	7.8	**0.0193**	0.004	18.1	ug/L	73	Standard
	Pb	208	234.3	6.6	**0.0146**	0.004	26.9	ug/L	190	Standard
	U	238	49190.4	1.3	**17.0356**	0.340	2.0	ug/L	0	Standard
>	Bi	209	215938.0	1.0				ug/L	276439	Standard

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Na	23	371.7	4.7	**111.6418**	8.180	7.3	mg/L	2	Standard
Mg	24	461883.9	1.6	**550.8989**	5.806	1.1	mg/L	37	Standard
K	39	45.0	33.3	**2.7283**	1.073	39.3	mg/L	3	Standard
Ca	43	315.0	3.2	**96.2776**	6.158	6.4	mg/L	43	Standard
Fe	54	195.0	7.6	**-0.0156**	0.006	41.0	mg/L	262	Standard
Fe	57	791.7	4.5	**1.5056**	0.113	7.5	mg/L	65	Standard
> **Sc-1**	45	22989.1	2.7				mg/L	26874	Standard
Cl	35	1712561.8	1.7				ug/L	141022	Standard
Kr	83	271.7	1.4				ug/L	75	Standard
Br	81	50350.2	2.5				ug/L	2810	Standard
P	31	445814.3	2.3				ug/L	458976	Standard
S	34	109128.3	0.9				ug/L	103378	Standard
Sr	88	7960.4	3.6				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	46.0	44.0				mg/L	10	Standard
Ho-1	165	110.0	32.8				mg/L	8	Standard
Er	166	83.3	18.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		168.443	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		86.546	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	82.247
|	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	78.114
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Se 82 Upper, S, EEE	Se	82	

Sample ID: L1311050506
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Method 6020 - Summary Report

Sample ID: L1311051401
Sample Date/Time: Monday, November 18, 2013 11:15:06
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	502668.5	2.9				ug/L	269614	Standard
	Be	9	106.7	35.2	**0.0031**	0.006	198.3	ug/L	23	Standard
	Al	27	246216603.7	0.9	**629.8553**	14.677	2.3	ug/L	1170	Standard
	Sc	45	22002.6	3.1				ug/L	26874	Standard
	Ti	47	233.3	8.4	**1.0259**	0.086	8.4	ug/L	25	Standard
	V	51	4944.0	3.2	**0.6706**	0.024	3.6	ug/L	1686	Standard
	Cr	52	18780.3	2.9	**2.6524**	0.077	2.9	ug/L	6098	Standard
	Cr	53	5047.5	3.8	**4.7522**	0.152	3.2	ug/L	193	Standard
	Mn	55	3287280.8	0.9	**296.8923**	0.524	0.2	ug/L	1232	Standard
	Co	59	8190.9	1.0	**1.0497**	0.012	1.1	ug/L	106	Standard
	Ni	60	31621.6	2.2	**13.8129**	0.232	1.7	ug/L	556	Standard
	Cu	65	12773.0	2.0	**5.8463**	0.157	2.7	ug/L	124	Standard
	Zn	66	14858.3	1.6	**12.3564**	0.300	2.4	ug/L	196	Standard
>	**Ge**	72	391663.1	0.8				ug/L	473313	Standard
	As	75	6063.4	8.5	**5.2730**	0.458	8.7	ug/L	-286	Standard
	Se	82	18230.6	0.2	**148.6276**	1.415	1.0	ug/L	-33	Standard
	Se-1	77	12470.1	1.3	**138.3021**	1.356	1.0	ug/L	86	Standard
>	**Ga**	71	128.3	21.5				mg/L	35	Standard
	Rb	85	21912.5	0.6				ug/L	13	Standard
	Y	89	373600.1	0.7				ug/L	439493	Standard
>	**Rh**	103	1841.8	2.6				ug/L	5	Standard
	Mo	98	4477.5	3.4	**1.4563**	0.048	3.3	ug/L	10	Standard
	Ag	107	394.3	6.7	**0.0616**	0.005	8.1	ug/L	53	Standard
	Cd	111	85.0	3.8	**0.0468**	0.002	3.6	mg/L	1	Standard
	Cd	114	215.6	20.2	**0.0404**	0.010	24.6	ug/L	32	Standard
>	**In**	115	385469.1	0.6				ug/L	494305	Standard
	Sn	118	350.7	8.7	**0.2873**	0.031	10.8	ug/L	53	Standard
	Sb	123	663.0	3.8	**0.3191**	0.012	3.7	ug/L	7	Standard
	Ba	135	10293.2	1.7	**7.1916**	0.091	1.3	ug/L	11	Standard
	Ce	140	980.0	4.5				ug/L	10	Standard
>	**Tb**	159	446730.1	0.2				ug/L	538219	Standard
	Ho	165	83.3	48.1				ug/L	8	Standard
	Tl	203	609.0	5.4	**0.1350**	0.007	5.3	ug/L	1	Standard
	Tl	205	723.4	10.7	**0.1312**	0.014	10.4	ug/L	3	Standard
	Pb	206	397.3	10.6	**0.1667**	0.022	13.0	ug/L	80	Standard
	Pb	207	354.7	2.6	**0.1746**	0.006	3.6	ug/L	73	Standard
	Pb	208	813.0	3.7	**0.1552**	0.008	5.2	ug/L	190	Standard
	U	238	83055.4	0.3	**30.3224**	0.207	0.7	ug/L	0	Standard
>	**Bi**	209	204829.2	0.5				ug/L	276439	Standard

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Na	23	423.3	8.0	**132.7832**	10.089	7.6	mg/L	2	Standard
Mg	24	637542.3	1.6	**794.6164**	12.408	1.6	mg/L	37	Standard
K	39	33.3	22.9	**2.0120**	0.517	25.7	mg/L	3	Standard
Ca	43	368.3	8.7	**119.6679**	8.053	6.7	mg/L	43	Standard
Fe	54	180.2	3.3	**-0.0194**	0.002	11.4	mg/L	262	Standard
Fe	57	893.4	7.0	**1.7886**	0.075	4.2	mg/L	65	Standard
> **Sc-1**	45	22002.6	3.1				mg/L	26874	Standard
Cl	35	1939133.6	0.4				ug/L	141022	Standard
Kr	83	361.7	8.5				ug/L	75	Standard
Br	81	86559.9	0.6				ug/L	2810	Standard
P	31	390321.7	2.1				ug/L	458976	Standard
S	34	103534.2	1.4				ug/L	103378	Standard
Sr	88	10465.3	2.0				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	0	Standard
Dy	164	9.0	10.6				mg/L	10	Standard
Ho-1	165	83.3	48.1				mg/L	8	Standard
Er	166	20.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		186.440	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		82.749	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	77.982
|	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	74.096
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Se 82 Upper, S, EEE	Se	82	
Se-1 77 Upper, S, EEE	Se-1	77	

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Method 6020 - Summary Report

Sample ID: L1311051803
Sample Date/Time: Monday, November 18, 2013 11:18:11
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	291646.6	2.9				ug/L	269614	Standard
	Be	9	40.0	37.5	**-0.0036**	0.005	139.1	ug/L	23	Standard
	Al	27	65619.2	20.8	**0.2811**	0.052	18.5	ug/L	1170	Standard
	Sc	45	26972.3	2.3				ug/L	26874	Standard
	Ti	47	392.0	1.9	**1.3737**	0.015	1.1	ug/L	25	Standard
	V	51	1872.6	10.1	**0.0694**	0.023	32.5	ug/L	1686	Standard
	Cr	52	11587.8	6.3	**0.9154**	0.084	9.1	ug/L	6098	Standard
	Cr	53	1268.4	4.8	**0.8183**	0.038	4.7	ug/L	193	Standard
	Mn	55	5594.4	4.5	**0.2546**	0.014	5.6	ug/L	1232	Standard
	Co	59	204.0	7.4	**0.0053**	0.001	24.9	ug/L	106	Standard
	Ni	60	971.4	6.4	**0.1337**	0.019	13.9	ug/L	556	Standard
	Cu	65	2890.3	16.3	**0.9800**	0.158	16.2	ug/L	124	Standard
	Zn	66	4506.3	14.5	**2.7659**	0.399	14.4	ug/L	196	Standard
>	**Ge**	72	502755.3	1.1				ug/L	473313	Standard
	As	75	-134.3	62.3	**0.1242**	0.055	44.3	ug/L	-286	Standard
	Se	82	1.0	5027.4	**0.3049**	0.309	101.2	ug/L	-33	Standard
	Se-1	77	109.0	4.2	**0.1914**	0.030	15.8	ug/L	86	Standard
>	**Ga**	71	101.7	18.6				mg/L	35	Standard
	Rb	85	3570.4	6.1				ug/L	13	Standard
	Y	89	463798.3	2.0				ug/L	439493	Standard
>	**Rh**	103	6.7	86.6				ug/L	5	Standard
	Mo	98	40.8	2.5	**-0.0054**	0.000	5.7	ug/L	10	Standard
	Ag	107	77.7	8.4	**-0.0040**	0.001	22.4	ug/L	53	Standard
	Cd	111	4.3	26.9	**-0.0011**	0.000	45.2	mg/L	1	Standard
	Cd	114	73.9	15.3	**0.0030**	0.002	60.8	ug/L	32	Standard
>	**In**	115	529510.0	1.3				ug/L	494305	Standard
	Sn	118	785.4	14.6	**0.5032**	0.074	14.8	ug/L	53	Standard
	Sb	123	205.5	8.9	**0.0708**	0.007	9.2	ug/L	7	Standard
	Ba	135	2551.2	6.9	**1.2868**	0.074	5.7	ug/L	11	Standard
	Ce	140	1383.4	4.5				ug/L	10	Standard
>	**Tb**	159	569830.9	1.6				ug/L	538219	Standard
	Ho	165	16.7	69.3				ug/L	8	Standard
	Tl	203	15.0	6.7	**0.0001**	0.000	95.3	ug/L	1	Standard
	Tl	205	23.3	44.6	**0.0022**	0.001	56.8	ug/L	3	Standard
	Pb	206	652.3	4.3	**0.1883**	0.007	3.6	ug/L	80	Standard
	Pb	207	528.0	3.3	**0.1748**	0.007	4.0	ug/L	73	Standard
	Pb	208	1203.7	1.7	**0.1543**	0.004	2.4	ug/L	190	Standard
	U	238	69.0	27.1	**0.0151**	0.005	31.7	ug/L	0	Standard
>	**Bi**	209	304647.0	1.4				ug/L	276439	Standard

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Na	23	1.7	173.2	**-0.0007**	0.740	106535.2	mg/L	2	Standard
Mg	24	736.7	16.8	**0.7153**	0.111	15.5	mg/L	37	Standard
K	39	5.0	100.0	**-0.0859**	0.293	340.7	mg/L	3	Standard
Ca	43	30.0	16.7	**-1.6682**	1.518	91.0	mg/L	43	Standard
Fe	54	334.9	31.8	**0.0364**	0.053	146.1	mg/L	262	Standard
Fe	57	95.0	5.3	**0.0671**	0.011	15.9	mg/L	65	Standard
> **Sc-1**	45	26972.3	2.3				mg/L	26874	Standard
Cl	35	159429.5	4.4				ug/L	141022	Standard
Kr	83	131.0	6.2				ug/L	75	Standard
Br	81	3780.5	7.6				ug/L	2810	Standard
P	31	511433.6	0.7				ug/L	458976	Standard
S	34	88346.8	0.9				ug/L	103378	Standard
Sr	88	43.3	24.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	18.4	58.5				mg/L	10	Standard
Ho-1	165	16.7	69.3				mg/L	8	Standard
Er	166	33.3	75.5				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		108.172	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		106.220	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	107.122
	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	110.204
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311036803 WG452233-01
Sample Date/Time: Monday, November 18, 2013 11:22:42
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	260502.7	2.1				ug/L	269614	Standard
	Be	9	48.3	21.5	**0.0008**	0.004	471.8	ug/L	23	Standard
	Al	27	3477995.9	1.9	**17.1624**	0.647	3.8	ug/L	1170	Standard
	Sc	45	23329.6	2.7				ug/L	26874	Standard
	Ti	47	17.3	12.0	**-0.0262**	0.009	34.8	ug/L	25	Standard
	V	51	1592.0	8.2	**0.0563**	0.017	30.8	ug/L	1686	Standard
	Cr	52	6039.9	5.4	**0.2422**	0.039	16.2	ug/L	6098	Standard
	Cr	53	308.3	6.8	**0.1204**	0.019	15.8	ug/L	193	Standard
	Mn	55	544497.9	2.9	**42.5834**	0.830	1.9	ug/L	1232	Standard
	Co	59	204.3	8.2	**0.0077**	0.002	25.6	ug/L	106	Standard
	Ni	60	1186.4	4.1	**0.2549**	0.014	5.3	ug/L	556	Standard
	Cu	65	1198.0	5.1	**0.4213**	0.030	7.1	ug/L	124	Standard
	Zn	66	3102.7	3.6	**2.0789**	0.070	3.4	ug/L	196	Standard
>	**Ge**	72	450998.0	1.2				ug/L	473313	Standard
	As	75	-222.0	18.8	**0.0512**	0.029	56.4	ug/L	-286	Standard
	Se	82	-14.1	79.6	**0.2011**	0.079	39.4	ug/L	-33	Standard
	Se-1	77	84.0	14.9	**0.0579**	0.117	201.8	ug/L	86	Standard
>	**Ga**	71	40.0	25.0				mg/L	35	Standard
	Rb	85	523.3	3.4				ug/L	13	Standard
	Y	89	398015.3	1.0				ug/L	439493	Standard
>	**Rh**	103	28.3	20.4				ug/L	5	Standard
	Mo	98	46.9	5.5	**-0.0025**	0.001	26.9	ug/L	10	Standard
	Ag	107	51.3	3.0	**-0.0068**	0.000	2.9	ug/L	53	Standard
	Cd	111	3.3	17.6	**-0.0013**	0.000	20.5	mg/L	1	Standard
	Cd	114	16.8	44.0	**-0.0062**	0.001	22.3	ug/L	32	Standard
>	**In**	115	468427.8	0.6				ug/L	494305	Standard
	Sn	118	55.3	15.4	**-0.0118**	0.007	55.9	ug/L	53	Standard
	Sb	123	83.3	4.5	**0.0317**	0.001	4.2	ug/L	7	Standard
	Ba	135	141.3	14.5	**0.0689**	0.012	17.0	ug/L	11	Standard
	Ce	140	45.0	22.2				ug/L	10	Standard
>	**Tb**	159	501735.6	0.6				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	17.7	25.5	**0.0008**	0.001	88.7	ug/L	1	Standard
	Tl	205	18.3	56.8	**0.0018**	0.001	79.2	ug/L	3	Standard
	Pb	206	93.3	3.8	**-0.0054**	0.002	32.5	ug/L	80	Standard
	Pb	207	78.3	8.5	**0.0019**	0.003	135.4	ug/L	73	Standard
	Pb	208	197.7	7.7	**-0.0033**	0.003	87.5	ug/L	190	Standard
	U	238	860.0	5.3	**0.2322**	0.015	6.4	ug/L	0	Standard
>	**Bi**	209	274868.7	1.2				ug/L	276439	Standard

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Na	23	6.7	86.6	**1.5396**	1.705	110.8	mg/L	2	Standard
Mg	24	5799.4	4.6	**6.7854**	0.328	4.8	mg/L	37	Standard
K	39	1.7	173.2	**-0.2667**	0.198	74.3	mg/L	3	Standard
Ca	43	46.7	6.2	**5.2121**	0.535	10.3	mg/L	43	Standard
Fe	54	97.3	20.6	**-0.0717**	0.013	17.5	mg/L	262	Standard
Fe	57	78.3	32.8	**0.0602**	0.054	90.2	mg/L	65	Standard
> **Sc-1**	45	23329.6	2.7				mg/L	26874	Standard
Cl	35	190245.2	4.6				ug/L	141022	Standard
Kr	83	99.3	6.5				ug/L	75	Standard
Br	81	3500.4	16.2				ug/L	2810	Standard
P	31	156003.0	3.4				ug/L	458976	Standard
S	34	104994.6	4.1				ug/L	103378	Standard
Sr	88	93.3	25.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	179.8				mg/L	10	Standard
Ho-1	165	8.3	34.6				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.620	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		95.285	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	94.765
	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	99.432
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311036803 WG452233-01
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Method 6020 - Summary Report

Sample ID: L1311036806S WG452233-05
Sample Date/Time: Monday, November 18, 2013 11:25:47
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	257297.9	3.4				ug/L	269614	Standard
	Be	9	823.4	1.9	**0.2749**	0.012	4.5	ug/L	23	Standard
	Al	27	1595350.2	2.9	**7.9655**	0.231	2.9	ug/L	1170	Standard
	Sc	45	23585.0	1.8				ug/L	26874	Standard
	Ti	47	24.0	8.3	**0.0010**	0.008	830.5	ug/L	25	Standard
	V	51	3292.2	1.0	**0.3075**	0.002	0.6	ug/L	1686	Standard
	Cr	52	7813.0	1.4	**0.5080**	0.014	2.8	ug/L	6098	Standard
	Cr	53	630.0	8.6	**0.3871**	0.042	10.8	ug/L	193	Standard
	Mn	55	397957.2	2.5	**30.8636**	0.758	2.5	ug/L	1232	Standard
	Co	59	2327.5	3.4	**0.2456**	0.009	3.6	ug/L	106	Standard
	Ni	60	1586.1	2.1	**0.4045**	0.016	4.1	ug/L	556	Standard
	Cu	65	1455.1	1.0	**0.5201**	0.002	0.3	ug/L	124	Standard
	Zn	66	3300.4	0.8	**2.2068**	0.038	1.7	ug/L	196	Standard
>	**Ge**	72	454282.0	0.8				ug/L	473313	Standard
	As	75	196.6	24.2	**0.3532**	0.033	9.5	ug/L	-286	Standard
	Se	82	17.6	71.7	**0.4243**	0.088	20.7	ug/L	-33	Standard
	Se-1	77	118.0	6.6	**0.3795**	0.081	21.3	ug/L	86	Standard
>	**Ga**	71	30.0	50.0				mg/L	35	Standard
	Rb	85	281.7	12.6				ug/L	13	Standard
	Y	89	407280.3	1.4				ug/L	439493	Standard
>	**Rh**	103	16.7	17.3				ug/L	5	Standard
	Mo	98	182.5	4.7	**0.0336**	0.003	7.7	ug/L	10	Standard
	Ag	107	1683.8	2.2	**0.2511**	0.006	2.5	ug/L	53	Standard
	Cd	111	549.1	3.2	**0.2586**	0.010	3.8	mg/L	1	Standard
	Cd	114	1383.8	8.8	**0.2510**	0.024	9.8	ug/L	32	Standard
>	**In**	115	473555.4	0.7				ug/L	494305	Standard
	Sn	118	47.7	7.9	**-0.0184**	0.003	17.5	ug/L	53	Standard
	Sb	123	715.1	3.4	**0.2801**	0.011	4.0	ug/L	7	Standard
	Ba	135	592.3	3.2	**0.3250**	0.013	3.9	ug/L	11	Standard
	Ce	140	8.3	124.9				ug/L	10	Standard
>	**Tb**	159	499719.1	0.9				ug/L	538219	Standard
	Ho	165	10.0	50.0				ug/L	8	Standard
	Tl	203	1476.4	1.1	**0.2442**	0.005	2.1	ug/L	1	Standard
	Tl	205	1910.1	6.4	**0.2573**	0.014	5.5	ug/L	3	Standard
	Pb	206	761.0	5.7	**0.2542**	0.015	6.0	ug/L	80	Standard
	Pb	207	654.3	3.2	**0.2505**	0.006	2.5	ug/L	73	Standard
	Pb	208	1523.7	0.5	**0.2305**	0.002	0.7	ug/L	190	Standard
	U	238	1181.4	6.2	**0.3179**	0.023	7.2	ug/L	0	Standard
>	**Bi**	209	276387.6	1.0				ug/L	276439	Standard

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Na	23	6.7	86.6	**1.5458**	1.709	110.6	mg/L	2	Standard
Mg	24	3198.7	3.1	**3.6881**	0.168	4.6	mg/L	37	Standard
K	39	5.0	100.0	**-0.0417**	0.342	820.0	mg/L	3	Standard
Ca	43	31.7	9.1	**0.1108**	0.939	847.1	mg/L	43	Standard
Fe	54	103.7	13.2	**-0.0691**	0.007	9.8	mg/L	262	Standard
Fe	57	86.7	8.8	**0.0740**	0.014	18.8	mg/L	65	Standard
> **Sc-1**	45	23585.0	1.8				mg/L	26874	Standard
Cl	35	186482.0	0.9				ug/L	141022	Standard
Kr	83	93.0	15.1				ug/L	75	Standard
Br	81	3500.4	13.4				ug/L	2810	Standard
P	31	164472.1	4.0				ug/L	458976	Standard
S	34	111947.1	1.7				ug/L	103378	Standard
Sr	88	65.0	7.7				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	10.0	100.0				mg/L	10	Standard
Ho-1	165	10.0	50.0				mg/L	8	Standard
Er	166	0.0					mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		95.432	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		95.979	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	95.802
	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	99.981
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 11:28:53
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	277818.8	3.1				ug/L	269614	Standard
	Be	9	152298.4	1.6	**49.8089**	1.410	2.8	ug/L	23	Standard
	Al	27	9977769.5	2.7	**46.1594**	0.193	0.4	ug/L	1170	Standard
	Sc	45	24641.7	4.2				ug/L	26874	Standard
	Ti	47	24816.6	1.1	**97.0405**	1.779	1.8	ug/L	25	Standard
	V	51	349996.1	2.4	**48.8192**	1.399	2.9	ug/L	1686	Standard
	Cr	52	346524.7	1.5	**49.3993**	1.076	2.2	ug/L	6098	Standard
	Cr	53	61277.0	1.8	**48.0727**	1.120	2.3	ug/L	193	Standard
	Mn	55	706586.9	2.8	**51.6935**	1.814	3.5	ug/L	1232	Standard
	Co	59	483639.4	0.3	**51.0333**	0.521	1.0	ug/L	106	Standard
	Ni	60	137362.9	1.5	**49.2220**	1.095	2.2	ug/L	556	Standard
	Cu	65	134021.5	0.7	**50.2380**	0.527	1.0	ug/L	124	Standard
	Zn	66	73088.9	0.5	**49.9242**	0.567	1.1	ug/L	196	Standard
>	Ge	72	482515.6	0.7				ug/L	473313	Standard
	As	75	72843.4	0.7	**49.5503**	0.671	1.4	ug/L	-286	Standard
	Se	82	7639.1	0.7	**50.7509**	0.600	1.2	ug/L	-33	Standard
	Se-1	77	5594.0	1.3	**49.8846**	1.030	2.1	ug/L	86	Standard
>	Ga	71	48.3	23.9				mg/L	35	Standard
	Rb	85	1130.0	8.8				ug/L	13	Standard
	Y	89	443263.5	1.8				ug/L	439493	Standard
>	Rh	103	16.7	17.3				ug/L	5	Standard
	Mo	98	410942.6	1.3	**103.3788**	1.726	1.7	ug/L	10	Standard
	Ag	107	348665.5	0.5	**51.8104**	0.608	1.2	ug/L	53	Standard
	Cd	111	112233.5	0.8	**50.2644**	0.655	1.3	mg/L	1	Standard
	Cd	114	284332.5	0.9	**50.3088**	0.516	1.0	ug/L	32	Standard
>	In	115	503548.6	1.2				ug/L	494305	Standard
	Sn	118	68711.8	0.8	**51.4892**	0.496	1.0	ug/L	53	Standard
	Sb	123	129910.7	0.5	**48.0958**	0.676	1.4	ug/L	7	Standard
	Ba	135	93721.6	0.5	**50.2080**	0.673	1.3	ug/L	11	Standard
	Ce	140	38.3	32.8				ug/L	10	Standard
>	Tb	159	536211.2	1.4				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	308499.7	0.2	**49.9024**	0.237	0.5	ug/L	1	Standard
	Tl	205	401206.2	1.1	**52.5611**	0.848	1.6	ug/L	3	Standard
	Pb	206	141721.1	0.7	**53.4283**	0.451	0.8	ug/L	80	Standard
	Pb	207	128454.9	0.7	**53.7577**	0.604	1.1	ug/L	73	Standard
	Pb	208	281972.0	0.4	**48.2120**	0.314	0.7	ug/L	190	Standard
	U	238	187745.8	1.2	**49.2540**	0.597	1.2	ug/L	0	Standard
>	Bi	209	285052.5	0.7				ug/L	276439	Standard

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	Na	23	18.3	68.6	**4.7958**	3.609	75.2	mg/L	2	Standard
	Mg	24	4935.8	10.3	**5.4510**	0.339	6.2	mg/L	37	Standard
	K	39	63.3	31.9	**3.7247**	1.469	39.4	mg/L	3	Standard
	Ca	43	45.0	29.4	**3.9901**	4.771	119.6	mg/L	43	Standard
	Fe	54	10505.7	3.2	**5.4518**	0.212	3.9	mg/L	262	Standard
	Fe	57	2891.9	4.3	**5.3679**	0.424	7.9	mg/L	65	Standard
>	**Sc-1**	45	24641.7	4.2				mg/L	26874	Standard
	Cl	35	158246.1	4.9				ug/L	141022	Standard
	Kr	83	116.0	8.2				ug/L	75	Standard
	Br	81	2977.0	8.1				ug/L	2810	Standard
	P	31	496885.7	1.6				ug/L	458976	Standard
	S	34	121767.4	1.4				ug/L	103378	Standard
	Sr	88	38.3	27.2				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	13.2	116.4				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.043	
	Be	9	99.618		
	Al	27	92.319		
	Sc	45			
	Ti	47	97.041		
	V	51	97.638		
	Cr	52	98.799		
	Cr	53			
	Mn	55	103.387		
	Co	59	102.067		
	Ni	60	98.444		
	Cu	65	100.476		
	Zn	66	99.848		
>	Ge	72		101.944	
	As	75	99.101		
	Se	82	101.502		
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89			
> Rh	103			
Mo	98	103.379		
Ag	107	103.621		
Cd	111	100.529		
Cd	114			
> In	115			101.870
Sn	118	102.978		
Sb	123	96.192		
Ba	135	100.416		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	99.805		
Tl	205			
Pb	206			
Pb	207			
Pb	208	96.424		
U	238	98.508		
> Bi	209			103.116
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 11:31:58
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	282348.9	2.1				ug/L	269614	Standard
	Be	9	55.0	9.1	**0.0016**	0.002	115.7	ug/L	23	Standard
	Al	27	2960.3	22.7	**0.0063**	0.003	46.9	ug/L	1170	Standard
	Sc	45	25802.0	2.9				ug/L	26874	Standard
	Ti	47	16.0	21.7	**-0.0359**	0.014	37.9	ug/L	25	Standard
	V	51	1144.2	5.3	**-0.0213**	0.008	37.8	ug/L	1686	Standard
	Cr	52	4332.3	3.0	**-0.0632**	0.017	27.1	ug/L	6098	Standard
	Cr	53	235.0	5.6	**0.0463**	0.011	22.9	ug/L	193	Standard
	Mn	55	1496.7	6.2	**-0.0290**	0.007	23.0	ug/L	1232	Standard
	Co	59	110.3	40.6	**-0.0037**	0.005	128.8	ug/L	106	Standard
	Ni	60	694.7	5.5	**0.0492**	0.014	28.2	ug/L	556	Standard
	Cu	65	758.7	7.1	**0.2258**	0.021	9.4	ug/L	124	Standard
	Zn	66	507.7	2.8	**0.1521**	0.011	7.3	ug/L	196	Standard
>	Ge	72	480863.1	0.4				ug/L	473313	Standard
	As	75	-283.1	13.9	**0.0195**	0.026	133.8	ug/L	-286	Standard
	Se	82	-25.2	26.0	**0.1335**	0.044	32.9	ug/L	-33	Standard
	Se-1	77	84.3	4.8	**0.0106**	0.035	330.6	ug/L	86	Standard
>	Ga	71	23.3	32.7				mg/L	35	Standard
	Rb	85	23.3	32.7				ug/L	13	Standard
	Y	89	444928.4	0.7				ug/L	439493	Standard
>	Rh	103	3.3	173.2				ug/L	5	Standard
	Mo	98	95.1	35.4	**0.0086**	0.008	96.8	ug/L	10	Standard
	Ag	107	82.0	37.6	**-0.0029**	0.004	152.9	ug/L	53	Standard
	Cd	111	8.9	97.8	**0.0010**	0.004	367.0	mg/L	1	Standard
	Cd	114	34.6	79.5	**-0.0034**	0.005	140.4	ug/L	32	Standard
>	In	115	506355.3	1.1				ug/L	494305	Standard
	Sn	118	77.3	16.1	**0.0013**	0.009	721.3	ug/L	53	Standard
	Sb	123	286.5	26.7	**0.1041**	0.029	27.7	ug/L	7	Standard
	Ba	135	97.7	0.6	**0.0395**	0.001	1.5	ug/L	11	Standard
	Ce	140	16.7	105.4				ug/L	10	Standard
>	Tb	159	541505.3	0.8				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	26.3	110.7	**0.0021**	0.005	224.7	ug/L	1	Standard
	Tl	205	26.7	108.3	**0.0028**	0.004	135.3	ug/L	3	Standard
	Pb	206	109.3	17.0	**-0.0010**	0.007	688.9	ug/L	80	Standard
	Pb	207	91.7	18.8	**0.0060**	0.007	120.7	ug/L	73	Standard
	Pb	208	211.3	8.1	**-0.0026**	0.003	116.5	ug/L	190	Standard
	U	238	23.3	69.8	**0.0042**	0.004	101.2	ug/L	0	Standard
>	Bi	209	287768.7	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0345**	0.801	2319.5	mg/L	2	Standard
Mg	24	71.7	38.4	**0.0438**	0.028	63.2	mg/L	37	Standard
K	39	3.3	173.2	**-0.1816**	0.346	190.4	mg/L	3	Standard
Ca	43	13.3	43.3	**-6.2733**	1.883	30.0	mg/L	43	Standard
Fe	54	255.9	22.2	**0.0030**	0.027	907.4	mg/L	262	Standard
Fe	57	70.0	18.9	**0.0296**	0.026	87.1	mg/L	65	Standard
Sc-1	45	25802.0	2.9				mg/L	26874	Standard
Cl	35	156312.9	1.1				ug/L	141022	Standard
Kr	83	94.3	11.3				ug/L	75	Standard
Br	81	2856.9	7.1				ug/L	2810	Standard
P	31	490014.0	3.0				ug/L	458976	Standard
S	34	121819.5	1.0				ug/L	103378	Standard
Sr	88	40.0	33.1				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.0	93.6				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	13.3	43.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.723	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.595	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	102.438
	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	104.098
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311033701
Sample Date/Time: Monday, November 18, 2013 11:35:04
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	278263.7	3.3				ug/L	269614	Standard
	Be	9	66.7	35.4	**0.0056**	0.007	132.7	ug/L	23	Standard
	Al	27	9295573.3	1.0	**42.9521**	0.986	2.3	ug/L	1170	Standard
	Sc	45	25927.2	2.9				ug/L	26874	Standard
	Ti	47	380.3	8.9	**1.4279**	0.121	8.5	ug/L	25	Standard
	V	51	14983.9	3.1	**1.9700**	0.041	2.1	ug/L	1686	Standard
	Cr	52	14392.8	0.8	**1.4432**	0.015	1.1	ug/L	6098	Standard
	Cr	53	3838.8	9.7	**2.9613**	0.323	10.9	ug/L	193	Standard
	Mn	55	16943.1	0.8	**1.1360**	0.013	1.2	ug/L	1232	Standard
	Co	59	1031.0	0.3	**0.0963**	0.002	1.9	ug/L	106	Standard
	Ni	60	5638.4	0.4	**1.8801**	0.036	1.9	ug/L	556	Standard
	Cu	65	2349.5	3.6	**0.8447**	0.025	3.0	ug/L	124	Standard
	Zn	66	5632.7	2.8	**3.7660**	0.097	2.6	ug/L	196	Standard
>	**Ge**	72	470255.3	1.3				ug/L	473313	Standard
	As	75	3980.8	0.8	**2.9784**	0.016	0.5	ug/L	-286	Standard
	Se	82	1539.0	0.1	**10.7301**	0.130	1.2	ug/L	-33	Standard
	Se-1	77	272.0	8.0	**1.7718**	0.213	12.0	ug/L	86	Standard
>	**Ga**	71	83.3	15.1				mg/L	35	Standard
	Rb	85	15431.2	0.7				ug/L	13	Standard
	Y	89	429448.0	0.9				ug/L	439493	Standard
>	**Rh**	103	166.7	1.7				ug/L	5	Standard
	Mo	98	4215.4	2.0	**1.0824**	0.017	1.6	ug/L	10	Standard
	Ag	107	65.0	4.1	**-0.0050**	0.000	7.1	ug/L	53	Standard
	Cd	111	22.6	2.7	**0.0076**	0.000	3.9	mg/L	1	Standard
	Cd	114	82.9	21.4	**0.0057**	0.003	55.9	ug/L	32	Standard
>	**In**	115	486524.0	0.7				ug/L	494305	Standard
	Sn	118	204.3	7.1	**0.1023**	0.012	12.2	ug/L	53	Standard
	Sb	123	275.5	8.2	**0.1041**	0.009	8.6	ug/L	7	Standard
	Ba	135	70275.6	0.9	**38.9580**	0.104	0.3	ug/L	11	Standard
	Ce	140	2428.5	3.3				ug/L	10	Standard
>	**Tb**	159	526451.6	0.4				ug/L	538219	Standard
	Ho	165	30.0	0.0				ug/L	8	Standard
	Tl	203	118.0	7.8	**0.0176**	0.002	8.8	ug/L	1	Standard
	Tl	205	108.3	7.1	**0.0140**	0.001	7.5	ug/L	3	Standard
	Pb	206	324.3	6.0	**0.0849**	0.007	8.8	ug/L	80	Standard
	Pb	207	269.3	7.0	**0.0848**	0.008	9.6	ug/L	73	Standard
	Pb	208	662.3	3.6	**0.0790**	0.004	5.2	ug/L	190	Standard
	U	238	2627.2	1.5	**0.7121**	0.010	1.4	ug/L	0	Standard
>	**Bi**	209	275172.6	0.2				ug/L	276439	Standard

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	Na	23	106.7	19.5	**28.0956**	5.877	20.9	mg/L	2	Standard
	Mg	24	11259.2	1.6	**11.8785**	0.279	2.3	mg/L	37	Standard
	K	39	16.7	105.4	**0.6371**	1.091	171.2	mg/L	3	Standard
	Ca	43	180.0	9.6	**43.6094**	4.616	10.6	mg/L	43	Standard
	Fe	54	382.9	14.4	**0.0666**	0.028	41.8	mg/L	262	Standard
	Fe	57	270.0	25.9	**0.3855**	0.113	29.3	mg/L	65	Standard
>	**Sc-1**	45	25927.2	2.9				mg/L	26874	Standard
	Cl	35	190255.3	1.8				ug/L	141022	Standard
	Kr	83	101.7	4.4				ug/L	75	Standard
	Br	81	205588.8	1.1				ug/L	2810	Standard
	P	31	673306.4	1.2				ug/L	458976	Standard
	S	34	98906.8	0.9				ug/L	103378	Standard
	Sr	88	710.0	6.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	316.7	10.2				mg/L	0	Standard
	Dy	164	50.8	63.8				mg/L	10	Standard
	Ho-1	165	30.0	0.0				mg/L	8	Standard
	Er	166	53.3	28.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.208	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.354	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	98.426
	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	99.542
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311036807SD WG452233-06
Sample Date/Time: Monday, November 18, 2013 11:39:04
Number of Replicates: 3
Autosampler Position: 326
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	253167.9	1.6				ug/L	269614	Standard
	Be	9	758.4	7.7	**0.2563**	0.025	9.6	ug/L	23	Standard
	Al	27	868512.6	1.9	**4.4037**	0.142	3.2	ug/L	1170	Standard
	Sc	45	21867.4	1.5				ug/L	26874	Standard
	Ti	47	26.0	13.3	**0.0140**	0.015	106.8	ug/L	25	Standard
	V	51	2822.8	2.7	**0.2561**	0.011	4.1	ug/L	1686	Standard
	Cr	52	6373.3	2.2	**0.3300**	0.025	7.7	ug/L	6098	Standard
	Cr	53	481.7	13.7	**0.2808**	0.056	19.9	ug/L	193	Standard
	Mn	55	290888.1	3.0	**23.5176**	0.721	3.1	ug/L	1232	Standard
	Co	59	2200.5	2.6	**0.2421**	0.007	2.8	ug/L	106	Standard
	Ni	60	1348.1	2.2	**0.3361**	0.011	3.2	ug/L	556	Standard
	Cu	65	1080.7	1.2	**0.3898**	0.004	1.0	ug/L	124	Standard
	Zn	66	2440.2	2.8	**1.6582**	0.056	3.4	ug/L	196	Standard
>	**Ge**	72	435169.6	0.4				ug/L	473313	Standard
	As	75	184.2	9.8	**0.3502**	0.014	4.0	ug/L	-286	Standard
	Se	82	19.3	37.6	**0.4426**	0.054	12.2	ug/L	-33	Standard
	Se-1	77	109.3	9.8	**0.3423**	0.111	32.4	ug/L	86	Standard
>	**Ga**	71	21.7	13.3				mg/L	35	Standard
	Rb	85	210.0	10.9				ug/L	13	Standard
	Y	89	392514.3	0.4				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	241.4	4.6	**0.0522**	0.003	6.2	ug/L	10	Standard
	Ag	107	1577.4	1.7	**0.2451**	0.003	1.3	ug/L	53	Standard
	Cd	111	532.7	8.3	**0.2617**	0.021	7.9	mg/L	1	Standard
	Cd	114	1245.4	3.5	**0.2351**	0.009	3.6	ug/L	32	Standard
>	**In**	115	453884.8	0.5				ug/L	494305	Standard
	Sn	118	48.7	18.5	**-0.0159**	0.007	46.3	ug/L	53	Standard
	Sb	123	770.5	1.2	**0.3150**	0.005	1.7	ug/L	7	Standard
	Ba	135	584.3	3.7	**0.3348**	0.012	3.4	ug/L	11	Standard
	Ce	140	5.0	173.2				ug/L	10	Standard
>	**Tb**	159	484257.4	1.0				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	1431.4	4.5	**0.2433**	0.011	4.5	ug/L	1	Standard
	Tl	205	1793.4	5.8	**0.2484**	0.014	5.6	ug/L	3	Standard
	Pb	206	732.4	5.7	**0.2510**	0.016	6.5	ug/L	80	Standard
	Pb	207	624.3	5.2	**0.2451**	0.014	5.8	ug/L	73	Standard
	Pb	208	1458.7	4.6	**0.2262**	0.012	5.2	ug/L	190	Standard
	U	238	959.0	2.4	**0.2649**	0.006	2.4	ug/L	0	Standard
>	**Bi**	209	268893.0	0.2				ug/L	276439	Standard

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	Na	23	8.3	34.6	**2.2091**	0.909	41.1	mg/L	2	Standard
	Mg	24	1881.8	7.1	**2.3262**	0.136	5.9	mg/L	37	Standard
	K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
	Ca	43	30.0	66.7	**0.3176**	7.120	2242.0	mg/L	43	Standard
	Fe	54	103.9	21.0	**-0.0645**	0.012	18.8	mg/L	262	Standard
	Fe	57	65.0	7.7	**0.0413**	0.009	20.9	mg/L	65	Standard
>	**Sc-1**	45	21867.4	1.5				mg/L	26874	Standard
	Cl	35	158539.5	2.7				ug/L	141022	Standard
	Kr	83	83.7	9.0				ug/L	75	Standard
	Br	81	3303.7	0.9				ug/L	2810	Standard
	P	31	156206.9	4.0				ug/L	458976	Standard
	S	34	109840.1	2.1				ug/L	103378	Standard
	Sr	88	43.3	29.0				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	3.2	186.4				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.900	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.941	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.823
	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	97.270
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311050502
Sample Date/Time: Monday, November 18, 2013 11:44:34
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	254294.8	1.4				ug/L	269614	Standard
	Be	9	33.3	82.6	**-0.0041**	0.010	243.9	ug/L	23	Standard
	Al	27	1672587.3	5.0	**8.4507**	0.512	6.1	ug/L	1170	Standard
	Sc	45	22004.3	2.6				ug/L	26874	Standard
	Ti	47	17.3	33.3	**-0.0241**	0.024	101.3	ug/L	25	Standard
	V	51	1483.1	7.1	**0.0466**	0.015	32.2	ug/L	1686	Standard
	Cr	52	5101.2	4.7	**0.1205**	0.036	29.6	ug/L	6098	Standard
	Cr	53	215.0	12.1	**0.0471**	0.022	47.3	ug/L	193	Standard
	Mn	55	16958.8	4.2	**1.2305**	0.051	4.2	ug/L	1232	Standard
	Co	59	142.7	20.8	**0.0012**	0.003	281.7	ug/L	106	Standard
	Ni	60	1031.0	5.8	**0.2068**	0.022	10.5	ug/L	556	Standard
	Cu	65	560.7	4.3	**0.1718**	0.009	5.2	ug/L	124	Standard
	Zn	66	1745.1	1.8	**1.1206**	0.018	1.6	ug/L	196	Standard
>	Ge	72	438131.1	0.5				ug/L	473313	Standard
	As	75	-159.4	31.9	**0.0930**	0.038	40.5	ug/L	-286	Standard
	Se	82	580.3	4.6	**4.5217**	0.211	4.7	ug/L	-33	Standard
	Se-1	77	531.0	0.8	**4.5382**	0.051	1.1	ug/L	86	Standard
>	Ga	71	28.3	27.0				mg/L	35	Standard
	Rb	85	428.3	1.8				ug/L	13	Standard
	Y	89	387820.0	1.8				ug/L	439493	Standard
>	Rh	103	16.7	45.8				ug/L	5	Standard
	Mo	98	29.2	24.6	**-0.0071**	0.002	28.0	ug/L	10	Standard
	Ag	107	53.3	28.6	**-0.0062**	0.003	40.3	ug/L	53	Standard
	Cd	111	5.3	85.2	**-0.0003**	0.002	795.2	mg/L	1	Standard
	Cd	114	20.6	100.7	**-0.0054**	0.004	74.7	ug/L	32	Standard
>	In	115	456786.5	0.3				ug/L	494305	Standard
	Sn	118	40.3	8.0	**-0.0231**	0.003	11.9	ug/L	53	Standard
	Sb	123	70.2	29.6	**0.0271**	0.009	31.3	ug/L	7	Standard
	Ba	135	150.0	6.1	**0.0761**	0.005	6.8	ug/L	11	Standard
	Ce	140	38.3	7.5				ug/L	10	Standard
>	Tb	159	487374.2	1.6				ug/L	538219	Standard
	Ho	165	3.3	173.2				ug/L	8	Standard
	Tl	203	11.7	30.1	**-0.0001**	0.001	518.9	ug/L	1	Standard
	Tl	205	68.3	128.9	**0.0089**	0.012	139.0	ug/L	3	Standard
	Pb	206	97.3	12.8	**-0.0026**	0.005	189.8	ug/L	80	Standard
	Pb	207	74.7	13.1	**0.0014**	0.005	322.6	ug/L	73	Standard
	Pb	208	215.3	29.8	**0.0011**	0.012	1118.0	ug/L	190	Standard
	U	238	849.0	10.7	**0.2366**	0.026	11.1	ug/L	0	Standard
>	Bi	209	266365.0	0.6				ug/L	276439	Standard

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Na	23	11.7	24.7	**3.2539**	0.975	30.0	mg/L	2	Standard
Mg	24	3557.1	7.2	**4.4067**	0.421	9.6	mg/L	37	Standard
K	39	6.7	43.3	**0.0948**	0.192	203.0	mg/L	3	Standard
Ca	43	41.7	59.2	**4.4754**	9.010	201.3	mg/L	43	Standard
Fe	54	87.7	14.7	**-0.0744**	0.008	10.6	mg/L	262	Standard
Fe	57	51.7	43.6	**0.0131**	0.050	379.9	mg/L	65	Standard
> **Sc-1**	45	22004.3	2.6				mg/L	26874	Standard
Cl	35	168871.5	4.1				ug/L	141022	Standard
Kr	83	93.7	6.8				ug/L	75	Standard
Br	81	3423.7	4.1				ug/L	2810	Standard
P	31	160780.4	1.7				ug/L	458976	Standard
S	34	112113.4	1.8				ug/L	103378	Standard
Sr	88	106.7	15.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	2.7	221.0				mg/L	10	Standard
Ho-1	165	3.3	173.2				mg/L	8	Standard
Er	166	13.3	114.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		94.318	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.567	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.410
	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	96.356
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311050502
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Method 6020 - Summary Report

Sample ID: L1311050503
Sample Date/Time: Monday, November 18, 2013 11:47:39
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	251641.1	1.4				ug/L	269614	Standard
	Be	9	28.3	27.0	**-0.0059**	0.003	45.2	ug/L	23	Standard
	Al	27	945304.7	1.9	**4.8212**	0.023	0.5	ug/L	1170	Standard
	Sc	45	22855.6	0.6				ug/L	26874	Standard
	Ti	47	15.3	24.7	**-0.0327**	0.016	48.4	ug/L	25	Standard
	V	51	1480.5	1.8	**0.0465**	0.006	12.7	ug/L	1686	Standard
	Cr	52	5349.9	1.5	**0.1610**	0.016	10.1	ug/L	6098	Standard
	Cr	53	303.3	11.2	**0.1240**	0.031	25.0	ug/L	193	Standard
	Mn	55	16988.5	3.4	**1.2343**	0.036	2.9	ug/L	1232	Standard
	Co	59	122.3	7.6	**-0.0011**	0.001	89.9	ug/L	106	Standard
	Ni	60	901.7	0.5	**0.1560**	0.003	1.7	ug/L	556	Standard
	Cu	65	481.0	1.9	**0.1391**	0.004	2.5	ug/L	124	Standard
	Zn	66	1777.1	3.0	**1.1460**	0.030	2.6	ug/L	196	Standard
>	Ge	72	437702.3	1.0				ug/L	473313	Standard
	As	75	-132.8	23.5	**0.1128**	0.022	19.9	ug/L	-286	Standard
	Se	82	671.7	5.5	**5.1923**	0.304	5.9	ug/L	-33	Standard
	Se-1	77	582.0	4.1	**5.0523**	0.234	4.6	ug/L	86	Standard
>	Ga	71	21.7	26.6				mg/L	35	Standard
	Rb	85	200.0	6.6				ug/L	13	Standard
	Y	89	394917.2	0.5				ug/L	439493	Standard
>	Rh	103	11.7	65.5				ug/L	5	Standard
	Mo	98	45.2	22.3	**-0.0028**	0.003	99.2	ug/L	10	Standard
	Ag	107	48.7	13.4	**-0.0071**	0.001	14.4	ug/L	53	Standard
	Cd	111	8.6	48.3	**0.0013**	0.002	152.4	mg/L	1	Standard
	Cd	114	20.4	37.5	**-0.0055**	0.002	27.4	ug/L	32	Standard
>	In	115	459418.1	0.7				ug/L	494305	Standard
	Sn	118	45.7	13.4	**-0.0188**	0.005	27.8	ug/L	53	Standard
	Sb	123	77.2	15.8	**0.0298**	0.005	16.4	ug/L	7	Standard
	Ba	135	204.7	10.2	**0.1077**	0.012	11.5	ug/L	11	Standard
	Ce	140	20.0	43.3				ug/L	10	Standard
>	Tb	159	485400.1	1.2				ug/L	538219	Standard
	Ho	165	5.0	0.0				ug/L	8	Standard
	Tl	203	23.3	31.0	**0.0019**	0.001	66.2	ug/L	1	Standard
	Tl	205	31.7	32.9	**0.0037**	0.001	38.6	ug/L	3	Standard
	Pb	206	84.7	14.2	**-0.0080**	0.005	58.3	ug/L	80	Standard
	Pb	207	82.7	6.9	**0.0047**	0.002	49.8	ug/L	73	Standard
	Pb	208	193.3	4.4	**-0.0033**	0.001	42.0	ug/L	190	Standard
	U	238	349.3	6.0	**0.0955**	0.006	6.6	ug/L	0	Standard
>	Bi	209	268325.5	0.5				ug/L	276439	Standard

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	Na	23	8.3	34.6	**2.0942**	0.866	41.4	mg/L	2	Standard
	Mg	24	3282.0	1.1	**3.9050**	0.025	0.6	mg/L	37	Standard
	K	39	5.0	173.2	**-0.0335**	0.602	1800.4	mg/L	3	Standard
	Ca	43	30.0	33.3	**-0.1108**	3.454	3116.1	mg/L	43	Standard
	Fe	54	115.9	24.9	**-0.0602**	0.017	27.5	mg/L	262	Standard
	Fe	57	68.3	36.1	**0.0421**	0.050	118.4	mg/L	65	Standard
>	**Sc-1**	45	22855.6	0.6				mg/L	26874	Standard
	Cl	35	166565.0	2.8				ug/L	141022	Standard
	Kr	83	84.0	2.1				ug/L	75	Standard
	Br	81	3133.7	4.1				ug/L	2810	Standard
	P	31	154660.4	0.7				ug/L	458976	Standard
	S	34	112726.1	0.7				ug/L	103378	Standard
	Sr	88	88.3	22.9				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	-1.0	86.6				mg/L	10	Standard
	Ho-1	165	5.0	0.0				mg/L	8	Standard
	Er	166	20.0	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.334	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.476	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.942
	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	97.065
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311050504
Sample Date/Time: Monday, November 18, 2013 11:50:43
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	259627.2	0.6				ug/L	269614	Standard
	Be	9	45.0	67.6	**-0.0003**	0.011	3043.1	ug/L	23	Standard
	Al	27	4091328.3	2.2	**20.2480**	0.426	2.1	ug/L	1170	Standard
	Sc	45	22463.3	2.5				ug/L	26874	Standard
	Ti	47	15.3	16.4	**-0.0330**	0.011	33.3	ug/L	25	Standard
	V	51	1564.1	5.2	**0.0577**	0.012	20.1	ug/L	1686	Standard
	Cr	52	5482.3	3.5	**0.1762**	0.029	16.7	ug/L	6098	Standard
	Cr	53	220.0	20.5	**0.0504**	0.039	77.9	ug/L	193	Standard
	Mn	55	65785.5	1.9	**5.1442**	0.084	1.6	ug/L	1232	Standard
	Co	59	254.3	52.1	**0.0140**	0.015	108.8	ug/L	106	Standard
	Ni	60	1306.7	1.1	**0.3132**	0.007	2.3	ug/L	556	Standard
	Cu	65	755.4	7.0	**0.2505**	0.022	8.9	ug/L	124	Standard
	Zn	66	1681.1	2.2	**1.0651**	0.031	2.9	ug/L	196	Standard
>	**Ge**	72	440644.7	0.3				ug/L	473313	Standard
	As	75	-145.2	41.7	**0.1041**	0.045	43.5	ug/L	-286	Standard
	Se	82	615.1	1.6	**4.7485**	0.065	1.4	ug/L	-33	Standard
	Se-1	77	551.0	4.5	**4.7060**	0.238	5.0	ug/L	86	Standard
>	**Ga**	71	18.3	15.7				mg/L	35	Standard
	Rb	85	176.7	4.3				ug/L	13	Standard
	Y	89	391676.7	1.1				ug/L	439493	Standard
>	**Rh**	103	28.3	36.7				ug/L	5	Standard
	Mo	98	124.1	99.5	**0.0193**	0.035	178.7	ug/L	10	Standard
	Ag	107	106.7	80.7	**0.0025**	0.014	560.8	ug/L	53	Standard
	Cd	111	4.6	33.1	**-0.0006**	0.001	125.5	mg/L	1	Standard
	Cd	114	28.7	62.6	**-0.0039**	0.004	91.0	ug/L	32	Standard
>	**In**	115	457122.9	1.2				ug/L	494305	Standard
	Sn	118	48.3	8.6	**-0.0164**	0.004	23.1	ug/L	53	Standard
	Sb	123	73.6	24.6	**0.0285**	0.007	26.3	ug/L	7	Standard
	Ba	135	107.7	8.9	**0.0511**	0.006	12.2	ug/L	11	Standard
	Ce	140	38.3	15.1				ug/L	10	Standard
>	**Tb**	159	485117.2	0.2				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	15.7	32.1	**0.0006**	0.001	151.8	ug/L	1	Standard
	Tl	205	46.7	99.0	**0.0059**	0.007	110.6	ug/L	3	Standard
	Pb	206	95.3	25.2	**-0.0033**	0.010	289.8	ug/L	80	Standard
	Pb	207	87.0	26.7	**0.0070**	0.010	147.5	ug/L	73	Standard
	Pb	208	191.0	26.3	**-0.0033**	0.009	279.9	ug/L	190	Standard
	U	238	2236.8	2.6	**0.6279**	0.011	1.7	ug/L	0	Standard
>	**Bi**	209	265613.4	0.9				ug/L	276439	Standard

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Na	23	6.7	114.6	**1.6629**	2.404	144.6	mg/L	2	Standard
Mg	24	8961.0	5.2	**10.9001**	0.306	2.8	mg/L	37	Standard
K	39	3.3	86.6	**-0.1473**	0.203	137.7	mg/L	3	Standard
Ca	43	38.3	7.5	**2.9389**	0.971	33.0	mg/L	43	Standard
Fe	54	84.2	15.9	**-0.0773**	0.009	11.5	mg/L	262	Standard
Fe	57	88.3	13.1	**0.0858**	0.021	24.8	mg/L	65	Standard
> **Sc-1**	45	22463.3	2.5				mg/L	26874	Standard
Cl	35	193394.6	1.6				ug/L	141022	Standard
Kr	83	101.0	6.9				ug/L	75	Standard
Br	81	2930.3	10.7				ug/L	2810	Standard
P	31	157982.8	1.2				ug/L	458976	Standard
S	34	113836.1	1.3				ug/L	103378	Standard
Sr	88	135.0	32.1				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.4	5.9				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	13.3	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.296	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.098	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.478
	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	96.084
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311050505
Sample Date/Time: Monday, November 18, 2013 11:53:48
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	254266.2	1.9				ug/L	269614	Standard
	Be	9	68.3	129.3	**0.0082**	0.031	382.4	ug/L	23	Standard
	Al	27	1031937.1	19.0	**5.2085**	0.971	18.6	ug/L	1170	Standard
	Sc	45	22348.1	0.4				ug/L	26874	Standard
	Ti	47	26.0	57.7	**0.0127**	0.064	508.2	ug/L	25	Standard
	V	51	1596.2	1.2	**0.0622**	0.006	9.4	ug/L	1686	Standard
	Cr	52	5632.4	1.3	**0.1983**	0.021	10.6	ug/L	6098	Standard
	Cr	53	223.3	7.2	**0.0528**	0.012	22.9	ug/L	193	Standard
	Mn	55	27109.9	3.3	**2.0344**	0.095	4.7	ug/L	1232	Standard
	Co	59	122.0	21.4	**-0.0013**	0.003	238.6	ug/L	106	Standard
	Ni	60	749.7	14.9	**0.0931**	0.044	47.3	ug/L	556	Standard
	Cu	65	498.3	17.4	**0.1444**	0.035	24.4	ug/L	124	Standard
	Zn	66	1834.4	2.8	**1.1775**	0.040	3.4	ug/L	196	Standard
>	**Ge**	72	441551.1	1.2				ug/L	473313	Standard
	As	75	-241.7	13.9	**0.0329**	0.026	77.5	ug/L	-286	Standard
	Se	82	-29.7	19.4	**0.0860**	0.044	51.2	ug/L	-33	Standard
	Se-1	77	86.7	7.9	**0.1016**	0.060	59.2	ug/L	86	Standard
>	**Ga**	71	23.3	12.4				mg/L	35	Standard
	Rb	85	148.3	24.8				ug/L	13	Standard
	Y	89	393605.0	2.0				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	76.9	19.6	**0.0060**	0.004	69.8	ug/L	10	Standard
	Ag	107	61.7	34.4	**-0.0049**	0.003	69.4	ug/L	53	Standard
	Cd	111	10.6	141.8	**0.0023**	0.007	321.6	mg/L	1	Standard
	Cd	114	31.9	113.1	**-0.0033**	0.007	214.4	ug/L	32	Standard
>	**In**	115	459574.4	0.9				ug/L	494305	Standard
	Sn	118	51.7	4.5	**-0.0140**	0.002	11.2	ug/L	53	Standard
	Sb	123	78.5	12.9	**0.0303**	0.004	13.2	ug/L	7	Standard
	Ba	135	253.7	1.9	**0.1364**	0.002	1.3	ug/L	11	Standard
	Ce	140	45.0	11.1				ug/L	10	Standard
>	**Tb**	159	489489.6	0.5				ug/L	538219	Standard
	Ho	165	0.0					ug/L	8	Standard
	Tl	203	20.0	95.8	**0.0013**	0.003	249.1	ug/L	1	Standard
	Tl	205	20.0	43.3	**0.0021**	0.001	56.6	ug/L	3	Standard
	Pb	206	98.0	7.1	**-0.0022**	0.003	141.9	ug/L	80	Standard
	Pb	207	75.7	17.7	**0.0020**	0.006	309.7	ug/L	73	Standard
	Pb	208	177.0	11.3	**-0.0059**	0.004	60.8	ug/L	190	Standard
	U	238	323.3	25.7	**0.0892**	0.024	26.3	ug/L	0	Standard
>	**Bi**	209	265485.2	1.1				ug/L	276439	Standard

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	Na	23	5.0	0.0	**1.1213**	0.006	0.5	mg/L	2	Standard
	Mg	24	2665.2	9.4	**3.2377**	0.304	9.4	mg/L	37	Standard
	K	39	3.3	173.2	**-0.1457**	0.408	279.8	mg/L	3	Standard
	Ca	43	28.3	20.4	**-0.4739**	1.987	419.4	mg/L	43	Standard
	Fe	54	119.2	25.0	**-0.0567**	0.018	31.2	mg/L	262	Standard
	Fe	57	71.7	33.0	**0.0523**	0.049	94.1	mg/L	65	Standard
>	**Sc-1**	45	22348.1	0.4				mg/L	26874	Standard
	Cl	35	173737.9	1.4				ug/L	141022	Standard
	Kr	83	94.0	2.8				ug/L	75	Standard
	Br	81	2903.6	9.5				ug/L	2810	Standard
	P	31	158614.7	2.9				ug/L	458976	Standard
	S	34	115070.4	1.3				ug/L	103378	Standard
	Sr	88	63.3	24.1				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	3.0	187.1				mg/L	10	Standard
	Ho-1	165	0.0					mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		94.307	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.289	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.974
	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	96.037
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311050506
Sample Date/Time: Monday, November 18, 2013 11:56:53
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	260750.8	3.0				ug/L	269614	Standard
	Be	9	35.0	24.7	**-0.0039**	0.003	76.9	ug/L	23	Standard
	Al	27	5441759.5	1.7	**26.8343**	0.959	3.6	ug/L	1170	Standard
	Sc	45	22463.3	0.9				ug/L	26874	Standard
	Ti	47	13.3	24.1	**-0.0420**	0.014	32.7	ug/L	25	Standard
	V	51	1556.3	6.1	**0.0550**	0.012	22.6	ug/L	1686	Standard
	Cr	52	5719.7	5.0	**0.2079**	0.038	18.1	ug/L	6098	Standard
	Cr	53	320.0	19.2	**0.1350**	0.055	40.4	ug/L	193	Standard
	Mn	55	17035.9	1.6	**1.2204**	0.011	0.9	ug/L	1232	Standard
	Co	59	150.7	16.3	**0.0019**	0.003	146.3	ug/L	106	Standard
	Ni	60	1037.0	2.7	**0.2043**	0.009	4.3	ug/L	556	Standard
	Cu	65	791.0	8.2	**0.2630**	0.024	9.0	ug/L	124	Standard
	Zn	66	2992.3	2.4	**2.0354**	0.050	2.4	ug/L	196	Standard
>	**Ge**	72	443452.1	0.9				ug/L	473313	Standard
	As	75	-224.4	41.7	**0.0465**	0.069	148.8	ug/L	-286	Standard
	Se	82	200.8	16.0	**1.7435**	0.231	13.3	ug/L	-33	Standard
	Se-1	77	247.7	2.1	**1.6844**	0.071	4.2	ug/L	86	Standard
>	**Ga**	71	13.3	21.7				mg/L	35	Standard
	Rb	85	428.3	5.5				ug/L	13	Standard
	Y	89	393367.9	1.0				ug/L	439493	Standard
>	**Rh**	103	36.7	34.3				ug/L	5	Standard
	Mo	98	179.2	1.4	**0.0338**	0.001	2.8	ug/L	10	Standard
	Ag	107	48.3	14.1	**-0.0072**	0.001	14.6	ug/L	53	Standard
	Cd	111	2.8	63.2	**-0.0015**	0.001	55.0	mg/L	1	Standard
	Cd	114	18.6	70.9	**-0.0059**	0.003	43.4	ug/L	32	Standard
>	**In**	115	463504.9	0.6				ug/L	494305	Standard
	Sn	118	53.0	14.7	**-0.0132**	0.006	47.2	ug/L	53	Standard
	Sb	123	127.2	11.4	**0.0496**	0.006	12.0	ug/L	7	Standard
	Ba	135	331.7	3.6	**0.1805**	0.006	3.2	ug/L	11	Standard
	Ce	140	26.7	10.8				ug/L	10	Standard
>	**Tb**	159	488302.1	0.2				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	21.0	9.5	**0.0015**	0.000	22.5	ug/L	1	Standard
	Tl	205	18.3	15.7	**0.0019**	0.000	21.9	ug/L	3	Standard
	Pb	206	90.3	10.5	**-0.0053**	0.004	79.9	ug/L	80	Standard
	Pb	207	76.0	7.0	**0.0021**	0.002	114.3	ug/L	73	Standard
	Pb	208	170.0	2.7	**-0.0071**	0.001	8.1	ug/L	190	Standard
	U	238	960.7	5.4	**0.2689**	0.013	4.7	ug/L	0	Standard
>	**Bi**	209	265314.6	1.0				ug/L	276439	Standard

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Na	23	11.7	65.5	**3.1538**	2.315	73.4	mg/L	2	Standard
Mg	24	10313.5	2.4	**12.5552**	0.245	2.0	mg/L	37	Standard
K	39	1.7	173.2	**-0.2636**	0.204	77.3	mg/L	3	Standard
Ca	43	36.7	78.7	**2.4087**	10.118	420.1	mg/L	43	Standard
Fe	54	102.8	14.9	**-0.0667**	0.009	13.3	mg/L	262	Standard
Fe	57	91.7	15.7	**0.0929**	0.030	31.9	mg/L	65	Standard
> **Sc-1**	45	22463.3	0.9				mg/L	26874	Standard
Cl	35	208266.9	2.5				ug/L	141022	Standard
Kr	83	95.0	18.9				ug/L	75	Standard
Br	81	3483.7	4.9				ug/L	2810	Standard
P	31	163909.3	3.8				ug/L	458976	Standard
S	34	113787.4	0.7				ug/L	103378	Standard
Sr	88	153.3	18.0				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.0	173.2				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.713	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.691	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	93.769
	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	95.976
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311036801
Sample Date/Time: Monday, November 18, 2013 11:59:57
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	260643.0	1.4				ug/L	269614	Standard
	Be	9	46.7	27.0	**0.0002**	0.005	1929.3	ug/L	23	Standard
	Al	27	6396373.8	1.6	**31.5388**	0.553	1.8	ug/L	1170	Standard
	Sc	45	23483.2	0.4				ug/L	26874	Standard
	Ti	47	19.3	23.9	**-0.0172**	0.020	115.4	ug/L	25	Standard
	V	51	1785.5	6.0	**0.0875**	0.017	19.7	ug/L	1686	Standard
	Cr	52	6232.6	4.7	**0.2799**	0.050	17.8	ug/L	6098	Standard
	Cr	53	218.3	10.8	**0.0461**	0.021	45.2	ug/L	193	Standard
	Mn	55	50685.0	1.1	**3.8688**	0.062	1.6	ug/L	1232	Standard
	Co	59	161.7	12.1	**0.0030**	0.002	75.6	ug/L	106	Standard
	Ni	60	1253.1	2.6	**0.2844**	0.011	3.9	ug/L	556	Standard
	Cu	65	989.4	3.2	**0.3404**	0.014	4.2	ug/L	124	Standard
	Zn	66	2501.9	1.6	**1.6524**	0.031	1.9	ug/L	196	Standard
>	**Ge**	72	447564.9	0.5				ug/L	473313	Standard
	As	75	-218.1	26.7	**0.0528**	0.042	79.2	ug/L	-286	Standard
	Se	82	-9.7	173.9	**0.2318**	0.120	51.9	ug/L	-33	Standard
	Se-1	77	89.7	3.6	**0.1197**	0.032	26.4	ug/L	86	Standard
>	**Ga**	71	28.3	66.8				mg/L	35	Standard
	Rb	85	1375.1	12.0				ug/L	13	Standard
	Y	89	403347.1	1.3				ug/L	439493	Standard
>	**Rh**	103	43.3	6.7				ug/L	5	Standard
	Mo	98	60.6	17.8	**0.0012**	0.003	238.8	ug/L	10	Standard
	Ag	107	51.3	18.7	**-0.0067**	0.002	23.4	ug/L	53	Standard
	Cd	111	4.6	62.6	**-0.0007**	0.001	208.4	mg/L	1	Standard
	Cd	114	15.1	19.5	**-0.0066**	0.001	8.3	ug/L	32	Standard
>	**In**	115	467051.3	0.6				ug/L	494305	Standard
	Sn	118	59.3	3.5	**-0.0084**	0.002	23.0	ug/L	53	Standard
	Sb	123	88.0	12.5	**0.0336**	0.005	13.5	ug/L	7	Standard
	Ba	135	239.3	5.2	**0.1257**	0.007	5.4	ug/L	11	Standard
	Ce	140	133.3	12.1				ug/L	10	Standard
>	**Tb**	159	491618.7	0.8				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	13.7	15.2	**0.0003**	0.000	142.4	ug/L	1	Standard
	Tl	205	25.0	20.0	**0.0029**	0.001	25.0	ug/L	3	Standard
	Pb	206	95.0	6.3	**-0.0029**	0.002	83.9	ug/L	80	Standard
	Pb	207	84.7	11.9	**0.0065**	0.005	71.1	ug/L	73	Standard
	Pb	208	204.3	15.4	**-0.0004**	0.006	1634.6	ug/L	190	Standard
	U	238	3222.0	1.5	**0.9172**	0.019	2.1	ug/L	0	Standard
>	**Bi**	209	262184.7	0.6				ug/L	276439	Standard

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Na	23	16.7	86.6	**4.4738**	4.245	94.9	mg/L	2	Standard
Mg	24	9926.6	3.8	**11.5561**	0.391	3.4	mg/L	37	Standard
K	39	8.3	34.6	**0.1797**	0.193	107.2	mg/L	3	Standard
Ca	43	36.7	20.8	**1.8042**	2.483	137.6	mg/L	43	Standard
Fe	54	108.9	8.0	**-0.0658**	0.005	7.1	mg/L	262	Standard
Fe	57	100.0	26.5	**0.1012**	0.052	51.8	mg/L	65	Standard
> **Sc-1**	45	23483.2	0.4				mg/L	26874	Standard
Cl	35	222195.4	2.6				ug/L	141022	Standard
Kr	83	95.3	8.0				ug/L	75	Standard
Br	81	3263.7	11.2				ug/L	2810	Standard
P	31	166942.4	4.3				ug/L	458976	Standard
S	34	116991.8	2.5				ug/L	103378	Standard
Sr	88	188.3	18.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.7	86.6				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	0.0					mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.673	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		94.560	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	94.486
	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	94.844
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311036801PS WG452303-01
Sample Date/Time: Monday, November 18, 2013 12:03:02
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	292182.9	2.2				ug/L	269614	Standard
	Be	9	160669.6	3.0	**49.9367**	0.912	1.8	ug/L	23	Standard
	Al	27	6876950.9	0.8	**30.2549**	0.699	2.3	ug/L	1170	Standard
	Sc	45	26905.5	1.2				ug/L	26874	Standard
	Ti	47	19.3	29.4	**-0.0263**	0.022	82.0	ug/L	25	Standard
	V	51	353678.3	2.8	**47.2238**	1.519	3.2	ug/L	1686	Standard
	Cr	52	352880.1	2.8	**48.1462**	1.714	3.6	ug/L	6098	Standard
	Cr	53	63779.0	2.6	**47.8996**	1.345	2.8	ug/L	193	Standard
	Mn	55	785206.8	1.6	**55.0013**	1.230	2.2	ug/L	1232	Standard
	Co	59	492177.8	1.8	**49.7196**	1.042	2.1	ug/L	106	Standard
	Ni	60	144949.1	0.6	**49.7253**	0.647	1.3	ug/L	556	Standard
	Cu	65	140911.9	1.1	**50.5715**	0.928	1.8	ug/L	124	Standard
	Zn	66	78414.1	0.3	**51.2837**	0.629	1.2	ug/L	196	Standard
>	**Ge**	72	504015.8	1.0				ug/L	473313	Standard
	As	75	76779.7	1.1	**50.0014**	1.021	2.0	ug/L	-286	Standard
	Se	82	7872.7	1.9	**50.0813**	1.335	2.7	ug/L	-33	Standard
	Se-1	77	5853.5	1.6	**49.9707**	0.895	1.8	ug/L	86	Standard
>	**Ga**	71	70.0	37.1				mg/L	35	Standard
	Rb	85	1540.1	1.8				ug/L	13	Standard
	Y	89	461614.6	1.9				ug/L	439493	Standard
>	**Rh**	103	81.7	35.3				ug/L	5	Standard
	Mo	98	122.6	6.6	**0.0143**	0.002	12.4	ug/L	10	Standard
	Ag	107	361207.6	0.7	**51.4447**	0.589	1.1	ug/L	53	Standard
	Cd	111	115119.6	1.2	**49.4120**	0.126	0.3	mg/L	1	Standard
	Cd	114	286161.2	0.9	**48.5326**	0.852	1.8	ug/L	32	Standard
>	**In**	115	525363.2	1.2				ug/L	494305	Standard
	Sn	118	291.3	7.0	**0.1530**	0.012	8.0	ug/L	53	Standard
	Sb	123	136407.8	0.9	**48.4032**	0.662	1.4	ug/L	7	Standard
	Ba	135	97834.2	1.4	**50.2293**	0.162	0.3	ug/L	11	Standard
	Ce	140	135.0	7.4				ug/L	10	Standard
>	**Tb**	159	547957.6	0.4				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	311275.4	0.8	**49.7928**	0.778	1.6	ug/L	1	Standard
	Tl	205	407934.6	1.7	**52.8418**	0.637	1.2	ug/L	3	Standard
	Pb	206	142823.7	0.6	**53.2428**	0.126	0.2	ug/L	80	Standard
	Pb	207	127712.7	0.8	**52.8517**	0.717	1.4	ug/L	73	Standard
	Pb	208	285105.3	0.9	**48.2030**	0.233	0.5	ug/L	190	Standard
	U	238	188096.7	0.4	**48.7962**	0.215	0.4	ug/L	0	Standard
>	**Bi**	209	288266.1	0.7				ug/L	276439	Standard

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Na	23	21.7	26.6	**5.1497**	1.496	29.1	mg/L	2	Standard
Mg	24	10663.8	2.9	**10.8328**	0.191	1.8	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	28.3	27.0	**-2.1306**	2.244	105.3	mg/L	43	Standard
Fe	54	298.0	9.6	**0.0185**	0.016	84.3	mg/L	262	Standard
Fe	57	95.0	15.8	**0.0675**	0.027	40.5	mg/L	65	Standard
> **Sc-1**	45	26905.5	1.2				mg/L	26874	Standard
Cl	35	240336.8	1.6				ug/L	141022	Standard
Kr	83	111.7	2.9				ug/L	75	Standard
Br	81	3807.1	5.0				ug/L	2810	Standard
P	31	497148.0	1.9				ug/L	458976	Standard
S	34	126201.8	0.6				ug/L	103378	Standard
Sr	88	210.0	21.4				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	12.4	127.2				mg/L	10	Standard
Ho-1	165	5.0	100.0				mg/L	8	Standard
Er	166	20.0	50.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		108.371	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		106.487	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

Sample ID: L1311036801PS WG452303-01
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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	106.283
	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	104.278
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311036801PS WG452303-01
Report Date/Time: Monday, November 18, 2013 12:05:15
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Method 6020 - Summary Report

Sample ID: L1311036801SDL WG452303-02
Sample Date/Time: Monday, November 18, 2013 12:06:07
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 250
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	256245.9	2.0				ug/L	269614	Standard
	Be	9	48.3	15.8	**0.0010**	0.002	235.6	ug/L	23	Standard
	Al	27	1181516.1	3.1	**5.9216**	0.241	4.1	ug/L	1170	Standard
	Sc	45	23224.5	2.4				ug/L	26874	Standard
	Ti	47	13.0	27.7	**-0.0442**	0.015	33.9	ug/L	25	Standard
	V	51	1817.0	4.5	**0.0911**	0.013	13.8	ug/L	1686	Standard
	Cr	52	6262.0	0.9	**0.2804**	0.012	4.4	ug/L	6098	Standard
	Cr	53	223.3	1.3	**0.0495**	0.003	6.0	ug/L	193	Standard
	Mn	55	10791.8	2.8	**0.7108**	0.025	3.5	ug/L	1232	Standard
	Co	59	139.7	31.8	**0.0005**	0.005	1098.0	ug/L	106	Standard
	Ni	60	682.0	4.8	**0.0618**	0.013	20.6	ug/L	556	Standard
	Cu	65	487.0	4.2	**0.1363**	0.008	5.5	ug/L	124	Standard
	Zn	66	1994.1	3.0	**1.2711**	0.046	3.6	ug/L	196	Standard
>	Ge	72	449380.8	0.4				ug/L	473313	Standard
	As	75	-288.2	15.4	**0.0023**	0.032	1356.7	ug/L	-286	Standard
	Se	82	-45.1	22.2	**-0.0192**	0.071	368.4	ug/L	-33	Standard
	Se-1	77	81.7	25.5	**0.0390**	0.206	528.2	ug/L	86	Standard
>	Ga	71	15.0	57.7				mg/L	35	Standard
	Rb	85	268.3	17.6				ug/L	13	Standard
	Y	89	404091.3	0.9				ug/L	439493	Standard
>	Rh	103	11.7	49.5				ug/L	5	Standard
	Mo	98	20.1	10.1	**-0.0098**	0.001	5.6	ug/L	10	Standard
	Ag	107	92.0	50.9	**-0.0004**	0.007	1970.0	ug/L	53	Standard
	Cd	111	8.6	29.0	**0.0012**	0.001	97.3	mg/L	1	Standard
	Cd	114	35.4	16.2	**-0.0028**	0.001	39.6	ug/L	32	Standard
>	In	115	471184.4	0.3				ug/L	494305	Standard
	Sn	118	48.7	6.3	**-0.0174**	0.002	14.0	ug/L	53	Standard
	Sb	123	264.4	8.0	**0.1031**	0.008	7.8	ug/L	7	Standard
	Ba	135	61.7	3.7	**0.0228**	0.001	6.0	ug/L	11	Standard
	Ce	140	23.3	53.9				ug/L	10	Standard
>	Tb	159	491140.4	1.0				ug/L	538219	Standard
	Ho	165	0.0					ug/L	8	Standard
	Tl	203	34.3	79.3	**0.0037**	0.005	125.1	ug/L	1	Standard
	Tl	205	45.0	11.1	**0.0055**	0.001	12.7	ug/L	3	Standard
	Pb	206	109.3	25.2	**0.0015**	0.011	722.1	ug/L	80	Standard
	Pb	207	84.7	10.7	**0.0052**	0.004	76.0	ug/L	73	Standard
	Pb	208	196.7	7.9	**-0.0030**	0.003	97.9	ug/L	190	Standard
	U	238	509.3	4.8	**0.1388**	0.007	4.9	ug/L	0	Standard
>	Bi	209	270881.0	0.4				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0785**	0.877	1117.1	mg/L	2	Standard
Mg	24	2055.1	4.5	**2.3944**	0.102	4.2	mg/L	37	Standard
K	39	6.7	43.3	**0.0752**	0.206	273.8	mg/L	3	Standard
Ca	43	28.3	27.0	**-0.8636**	2.421	280.3	mg/L	43	Standard
Fe	54	99.0	25.0	**-0.0709**	0.013	18.2	mg/L	262	Standard
Fe	57	83.3	6.9	**0.0702**	0.015	20.8	mg/L	65	Standard
> **Sc-1**	45	23224.5	2.4				mg/L	26874	Standard
Cl	35	184170.8	1.7				ug/L	141022	Standard
Kr	83	102.7	10.0				ug/L	75	Standard
Br	81	2613.6	4.8				ug/L	2810	Standard
P	31	158838.3	0.7				ug/L	458976	Standard
S	34	118389.1	0.6				ug/L	103378	Standard
Sr	88	80.0	34.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	3.2	186.4				mg/L	10	Standard
Ho-1	165	0.0					mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		95.042	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		94.944	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	95.323
	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	97.989
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 12:09:14
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	278428.8	1.7				ug/L	269614	Standard
	Be	9	153611.5	1.0	**50.1162**	1.207	2.4	ug/L	23	Standard
	Al	27	10037117.6	0.9	**46.3355**	0.703	1.5	ug/L	1170	Standard
	Sc	45	25296.1	1.3				ug/L	26874	Standard
	Ti	47	25430.7	1.2	**98.5462**	1.458	1.5	ug/L	25	Standard
	V	51	345954.1	0.5	**47.8149**	0.260	0.5	ug/L	1686	Standard
	Cr	52	341810.4	1.8	**48.2715**	0.977	2.0	ug/L	6098	Standard
	Cr	53	62776.5	0.7	**48.8061**	0.429	0.9	ug/L	193	Standard
	Mn	55	697734.8	1.1	**50.5780**	0.570	1.1	ug/L	1232	Standard
	Co	59	481774.9	2.3	**50.3801**	1.237	2.5	ug/L	106	Standard
	Ni	60	140751.1	1.2	**49.9831**	0.703	1.4	ug/L	556	Standard
	Cu	65	135297.1	0.9	**50.2607**	0.575	1.1	ug/L	124	Standard
	Zn	66	74448.5	0.5	**50.3973**	0.381	0.8	ug/L	196	Standard
>	Ge	72	486876.6	0.3				ug/L	473313	Standard
	As	75	74843.3	0.1	**50.4478**	0.111	0.2	ug/L	-286	Standard
	Se	82	7723.1	1.5	**50.8472**	0.814	1.6	ug/L	-33	Standard
	Se-1	77	5692.1	1.0	**50.3055**	0.475	0.9	ug/L	86	Standard
>	Ga	71	75.0	20.0				mg/L	35	Standard
	Rb	85	1160.0	7.9				ug/L	13	Standard
	Y	89	444563.2	1.1				ug/L	439493	Standard
>	Rh	103	28.3	36.7				ug/L	5	Standard
	Mo	98	419104.6	2.1	**103.5707**	2.077	2.0	ug/L	10	Standard
	Ag	107	358937.8	1.1	**52.3941**	0.158	0.3	ug/L	53	Standard
	Cd	111	114769.8	0.7	**50.4938**	0.367	0.7	mg/L	1	Standard
	Cd	114	287965.5	2.2	**50.0493**	0.719	1.4	ug/L	32	Standard
>	In	115	512579.1	1.4				ug/L	494305	Standard
	Sn	118	70136.4	2.9	**51.6217**	0.869	1.7	ug/L	53	Standard
	Sb	123	133562.5	0.5	**48.5758**	0.494	1.0	ug/L	7	Standard
	Ba	135	95817.4	1.5	**50.4209**	0.063	0.1	ug/L	11	Standard
	Ce	140	31.7	18.2				ug/L	10	Standard
>	Tb	159	535441.8	0.4				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	311251.7	1.1	**50.0366**	0.079	0.2	ug/L	1	Standard
	Tl	205	407971.3	0.5	**53.1201**	0.714	1.3	ug/L	3	Standard
	Pb	206	142846.2	0.7	**53.5225**	0.460	0.9	ug/L	80	Standard
	Pb	207	127624.6	1.1	**53.0809**	0.544	1.0	ug/L	73	Standard
	Pb	208	283875.7	0.5	**48.2398**	0.257	0.5	ug/L	190	Standard
	U	238	187125.5	1.2	**48.7895**	0.446	0.9	ug/L	0	Standard
>	Bi	209	286815.1	1.0				ug/L	276439	Standard

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	Na	23	23.3	65.5	**5.9511**	4.185	70.3	mg/L	2	Standard
	Mg	24	4779.1	4.8	**5.1496**	0.293	5.7	mg/L	37	Standard
	K	39	70.0	18.9	**3.9965**	0.828	20.7	mg/L	3	Standard
	Ca	43	51.7	44.7	**5.5441**	7.084	127.8	mg/L	43	Standard
	Fe	54	10876.4	1.0	**5.4962**	0.128	2.3	mg/L	262	Standard
	Fe	57	3062.0	3.5	**5.5277**	0.137	2.5	mg/L	65	Standard
>	**Sc-1**	45	25296.1	1.3				mg/L	26874	Standard
	Cl	35	163011.1	2.1				ug/L	141022	Standard
	Kr	83	98.0	8.2				ug/L	75	Standard
	Br	81	3043.6	2.6				ug/L	2810	Standard
	P	31	541425.0	2.2				ug/L	458976	Standard
	S	34	133705.7	0.8				ug/L	103378	Standard
	Sr	88	38.3	45.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	5.7	109.1				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	8	Standard
	Er	166	20.0	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.269	
	Be	9	100.232		
	Al	27	92.671		
	Sc	45			
	Ti	47	98.546		
	V	51	95.630		
	Cr	52	96.543		
	Cr	53			
	Mn	55	101.156		
	Co	59	100.760		
	Ni	60	99.966		
	Cu	65	100.521		
	Zn	66	100.795		
>	Ge	72		102.866	
	As	75	100.896		
	Se	82	101.694		
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	103.571	
	Ag	107	104.788	
	Cd	111	100.988	
	Cd	114		
>	In	115		103.697
	Sn	118	103.243	
	Sb	123	97.152	
	Ba	135	100.842	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	100.073	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.480	
	U	238	97.579	
>	Bi	209		103.753
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 12:12:18
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	276592.6	2.3				ug/L	269614	Standard
	Be	9	76.7	19.9	**0.0091**	0.005	56.1	ug/L	23	Standard
	Al	27	1923.5	8.3	**0.0018**	0.001	30.1	ug/L	1170	Standard
	Sc	45	25366.2	2.6				ug/L	26874	Standard
	Ti	47	25.0	28.0	**-0.0014**	0.028	1963.1	ug/L	25	Standard
	V	51	1099.8	6.2	**-0.0289**	0.009	30.0	ug/L	1686	Standard
	Cr	52	4138.2	1.8	**-0.0965**	0.008	8.0	ug/L	6098	Standard
	Cr	53	171.7	7.3	**-0.0049**	0.009	187.2	ug/L	193	Standard
	Mn	55	1424.4	1.3	**-0.0352**	0.001	2.1	ug/L	1232	Standard
	Co	59	93.3	13.9	**-0.0056**	0.001	24.1	ug/L	106	Standard
	Ni	60	534.7	2.7	**-0.0103**	0.005	53.2	ug/L	556	Standard
	Cu	65	440.3	14.0	**0.1045**	0.024	22.8	ug/L	124	Standard
	Zn	66	315.3	5.3	**0.0179**	0.013	69.9	ug/L	196	Standard
>	**Ge**	72	485088.7	0.5				ug/L	473313	Standard
	As	75	-286.5	3.0	**0.0189**	0.005	27.3	ug/L	-286	Standard
	Se	82	-36.6	8.4	**0.0607**	0.019	32.0	ug/L	-33	Standard
	Se-1	77	93.3	9.2	**0.0850**	0.076	89.4	ug/L	86	Standard
>	**Ga**	71	20.0	43.3				mg/L	35	Standard
	Rb	85	23.3	32.7				ug/L	13	Standard
	Y	89	447259.4	1.4				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	85.5	31.2	**0.0060**	0.007	109.7	ug/L	10	Standard
	Ag	107	78.7	9.4	**-0.0035**	0.001	29.9	ug/L	53	Standard
	Cd	111	4.6	24.7	**-0.0009**	0.000	56.2	mg/L	1	Standard
	Cd	114	32.9	40.0	**-0.0037**	0.002	60.9	ug/L	32	Standard
>	**In**	115	511436.6	0.6				ug/L	494305	Standard
	Sn	118	79.3	4.8	**0.0022**	0.002	112.5	ug/L	53	Standard
	Sb	123	297.9	26.5	**0.1071**	0.029	26.9	ug/L	7	Standard
	Ba	135	99.0	10.6	**0.0397**	0.005	13.3	ug/L	11	Standard
	Ce	140	10.0	86.6				ug/L	10	Standard
>	**Tb**	159	536366.8	1.6				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	17.3	8.8	**0.0006**	0.000	38.3	ug/L	1	Standard
	Tl	205	20.0	66.1	**0.0019**	0.002	90.6	ug/L	3	Standard
	Pb	206	101.0	10.3	**-0.0045**	0.004	82.7	ug/L	80	Standard
	Pb	207	82.7	18.5	**0.0019**	0.006	335.5	ug/L	73	Standard
	Pb	208	193.7	12.9	**-0.0059**	0.004	68.8	ug/L	190	Standard
	U	238	11.3	28.4	**0.0011**	0.001	78.9	ug/L	0	Standard
>	**Bi**	209	290752.2	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0279**	0.789	2825.2	mg/L	2	Standard
Mg	24	43.3	56.9	**0.0146**	0.026	178.8	mg/L	37	Standard
K	39	3.3	86.6	**-0.1704**	0.183	107.2	mg/L	3	Standard
Ca	43	18.3	56.8	**-4.6896**	3.212	68.5	mg/L	43	Standard
Fe	54	289.4	9.1	**0.0226**	0.010	44.2	mg/L	262	Standard
Fe	57	48.3	47.8	**-0.0075**	0.045	596.6	mg/L	65	Standard
> **Sc-1**	45	25366.2	2.6				mg/L	26874	Standard
Cl	35	159848.8	0.9				ug/L	141022	Standard
Kr	83	93.3	2.2				ug/L	75	Standard
Br	81	3060.3	7.8				ug/L	2810	Standard
P	31	529756.1	1.1				ug/L	458976	Standard
S	34	128954.8	0.9				ug/L	103378	Standard
Sr	88	41.7	36.7				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	13.0	40.1				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		102.588	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		102.488	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	103.466
	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	105.178
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311036804
Sample Date/Time: Monday, November 18, 2013 12:15:25
Number of Replicates: 3
Autosampler Position: 321
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	329955.7	0.4				ug/L	269614	Standard
	Be	9	66.7	30.3	**0.0023**	0.006	242.3	ug/L	23	Standard
	Al	27	172149798.8	0.4	**670.6076**	2.855	0.4	ug/L	1170	Standard
	Sc	45	22878.9	1.5				ug/L	26874	Standard
	Ti	47	127.3	14.6	**0.4878**	0.089	18.3	ug/L	25	Standard
	V	51	3092.9	7.9	**0.3272**	0.038	11.6	ug/L	1686	Standard
	Cr	52	7308.1	4.7	**0.5509**	0.050	9.1	ug/L	6098	Standard
	Cr	53	2045.1	10.1	**1.7542**	0.201	11.4	ug/L	193	Standard
	Mn	55	55082.3	1.5	**4.6131**	0.045	1.0	ug/L	1232	Standard
	Co	59	5128.9	0.6	**0.6214**	0.003	0.5	ug/L	106	Standard
	Ni	60	30314.3	2.5	**12.6264**	0.233	1.8	ug/L	556	Standard
	Cu	65	10044.0	3.4	**4.3749**	0.181	4.1	ug/L	124	Standard
	Zn	66	8748.5	2.0	**6.8593**	0.091	1.3	ug/L	196	Standard
>	Ge	72	410187.7	0.7				ug/L	473313	Standard
	As	75	1564.5	9.8	**1.4581**	0.119	8.1	ug/L	-286	Standard
	Se	82	1754.9	3.7	**13.9318**	0.415	3.0	ug/L	-33	Standard
	Se-1	77	1146.7	1.8	**11.4551**	0.245	2.1	ug/L	86	Standard
>	Ga	71	68.3	37.5				mg/L	35	Standard
	Rb	85	28261.3	1.6				ug/L	13	Standard
	Y	89	386778.1	1.0				ug/L	439493	Standard
>	Rh	103	1498.4	4.9				ug/L	5	Standard
	Mo	98	3337.4	1.6	**1.0085**	0.011	1.1	ug/L	10	Standard
	Ag	107	72.0	20.7	**-0.0019**	0.003	135.3	ug/L	53	Standard
	Cd	111	62.9	8.8	**0.0315**	0.003	10.1	mg/L	1	Standard
	Cd	114	161.4	17.6	**0.0254**	0.006	23.1	ug/L	32	Standard
>	In	115	412995.9	0.8				ug/L	494305	Standard
	Sn	118	71.0	8.6	**0.0085**	0.006	65.5	ug/L	53	Standard
	Sb	123	246.2	0.2	**0.1096**	0.001	0.7	ug/L	7	Standard
	Ba	135	10196.4	0.9	**6.6485**	0.011	0.2	ug/L	11	Standard
	Ce	140	635.0	16.2				ug/L	10	Standard
>	Tb	159	461573.6	0.4				ug/L	538219	Standard
	Ho	165	111.7	24.7				ug/L	8	Standard
	Tl	203	129.0	7.4	**0.0251**	0.002	7.7	ug/L	1	Standard
	Tl	205	143.3	5.3	**0.0238**	0.001	5.0	ug/L	3	Standard
	Pb	206	114.0	16.9	**0.0143**	0.010	68.7	ug/L	80	Standard
	Pb	207	90.3	6.1	**0.0173**	0.003	17.4	ug/L	73	Standard
	Pb	208	240.7	0.6	**0.0154**	0.000	2.1	ug/L	190	Standard
	U	238	131613.9	0.9	**45.0917**	0.224	0.5	ug/L	0	Standard
>	Bi	209	218274.8	1.2				ug/L	276439	Standard

Sample ID: L1311036804
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	Na	23	540.0	13.1	**163.1956**	23.739	14.5	mg/L	2	Standard
	Mg	24	394106.6	0.7	**472.2910**	6.753	1.4	mg/L	37	Standard
	K	39	26.7	57.3	**1.4648**	1.053	71.9	mg/L	3	Standard
	Ca	43	543.3	9.8	**174.1374**	15.980	9.2	mg/L	43	Standard
	Fe	54	218.9	29.0	**-0.0016**	0.035	2172.5	mg/L	262	Standard
	Fe	57	1041.7	4.5	**2.0192**	0.091	4.5	mg/L	65	Standard
>	**Sc-1**	45	22878.9	1.5				mg/L	26874	Standard
	Cl	35	1623099.8	1.2				ug/L	141022	Standard
	Kr	83	217.3	3.0				ug/L	75	Standard
	Br	81	59228.9	2.6				ug/L	2810	Standard
	P	31	433343.2	0.9				ug/L	458976	Standard
	S	34	115612.8	0.6				ug/L	103378	Standard
	Sr	88	7778.7	2.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	105.8	24.4				mg/L	10	Standard
	Ho-1	165	111.7	24.7				mg/L	8	Standard
	Er	166	86.7	17.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.381	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		86.663	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	83.551
|	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	78.959
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	

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Method 6020 - Summary Report

Sample ID: L1311036805
Sample Date/Time: Monday, November 18, 2013 12:18:30
Number of Replicates: 3
Autosampler Position: 322
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	329402.4	0.9				ug/L	269614	Standard
	Be	9	55.0	36.4	**-0.0009**	0.005	590.9	ug/L	23	Standard
	Al	27	160188303.4	0.8	**625.1143**	10.243	1.6	ug/L	1170	Standard
	Sc	45	23237.8	1.4				ug/L	26874	Standard
	Ti	47	188.7	5.9	**0.7531**	0.050	6.6	ug/L	25	Standard
	V	51	4522.4	0.7	**0.5484**	0.005	0.9	ug/L	1686	Standard
	Cr	52	9003.0	1.4	**0.8097**	0.021	2.5	ug/L	6098	Standard
	Cr	53	2270.2	3.3	**1.9212**	0.069	3.6	ug/L	193	Standard
	Mn	55	30046.4	0.8	**2.4032**	0.020	0.8	ug/L	1232	Standard
	Co	59	5045.5	1.8	**0.5990**	0.011	1.8	ug/L	106	Standard
	Ni	60	29023.8	0.5	**11.8445**	0.059	0.5	ug/L	556	Standard
	Cu	65	9395.6	1.1	**4.0079**	0.046	1.2	ug/L	124	Standard
	Zn	66	11081.4	10.8	**8.5690**	0.949	11.1	ug/L	196	Standard
>	Ge	72	418251.2	0.0				ug/L	473313	Standard
	As	75	2016.8	8.8	**1.7877**	0.138	7.7	ug/L	-286	Standard
	Se	82	1832.9	3.6	**14.2649**	0.500	3.5	ug/L	-33	Standard
	Se-1	77	1158.0	3.4	**11.3374**	0.405	3.6	ug/L	86	Standard
>	Ga	71	80.0	37.5				mg/L	35	Standard
	Rb	85	29812.6	1.5				ug/L	13	Standard
	Y	89	395269.8	2.4				ug/L	439493	Standard
>	Rh	103	1520.1	3.4				ug/L	5	Standard
	Mo	98	4685.6	1.3	**1.3883**	0.013	1.0	ug/L	10	Standard
	Ag	107	64.7	23.3	**-0.0035**	0.003	76.7	ug/L	53	Standard
	Cd	111	70.3	13.5	**0.0346**	0.005	14.4	mg/L	1	Standard
	Cd	114	232.9	23.3	**0.0396**	0.011	28.4	ug/L	32	Standard
>	In	115	422907.6	0.6				ug/L	494305	Standard
	Sn	118	77.0	16.0	**0.0124**	0.011	91.6	ug/L	53	Standard
	Sb	123	221.0	6.8	**0.0959**	0.006	6.3	ug/L	7	Standard
	Ba	135	15833.6	0.8	**10.0886**	0.031	0.3	ug/L	11	Standard
	Ce	140	636.7	2.8				ug/L	10	Standard
>	Tb	159	473617.3	1.0				ug/L	538219	Standard
	Ho	165	145.0	13.8				ug/L	8	Standard
	Tl	203	131.0	14.5	**0.0250**	0.004	15.9	ug/L	1	Standard
	Tl	205	156.7	27.9	**0.0256**	0.007	28.4	ug/L	3	Standard
	Pb	206	111.0	3.9	**0.0117**	0.002	18.7	ug/L	80	Standard
	Pb	207	98.0	7.1	**0.0205**	0.004	18.8	ug/L	73	Standard
	Pb	208	221.7	6.1	**0.0102**	0.003	29.6	ug/L	190	Standard
	U	238	118530.8	0.5	**39.7987**	0.287	0.7	ug/L	0	Standard
>	Bi	209	222716.6	0.2				ug/L	276439	Standard

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	Na	23	513.3	9.0	**152.4470**	12.604	8.3	mg/L	2	Standard
	Mg	24	367863.8	0.4	**434.0319**	6.296	1.5	mg/L	37	Standard
	K	39	21.7	74.2	**1.0988**	1.104	100.5	mg/L	3	Standard
	Ca	43	511.7	13.3	**160.6257**	20.242	12.6	mg/L	43	Standard
	Fe	54	229.2	18.9	**0.0026**	0.026	968.8	mg/L	262	Standard
	Fe	57	941.7	8.6	**1.7858**	0.146	8.2	mg/L	65	Standard
>	**Sc-1**	45	23237.8	1.4				mg/L	26874	Standard
	Cl	35	1533713.0	0.1				ug/L	141022	Standard
	Kr	83	223.3	8.8				ug/L	75	Standard
	Br	81	54558.1	1.5				ug/L	2810	Standard
	P	31	442929.6	2.2				ug/L	458976	Standard
	S	34	111562.6	0.9				ug/L	103378	Standard
	Sr	88	7075.0	2.6				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	101.7	5.2				mg/L	10	Standard
	Ho-1	165	145.0	13.8				mg/L	8	Standard
	Er	166	103.3	14.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		122.175	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		88.367	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.556
|	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	80.566
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	

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Method 6020 - Summary Report

Sample ID: L1311039801
Sample Date/Time: Monday, November 18, 2013 12:21:42
Number of Replicates: 3
Autosampler Position: 325
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	293973.4	1.8				ug/L	269614	Standard
	Be	9	43.3	24.0	**-0.0027**	0.003	115.1	ug/L	23	Standard
	Al	27	20539.5	64.9	**0.0824**	0.057	69.7	ug/L	1170	Standard
	Sc	45	26763.6	1.0				ug/L	26874	Standard
	Ti	47	36.3	9.7	**0.0373**	0.012	31.1	ug/L	25	Standard
	V	51	2360.5	5.2	**0.1343**	0.013	9.6	ug/L	1686	Standard
	Cr	52	8535.7	2.4	**0.4899**	0.015	3.0	ug/L	6098	Standard
	Cr	53	335.0	18.2	**0.1133**	0.046	40.8	ug/L	193	Standard
	Mn	55	4718.7	3.4	**0.1922**	0.008	4.1	ug/L	1232	Standard
	Co	59	172.0	9.1	**0.0020**	0.001	71.1	ug/L	106	Standard
	Ni	60	721.7	0.3	**0.0470**	0.002	4.6	ug/L	556	Standard
	Cu	65	1012.7	20.5	**0.3035**	0.070	23.2	ug/L	124	Standard
	Zn	66	3742.1	3.3	**2.2597**	0.053	2.3	ug/L	196	Standard
>	**Ge**	72	503876.1	1.1				ug/L	473313	Standard
	As	75	-215.1	4.8	**0.0723**	0.007	10.0	ug/L	-286	Standard
	Se	82	4.1	14.1	**0.3268**	0.004	1.2	ug/L	-33	Standard
	Se-1	77	96.7	13.8	**0.0826**	0.115	139.7	ug/L	86	Standard
>	**Ga**	71	21.7	13.3				mg/L	35	Standard
	Rb	85	101.7	7.5				ug/L	13	Standard
	Y	89	473484.5	0.5				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	267.0	8.2	**0.0479**	0.005	11.1	ug/L	10	Standard
	Ag	107	56.3	1.0	**-0.0071**	0.000	2.2	ug/L	53	Standard
	Cd	111	9.6	27.3	**0.0012**	0.001	97.8	mg/L	1	Standard
	Cd	114	52.3	43.4	**-0.0007**	0.004	521.0	ug/L	32	Standard
>	**In**	115	536370.9	1.2				ug/L	494305	Standard
	Sn	118	102.3	8.4	**0.0157**	0.007	43.7	ug/L	53	Standard
	Sb	123	132.5	11.6	**0.0446**	0.005	11.7	ug/L	7	Standard
	Ba	135	210.3	10.6	**0.0932**	0.011	11.3	ug/L	11	Standard
	Ce	140	81.7	35.3				ug/L	10	Standard
>	**Tb**	159	560983.4	0.7				ug/L	538219	Standard
	Ho	165	6.7	173.2				ug/L	8	Standard
	Tl	203	21.7	14.1	**0.0012**	0.000	37.7	ug/L	1	Standard
	Tl	205	33.3	34.6	**0.0035**	0.001	41.7	ug/L	3	Standard
	Pb	206	176.0	12.0	**0.0217**	0.007	32.5	ug/L	80	Standard
	Pb	207	162.7	13.5	**0.0332**	0.008	24.7	ug/L	73	Standard
	Pb	208	355.0	11.6	**0.0198**	0.006	31.8	ug/L	190	Standard
	U	238	20.7	46.0	**0.0034**	0.002	72.9	ug/L	0	Standard
>	**Bi**	209	297185.8	1.0				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	85.0	52.3	**0.0555**	0.047	83.9	mg/L	37	Standard
K	39	1.7	173.2	**-0.2830**	0.170	60.1	mg/L	3	Standard
Ca	43	35.0	28.6	**-0.1641**	2.871	1750.0	mg/L	43	Standard
Fe	54	332.2	15.4	**0.0358**	0.024	67.8	mg/L	262	Standard
Fe	57	83.3	38.6	**0.0479**	0.055	115.7	mg/L	65	Standard
Sc-1	45	26763.6	1.0				mg/L	26874	Standard
Cl	35	201548.4	1.0				ug/L	141022	Standard
Kr	83	93.0	3.2				ug/L	75	Standard
Br	81	6651.5	2.3				ug/L	2810	Standard
P	31	502109.8	1.1				ug/L	458976	Standard
S	34	111057.2	0.8				ug/L	103378	Standard
Sr	88	31.7	39.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	6.5	173.2				mg/L	10	Standard
Ho-1	165	6.7	173.2				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		109.035	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		106.457	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	108.510
	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	107.505
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311051401
Sample Date/Time: Monday, November 18, 2013 12:24:46
Number of Replicates: 3
Autosampler Position: 326
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	267166.6	0.8				ug/L	269614	Standard
	Be	9	30.0	33.3	**-0.0059**	0.003	56.5	ug/L	23	Standard
	Al	27	5681343.9	1.5	**27.3256**	0.321	1.2	ug/L	1170	Standard
	Sc	45	22818.8	0.5				ug/L	26874	Standard
	Ti	47	18.0	19.2	**-0.0227**	0.015	64.1	ug/L	25	Standard
	V	51	1876.8	1.0	**0.1017**	0.004	3.7	ug/L	1686	Standard
	Cr	52	6902.9	1.0	**0.3858**	0.011	2.8	ug/L	6098	Standard
	Cr	53	458.3	1.3	**0.2502**	0.006	2.6	ug/L	193	Standard
	Mn	55	60597.0	2.2	**4.6592**	0.087	1.9	ug/L	1232	Standard
	Co	59	249.3	5.2	**0.0130**	0.001	11.1	ug/L	106	Standard
	Ni	60	1218.4	1.2	**0.2716**	0.005	2.0	ug/L	556	Standard
	Cu	65	931.0	3.3	**0.3174**	0.014	4.4	ug/L	124	Standard
	Zn	66	2979.3	0.6	**2.0085**	0.004	0.2	ug/L	196	Standard
>	**Ge**	72	446911.7	0.4				ug/L	473313	Standard
	As	75	-173.7	40.2	**0.0850**	0.051	59.5	ug/L	-286	Standard
	Se	82	307.5	0.7	**2.4937**	0.019	0.8	ug/L	-33	Standard
	Se-1	77	325.0	4.2	**2.4210**	0.136	5.6	ug/L	86	Standard
>	**Ga**	71	18.3	68.6				mg/L	35	Standard
	Rb	85	498.3	20.9				ug/L	13	Standard
	Y	89	399903.7	0.2				ug/L	439493	Standard
>	**Rh**	103	58.3	13.1				ug/L	5	Standard
	Mo	98	97.0	11.8	**0.0111**	0.003	27.1	ug/L	10	Standard
	Ag	107	55.7	5.8	**-0.0061**	0.001	9.2	ug/L	53	Standard
	Cd	111	2.2	26.1	**-0.0018**	0.000	15.5	mg/L	1	Standard
	Cd	114	21.6	12.1	**-0.0053**	0.000	9.3	ug/L	32	Standard
>	**In**	115	468015.5	0.5				ug/L	494305	Standard
	Sn	118	66.0	16.9	**-0.0032**	0.009	280.2	ug/L	53	Standard
	Sb	123	140.9	12.4	**0.0546**	0.007	12.5	ug/L	7	Standard
	Ba	135	273.0	3.9	**0.1449**	0.007	4.7	ug/L	11	Standard
	Ce	140	28.3	10.2				ug/L	10	Standard
>	**Tb**	159	504632.6	0.3				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	45.7	21.5	**0.0057**	0.002	28.7	ug/L	1	Standard
	Tl	205	71.7	24.5	**0.0093**	0.002	25.5	ug/L	3	Standard
	Pb	206	99.3	7.6	**-0.0019**	0.003	175.7	ug/L	80	Standard
	Pb	207	82.7	2.5	**0.0048**	0.001	16.1	ug/L	73	Standard
	Pb	208	199.7	3.1	**-0.0020**	0.001	70.9	ug/L	190	Standard
	U	238	1695.4	1.4	**0.4723**	0.011	2.3	ug/L	0	Standard
>	**Bi**	209	267423.1	0.9				ug/L	276439	Standard

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Na	23	6.7	86.6	**1.5989**	1.755	109.8	mg/L	2	Standard
Mg	24	15639.7	2.4	**18.7593**	0.468	2.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2661**	0.199	74.9	mg/L	3	Standard
Ca	43	33.3	34.6	**1.0148**	3.886	382.9	mg/L	43	Standard
Fe	54	111.0	29.8	**-0.0628**	0.019	30.5	mg/L	262	Standard
Fe	57	113.3	9.2	**0.1341**	0.022	16.7	mg/L	65	Standard
> **Sc-1**	45	22818.8	0.5				mg/L	26874	Standard
Cl	35	233562.2	3.0				ug/L	141022	Standard
Kr	83	101.7	6.4				ug/L	75	Standard
Br	81	4253.9	4.6				ug/L	2810	Standard
P	31	156930.3	1.8				ug/L	458976	Standard
S	34	109316.3	1.0				ug/L	103378	Standard
Sr	88	163.3	15.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	-0.5	100.0				mg/L	10	Standard
Ho-1	165	8.3	34.6				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		99.092	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		94.422	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	94.681
	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	96.739
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 12:27:52
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	281737.5	1.9				ug/L	269614	Standard
	Be	9	154291.8	1.8	**49.7349**	0.288	0.6	ug/L	23	Standard
	Al	27	9889776.2	0.8	**45.1181**	0.499	1.1	ug/L	1170	Standard
	Sc	45	24763.6	1.2				ug/L	26874	Standard
	Ti	47	25111.1	1.8	**97.7999**	1.917	2.0	ug/L	25	Standard
	V	51	343163.7	0.8	**47.6691**	0.444	0.9	ug/L	1686	Standard
	Cr	52	338171.7	0.8	**47.9940**	0.267	0.6	ug/L	6098	Standard
	Cr	53	61685.3	1.2	**48.2000**	0.762	1.6	ug/L	193	Standard
	Mn	55	697355.8	1.0	**50.8088**	0.755	1.5	ug/L	1232	Standard
	Co	59	472950.2	1.5	**49.7043**	0.560	1.1	ug/L	106	Standard
	Ni	60	137666.3	0.3	**49.1313**	0.290	0.6	ug/L	556	Standard
	Cu	65	133897.7	1.0	**49.9936**	0.730	1.5	ug/L	124	Standard
	Zn	66	73443.6	1.1	**49.9667**	0.545	1.1	ug/L	196	Standard
>	Ge	72	484426.3	0.4				ug/L	473313	Standard
	As	75	73066.2	1.2	**49.5037**	0.662	1.3	ug/L	-286	Standard
	Se	82	7588.6	1.3	**50.2165**	0.421	0.8	ug/L	-33	Standard
	Se-1	77	5584.7	1.3	**49.5970**	0.721	1.5	ug/L	86	Standard
>	Ga	71	61.7	32.8				mg/L	35	Standard
	Rb	85	1195.0	11.1				ug/L	13	Standard
	Y	89	440041.9	0.3				ug/L	439493	Standard
>	Rh	103	23.3	65.5				ug/L	5	Standard
	Mo	98	414319.1	0.3	**103.0756**	1.064	1.0	ug/L	10	Standard
	Ag	107	355175.4	1.2	**52.1905**	0.252	0.5	ug/L	53	Standard
	Cd	111	112275.0	0.5	**49.7258**	0.297	0.6	mg/L	1	Standard
	Cd	114	284852.2	1.0	**49.8416**	0.083	0.2	ug/L	32	Standard
>	In	115	509168.2	1.0				ug/L	494305	Standard
	Sn	118	68396.0	0.6	**50.6850**	0.345	0.7	ug/L	53	Standard
	Sb	123	132493.1	0.9	**48.5086**	0.632	1.3	ug/L	7	Standard
	Ba	135	94520.9	0.3	**50.0768**	0.675	1.3	ug/L	11	Standard
	Ce	140	55.0	55.3				ug/L	10	Standard
>	Tb	159	534887.5	1.6				ug/L	538219	Standard
	Ho	165	8.3	91.7				ug/L	8	Standard
	Tl	203	307480.4	0.7	**50.3457**	0.463	0.9	ug/L	1	Standard
	Tl	205	402293.0	1.3	**53.3422**	0.063	0.1	ug/L	3	Standard
	Pb	206	140911.2	0.2	**53.7739**	0.536	1.0	ug/L	80	Standard
	Pb	207	127078.0	0.1	**53.8323**	0.591	1.1	ug/L	73	Standard
	Pb	208	280914.4	0.4	**48.6194**	0.470	1.0	ug/L	190	Standard
	U	238	184605.2	0.5	**49.0246**	0.663	1.4	ug/L	0	Standard
>	Bi	209	281620.0	1.2				ug/L	276439	Standard

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Na	23	10.0	100.0	**2.3597**	2.765	117.2	mg/L	2	Standard
Mg	24	5012.5	3.6	**5.5197**	0.269	4.9	mg/L	37	Standard
K	39	71.7	14.5	**4.1932**	0.625	14.9	mg/L	3	Standard
Ca	43	38.3	27.2	**1.7099**	3.271	191.3	mg/L	43	Standard
Fe	54	11437.6	3.0	**5.9129**	0.194	3.3	mg/L	262	Standard
Fe	57	3055.3	8.9	**5.6374**	0.513	9.1	mg/L	65	Standard
> **Sc-1**	45	24763.6	1.2				mg/L	26874	Standard
Cl	35	152677.7	2.6				ug/L	141022	Standard
Kr	83	103.7	4.0				ug/L	75	Standard
Br	81	2983.6	0.4				ug/L	2810	Standard
P	31	486944.4	0.3				ug/L	458976	Standard
S	34	116707.8	1.0				ug/L	103378	Standard
Sr	88	33.3	37.7				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	93.2				mg/L	10	Standard
Ho-1	165	8.3	91.7				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.496	
Be	9	99.470		
Al	27	90.236		
Sc	45			
Ti	47	97.800		
V	51	95.338		
Cr	52	95.988		
Cr	53			
Mn	55	101.618		
Co	59	99.409		
Ni	60	98.263		
Cu	65	99.987		
Zn	66	99.933		
> Ge	72		102.348	
As	75	99.007		
Se	82	100.433		
Se-1	77			
> Ga	71			
Rb	85			

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Y	89			
> Rh	103			
Mo	98	103.076		
Ag	107	104.381		
Cd	111	99.452		
Cd	114			
> In	115			103.007
Sn	118	101.370		
Sb	123	97.017		
Ba	135	100.154		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	100.691		
Tl	205			
Pb	206			
Pb	207			
Pb	208	97.239		
U	238	98.049		
> Bi	209			101.874
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 12:30:57
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	279487.1	2.7				ug/L	269614	Standard
	Be	9	98.3	17.9	**0.0160**	0.007	40.8	ug/L	23	Standard
	Al	27	48947.5	144.0	**0.2240**	0.336	149.8	ug/L	1170	Standard
	Sc	45	25142.5	1.2				ug/L	26874	Standard
	Ti	47	20.7	58.1	**-0.0183**	0.047	259.3	ug/L	25	Standard
	V	51	1264.0	5.9	**-0.0065**	0.012	184.7	ug/L	1686	Standard
	Cr	52	4397.3	3.2	**-0.0612**	0.022	36.5	ug/L	6098	Standard
	Cr	53	225.0	13.9	**0.0363**	0.024	65.9	ug/L	193	Standard
	Mn	55	2034.5	0.8	**0.0088**	0.000	5.3	ug/L	1232	Standard
	Co	59	180.7	34.3	**0.0036**	0.007	186.1	ug/L	106	Standard
	Ni	60	574.0	13.7	**0.0033**	0.030	896.8	ug/L	556	Standard
	Cu	65	425.3	12.9	**0.0985**	0.022	22.3	ug/L	124	Standard
	Zn	66	399.0	12.1	**0.0743**	0.035	47.7	ug/L	196	Standard
>	**Ge**	72	486605.9	0.9				ug/L	473313	Standard
	As	75	-266.8	11.8	**0.0327**	0.021	65.8	ug/L	-286	Standard
	Se	82	-39.9	27.8	**0.0392**	0.074	189.0	ug/L	-33	Standard
	Se-1	77	98.3	3.6	**0.1275**	0.037	29.0	ug/L	86	Standard
>	**Ga**	71	16.7	45.8				mg/L	35	Standard
	Rb	85	15.0	33.3				ug/L	13	Standard
	Y	89	450139.4	1.2				ug/L	439493	Standard
>	**Rh**	103	5.0	0.0				ug/L	5	Standard
	Mo	98	144.9	37.0	**0.0202**	0.013	66.0	ug/L	10	Standard
	Ag	107	122.0	19.4	**0.0026**	0.003	133.6	ug/L	53	Standard
	Cd	111	29.1	59.0	**0.0098**	0.007	76.5	mg/L	1	Standard
	Cd	114	62.7	23.7	**0.0013**	0.003	196.5	ug/L	32	Standard
>	**In**	115	519416.6	0.7				ug/L	494305	Standard
	Sn	118	85.3	8.3	**0.0056**	0.005	89.6	ug/L	53	Standard
	Sb	123	355.3	24.8	**0.1261**	0.032	25.5	ug/L	7	Standard
	Ba	135	127.7	10.1	**0.0538**	0.007	12.7	ug/L	11	Standard
	Ce	140	15.0	33.3				ug/L	10	Standard
>	**Tb**	159	541961.0	0.6				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	65.3	46.5	**0.0084**	0.005	58.9	ug/L	1	Standard
	Tl	205	153.3	88.2	**0.0193**	0.018	91.8	ug/L	3	Standard
	Pb	206	123.0	13.4	**0.0041**	0.006	148.4	ug/L	80	Standard
	Pb	207	101.0	5.0	**0.0099**	0.002	20.5	ug/L	73	Standard
	Pb	208	300.0	34.6	**0.0126**	0.018	142.4	ug/L	190	Standard
	U	238	113.0	123.9	**0.0276**	0.037	132.6	ug/L	0	Standard
>	**Bi**	209	287397.5	0.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	150.0	115.5	**0.1308**	0.187	142.9	mg/L	37	Standard
K	39	1.7	173.2	**-0.2772**	0.180	65.0	mg/L	3	Standard
Ca	43	21.7	48.0	**-3.6157**	3.233	89.4	mg/L	43	Standard
Fe	54	279.3	1.8	**0.0188**	0.001	6.5	mg/L	262	Standard
Fe	57	85.0	25.6	**0.0606**	0.042	68.5	mg/L	65	Standard
> **Sc-1**	45	25142.5	1.2				mg/L	26874	Standard
Cl	35	157251.9	1.5				ug/L	141022	Standard
Kr	83	94.7	11.8				ug/L	75	Standard
Br	81	2953.6	11.5				ug/L	2810	Standard
P	31	496917.7	1.0				ug/L	458976	Standard
S	34	118463.0	0.7				ug/L	103378	Standard
Sr	88	25.0	20.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.4	112.0				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	13.3	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.662	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		102.808	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	105.080
	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	103.964
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, November 18, 2013 12:34:03
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	291989.6	2.6				ug/L	269614	Standard
	Be	9	610.0	16.0	**0.1735**	0.028	16.3	ug/L	23	Standard
	Al	27	11001.2	145.0	**0.0402**	0.068	169.4	ug/L	1170	Standard
	Sc	45	25960.6	0.9				ug/L	26874	Standard
	Ti	47	12.7	29.9	**-0.0502**	0.014	28.8	ug/L	25	Standard
	V	51	3910.3	3.3	**0.3545**	0.016	4.4	ug/L	1686	Standard
	Cr	52	9841.9	1.7	**0.7028**	0.020	2.9	ug/L	6098	Standard
	Cr	53	1165.0	5.6	**0.7591**	0.046	6.0	ug/L	193	Standard
	Mn	55	8479.7	4.9	**0.4704**	0.028	5.9	ug/L	1232	Standard
	Co	59	3991.5	6.0	**0.3975**	0.023	5.7	ug/L	106	Standard
	Ni	60	4900.1	1.3	**1.5263**	0.014	0.9	ug/L	556	Standard
	Cu	65	2490.9	3.2	**0.8563**	0.025	2.9	ug/L	124	Standard
	Zn	66	10740.1	0.3	**7.0218**	0.051	0.7	ug/L	196	Standard
>	**Ge**	72	492266.4	0.5				ug/L	473313	Standard
	As	75	243.1	14.5	**0.3732**	0.023	6.2	ug/L	-286	Standard
	Se	82	14.7	103.7	**0.3958**	0.098	24.9	ug/L	-33	Standard
	Se-1	77	125.0	5.0	**0.3539**	0.060	17.1	ug/L	86	Standard
>	**Ga**	71	16.7	96.4				mg/L	35	Standard
	Rb	85	13.3	57.3				ug/L	13	Standard
	Y	89	454008.4	0.5				ug/L	439493	Standard
>	**Rh**	103	5.0	100.0				ug/L	5	Standard
	Mo	98	154.6	140.9	**0.0225**	0.053	236.2	ug/L	10	Standard
	Ag	107	3025.0	10.7	**0.4203**	0.047	11.1	ug/L	53	Standard
	Cd	111	513.3	6.2	**0.2197**	0.014	6.2	mg/L	1	Standard
	Cd	114	1376.3	9.0	**0.2264**	0.022	9.6	ug/L	32	Standard
>	**In**	115	520080.0	0.2				ug/L	494305	Standard
	Sn	118	78.3	35.0	**0.0005**	0.020	4066.1	ug/L	53	Standard
	Sb	123	1114.2	4.9	**0.3979**	0.020	5.0	ug/L	7	Standard
	Ba	135	1421.7	5.8	**0.7250**	0.043	5.9	ug/L	11	Standard
	Ce	140	8.3	69.3				ug/L	10	Standard
>	**Tb**	159	542198.4	1.3				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	641.0	37.4	**0.1005**	0.038	37.7	ug/L	1	Standard
	Tl	205	741.7	18.1	**0.0955**	0.017	17.8	ug/L	3	Standard
	Pb	206	746.7	21.3	**0.2370**	0.058	24.6	ug/L	80	Standard
	Pb	207	623.3	14.5	**0.2264**	0.036	16.0	ug/L	73	Standard
	Pb	208	1333.7	6.4	**0.1876**	0.013	7.1	ug/L	190	Standard
	U	238	1458.4	7.3	**0.3771**	0.027	7.2	ug/L	0	Standard
>	**Bi**	209	287772.8	0.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	66.7	56.3	**0.0385**	0.039	102.4	mg/L	37	Standard
K	39	1.7	173.2	**-0.2786**	0.178	63.8	mg/L	3	Standard
Ca	43	10.0	50.0	**-7.3237**	1.523	20.8	mg/L	43	Standard
Fe	54	315.4	15.3	**0.0325**	0.026	79.0	mg/L	262	Standard
Fe	57	83.3	18.3	**0.0526**	0.029	54.6	mg/L	65	Standard
> **Sc-1**	45	25960.6	0.9				mg/L	26874	Standard
Cl	35	155645.5	1.7				ug/L	141022	Standard
Kr	83	103.7	9.4				ug/L	75	Standard
Br	81	2950.3	10.4				ug/L	2810	Standard
P	31	492366.5	1.5				ug/L	458976	Standard
S	34	115233.2	1.2				ug/L	103378	Standard
Sr	88	63.3	12.1				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	10.0	100.0				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	0.0					mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		108.299	
	Be	9	86.755		
	Al	27			
	Sc	45			
	Ti	47			
	V	51	88.628		
	Cr	52	87.855		
	Cr	53			
	Mn	55	94.081		
	Co	59	99.376		
	Ni	60	95.394		
	Cu	65	107.035		
	Zn	66	112.349		
>	Ge	72		104.004	
	As	75	93.306		
	Se	82	98.960		
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89			
> Rh	103			
Mo	98			
Ag	107	105.084		
Cd	111	91.530		
Cd	114			
> In	115			105.214
Sn	118			
Sb	123	99.470		
Ba	135	96.671		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	125.580		
Tl	205			
Pb	206			
Pb	207			
Pb	208	93.810		
U	238	94.275		
> Bi	209			104.100
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311033702
Sample Date/Time: Monday, November 18, 2013 12:38:04
Number of Replicates: 3
Autosampler Position: 327
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	286216.6	1.0				ug/L	269614	Standard
	Be	9	75.0	11.5	**0.0077**	0.003	36.1	ug/L	23	Standard
	Al	27	6211091.8	0.7	**27.8868**	0.232	0.8	ug/L	1170	Standard
	Sc	45	26590.0	3.1				ug/L	26874	Standard
	Ti	47	760.0	0.3	**2.9029**	0.021	0.7	ug/L	25	Standard
	V	51	14223.4	2.2	**1.8271**	0.040	2.2	ug/L	1686	Standard
	Cr	52	8990.7	1.4	**0.6198**	0.014	2.2	ug/L	6098	Standard
	Cr	53	2721.9	8.8	**2.0221**	0.198	9.8	ug/L	193	Standard
	Mn	55	46424.3	0.5	**3.2967**	0.009	0.3	ug/L	1232	Standard
	Co	59	866.7	2.7	**0.0769**	0.003	3.7	ug/L	106	Standard
	Ni	60	3483.1	2.3	**1.0629**	0.032	3.0	ug/L	556	Standard
	Cu	65	1392.1	2.0	**0.4672**	0.009	1.9	ug/L	124	Standard
	Zn	66	18640.8	1.5	**12.7007**	0.149	1.2	ug/L	196	Standard
>	Ge	72	478184.6	0.4				ug/L	473313	Standard
	As	75	1395.8	5.0	**1.1659**	0.050	4.3	ug/L	-286	Standard
	Se	82	582.7	4.5	**4.1842**	0.187	4.5	ug/L	-33	Standard
	Se-1	77	286.7	11.2	**1.8637**	0.300	16.1	ug/L	86	Standard
>	Ga	71	220.0	14.2				mg/L	35	Standard
	Rb	85	32261.0	2.0				ug/L	13	Standard
	Y	89	442656.7	0.8				ug/L	439493	Standard
>	Rh	103	100.0	17.3				ug/L	5	Standard
	Mo	98	3230.4	0.9	**0.8031**	0.004	0.5	ug/L	10	Standard
	Ag	107	320.0	6.1	**0.0329**	0.003	8.3	ug/L	53	Standard
	Cd	111	10.1	16.4	**0.0017**	0.001	44.6	mg/L	1	Standard
	Cd	114	32.4	61.1	**-0.0037**	0.004	95.4	ug/L	32	Standard
>	In	115	500075.7	0.5				ug/L	494305	Standard
	Sn	118	96.0	7.9	**0.0161**	0.005	33.5	ug/L	53	Standard
	Sb	123	228.6	6.6	**0.0837**	0.005	6.4	ug/L	7	Standard
	Ba	135	47338.2	1.0	**25.5269**	0.174	0.7	ug/L	11	Standard
	Ce	140	5879.5	3.7				ug/L	10	Standard
>	Tb	159	529935.0	0.6				ug/L	538219	Standard
	Ho	165	118.3	24.0				ug/L	8	Standard
	Tl	203	87.0	14.4	**0.0123**	0.002	17.0	ug/L	1	Standard
	Tl	205	136.7	31.1	**0.0177**	0.006	32.9	ug/L	3	Standard
	Pb	206	449.7	2.6	**0.1325**	0.004	3.0	ug/L	80	Standard
	Pb	207	375.0	4.8	**0.1294**	0.008	6.0	ug/L	73	Standard
	Pb	208	844.7	3.1	**0.1102**	0.004	4.0	ug/L	190	Standard
	U	238	902.7	2.2	**0.2416**	0.005	2.1	ug/L	0	Standard
>	Bi	209	277282.3	0.6				ug/L	276439	Standard

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Na	23	86.7	21.8	**22.2167**	5.331	24.0	mg/L	2	Standard
Mg	24	9104.4	4.9	**9.3600**	0.498	5.3	mg/L	37	Standard
K	39	10.0	86.6	**0.2115**	0.509	240.6	mg/L	3	Standard
Ca	43	96.7	34.4	**17.7906**	8.951	50.3	mg/L	43	Standard
Fe	54	470.4	7.2	**0.1049**	0.018	16.8	mg/L	262	Standard
Fe	57	273.3	11.0	**0.3821**	0.066	17.2	mg/L	65	Standard
> **Sc-1**	45	26590.0	3.1				mg/L	26874	Standard
Cl	35	168870.0	1.6				ug/L	141022	Standard
Kr	83	104.3	1.5				ug/L	75	Standard
Br	81	78476.1	1.2				ug/L	2810	Standard
P	31	707201.5	1.9				ug/L	458976	Standard
S	34	92768.3	3.0				ug/L	103378	Standard
Sr	88	506.7	2.5				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	26.7	78.1				mg/L	0	Standard
Dy	164	158.5	30.3				mg/L	10	Standard
Ho-1	165	118.3	24.0				mg/L	8	Standard
Er	166	100.0	36.1				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		106.158	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.029	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.167
|	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	100.305
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311033703
Sample Date/Time: Monday, November 18, 2013 12:41:09
Number of Replicates: 3
Autosampler Position: 328
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	274917.8	2.6				ug/L	269614	Standard
	Be	9	93.3	43.0	**0.0146**	0.012	85.4	ug/L	23	Standard
	Al	27	33699386.1	0.6	**157.6059**	3.176	2.0	ug/L	1170	Standard
	Sc	45	26762.0	1.9				ug/L	26874	Standard
	Ti	47	2536.9	0.9	**10.1515**	0.197	1.9	ug/L	25	Standard
	V	51	10897.1	2.0	**1.3925**	0.018	1.3	ug/L	1686	Standard
	Cr	52	29464.3	0.4	**3.7049**	0.069	1.9	ug/L	6098	Standard
	Cr	53	8699.2	3.6	**6.9287**	0.370	5.3	ug/L	193	Standard
	Mn	55	123824.6	0.2	**9.2364**	0.151	1.6	ug/L	1232	Standard
	Co	59	3187.3	1.3	**0.3319**	0.002	0.6	ug/L	106	Standard
	Ni	60	11827.9	0.8	**4.1910**	0.051	1.2	ug/L	556	Standard
	Cu	65	3789.5	1.6	**1.4079**	0.007	0.5	ug/L	124	Standard
	Zn	66	6960.9	1.0	**4.7300**	0.061	1.3	ug/L	196	Standard
>	Ge	72	467493.0	1.8				ug/L	473313	Standard
	As	75	584.4	18.4	**0.6200**	0.072	11.6	ug/L	-286	Standard
	Se	82	604.5	1.6	**4.4228**	0.125	2.8	ug/L	-33	Standard
	Se-1	77	738.0	6.7	**6.1454**	0.558	9.1	ug/L	86	Standard
>	Ga	71	460.0	7.1				mg/L	35	Standard
	Rb	85	9561.3	1.9				ug/L	13	Standard
	Y	89	439024.6	2.0				ug/L	439493	Standard
>	Rh	103	388.3	3.9				ug/L	5	Standard
	Mo	98	2893.0	3.6	**0.7467**	0.021	2.8	ug/L	10	Standard
	Ag	107	109.7	26.3	**0.0021**	0.004	212.7	ug/L	53	Standard
	Cd	111	26.5	55.4	**0.0095**	0.007	71.6	mg/L	1	Standard
	Cd	114	120.4	45.5	**0.0128**	0.010	78.2	ug/L	32	Standard
>	In	115	480941.7	0.9				ug/L	494305	Standard
	Sn	118	233.7	1.5	**0.1271**	0.003	2.6	ug/L	53	Standard
	Sb	123	170.7	8.3	**0.0646**	0.005	8.4	ug/L	7	Standard
	Ba	135	44748.0	0.7	**25.0906**	0.133	0.5	ug/L	11	Standard
	Ce	140	17860.5	1.7				ug/L	10	Standard
>	Tb	159	523212.5	0.8				ug/L	538219	Standard
	Ho	165	220.0	9.9				ug/L	8	Standard
	Tl	203	90.3	29.7	**0.0135**	0.005	33.8	ug/L	1	Standard
	Tl	205	126.7	14.9	**0.0171**	0.003	15.2	ug/L	3	Standard
	Pb	206	1066.4	2.9	**0.3887**	0.015	3.8	ug/L	80	Standard
	Pb	207	878.4	2.4	**0.3616**	0.011	3.1	ug/L	73	Standard
	Pb	208	1979.1	1.5	**0.3240**	0.004	1.3	ug/L	190	Standard
	U	238	878.0	4.7	**0.2447**	0.013	5.2	ug/L	0	Standard
>	Bi	209	266338.5	0.6				ug/L	276439	Standard

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	Na	23	345.0	9.1	**88.9293**	9.637	10.8	mg/L	2	Standard
	Mg	24	17318.2	2.1	**17.7154**	0.570	3.2	mg/L	37	Standard
	K	39	23.3	49.5	**0.9997**	0.686	68.6	mg/L	3	Standard
	Ca	43	330.0	19.7	**85.3125**	17.399	20.4	mg/L	43	Standard
	Fe	54	700.9	13.4	**0.2164**	0.050	23.0	mg/L	262	Standard
	Fe	57	646.7	4.0	**1.0260**	0.025	2.4	mg/L	65	Standard
>	**Sc-1**	45	26762.0	1.9				mg/L	26874	Standard
	Cl	35	359819.0	0.1				ug/L	141022	Standard
	Kr	83	104.0	6.3				ug/L	75	Standard
	Br	81	41978.1	1.9				ug/L	2810	Standard
	P	31	699344.0	1.3				ug/L	458976	Standard
	S	34	102116.3	1.5				ug/L	103378	Standard
	Sr	88	1626.8	7.5				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0					mg/L	0	Standard
	Dy	164	444.1	21.8				mg/L	10	Standard
	Ho-1	165	220.0	9.9				mg/L	8	Standard
	Er	166	193.3	15.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.967	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		98.770	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	97.296
	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	96.346
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	

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Method 6020 - Summary Report

Sample ID: L1311047201 WG452233-02
Sample Date/Time: Monday, November 18, 2013 12:44:14
Number of Replicates: 3
Autosampler Position: 329
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	284471.7	2.4				ug/L	269614	Standard
	Be	9	38.3	27.2	**-0.0038**	0.004	96.6	ug/L	23	Standard
	Al	27	11493655.1	0.7	**51.9509**	1.594	3.1	ug/L	1170	Standard
	Sc	45	25184.3	2.9				ug/L	26874	Standard
	Ti	47	186.7	6.3	**0.6476**	0.049	7.6	ug/L	25	Standard
	V	51	1532.8	14.0	**0.0372**	0.031	82.2	ug/L	1686	Standard
	Cr	52	7476.2	1.4	**0.4124**	0.018	4.4	ug/L	6098	Standard
	Cr	53	3368.7	2.7	**2.5680**	0.077	3.0	ug/L	193	Standard
	Mn	55	711825.2	1.5	**53.1898**	0.704	1.3	ug/L	1232	Standard
	Co	59	1317.1	1.1	**0.1266**	0.002	1.5	ug/L	106	Standard
	Ni	60	4768.8	1.0	**1.5509**	0.019	1.2	ug/L	556	Standard
	Cu	65	2188.8	4.8	**0.7791**	0.037	4.8	ug/L	124	Standard
	Zn	66	4154.6	0.6	**2.7129**	0.021	0.8	ug/L	196	Standard
>	**Ge**	72	472373.6	0.4				ug/L	473313	Standard
	As	75	930.5	8.3	**0.8557**	0.055	6.4	ug/L	-286	Standard
	Se	82	443.7	3.4	**3.2938**	0.109	3.3	ug/L	-33	Standard
	Se-1	77	340.0	12.0	**2.3877**	0.368	15.4	ug/L	86	Standard
>	**Ga**	71	175.0	15.1				mg/L	35	Standard
	Rb	85	10647.1	3.8				ug/L	13	Standard
	Y	89	437114.0	0.4				ug/L	439493	Standard
>	**Rh**	103	95.0	9.1				ug/L	5	Standard
	Mo	98	5514.1	1.8	**1.4044**	0.028	2.0	ug/L	10	Standard
	Ag	107	62.3	16.4	**-0.0055**	0.002	28.2	ug/L	53	Standard
	Cd	111	9.9	23.0	**0.0016**	0.001	64.3	mg/L	1	Standard
	Cd	114	50.3	44.1	**-0.0003**	0.004	1198.8	ug/L	32	Standard
>	**In**	115	492091.2	0.3				ug/L	494305	Standard
	Sn	118	111.3	13.5	**0.0291**	0.012	39.9	ug/L	53	Standard
	Sb	123	298.5	5.3	**0.1116**	0.006	5.4	ug/L	7	Standard
	Ba	135	39482.4	0.3	**21.6344**	0.028	0.1	ug/L	11	Standard
	Ce	140	1715.1	9.1				ug/L	10	Standard
>	**Tb**	159	530976.2	1.2				ug/L	538219	Standard
	Ho	165	35.0	37.8				ug/L	8	Standard
	Tl	203	101.0	10.9	**0.0150**	0.002	12.4	ug/L	1	Standard
	Tl	205	123.3	6.2	**0.0162**	0.001	6.5	ug/L	3	Standard
	Pb	206	244.7	7.0	**0.0547**	0.007	12.4	ug/L	80	Standard
	Pb	207	216.3	13.0	**0.0627**	0.012	19.7	ug/L	73	Standard
	Pb	208	432.0	0.6	**0.0390**	0.000	1.2	ug/L	190	Standard
	U	238	984.4	1.8	**0.2684**	0.005	1.8	ug/L	0	Standard
>	**Bi**	209	272342.5	0.0				ug/L	276439	Standard

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	Na	23	90.0	29.4	**24.3179**	7.316	30.1	mg/L	2	Standard
	Mg	24	35119.0	0.8	**38.2262**	1.402	3.7	mg/L	37	Standard
	K	39	18.3	15.7	**0.7743**	0.209	27.0	mg/L	3	Standard
	Ca	43	115.0	19.9	**25.3116**	8.066	31.9	mg/L	43	Standard
	Fe	54	479.0	6.3	**0.1223**	0.016	12.9	mg/L	262	Standard
	Fe	57	245.0	23.2	**0.3556**	0.106	29.8	mg/L	65	Standard
>	**Sc-1**	45	25184.3	2.9				mg/L	26874	Standard
	Cl	35	258055.8	1.0				ug/L	141022	Standard
	Kr	83	108.7	12.3				ug/L	75	Standard
	Br	81	57606.0	2.1				ug/L	2810	Standard
	P	31	502572.1	1.5				ug/L	458976	Standard
	S	34	112761.4	1.5				ug/L	103378	Standard
	Sr	88	366.7	7.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	61.6	40.2				mg/L	10	Standard
	Ho-1	165	35.0	37.8				mg/L	8	Standard
	Er	166	36.7	41.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.511	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.801	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	99.552
	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	98.518
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311047201DP WG452233-07
Sample Date/Time: Monday, November 18, 2013 12:47:18
Number of Replicates: 3
Autosampler Position: 330
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	277910.9	1.4				ug/L	269614	Standard
	Be	9	51.7	29.6	**0.0008**	0.005	612.4	ug/L	23	Standard
	Al	27	11095817.5	1.3	**51.3229**	1.312	2.6	ug/L	1170	Standard
	Sc	45	25713.5	2.4				ug/L	26874	Standard
	Ti	47	175.0	14.6	**0.5993**	0.105	17.6	ug/L	25	Standard
	V	51	1685.8	10.4	**0.0584**	0.024	41.9	ug/L	1686	Standard
	Cr	52	7532.5	1.4	**0.4176**	0.010	2.4	ug/L	6098	Standard
	Cr	53	3462.1	4.5	**2.6353**	0.124	4.7	ug/L	193	Standard
	Mn	55	687328.5	0.3	**51.2154**	0.430	0.8	ug/L	1232	Standard
	Co	59	1268.4	3.7	**0.1210**	0.005	4.3	ug/L	106	Standard
	Ni	60	4668.7	1.4	**1.5094**	0.029	1.9	ug/L	556	Standard
	Cu	65	2005.8	1.5	**0.7069**	0.016	2.2	ug/L	124	Standard
	Zn	66	3433.4	2.1	**2.2012**	0.058	2.6	ug/L	196	Standard
>	**Ge**	72	473674.7	0.6				ug/L	473313	Standard
	As	75	933.0	2.3	**0.8555**	0.011	1.3	ug/L	-286	Standard
	Se	82	438.2	4.6	**3.2491**	0.147	4.5	ug/L	-33	Standard
	Se-1	77	320.7	6.2	**2.2011**	0.172	7.8	ug/L	86	Standard
>	**Ga**	71	196.7	3.9				mg/L	35	Standard
	Rb	85	10320.2	1.0				ug/L	13	Standard
	Y	89	431309.8	1.0				ug/L	439493	Standard
>	**Rh**	103	108.3	9.6				ug/L	5	Standard
	Mo	98	5381.1	2.0	**1.3742**	0.021	1.5	ug/L	10	Standard
	Ag	107	50.7	19.0	**-0.0072**	0.001	20.1	ug/L	53	Standard
	Cd	111	8.1	18.9	**0.0008**	0.001	83.7	mg/L	1	Standard
	Cd	114	26.5	10.9	**-0.0046**	0.001	11.6	ug/L	32	Standard
>	**In**	115	490602.6	0.7				ug/L	494305	Standard
	Sn	118	70.0	13.6	**-0.0025**	0.007	276.2	ug/L	53	Standard
	Sb	123	345.9	3.1	**0.1299**	0.003	2.6	ug/L	7	Standard
	Ba	135	38931.0	0.4	**21.3973**	0.130	0.6	ug/L	11	Standard
	Ce	140	1830.1	7.3				ug/L	10	Standard
>	**Tb**	159	524792.1	0.4				ug/L	538219	Standard
	Ho	165	31.7	32.9				ug/L	8	Standard
	Tl	203	90.7	4.5	**0.0134**	0.001	5.6	ug/L	1	Standard
	Tl	205	128.3	4.5	**0.0171**	0.001	4.8	ug/L	3	Standard
	Pb	206	217.0	10.8	**0.0447**	0.009	20.8	ug/L	80	Standard
	Pb	207	194.0	7.6	**0.0539**	0.007	12.2	ug/L	73	Standard
	Pb	208	419.7	4.1	**0.0376**	0.004	9.3	ug/L	190	Standard
	U	238	959.4	3.4	**0.2645**	0.008	3.1	ug/L	0	Standard
>	**Bi**	209	269382.3	0.6				ug/L	276439	Standard

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Na	23	83.3	18.3	**21.9957**	3.996	18.2	mg/L	2	Standard
Mg	24	33821.0	1.6	**36.0343**	0.413	1.1	mg/L	37	Standard
K	39	18.3	31.5	**0.7472**	0.356	47.6	mg/L	3	Standard
Ca	43	106.7	18.9	**22.0265**	6.866	31.2	mg/L	43	Standard
Fe	54	375.6	15.5	**0.0643**	0.026	41.1	mg/L	262	Standard
Fe	57	276.7	13.1	**0.4025**	0.055	13.8	mg/L	65	Standard
> **Sc-1**	45	25713.5	2.4				mg/L	26874	Standard
Cl	35	252870.0	0.5				ug/L	141022	Standard
Kr	83	104.0	5.4				ug/L	75	Standard
Br	81	57017.2	3.4				ug/L	2810	Standard
P	31	479942.4	2.4				ug/L	458976	Standard
S	34	109977.7	1.2				ug/L	103378	Standard
Sr	88	353.3	10.2				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	41.6	37.4				mg/L	10	Standard
Ho-1	165	31.7	32.9				mg/L	8	Standard
Er	166	36.7	15.7				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		103.077	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		100.076	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	99.251
	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	97.447
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 12:50:25
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	277951.2	3.1				ug/L	269614	Standard
	Be	9	154219.6	2.8	**50.4095**	1.692	3.4	ug/L	23	Standard
	Al	27	9896009.8	1.8	**45.7784**	1.351	3.0	ug/L	1170	Standard
	Sc	45	24917.1	2.5				ug/L	26874	Standard
	Ti	47	25070.7	2.8	**98.4927**	1.953	2.0	ug/L	25	Standard
	V	51	335793.9	1.9	**47.0513**	0.297	0.6	ug/L	1686	Standard
	Cr	52	336222.4	0.9	**48.1424**	0.365	0.8	ug/L	6098	Standard
	Cr	53	60932.3	1.2	**48.0300**	0.268	0.6	ug/L	193	Standard
	Mn	55	691887.8	0.7	**50.8566**	0.532	1.0	ug/L	1232	Standard
	Co	59	473014.2	1.0	**50.1526**	0.329	0.7	ug/L	106	Standard
	Ni	60	137046.5	1.7	**49.3408**	0.451	0.9	ug/L	556	Standard
	Cu	65	133251.1	1.0	**50.1912**	0.439	0.9	ug/L	124	Standard
	Zn	66	73742.1	1.8	**50.6133**	0.541	1.1	ug/L	196	Standard
>	Ge	72	480210.8	1.7				ug/L	473313	Standard
	As	75	73562.7	0.9	**50.2777**	0.396	0.8	ug/L	-286	Standard
	Se	82	7574.3	0.8	**50.5740**	1.214	2.4	ug/L	-33	Standard
	Se-1	77	5586.4	1.7	**50.0603**	1.087	2.2	ug/L	86	Standard
>	Ga	71	48.3	39.2				mg/L	35	Standard
	Rb	85	1150.0	11.0				ug/L	13	Standard
	Y	89	440047.4	0.9				ug/L	439493	Standard
>	Rh	103	16.7	69.3				ug/L	5	Standard
	Mo	98	418436.7	0.7	**104.5050**	1.550	1.5	ug/L	10	Standard
	Ag	107	355562.7	0.4	**52.4527**	0.482	0.9	ug/L	53	Standard
	Cd	111	113104.8	0.6	**50.2890**	0.660	1.3	mg/L	1	Standard
	Cd	114	288810.9	0.5	**50.7334**	0.609	1.2	ug/L	32	Standard
>	In	115	507201.6	0.9				ug/L	494305	Standard
	Sn	118	68985.4	0.1	**51.3209**	0.411	0.8	ug/L	53	Standard
	Sb	123	134162.8	0.6	**49.3105**	0.641	1.3	ug/L	7	Standard
	Ba	135	94395.5	0.4	**50.2012**	0.297	0.6	ug/L	11	Standard
	Ce	140	65.0	13.3				ug/L	10	Standard
>	Tb	159	536888.7	0.8				ug/L	538219	Standard
	Ho	165	3.3	173.2				ug/L	8	Standard
	Tl	203	308126.9	0.4	**50.1672**	0.280	0.6	ug/L	1	Standard
	Tl	205	402020.4	0.4	**53.0093**	0.355	0.7	ug/L	3	Standard
	Pb	206	142230.5	0.3	**53.9706**	0.318	0.6	ug/L	80	Standard
	Pb	207	128432.4	1.0	**54.0990**	0.713	1.3	ug/L	73	Standard
	Pb	208	283529.5	0.7	**48.7955**	0.487	1.0	ug/L	190	Standard
	U	238	186341.9	0.2	**49.2050**	0.247	0.5	ug/L	0	Standard
>	Bi	209	283201.2	0.3				ug/L	276439	Standard

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	Na	23	16.7	34.6	**4.1784**	1.513	36.2	mg/L	2	Standard
	Mg	24	4685.7	0.9	**5.1253**	0.090	1.8	mg/L	37	Standard
	K	39	68.3	8.4	**3.9549**	0.297	7.5	mg/L	3	Standard
	Ca	43	48.3	26.0	**4.8007**	4.219	87.9	mg/L	43	Standard
	Fe	54	10792.2	3.0	**5.5360**	0.033	0.6	mg/L	262	Standard
	Fe	57	2938.6	7.9	**5.3938**	0.579	10.7	mg/L	65	Standard
>	**Sc-1**	45	24917.1	2.5				mg/L	26874	Standard
	Cl	35	155141.1	1.9				ug/L	141022	Standard
	Kr	83	105.0	6.7				ug/L	75	Standard
	Br	81	3170.3	4.9				ug/L	2810	Standard
	P	31	514449.7	0.4				ug/L	458976	Standard
	S	34	130114.7	1.0				ug/L	103378	Standard
	Sr	88	48.3	39.2				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	6.3	93.2				mg/L	10	Standard
	Ho-1	165	3.3	173.2				mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.092	
	Be	9	100.819		
	Al	27	91.557		
	Sc	45			
	Ti	47	98.493		
	V	51	94.103		
	Cr	52	96.285		
	Cr	53			
	Mn	55	101.713		
	Co	59	100.305		
	Ni	60	98.682		
	Cu	65	100.382		
	Zn	66	101.227		
>	Ge	72		101.457	
	As	75	100.555		
	Se	82	101.148		
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89			
> Rh	103			
Mo	98	104.505		
Ag	107	104.905		
Cd	111	100.578		
Cd	114			
> In	115			102.609
Sn	118	102.642		
Sb	123	98.621		
Ba	135	100.402		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	100.334		
Tl	205			
Pb	206			
Pb	207			
Pb	208	97.591		
U	238	98.410		
> Bi	209			102.446
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 12:53:30
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	270135.6	1.6				ug/L	269614	Standard
	Be	9	45.0	0.0	**-0.0009**	0.000	25.6	ug/L	23	Standard
	Al	27	1951.8	17.0	**0.0021**	0.001	67.4	ug/L	1170	Standard
	Sc	45	24501.5	1.1				ug/L	26874	Standard
	Ti	47	13.0	26.6	**-0.0461**	0.014	31.2	ug/L	25	Standard
	V	51	1036.7	4.7	**-0.0320**	0.008	26.4	ug/L	1686	Standard
	Cr	52	3838.2	2.7	**-0.1181**	0.010	8.4	ug/L	6098	Standard
	Cr	53	206.7	21.7	**0.0291**	0.038	130.0	ug/L	193	Standard
	Mn	55	1464.4	4.0	**-0.0281**	0.004	14.8	ug/L	1232	Standard
	Co	59	87.7	17.1	**-0.0058**	0.002	29.4	ug/L	106	Standard
	Ni	60	493.3	4.5	**-0.0181**	0.010	53.1	ug/L	556	Standard
	Cu	65	304.7	2.0	**0.0583**	0.003	5.9	ug/L	124	Standard
	Zn	66	307.3	3.9	**0.0206**	0.007	33.4	ug/L	196	Standard
>	**Ge**	72	466822.8	1.0				ug/L	473313	Standard
	As	75	-285.2	6.3	**0.0123**	0.013	103.8	ug/L	-286	Standard
	Se	82	-45.8	1.9	**-0.0116**	0.008	65.3	ug/L	-33	Standard
	Se-1	77	83.7	5.6	**0.0276**	0.046	167.7	ug/L	86	Standard
>	**Ga**	71	18.3	56.8				mg/L	35	Standard
	Rb	85	23.3	12.4				ug/L	13	Standard
	Y	89	434066.6	0.5				ug/L	439493	Standard
>	**Rh**	103	10.0					ug/L	5	Standard
	Mo	98	89.9	37.4	**0.0078**	0.009	111.8	ug/L	10	Standard
	Ag	107	64.3	17.1	**-0.0053**	0.002	32.4	ug/L	53	Standard
	Cd	111	4.6	82.2	**-0.0008**	0.002	210.4	mg/L	1	Standard
	Cd	114	13.1	168.1	**-0.0071**	0.004	56.0	ug/L	32	Standard
>	**In**	115	495873.2	0.4				ug/L	494305	Standard
	Sn	118	71.7	10.8	**-0.0018**	0.006	314.2	ug/L	53	Standard
	Sb	123	266.1	25.4	**0.0986**	0.026	26.3	ug/L	7	Standard
	Ba	135	72.3	8.0	**0.0269**	0.003	12.3	ug/L	11	Standard
	Ce	140	11.7	89.2				ug/L	10	Standard
>	**Tb**	159	524465.8	2.3				ug/L	538219	Standard
	Ho	165	0.0					ug/L	8	Standard
	Tl	203	18.3	71.2	**0.0009**	0.002	244.9	ug/L	1	Standard
	Tl	205	45.0	58.8	**0.0053**	0.004	66.4	ug/L	3	Standard
	Pb	206	103.0	12.2	**-0.0023**	0.005	204.0	ug/L	80	Standard
	Pb	207	89.0	10.7	**0.0059**	0.004	69.0	ug/L	73	Standard
	Pb	208	188.7	14.6	**-0.0056**	0.005	84.5	ug/L	190	Standard
	U	238	13.0	73.4	**0.0016**	0.003	158.4	ug/L	0	Standard
>	**Bi**	209	280078.0	0.5				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	48.3	11.9	**0.0222**	0.006	28.7	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	8.3	124.9	**-7.6605**	3.349	43.7	mg/L	43	Standard
Fe	54	304.4	8.6	**0.0360**	0.015	41.2	mg/L	262	Standard
Fe	57	61.7	65.5	**0.0208**	0.078	375.8	mg/L	65	Standard
> **Sc-1**	45	24501.5	1.1				mg/L	26874	Standard
Cl	35	153652.5	0.5				ug/L	141022	Standard
Kr	83	98.7	4.2				ug/L	75	Standard
Br	81	3090.3	8.4				ug/L	2810	Standard
P	31	498110.4	3.1				ug/L	458976	Standard
S	34	125339.6	0.4				ug/L	103378	Standard
Sr	88	41.7	60.4				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	0	Standard
Dy	164	6.3	86.9				mg/L	10	Standard
Ho-1	165	0.0					mg/L	8	Standard
Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		100.193	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		98.629	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	100.317
|	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	101.316
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: PBW 62 WG452687-04
Sample Date/Time: Monday, November 18, 2013 13:10:18
Number of Replicates: 3
Autosampler Position: 301
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	263328.3	3.1				ug/L	269614	Standard
	Be	9	41.7	38.6	**-0.0018**	0.005	280.5	ug/L	23	Standard
	Al	27	1381.7	2.9	**-0.0004**	0.000	35.6	ug/L	1170	Standard
	Sc	45	23583.4	4.1				ug/L	26874	Standard
	Ti	47	10.0	43.6	**-0.0576**	0.018	31.3	ug/L	25	Standard
	V	51	1142.4	1.6	**-0.0139**	0.002	15.3	ug/L	1686	Standard
	Cr	52	4123.2	1.5	**-0.0651**	0.007	11.4	ug/L	6098	Standard
	Cr	53	146.7	25.6	**-0.0180**	0.030	169.5	ug/L	193	Standard
	Mn	55	906.7	2.7	**-0.0692**	0.002	3.1	ug/L	1232	Standard
	Co	59	67.0	22.6	**-0.0079**	0.002	20.8	ug/L	106	Standard
	Ni	60	475.3	3.9	**-0.0219**	0.008	35.8	ug/L	556	Standard
	Cu	65	175.0	2.6	**0.0091**	0.002	22.6	ug/L	124	Standard
	Zn	66	3225.3	1.5	**2.1272**	0.024	1.1	ug/L	196	Standard
>	Ge	72	459104.6	0.5				ug/L	473313	Standard
	As	75	-293.7	13.5	**0.0029**	0.027	956.6	ug/L	-286	Standard
	Se	82	-38.2	33.1	**0.0357**	0.087	244.5	ug/L	-33	Standard
	Se-1	77	72.3	8.8	**-0.0670**	0.063	94.7	ug/L	86	Standard
>	Ga	71	8.3	91.7				mg/L	35	Standard
	Rb	85	18.3	41.7				ug/L	13	Standard
	Y	89	418579.8	0.4				ug/L	439493	Standard
>	Rh	103	5.0	100.0				ug/L	5	Standard
	Mo	98	12.5	33.2	**-0.0119**	0.001	9.4	ug/L	10	Standard
	Ag	107	49.3	11.9	**-0.0072**	0.001	13.5	ug/L	53	Standard
	Cd	111	-0.0	16.7	**-0.0029**	0.000	0.0	mg/L	1	Standard
	Cd	114	12.0	63.6	**-0.0072**	0.001	19.9	ug/L	32	Standard
>	In	115	477553.0	1.0				ug/L	494305	Standard
	Sn	118	49.3	4.2	**-0.0174**	0.001	8.4	ug/L	53	Standard
	Sb	123	102.1	2.2	**0.0384**	0.001	1.4	ug/L	7	Standard
	Ba	135	6.7	22.9	**-0.0087**	0.001	10.2	ug/L	11	Standard
	Ce	140	13.3	43.3				ug/L	10	Standard
>	Tb	159	505762.9	1.9				ug/L	538219	Standard
	Ho	165	6.7	114.6				ug/L	8	Standard
	Tl	203	4.3	66.6	**-0.0014**	0.000	34.8	ug/L	1	Standard
	Tl	205	6.7	114.6	**0.0002**	0.001	456.3	ug/L	3	Standard
	Pb	206	85.0	5.1	**-0.0083**	0.002	21.1	ug/L	80	Standard
	Pb	207	73.0	12.2	**-0.0000**	0.004	14300.9	ug/L	73	Standard
	Pb	208	172.0	5.0	**-0.0076**	0.002	21.1	ug/L	190	Standard
	U	238	0.0		**-0.0019**	0.000	0.0	ug/L	0	Standard
>	Bi	209	272033.7	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0547**	0.836	1526.5	mg/L	2	Standard
Mg	24	48.3	29.9	**0.0241**	0.015	62.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2728**	0.188	68.8	mg/L	3	Standard
Ca	43	26.7	47.2	**-1.5166**	4.106	270.7	mg/L	43	Standard
Fe	54	204.2	9.0	**-0.0128**	0.015	117.6	mg/L	262	Standard
Fe	57	45.0	22.2	**-0.0084**	0.017	207.8	mg/L	65	Standard
> **Sc-1**	45	23583.4	4.1				mg/L	26874	Standard
Cl	35	147609.6	1.0				ug/L	141022	Standard
Kr	83	91.0	13.5				ug/L	75	Standard
Br	81	2823.6	7.5				ug/L	2810	Standard
P	31	350503.9	3.3				ug/L	458976	Standard
S	34	112826.9	1.2				ug/L	103378	Standard
Sr	88	28.3	10.2				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.5	102.6				mg/L	10	Standard
Ho-1	165	6.7	114.6				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		97.669	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		96.998	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	96.611
	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	98.406
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 62 WG452687-04
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Method 6020 - Summary Report

Sample ID: LCSW 62 WG452687-05
Sample Date/Time: Monday, November 18, 2013 13:13:49
Number of Replicates: 3
Autosampler Position: 302
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	281557.5	1.8				ug/L	269614	Standard
	Be	9	76383.7	1.1	**24.6317**	0.273	1.1	ug/L	23	Standard
	Al	27	80583.7	0.9	**0.3608**	0.008	2.2	ug/L	1170	Standard
	Sc	45	25187.6	2.1				ug/L	26874	Standard
	Ti	47	30.0	17.6	**0.0182**	0.019	105.4	ug/L	25	Standard
	V	51	168973.2	1.0	**23.4293**	0.248	1.1	ug/L	1686	Standard
	Cr	52	169486.2	1.9	**23.7654**	0.759	3.2	ug/L	6098	Standard
	Cr	53	31780.0	2.2	**24.8144**	0.376	1.5	ug/L	193	Standard
	Mn	55	350895.9	0.9	**25.5541**	0.613	2.4	ug/L	1232	Standard
	Co	59	233681.1	1.4	**24.6078**	0.659	2.7	ug/L	106	Standard
	Ni	60	69478.9	0.9	**24.7515**	0.524	2.1	ug/L	556	Standard
	Cu	65	68078.6	0.2	**25.4444**	0.446	1.8	ug/L	124	Standard
	Zn	66	39891.8	0.5	**27.1103**	0.512	1.9	ug/L	196	Standard
>	Ge	72	483443.1	1.5				ug/L	473313	Standard
	As	75	36303.9	1.0	**24.7551**	0.319	1.3	ug/L	-286	Standard
	Se	82	3702.4	1.3	**24.7068**	0.385	1.6	ug/L	-33	Standard
	Se-1	77	2844.9	2.0	**24.9500**	0.612	2.5	ug/L	86	Standard
>	Ga	71	43.3	35.3				mg/L	35	Standard
	Rb	85	151.7	11.6				ug/L	13	Standard
	Y	89	445769.1	0.3				ug/L	439493	Standard
>	Rh	103	20.0	66.1				ug/L	5	Standard
	Mo	98	81.5	13.3	**0.0050**	0.003	53.6	ug/L	10	Standard
	Ag	107	179874.4	0.5	**26.2630**	0.156	0.6	ug/L	53	Standard
	Cd	111	54701.8	0.5	**24.0772**	0.189	0.8	mg/L	1	Standard
	Cd	114	135156.1	0.5	**23.4994**	0.062	0.3	ug/L	32	Standard
>	In	115	512290.1	0.2				ug/L	494305	Standard
	Sn	118	88.3	10.3	**0.0087**	0.007	77.8	ug/L	53	Standard
	Sb	123	66735.5	1.4	**24.2820**	0.347	1.4	ug/L	7	Standard
	Ba	135	47270.6	1.2	**24.8831**	0.341	1.4	ug/L	11	Standard
	Ce	140	175.0	24.7				ug/L	10	Standard
>	Tb	159	541623.9	1.6				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	153255.3	1.4	**24.5156**	0.173	0.7	ug/L	1	Standard
	Tl	205	199868.1	1.1	**25.8975**	0.527	2.0	ug/L	3	Standard
	Pb	206	72431.1	0.8	**26.9867**	0.395	1.5	ug/L	80	Standard
	Pb	207	61287.7	1.0	**25.3487**	0.120	0.5	ug/L	73	Standard
	Pb	208	141628.0	0.2	**23.9308**	0.205	0.9	ug/L	190	Standard
	U	238	89196.5	0.8	**23.1423**	0.208	0.9	ug/L	0	Standard
>	Bi	209	288222.7	1.0				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0373**	0.805	2158.6	mg/L	2	Standard
Mg	24	256.7	9.2	**0.2475**	0.026	10.3	mg/L	37	Standard
K	39	1.7	173.2	**-0.2749**	0.184	66.9	mg/L	3	Standard
Ca	43	26.7	28.6	**-2.1240**	2.178	102.5	mg/L	43	Standard
Fe	54	298.5	3.6	**0.0285**	0.005	18.0	mg/L	262	Standard
Fe	57	60.0	38.2	**0.0138**	0.042	305.1	mg/L	65	Standard
> **Sc-1**	45	25187.6	2.1				mg/L	26874	Standard
Cl	35	151102.5	1.3				ug/L	141022	Standard
Kr	83	96.3	8.3				ug/L	75	Standard
Br	81	3147.0	6.1				ug/L	2810	Standard
P	31	478349.6	1.4				ug/L	458976	Standard
S	34	111248.6	0.1				ug/L	103378	Standard
Sr	88	31.7	55.5				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	2.9	187.9				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.430	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		102.140	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	103.638
	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	104.263
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 62 WG452687-05
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Method 6020 - Summary Report

Sample ID: L1311063001 WG452687-01
Sample Date/Time: Monday, November 18, 2013 13:16:53
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	310693.4	1.1				ug/L	269614	Standard
	Be	9	8859.3	3.3	**2.5739**	0.056	2.2	ug/L	23	Standard
	Al	27	67659261.9	0.6	**279.9198**	3.053	1.1	ug/L	1170	Standard
	Sc	45	31055.1	2.6				ug/L	26874	Standard
	Ti	47	40.3	21.4	**0.0748**	0.035	46.6	ug/L	25	Standard
	V	51	20471.6	2.8	**2.9755**	0.019	0.6	ug/L	1686	Standard
	Cr	52	4224.6	4.5	**-0.0189**	0.015	81.7	ug/L	6098	Standard
	Cr	53	395.0	10.0	**0.2030**	0.029	14.5	ug/L	193	Standard
	Mn	55	428212432.7	2.7	**34604.1939**	168.403	0.5	ug/L	1232	Standard
	Co	59	5684634.5	3.2	**661.0017**	6.594	1.0	ug/L	106	Standard
	Ni	60	991980.6	3.6	**392.9557**	5.540	1.4	ug/L	556	Standard
	Cu	65	27673.3	5.5	**11.3780**	0.376	3.3	ug/L	124	Standard
	Zn	66	417431029.9	2.5	**315405.8863**	3597.502	1.1	ug/L	196	Standard
>	**Ge**	72	437904.3	2.2				ug/L	473313	Standard
	As	75	10417.6	4.7	**7.9838**	0.214	2.7	ug/L	-286	Standard
	Se	82	817.7	11.6	**6.2442**	0.587	9.4	ug/L	-33	Standard
	Se-1	77	496.0	4.9	**4.1913**	0.194	4.6	ug/L	86	Standard
>	**Ga**	71	7541.9	6.2				mg/L	35	Standard
	Rb	85	17366.6	4.4				ug/L	13	Standard
	Y	89	3802162.4	1.4				ug/L	439493	Standard
>	**Rh**	103	68.3	18.4				ug/L	5	Standard
	Mo	98	144.6	11.0	**0.0278**	0.004	13.6	ug/L	10	Standard
	Ag	107	1291.7	6.5	**0.2122**	0.012	5.4	ug/L	53	Standard
	Cd	111	55551.2	1.8	**29.4468**	0.251	0.9	mg/L	1	Standard
	Cd	114	138859.2	3.2	**29.0715**	0.280	1.0	ug/L	32	Standard
>	**In**	115	425426.7	2.4				ug/L	494305	Standard
	Sn	118	50.3	4.6	**-0.0117**	0.002	16.3	ug/L	53	Standard
	Sb	123	85.2	7.6	**0.0359**	0.003	7.5	ug/L	7	Standard
	Ba	135	2813.6	1.8	**1.7720**	0.014	0.8	ug/L	11	Standard
	Ce	140	5133261.5	2.2				ug/L	10	Standard
>	**Tb**	159	633926.7	1.5				ug/L	538219	Standard
	Ho	165	145483.8	2.7				ug/L	8	Standard
	Tl	203	124.3	45.2	**0.0201**	0.010	49.4	ug/L	1	Standard
	Tl	205	136.7	39.1	**0.0192**	0.008	40.7	ug/L	3	Standard
	Pb	206	1896.5	4.2	**0.7510**	0.027	3.7	ug/L	80	Standard
	Pb	207	1567.1	5.4	**0.6947**	0.017	2.5	ug/L	73	Standard
	Pb	208	3635.8	3.9	**0.6508**	0.004	0.6	ug/L	190	Standard
	U	238	140.7	12.4	**0.0391**	0.006	14.5	ug/L	0	Standard
>	**Bi**	209	257271.4	3.3				ug/L	276439	Standard

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Na	23	110.0	7.9	**24.1315**	2.439	10.1	mg/L	2	Standard
Mg	24	19424.1	0.4	**17.1231**	0.395	2.3	mg/L	37	Standard
K	39	70.0	49.5	**3.2098**	1.818	56.6	mg/L	3	Standard
Ca	43	136.7	21.1	**24.0160**	8.203	34.2	mg/L	43	Standard
Fe	54	121370.8	3.8	**50.9822**	1.865	3.7	mg/L	262	Standard
Fe	57	34521.0	2.2	**51.5840**	1.673	3.2	mg/L	65	Standard
> **Sc-1**	45	31055.1	2.6				mg/L	26874	Standard
Cl	35	962465.9	1.7				ug/L	141022	Standard
Kr	83	1455.4	3.3				ug/L	75	Standard
Br	81	3473.7	1.8				ug/L	2810	Standard
P	31	203288.1	4.5				ug/L	458976	Standard
S	34	102539.2	2.0				ug/L	103378	Standard
Sr	88	491.7	13.9				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	223466.4	2.8				mg/L	10	Standard
Ho-1	165	145483.8	2.7				mg/L	8	Standard
Er	166	127070.9	2.8				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		115.236	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.519	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	86.066
|	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	93.066
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063005S WG452687-06
Sample Date/Time: Monday, November 18, 2013 13:19:58
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	314133.4	1.4				ug/L	269614	Standard
	Be	9	24264.4	2.4	**7.0027**	0.234	3.3	ug/L	23	Standard
	Al	27	64919822.1	0.4	**265.6692**	4.606	1.7	ug/L	1170	Standard
	Sc	45	30811.3	1.9				ug/L	26874	Standard
	Ti	47	34.0	10.6	**0.0459**	0.016	35.5	ug/L	25	Standard
	V	51	56134.8	0.7	**8.3577**	0.059	0.7	ug/L	1686	Standard
	Cr	52	36088.3	1.2	**4.9769**	0.066	1.3	ug/L	6098	Standard
	Cr	53	5737.8	3.8	**4.7669**	0.215	4.5	ug/L	193	Standard
	Mn	55	429506689.4	0.5	**34234.4270**	369.444	1.1	ug/L	1232	Standard
	Co	59	5803546.3	1.4	**665.6073**	5.584	0.8	ug/L	106	Standard
	Ni	60	1021200.6	1.2	**399.0315**	1.963	0.5	ug/L	556	Standard
	Cu	65	39485.0	0.4	**16.0431**	0.105	0.7	ug/L	124	Standard
	Zn	66	413007880.3	0.2	**307769.3214**	1779.877	0.6	ug/L	196	Standard
>	Ge	72	444023.1	0.7				ug/L	473313	Standard
	As	75	17831.8	3.3	**13.3344**	0.348	2.6	ug/L	-286	Standard
	Se	82	1844.3	5.2	**13.5334**	0.608	4.5	ug/L	-33	Standard
	Se-1	77	1172.7	2.3	**10.7811**	0.329	3.0	ug/L	86	Standard
>	Ga	71	7838.7	5.9				mg/L	35	Standard
	Rb	85	18139.2	1.9				ug/L	13	Standard
	Y	89	3693578.8	1.0				ug/L	439493	Standard
>	Rh	103	81.7	12.7				ug/L	5	Standard
	Mo	98	129.0	7.2	**0.0226**	0.003	14.7	ug/L	10	Standard
	Ag	107	31740.9	0.8	**5.4741**	0.045	0.8	ug/L	53	Standard
	Cd	111	68926.6	1.1	**35.9134**	0.311	0.9	mg/L	1	Standard
	Cd	114	169833.6	1.7	**34.9561**	0.163	0.5	ug/L	32	Standard
>	In	115	432802.6	1.5				ug/L	494305	Standard
	Sn	118	55.0	19.0	**-0.0084**	0.009	109.1	ug/L	53	Standard
	Sb	123	13202.9	1.2	**5.6853**	0.028	0.5	ug/L	7	Standard
	Ba	135	11274.9	1.9	**7.0174**	0.191	2.7	ug/L	11	Standard
	Ce	140	5335325.3	0.1				ug/L	10	Standard
>	Tb	159	643428.6	0.9				ug/L	538219	Standard
	Ho	165	145037.6	0.8				ug/L	8	Standard
	Tl	203	30073.8	1.1	**5.3293**	0.009	0.2	ug/L	1	Standard
	Tl	205	39244.1	1.0	**5.6340**	0.087	1.5	ug/L	3	Standard
	Pb	206	15774.9	1.5	**6.4805**	0.041	0.6	ug/L	80	Standard
	Pb	207	13495.7	1.0	**6.1611**	0.020	0.3	ug/L	73	Standard
	Pb	208	31130.7	1.3	**5.7994**	0.026	0.4	ug/L	190	Standard
	U	238	18895.8	1.4	**5.4310**	0.051	0.9	ug/L	0	Standard
>	Bi	209	260100.0	1.0				ug/L	276439	Standard

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	Na	23	103.3	26.6	**22.8185**	6.361	27.9	mg/L	2	Standard
	Mg	24	18407.8	1.3	**16.3497**	0.228	1.4	mg/L	37	Standard
	K	39	53.3	23.6	**2.3507**	0.600	25.5	mg/L	3	Standard
	Ca	43	135.0	9.8	**23.7766**	3.919	16.5	mg/L	43	Standard
	Fe	54	112855.9	4.6	**47.7681**	2.201	4.6	mg/L	262	Standard
	Fe	57	32436.4	2.3	**48.8258**	0.437	0.9	mg/L	65	Standard
>	**Sc-1**	45	30811.3	1.9				mg/L	26874	Standard
	Cl	35	940215.0	0.2				ug/L	141022	Standard
	Kr	83	1473.7	1.6				ug/L	75	Standard
	Br	81	3413.7	5.7				ug/L	2810	Standard
	P	31	204167.1	2.8				ug/L	458976	Standard
	S	34	96739.7	2.8				ug/L	103378	Standard
	Sr	88	541.7	15.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	224073.5	1.0				mg/L	10	Standard
	Ho-1	165	145037.6	0.8				mg/L	8	Standard
	Er	166	126391.8	1.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.512	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.812	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	87.558
|	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	94.089
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063007SD WG452687-07
Sample Date/Time: Monday, November 18, 2013 13:23:03
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	303478.8	2.6				ug/L	269614	Standard
	Be	9	23284.6	2.1	**6.9557**	0.163	2.3	ug/L	23	Standard
	Al	27	64899970.1	0.7	**274.9847**	6.971	2.5	ug/L	1170	Standard
	Sc	45	31188.7	0.2				ug/L	26874	Standard
	Ti	47	37.3	12.4	**0.0619**	0.020	32.9	ug/L	25	Standard
	V	51	53892.3	0.3	**8.1125**	0.053	0.6	ug/L	1686	Standard
	Cr	52	34694.0	0.6	**4.8216**	0.031	0.6	ug/L	6098	Standard
	Cr	53	5501.0	4.6	**4.6185**	0.212	4.6	ug/L	193	Standard
	Mn	55	424287439.9	0.7	**34212.2814**	156.282	0.5	ug/L	1232	Standard
	Co	59	5731396.0	0.2	**665.0653**	6.457	1.0	ug/L	106	Standard
	Ni	60	1027506.7	0.3	**406.2093**	2.341	0.6	ug/L	556	Standard
	Cu	65	39542.5	0.8	**16.2547**	0.067	0.4	ug/L	124	Standard
	Zn	66	416578044.3	0.4	**314065.4730**	3425.901	1.1	ug/L	196	Standard
>	Ge	72	438898.4	0.9				ug/L	473313	Standard
	As	75	17847.7	1.7	**13.5010**	0.191	1.4	ug/L	-286	Standard
	Se	82	1759.7	5.5	**13.0759**	0.674	5.2	ug/L	-33	Standard
	Se-1	77	1143.0	4.3	**10.6176**	0.414	3.9	ug/L	86	Standard
>	Ga	71	7663.6	3.6				mg/L	35	Standard
	Rb	85	17688.7	2.6				ug/L	13	Standard
	Y	89	3872593.5	0.8				ug/L	439493	Standard
>	Rh	103	105.0	17.2				ug/L	5	Standard
	Mo	98	177.5	15.5	**0.0372**	0.008	21.4	ug/L	10	Standard
	Ag	107	30943.9	0.6	**5.3876**	0.006	0.1	ug/L	53	Standard
	Cd	111	66765.6	0.7	**35.1214**	0.089	0.3	mg/L	1	Standard
	Cd	114	166108.8	0.9	**34.5204**	0.252	0.7	ug/L	32	Standard
>	In	115	428659.0	0.6				ug/L	494305	Standard
	Sn	118	68.3	31.5	**0.0037**	0.019	500.9	ug/L	53	Standard
	Sb	123	12691.6	1.6	**5.5176**	0.069	1.2	ug/L	7	Standard
	Ba	135	11380.6	1.2	**7.1509**	0.130	1.8	ug/L	11	Standard
	Ce	140	5293684.7	0.9				ug/L	10	Standard
>	Tb	159	646272.1	0.5				ug/L	538219	Standard
	Ho	165	151806.7	0.4				ug/L	8	Standard
	Tl	203	29440.6	1.1	**5.2342**	0.049	0.9	ug/L	1	Standard
	Tl	205	37289.2	0.5	**5.3704**	0.013	0.2	ug/L	3	Standard
	Pb	206	15618.7	0.5	**6.4372**	0.015	0.2	ug/L	80	Standard
	Pb	207	13076.3	0.8	**5.9883**	0.045	0.8	ug/L	73	Standard
	Pb	208	30072.7	0.8	**5.6196**	0.034	0.6	ug/L	190	Standard
	U	238	18246.0	0.6	**5.2615**	0.055	1.0	ug/L	0	Standard
>	Bi	209	259251.2	0.5				ug/L	276439	Standard

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	Na	23	131.7	12.2	**28.7948**	3.511	12.2	mg/L	2	Standard
	Mg	24	18035.7	1.1	**15.8222**	0.168	1.1	mg/L	37	Standard
	K	39	55.0	32.8	**2.4074**	0.908	37.7	mg/L	3	Standard
	Ca	43	131.7	17.1	**22.4784**	5.552	24.7	mg/L	43	Standard
	Fe	54	116736.5	0.9	**48.8109**	0.489	1.0	mg/L	262	Standard
	Fe	57	33702.5	1.9	**50.1210**	0.933	1.9	mg/L	65	Standard
>	**Sc-1**	45	31188.7	0.2				mg/L	26874	Standard
	Cl	35	931897.4	0.2				ug/L	141022	Standard
	Kr	83	1540.4	0.9				ug/L	75	Standard
	Br	81	3593.8	5.9				ug/L	2810	Standard
	P	31	197078.7	1.9				ug/L	458976	Standard
	S	34	90789.6	2.1				ug/L	103378	Standard
	Sr	88	541.7	9.6				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	236756.0	0.8				mg/L	10	Standard
	Ho-1	165	151806.7	0.4				mg/L	8	Standard
	Er	166	131689.9	1.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		112.560	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.729	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	86.719
|	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	93.782
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311079301
Sample Date/Time: Monday, November 18, 2013 13:26:09
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	280181.9	0.5				ug/L	269614	Standard
	Be	9	83.3	30.2	**0.0109**	0.008	73.9	ug/L	23	Standard
	Al	27	6698992.5	2.0	**30.7233**	0.490	1.6	ug/L	1170	Standard
	Sc	45	26049.0	1.0				ug/L	26874	Standard
	Ti	47	427.7	4.1	**1.5282**	0.073	4.8	ug/L	25	Standard
	V	51	7812.2	1.2	**0.8809**	0.014	1.6	ug/L	1686	Standard
	Cr	52	6609.4	1.9	**0.2369**	0.013	5.4	ug/L	6098	Standard
	Cr	53	960.0	17.6	**0.5944**	0.126	21.2	ug/L	193	Standard
	Mn	55	1693236.5	27.9	**120.5312**	33.542	27.8	ug/L	1232	Standard
	Co	59	18041.6	26.0	**1.8349**	0.479	26.1	ug/L	106	Standard
	Ni	60	7283.1	5.0	**2.3447**	0.121	5.2	ug/L	556	Standard
	Cu	65	3472.7	4.7	**1.2069**	0.066	5.5	ug/L	124	Standard
	Zn	66	855437.4	11.8	**569.8504**	66.290	11.6	ug/L	196	Standard
>	**Ge**	72	496474.4	0.5				ug/L	473313	Standard
	As	75	310.9	13.7	**0.4165**	0.027	6.6	ug/L	-286	Standard
	Se	82	38.8	32.4	**0.5493**	0.080	14.5	ug/L	-33	Standard
	Se-1	77	141.3	18.4	**0.4874**	0.224	45.9	ug/L	86	Standard
>	**Ga**	71	385.0	9.4				mg/L	35	Standard
	Rb	85	18576.4	1.4				ug/L	13	Standard
	Y	89	470081.0	0.6				ug/L	439493	Standard
>	**Rh**	103	51.7	24.4				ug/L	5	Standard
	Mo	98	3068.4	1.9	**0.7270**	0.006	0.8	ug/L	10	Standard
	Ag	107	98.7	45.2	**-0.0009**	0.006	750.5	ug/L	53	Standard
	Cd	111	211.9	11.5	**0.0884**	0.011	12.7	mg/L	1	Standard
	Cd	114	620.9	8.8	**0.0963**	0.010	10.8	ug/L	32	Standard
>	**In**	115	523696.8	1.2				ug/L	494305	Standard
	Sn	118	154.7	4.9	**0.0552**	0.007	12.1	ug/L	53	Standard
	Sb	123	232.8	9.1	**0.0814**	0.008	10.4	ug/L	7	Standard
	Ba	135	33754.6	0.8	**17.3783**	0.201	1.2	ug/L	11	Standard
	Ce	140	15619.7	5.5				ug/L	10	Standard
>	**Tb**	159	548056.8	1.1				ug/L	538219	Standard
	Ho	165	441.7	5.2				ug/L	8	Standard
	Tl	203	100.7	9.4	**0.0140**	0.002	10.8	ug/L	1	Standard
	Tl	205	158.3	23.3	**0.0198**	0.005	23.8	ug/L	3	Standard
	Pb	206	961.7	4.2	**0.3174**	0.014	4.3	ug/L	80	Standard
	Pb	207	857.7	5.2	**0.3235**	0.018	5.5	ug/L	73	Standard
	Pb	208	1873.7	3.3	**0.2791**	0.009	3.3	ug/L	190	Standard
	U	238	260.7	12.8	**0.0658**	0.008	12.7	ug/L	0	Standard
>	**Bi**	209	287863.9	0.4				ug/L	276439	Standard

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	Na	23	55.0	27.3	**14.2044**	4.043	28.5	mg/L	2	Standard
	Mg	24	11411.0	5.5	**11.9813**	0.739	6.2	mg/L	37	Standard
	K	39	6.7	114.6	**0.0248**	0.464	1872.6	mg/L	3	Standard
	Ca	43	91.7	30.0	**16.9705**	7.931	46.7	mg/L	43	Standard
	Fe	54	1755.8	4.7	**0.7551**	0.049	6.5	mg/L	262	Standard
	Fe	57	553.3	22.3	**0.8896**	0.213	24.0	mg/L	65	Standard
>	**Sc-1**	45	26049.0	1.0				mg/L	26874	Standard
	Cl	35	178084.5	3.1				ug/L	141022	Standard
	Kr	83	138.0	10.8				ug/L	75	Standard
	Br	81	14069.9	3.2				ug/L	2810	Standard
	P	31	508073.2	0.4				ug/L	458976	Standard
	S	34	94084.8	3.8				ug/L	103378	Standard
	Sr	88	301.7	12.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	649.6	9.3				mg/L	10	Standard
	Ho-1	165	441.7	5.2				mg/L	8	Standard
	Er	166	356.7	3.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		103.919	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.893	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.946
|	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	104.133
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

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	

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Method 6020 - Summary Report

Sample ID: L1311079303
Sample Date/Time: Monday, November 18, 2013 13:29:14
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	286946.7	0.5				ug/L	269614	Standard
	Be	9	60.0	30.0	**0.0029**	0.006	196.2	ug/L	23	Standard
	Al	27	9396107.3	1.8	**42.0813**	0.694	1.6	ug/L	1170	Standard
	Sc	45	26805.4	1.9				ug/L	26874	Standard
	Ti	47	244.0	5.2	**0.8316**	0.041	4.9	ug/L	25	Standard
	V	51	-36259.6	9.6	**-5.1272**	0.463	9.0	ug/L	1686	Standard
	Cr	52	1053620.8	0.3	**147.7066**	1.740	1.2	ug/L	6098	Standard
	Cr	53	199343.9	3.6	**152.6516**	4.334	2.8	ug/L	193	Standard
	Mn	55	323503.7	13.9	**22.9635**	3.008	13.1	ug/L	1232	Standard
	Co	59	1827.8	35.5	**0.1722**	0.065	37.6	ug/L	106	Standard
	Ni	60	7053.3	1.6	**2.2709**	0.033	1.4	ug/L	556	Standard
	Cu	65	7645.3	0.7	**2.7358**	0.010	0.4	ug/L	124	Standard
	Zn	66	34519.6	45.1	**22.8098**	10.158	44.5	ug/L	196	Standard
>	Ge	72	495194.8	0.9				ug/L	473313	Standard
	As	75	200.9	31.4	**0.3444**	0.041	12.0	ug/L	-286	Standard
	Se	82	28.6	60.0	**0.4846**	0.111	22.8	ug/L	-33	Standard
	Se-1	77	199.0	3.3	**0.9999**	0.058	5.8	ug/L	86	Standard
>	Ga	71	355.0	6.5				mg/L	35	Standard
	Rb	85	16080.2	2.8				ug/L	13	Standard
	Y	89	454030.9	0.7				ug/L	439493	Standard
>	Rh	103	41.7	25.0				ug/L	5	Standard
	Mo	98	4089.8	4.2	**0.9511**	0.036	3.8	ug/L	10	Standard
	Ag	107	109.7	3.8	**0.0003**	0.000	117.2	ug/L	53	Standard
	Cd	111	30.0	20.4	**0.0097**	0.003	26.2	mg/L	1	Standard
	Cd	114	37824.6	1.7	**6.2786**	0.189	3.0	ug/L	32	Standard
>	In	115	536152.7	1.4				ug/L	494305	Standard
	Sn	118	306864.6	2.8	**216.1153**	4.137	1.9	ug/L	53	Standard
	Sb	123	1214.8	2.2	**0.4209**	0.008	1.8	ug/L	7	Standard
	Ba	135	14191.6	1.3	**7.1289**	0.024	0.3	ug/L	11	Standard
	Ce	140	1785.1	36.5				ug/L	10	Standard
>	Tb	159	551178.0	0.5				ug/L	538219	Standard
	Ho	165	50.0	50.0				ug/L	8	Standard
	Tl	203	78.3	17.6	**0.0106**	0.002	20.6	ug/L	1	Standard
	Tl	205	106.7	37.6	**0.0134**	0.005	39.9	ug/L	3	Standard
	Pb	206	835.7	3.1	**0.2764**	0.008	3.0	ug/L	80	Standard
	Pb	207	719.0	3.3	**0.2719**	0.011	4.0	ug/L	73	Standard
	Pb	208	1643.0	2.2	**0.2455**	0.007	2.9	ug/L	190	Standard
	U	238	166.0	11.5	**0.0421**	0.005	12.1	ug/L	0	Standard
>	Bi	209	282349.2	0.6				ug/L	276439	Standard

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	Na	23	56.7	41.7	**14.2843**	6.302	44.1	mg/L	2	Standard
	Mg	24	36124.7	1.7	**36.9274**	1.064	2.9	mg/L	37	Standard
	K	39	13.3	21.7	**0.4045**	0.163	40.2	mg/L	3	Standard
	Ca	43	76.7	10.0	**11.8816**	1.779	15.0	mg/L	43	Standard
	Fe	54	1721.6	1.1	**0.7135**	0.018	2.5	mg/L	262	Standard
	Fe	57	581.7	8.6	**0.9111**	0.073	8.0	mg/L	65	Standard
>	**Sc-1**	45	26805.4	1.9				mg/L	26874	Standard
	Cl	35	217105.9	1.2				ug/L	141022	Standard
	Kr	83	120.3	7.5				ug/L	75	Standard
	Br	81	12244.9	1.9				ug/L	2810	Standard
	P	31	530370.0	4.2				ug/L	458976	Standard
	S	34	87388.0	1.2				ug/L	103378	Standard
	Sr	88	243.3	22.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	0	Standard
	Dy	164	41.6	61.6				mg/L	10	Standard
	Ho-1	165	50.0	50.0				mg/L	8	Standard
	Er	166	36.7	31.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.429	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.623	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.466
|	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	102.138
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
V 51 Lower	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Sn 118 Upper, S, EEE	Sn	118	

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Method 6020 - Summary Report

Sample ID: L1311079303PS WG453185-01
Sample Date/Time: Monday, November 18, 2013 13:32:18
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	309639.4	3.5				ug/L	269614	Standard
	Be	9	167141.9	1.3	**49.0473**	1.189	2.4	ug/L	23	Standard
	Al	27	10100164.1	1.1	**41.9428**	1.012	2.4	ug/L	1170	Standard
	Sc	45	27636.8	0.8				ug/L	26874	Standard
	Ti	47	252.7	7.9	**0.8163**	0.088	10.8	ug/L	25	Standard
	V	51	339828.7	2.4	**43.7881**	0.479	1.1	ug/L	1686	Standard
	Cr	52	1522740.8	0.4	**202.7899**	4.091	2.0	ug/L	6098	Standard
	Cr	53	280374.1	1.6	**203.7652**	3.570	1.8	ug/L	193	Standard
	Mn	55	1089676.4	1.3	**73.7404**	0.817	1.1	ug/L	1232	Standard
	Co	59	527872.5	1.2	**51.4870**	0.515	1.0	ug/L	106	Standard
	Ni	60	155891.0	1.8	**51.6394**	0.598	1.2	ug/L	556	Standard
	Cu	65	153036.1	1.6	**53.0262**	0.246	0.5	ug/L	124	Standard
	Zn	66	98915.3	2.2	**62.4945**	0.436	0.7	ug/L	196	Standard
>	Ge	72	522031.7	1.8				ug/L	473313	Standard
	As	75	80457.3	1.5	**50.5830**	0.583	1.2	ug/L	-286	Standard
	Se	82	8109.2	0.7	**49.8096**	0.896	1.8	ug/L	-33	Standard
	Se-1	77	5999.5	2.1	**49.4377**	0.225	0.5	ug/L	86	Standard
>	Ga	71	438.3	10.2				mg/L	35	Standard
	Rb	85	17249.8	2.1				ug/L	13	Standard
	Y	89	480289.0	2.1				ug/L	439493	Standard
>	Rh	103	83.3	12.5				ug/L	5	Standard
	Mo	98	4376.8	2.0	**0.9813**	0.021	2.2	ug/L	10	Standard
	Ag	107	376643.3	1.1	**50.6446**	0.336	0.7	ug/L	53	Standard
	Cd	111	117894.0	1.3	**47.7783**	0.523	1.1	mg/L	1	Standard
	Cd	114	329399.3	2.4	**52.7397**	1.059	2.0	ug/L	32	Standard
>	In	115	556413.0	0.4				ug/L	494305	Standard
	Sn	118	324668.7	0.7	**220.3467**	1.011	0.5	ug/L	53	Standard
	Sb	123	143697.8	0.6	**48.1402**	0.097	0.2	ug/L	7	Standard
	Ba	135	116047.0	0.3	**56.2574**	0.081	0.1	ug/L	11	Standard
	Ce	140	1378.4	4.8				ug/L	10	Standard
>	Tb	159	574785.5	1.2				ug/L	538219	Standard
	Ho	165	46.7	34.4				ug/L	8	Standard
	Tl	203	321636.7	0.3	**51.5088**	0.228	0.4	ug/L	1	Standard
	Tl	205	427236.7	0.8	**55.4113**	0.503	0.9	ug/L	3	Standard
	Pb	206	151248.5	0.5	**56.4541**	0.346	0.6	ug/L	80	Standard
	Pb	207	134582.1	0.5	**55.7607**	0.365	0.7	ug/L	73	Standard
	Pb	208	296611.0	1.0	**50.2112**	0.550	1.1	ug/L	190	Standard
	U	238	197987.6	0.9	**51.4238**	0.521	1.0	ug/L	0	Standard
>	Bi	209	287917.5	0.2				ug/L	276439	Standard

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	Na	23	70.0	14.3	**17.0979**	2.393	14.0	mg/L	2	Standard
	Mg	24	37910.7	1.4	**37.5797**	0.773	2.1	mg/L	37	Standard
	K	39	25.0	20.0	**1.0511**	0.294	28.0	mg/L	3	Standard
	Ca	43	80.0	6.3	**12.1801**	1.563	12.8	mg/L	43	Standard
	Fe	54	1908.9	2.5	**0.7768**	0.029	3.7	mg/L	262	Standard
	Fe	57	576.7	7.8	**0.8728**	0.072	8.2	mg/L	65	Standard
>	**Sc-1**	45	27636.8	0.8				mg/L	26874	Standard
	Cl	35	223750.2	1.4				ug/L	141022	Standard
	Kr	83	131.7	5.8				ug/L	75	Standard
	Br	81	13279.2	5.9				ug/L	2810	Standard
	P	31	711843.4	2.3				ug/L	458976	Standard
	S	34	88259.7	2.4				ug/L	103378	Standard
	Sr	88	263.3	11.6				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	52.4	47.9				mg/L	10	Standard
	Ho-1	165	46.7	34.4				mg/L	8	Standard
	Er	166	20.0	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		114.845	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		110.293	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	112.565
|	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	104.152
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Sn 118 Upper, S, EEE	Sn	118	

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Method 6020 - Summary Report

Sample ID: L1311079303SDL WG453185-02
Sample Date/Time: Monday, November 18, 2013 13:35:23
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	262099.8	1.9				ug/L	269614	Standard
	Be	9	60.0	22.0	**0.0047**	0.005	96.5	ug/L	23	Standard
	Al	27	1677085.5	1.3	**8.2182**	0.073	0.9	ug/L	1170	Standard
	Sc	45	23369.7	1.0				ug/L	26874	Standard
	Ti	47	54.0	12.1	**0.1264**	0.028	22.3	ug/L	25	Standard
	V	51	-3457.9	16.9	**-0.6977**	0.088	12.7	ug/L	1686	Standard
	Cr	52	191071.3	1.1	**28.7202**	0.242	0.8	ug/L	6098	Standard
	Cr	53	37087.0	1.9	**30.9329**	0.478	1.5	ug/L	193	Standard
	Mn	55	72027.5	0.5	**5.4872**	0.042	0.8	ug/L	1232	Standard
	Co	59	352.0	8.7	**0.0242**	0.003	14.3	ug/L	106	Standard
	Ni	60	1661.1	2.6	**0.4349**	0.019	4.4	ug/L	556	Standard
	Cu	65	1495.1	2.1	**0.5376**	0.013	2.4	ug/L	124	Standard
	Zn	66	8852.3	2.5	**6.2678**	0.175	2.8	ug/L	196	Standard
>	Ge	72	453067.2	0.4				ug/L	473313	Standard
	As	75	-204.2	14.7	**0.0646**	0.022	33.5	ug/L	-286	Standard
	Se	82	-32.4	33.9	**0.0725**	0.078	107.6	ug/L	-33	Standard
	Se-1	77	117.7	5.0	**0.3792**	0.061	16.1	ug/L	86	Standard
>	Ga	71	76.7	3.8				mg/L	35	Standard
	Rb	85	2915.3	7.9				ug/L	13	Standard
	Y	89	409426.7	0.9				ug/L	439493	Standard
>	Rh	103	16.7	34.6				ug/L	5	Standard
	Mo	98	760.4	2.7	**0.1835**	0.003	1.9	ug/L	10	Standard
	Ag	107	73.3	9.3	**-0.0037**	0.001	28.3	ug/L	53	Standard
	Cd	111	12.4	55.3	**0.0029**	0.003	111.3	mg/L	1	Standard
	Cd	114	7054.9	2.5	**1.2875**	0.034	2.7	ug/L	32	Standard
>	In	115	484758.1	1.2				ug/L	494305	Standard
	Sn	118	60484.8	0.6	**47.0765**	0.445	0.9	ug/L	53	Standard
	Sb	123	520.5	3.7	**0.1987**	0.006	3.2	ug/L	7	Standard
	Ba	135	2713.6	2.6	**1.4982**	0.056	3.8	ug/L	11	Standard
	Ce	140	256.7	11.1				ug/L	10	Standard
>	Tb	159	511286.3	1.4				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	156.0	5.0	**0.0241**	0.002	6.4	ug/L	1	Standard
	Tl	205	208.3	9.7	**0.0277**	0.003	11.2	ug/L	3	Standard
	Pb	206	297.7	12.2	**0.0750**	0.014	18.0	ug/L	80	Standard
	Pb	207	251.7	6.3	**0.0776**	0.007	8.6	ug/L	73	Standard
	Pb	208	573.3	2.0	**0.0637**	0.002	3.8	ug/L	190	Standard
	U	238	48.0	19.9	**0.0112**	0.003	23.4	ug/L	0	Standard
>	Bi	209	273845.1	1.2				ug/L	276439	Standard

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	Na	23	6.7	86.6	**1.5417**	1.706	110.6	mg/L	2	Standard
	Mg	24	7040.0	2.2	**8.2288**	0.264	3.2	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2677**	0.197	73.4	mg/L	3	Standard
	Ca	43	41.7	25.0	**3.5263**	3.441	97.6	mg/L	43	Standard
	Fe	54	393.3	12.0	**0.0934**	0.024	26.2	mg/L	262	Standard
	Fe	57	160.0	19.0	**0.2210**	0.057	25.7	mg/L	65	Standard
>	**Sc-1**	45	23369.7	1.0				mg/L	26874	Standard
	Cl	35	149889.9	1.9				ug/L	141022	Standard
	Kr	83	119.3	3.5				ug/L	75	Standard
	Br	81	4317.3	3.3				ug/L	2810	Standard
	P	31	216033.2	2.5				ug/L	458976	Standard
	S	34	86259.9	1.7				ug/L	103378	Standard
	Sr	88	66.7	4.3				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	12.2	45.2				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	8	Standard
	Er	166	23.3	49.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		97.213	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.722	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.069
|	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	99.062
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
V 51 Lower	V	51	

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Method 6020 - Summary Report

Sample ID: L1311079303SDL WG453185-02
Sample Date/Time: Monday, November 18, 2013 13:38:28
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 25
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	252514.6	2.9				ug/L	269614	Standard
	Be	9	41.7	18.3	**-0.0011**	0.002	204.2	ug/L	23	Standard
	Al	27	334465.2	1.6	**1.6965**	0.065	3.8	ug/L	1170	Standard
	Sc	45	22785.5	1.6				ug/L	26874	Standard
	Ti	47	29.7	21.7	**0.0268**	0.027	98.8	ug/L	25	Standard
	V	51	230.9	105.4	**-0.1472**	0.037	25.0	ug/L	1686	Standard
	Cr	52	40740.4	1.3	**5.6850**	0.116	2.0	ug/L	6098	Standard
	Cr	53	7405.1	2.2	**6.1687**	0.106	1.7	ug/L	193	Standard
	Mn	55	14428.9	3.7	**1.0070**	0.051	5.1	ug/L	1232	Standard
	Co	59	143.0	6.3	**0.0010**	0.001	104.6	ug/L	106	Standard
	Ni	60	669.7	2.4	**0.0592**	0.005	8.8	ug/L	556	Standard
	Cu	65	399.7	4.3	**0.1025**	0.006	5.9	ug/L	124	Standard
	Zn	66	5205.9	5.3	**3.6690**	0.226	6.2	ug/L	196	Standard
>	Ge	72	445617.9	0.7				ug/L	473313	Standard
	As	75	-321.1	15.2	**-0.0236**	0.036	151.6	ug/L	-286	Standard
	Se	82	-64.5	35.0	**-0.1599**	0.160	99.9	ug/L	-33	Standard
	Se-1	77	75.7	10.8	**-0.0133**	0.085	644.0	ug/L	86	Standard
>	Ga	71	55.0	27.3				mg/L	35	Standard
	Rb	85	606.7	7.1				ug/L	13	Standard
	Y	89	404616.6	0.8				ug/L	439493	Standard
>	Rh	103	0.0					ug/L	5	Standard
	Mo	98	161.7	5.4	**0.0279**	0.002	8.2	ug/L	10	Standard
	Ag	107	49.0	10.8	**-0.0073**	0.001	11.6	ug/L	53	Standard
	Cd	111	5.5	64.2	**-0.0003**	0.002	575.1	mg/L	1	Standard
	Cd	114	1445.7	4.6	**0.2616**	0.012	4.8	ug/L	32	Standard
>	In	115	475248.3	0.1				ug/L	494305	Standard
	Sn	118	11905.7	0.6	**9.4062**	0.068	0.7	ug/L	53	Standard
	Sb	123	211.9	7.5	**0.0816**	0.006	7.6	ug/L	7	Standard
	Ba	135	540.0	4.3	**0.2940**	0.013	4.3	ug/L	11	Standard
	Ce	140	48.3	31.6				ug/L	10	Standard
>	Tb	159	493754.4	1.7				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	60.7	9.1	**0.0082**	0.001	11.7	ug/L	1	Standard
	Tl	205	55.0		**0.0069**	0.000	0.3	ug/L	3	Standard
	Pb	206	125.7	3.8	**0.0081**	0.002	21.4	ug/L	80	Standard
	Pb	207	106.3	5.4	**0.0149**	0.003	17.5	ug/L	73	Standard
	Pb	208	244.7	4.0	**0.0057**	0.002	32.7	ug/L	190	Standard
	U	238	10.3	24.4	**0.0010**	0.001	70.7	ug/L	0	Standard
>	Bi	209	270467.4	0.3				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	1415.1	2.8	**1.6715**	0.074	4.4	mg/L	37	Standard
K	39	5.0	100.0	**-0.0302**	0.353	1170.3	mg/L	3	Standard
Ca	43	31.7	9.1	**0.4700**	0.846	180.1	mg/L	43	Standard
Fe	54	133.3	27.0	**-0.0502**	0.020	38.9	mg/L	262	Standard
Fe	57	86.7	27.3	**0.0802**	0.049	61.7	mg/L	65	Standard
> **Sc-1**	45	22785.5	1.6				mg/L	26874	Standard
Cl	35	141516.1	2.6				ug/L	141022	Standard
Kr	83	123.3	11.6				ug/L	75	Standard
Br	81	2890.3	10.7				ug/L	2810	Standard
P	31	162118.7	4.1				ug/L	458976	Standard
S	34	93405.5	2.3				ug/L	103378	Standard
Sr	88	40.0	25.0				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	16.7	91.7				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	0.0					mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.658	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.149	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	96.145
	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	97.840
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 13:41:35
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	281211.0	1.6				ug/L	269614	Standard
	Be	9	155457.0	2.1	**50.2078**	1.085	2.2	ug/L	23	Standard
	Al	27	10030614.5	0.9	**45.8436**	0.326	0.7	ug/L	1170	Standard
	Sc	45	26002.3	1.2				ug/L	26874	Standard
	Ti	47	25857.7	1.4	**97.8012**	0.520	0.5	ug/L	25	Standard
	V	51	347647.0	1.2	**46.8997**	0.676	1.4	ug/L	1686	Standard
	Cr	52	348671.0	0.7	**48.0610**	0.216	0.4	ug/L	6098	Standard
	Cr	53	63879.4	2.5	**48.4709**	0.712	1.5	ug/L	193	Standard
	Mn	55	706848.5	0.8	**50.0132**	0.104	0.2	ug/L	1232	Standard
	Co	59	486306.2	0.7	**49.6404**	0.575	1.2	ug/L	106	Standard
	Ni	60	142583.4	0.4	**49.4230**	0.343	0.7	ug/L	556	Standard
	Cu	65	138915.6	1.1	**50.3727**	0.529	1.0	ug/L	124	Standard
	Zn	66	77243.7	0.8	**51.0441**	0.479	0.9	ug/L	196	Standard
>	Ge	72	498794.9	1.0				ug/L	473313	Standard
	As	75	75409.0	1.6	**49.6177**	0.549	1.1	ug/L	-286	Standard
	Se	82	7802.3	1.4	**50.1441**	0.276	0.5	ug/L	-33	Standard
	Se-1	77	5703.1	0.5	**49.1843**	0.387	0.8	ug/L	86	Standard
>	Ga	71	61.7	12.4				mg/L	35	Standard
	Rb	85	1236.7	6.5				ug/L	13	Standard
	Y	89	457076.6	1.8				ug/L	439493	Standard
>	Rh	103	40.0	45.1				ug/L	5	Standard
	Mo	98	434381.9	0.8	**104.5172**	0.837	0.8	ug/L	10	Standard
	Ag	107	367668.8	0.3	**52.2561**	0.389	0.7	ug/L	53	Standard
	Cd	111	116914.6	1.4	**50.0796**	0.504	1.0	mg/L	1	Standard
	Cd	114	295234.4	1.7	**49.9619**	0.595	1.2	ug/L	32	Standard
>	In	115	526432.1	0.6				ug/L	494305	Standard
	Sn	118	71320.8	1.3	**51.1184**	0.705	1.4	ug/L	53	Standard
	Sb	123	137397.7	0.7	**48.6510**	0.090	0.2	ug/L	7	Standard
	Ba	135	97461.5	0.4	**49.9370**	0.096	0.2	ug/L	11	Standard
	Ce	140	45.0	22.2				ug/L	10	Standard
>	Tb	159	549512.6	0.6				ug/L	538219	Standard
	Ho	165	5.0	173.2				ug/L	8	Standard
	Tl	203	311000.2	0.9	**49.9527**	0.314	0.6	ug/L	1	Standard
	Tl	205	410351.1	0.8	**53.3794**	0.459	0.9	ug/L	3	Standard
	Pb	206	143512.8	0.3	**53.7239**	0.219	0.4	ug/L	80	Standard
	Pb	207	128269.3	0.2	**53.3016**	0.183	0.3	ug/L	73	Standard
	Pb	208	286590.5	0.3	**48.6580**	0.286	0.6	ug/L	190	Standard
	U	238	184753.3	0.3	**48.1287**	0.185	0.4	ug/L	0	Standard
>	Bi	209	287064.2	0.3				ug/L	276439	Standard

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Na	23	31.7	9.1	**8.0103**	0.872	10.9	mg/L	2	Standard
Mg	24	4815.8	4.4	**5.0464**	0.232	4.6	mg/L	37	Standard
K	39	61.7	20.4	**3.3771**	0.813	24.1	mg/L	3	Standard
Ca	43	48.3	21.5	**4.1448**	3.285	79.2	mg/L	43	Standard
Fe	54	11576.9	2.2	**5.6952**	0.148	2.6	mg/L	262	Standard
Fe	57	3335.4	7.0	**5.8653**	0.429	7.3	mg/L	65	Standard
> **Sc-1**	45	26002.3	1.2				mg/L	26874	Standard
Cl	35	151424.9	0.2				ug/L	141022	Standard
Kr	83	136.3	10.6				ug/L	75	Standard
Br	81	3130.3	2.9				ug/L	2810	Standard
P	31	512445.6	1.0				ug/L	458976	Standard
S	34	122587.3	1.2				ug/L	103378	Standard
Sr	88	38.3	30.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	9.5	0.0				mg/L	10	Standard
Ho-1	165	5.0	173.2				mg/L	8	Standard
Er	166	10.0					mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.301	
Be	9	100.416		
Al	27	91.687		
Sc	45			
Ti	47	97.801		
V	51	93.799		
Cr	52	96.122		
Cr	53			
Mn	55	100.026		
Co	59	99.281		
Ni	60	98.846		
Cu	65	100.745		
Zn	66	102.088		
> Ge	72		105.384	
As	75	99.235		
Se	82	100.288		
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	104.517	
|	Ag	107	104.512	
|	Cd	111	100.159	
|	Cd	114		
|>	In	115		106.499
|	Sn	118	102.237	
|	Sb	123	97.302	
⌊	Ba	135	99.874	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	99.905	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	97.316	
|	U	238	96.257	
⌊>	Bi	209		103.844
⌈	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 13:44:40
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	282681.2	1.2				ug/L	269614	Standard
	Be	9	30.0	16.7	**-0.0064**	0.002	24.4	ug/L	23	Standard
	Al	27	1405.1	13.1	**-0.0007**	0.001	119.5	ug/L	1170	Standard
	Sc	45	25246.0	2.9				ug/L	26874	Standard
	Ti	47	11.0	18.2	**-0.0564**	0.008	13.7	ug/L	25	Standard
	V	51	1154.5	1.7	**-0.0229**	0.002	7.7	ug/L	1686	Standard
	Cr	52	4104.6	0.4	**-0.1075**	0.005	4.9	ug/L	6098	Standard
	Cr	53	153.3	11.5	**-0.0204**	0.013	65.9	ug/L	193	Standard
	Mn	55	1825.4	5.1	**-0.0073**	0.008	102.4	ug/L	1232	Standard
	Co	59	99.3	10.1	**-0.0051**	0.001	21.7	ug/L	106	Standard
	Ni	60	487.0	4.5	**-0.0291**	0.008	28.6	ug/L	556	Standard
	Cu	65	173.0	7.8	**0.0040**	0.005	117.1	ug/L	124	Standard
	Zn	66	1145.0	11.8	**0.5760**	0.095	16.6	ug/L	196	Standard
>	**Ge**	72	490199.3	0.6				ug/L	473313	Standard
	As	75	-363.8	13.6	**-0.0305**	0.032	105.3	ug/L	-286	Standard
	Se	82	-67.1	11.1	**-0.1353**	0.047	35.0	ug/L	-33	Standard
	Se-1	77	73.0	7.2	**-0.1049**	0.047	44.6	ug/L	86	Standard
>	**Ga**	71	28.3	36.7				mg/L	35	Standard
	Rb	85	20.0	43.3				ug/L	13	Standard
	Y	89	445432.8	0.4				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	75.1	24.8	**0.0031**	0.004	143.3	ug/L	10	Standard
	Ag	107	75.0	15.1	**-0.0042**	0.002	42.7	ug/L	53	Standard
	Cd	111	6.2	48.8	**-0.0002**	0.001	767.0	mg/L	1	Standard
	Cd	114	22.2	38.9	**-0.0056**	0.002	26.8	ug/L	32	Standard
>	**In**	115	519212.4	1.2				ug/L	494305	Standard
	Sn	118	102.7	6.8	**0.0183**	0.006	32.0	ug/L	53	Standard
	Sb	123	299.0	31.0	**0.1057**	0.033	30.8	ug/L	7	Standard
	Ba	135	69.7	14.2	**0.0237**	0.005	21.2	ug/L	11	Standard
	Ce	140	10.0	132.3				ug/L	10	Standard
>	**Tb**	159	540699.3	1.1				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	16.0	34.8	**0.0004**	0.001	208.0	ug/L	1	Standard
	Tl	205	18.3	56.8	**0.0017**	0.001	78.7	ug/L	3	Standard
	Pb	206	117.3	9.6	**0.0021**	0.004	199.8	ug/L	80	Standard
	Pb	207	96.3	21.6	**0.0080**	0.008	105.0	ug/L	73	Standard
	Pb	208	187.3	5.1	**-0.0065**	0.001	21.6	ug/L	190	Standard
	U	238	7.7	19.9	**0.0001**	0.000	291.2	ug/L	0	Standard
>	**Bi**	209	286814.3	0.7				ug/L	276439	Standard

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Kym H. Rhoden

Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	36.7	79.9	**0.0081**	0.033	400.6	mg/L	37	Standard
K	39	1.7	173.2	**-0.2748**	0.184	67.0	mg/L	3	Standard
Ca	43	25.0	52.9	**-2.6534**	4.054	152.8	mg/L	43	Standard
Fe	54	297.9	8.6	**0.0277**	0.010	37.7	mg/L	262	Standard
Fe	57	71.7	26.4	**0.0350**	0.034	97.7	mg/L	65	Standard
> **Sc-1**	45	25246.0	2.9				mg/L	26874	Standard
Cl	35	147351.1	1.4				ug/L	141022	Standard
Kr	83	120.3	4.3				ug/L	75	Standard
Br	81	2923.6	1.1				ug/L	2810	Standard
P	31	486076.5	1.4				ug/L	458976	Standard
S	34	114719.5	2.3				ug/L	103378	Standard
Sr	88	35.0	57.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.5	179.6				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.846	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		103.568	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	105.039
	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	103.753
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079305
Sample Date/Time: Monday, November 18, 2013 13:47:46
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	272198.6	1.5				ug/L	269614	Standard
	Be	9	55.0	9.1	**0.0023**	0.002	79.2	ug/L	23	Standard
	Al	27	5441367.6	1.9	**25.6928**	0.711	2.8	ug/L	1170	Standard
	Sc	45	25443.0	1.6				ug/L	26874	Standard
	Ti	47	786.7	9.8	**3.1270**	0.323	10.3	ug/L	25	Standard
	V	51	85183.7	1.0	**12.3094**	0.159	1.3	ug/L	1686	Standard
	Cr	52	27553.5	8.5	**3.4796**	0.348	10.0	ug/L	6098	Standard
	Cr	53	8253.9	10.3	**6.6616**	0.682	10.2	ug/L	193	Standard
	Mn	55	117502.5	0.3	**8.8883**	0.032	0.4	ug/L	1232	Standard
	Co	59	1026.7	1.2	**0.0981**	0.001	1.3	ug/L	106	Standard
	Ni	60	5122.2	0.9	**1.7287**	0.017	1.0	ug/L	556	Standard
	Cu	65	2933.6	4.2	**1.0934**	0.051	4.7	ug/L	124	Standard
	Zn	66	24043.4	1.1	**17.0727**	0.175	1.0	ug/L	196	Standard
>	**Ge**	72	460643.5	0.2				ug/L	473313	Standard
	As	75	235.5	17.9	**0.3790**	0.030	8.0	ug/L	-286	Standard
	Se	82	52.2	9.3	**0.6621**	0.034	5.2	ug/L	-33	Standard
	Se-1	77	555.7	15.7	**4.5124**	0.820	18.2	ug/L	86	Standard
>	**Ga**	71	351.7	11.0				mg/L	35	Standard
	Rb	85	146994.6	0.7				ug/L	13	Standard
	Y	89	425715.0	1.2				ug/L	439493	Standard
>	**Rh**	103	111.7	22.5				ug/L	5	Standard
	Mo	98	17827.5	1.0	**4.7813**	0.058	1.2	ug/L	10	Standard
	Ag	107	53.0	10.5	**-0.0066**	0.001	14.1	ug/L	53	Standard
	Cd	111	149.4	2.3	**0.0687**	0.002	2.5	mg/L	1	Standard
	Cd	114	423.5	11.2	**0.0707**	0.009	12.2	ug/L	32	Standard
>	**In**	115	470862.9	0.6				ug/L	494305	Standard
	Sn	118	303.3	12.6	**0.1869**	0.030	15.9	ug/L	53	Standard
	Sb	123	6225.8	5.4	**2.4629**	0.122	4.9	ug/L	7	Standard
	Ba	135	27222.8	0.7	**15.5857**	0.036	0.2	ug/L	11	Standard
	Ce	140	1521.7	6.8				ug/L	10	Standard
>	**Tb**	159	508643.7	0.7				ug/L	538219	Standard
	Ho	165	30.0	60.1				ug/L	8	Standard
	Tl	203	72.3	8.1	**0.0110**	0.001	10.4	ug/L	1	Standard
	Tl	205	80.0	10.8	**0.0111**	0.001	11.6	ug/L	3	Standard
	Pb	206	1402.7	1.1	**0.5521**	0.009	1.7	ug/L	80	Standard
	Pb	207	1123.0	5.0	**0.4958**	0.029	5.9	ug/L	73	Standard
	Pb	208	2636.4	2.1	**0.4680**	0.014	3.0	ug/L	190	Standard
	U	238	366.7	10.1	**0.1061**	0.011	10.2	ug/L	0	Standard
>	**Bi**	209	253989.5	0.6				ug/L	276439	Standard

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	Na	23	108.3	11.6	**29.0709**	3.625	12.5	mg/L	2	Standard
	Mg	24	87320.9	1.3	**94.0894**	2.734	2.9	mg/L	37	Standard
	K	39	71.7	22.4	**4.0667**	0.935	23.0	mg/L	3	Standard
	Ca	43	161.7	31.0	**38.9585**	14.899	38.2	mg/L	43	Standard
	Fe	54	403.3	9.3	**0.0808**	0.019	23.9	mg/L	262	Standard
	Fe	57	221.7	14.3	**0.3087**	0.063	20.3	mg/L	65	Standard
>	**Sc-1**	45	25443.0	1.6				mg/L	26874	Standard
	Cl	35	184314.5	3.5				ug/L	141022	Standard
	Kr	83	121.7	1.7				ug/L	75	Standard
	Br	81	8885.9	4.1				ug/L	2810	Standard
	P	31	493664.5	1.5				ug/L	458976	Standard
	S	34	78906.7	2.9				ug/L	103378	Standard
	Sr	88	513.3	14.5				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	170.0	5.9				mg/L	0	Standard
	Dy	164	41.4	37.0				mg/L	10	Standard
	Ho-1	165	30.0	60.1				mg/L	8	Standard
	Er	166	40.0	66.1				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		100.958	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.323	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	95.257
	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	91.879
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079308
Sample Date/Time: Monday, November 18, 2013 13:57:08
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	267127.7	1.1				ug/L	269614	Standard
	Be	9	198.3	21.1	**0.0513**	0.014	26.6	ug/L	23	Standard
	Al	27	64268132.7	0.7	**309.2628**	4.656	1.5	ug/L	1170	Standard
	Sc	45	26970.7	1.6				ug/L	26874	Standard
	Ti	47	5312.6	1.8	**20.9993**	0.487	2.3	ug/L	25	Standard
	V	51	2110331.5	13.4	**299.7582**	42.339	14.1	ug/L	1686	Standard
	Cr	52	179439577.9	1.9	**26312.9234**	450.217	1.7	ug/L	6098	Standard
	Cr	53	28484275.2	2.5	**22738.5072**	703.922	3.1	ug/L	193	Standard
	Mn	55	4463662.6	1.0	**332.0302**	4.121	1.2	ug/L	1232	Standard
	Co	59	16143.9	1.4	**1.7134**	0.018	1.0	ug/L	106	Standard
	Ni	60	72612.3	0.9	**26.3022**	0.086	0.3	ug/L	556	Standard
	Cu	65	252873.9	1.0	**96.2210**	0.332	0.3	ug/L	124	Standard
	Zn	66	37938.8	2.3	**26.2013**	0.789	3.0	ug/L	196	Standard
>	Ge	72	475586.3	0.8				ug/L	473313	Standard
	As	75	934.3	10.9	**0.8536**	0.065	7.6	ug/L	-286	Standard
	Se	82	-46.7	67.2	**-0.0130**	0.212	1632.7	ug/L	-33	Standard
	Se-1	77	133.3	13.7	**0.4684**	0.158	33.7	ug/L	86	Standard
>	Ga	71	3308.7	3.3				mg/L	35	Standard
	Rb	85	15134.2	1.3				ug/L	13	Standard
	Y	89	440503.5	0.5				ug/L	439493	Standard
>	Rh	103	61.7	28.5				ug/L	5	Standard
	Mo	98	17637.3	0.2	**4.5859**	0.126	2.8	ug/L	10	Standard
	Ag	107	2643.2	3.8	**0.3922**	0.009	2.4	ug/L	53	Standard
	Cd	111	47.1	10.9	**0.0190**	0.003	15.0	mg/L	1	Standard
	Cd	114	15384.8	2.7	**2.8125**	0.047	1.7	ug/L	32	Standard
>	In	115	485831.7	2.5				ug/L	494305	Standard
	Sn	118	131662.1	2.1	**102.3176**	0.972	0.9	ug/L	53	Standard
	Sb	123	3337.2	2.6	**1.2790**	0.014	1.1	ug/L	7	Standard
	Ba	135	21121.7	2.3	**11.7174**	0.028	0.2	ug/L	11	Standard
	Ce	140	15918.4	1.6				ug/L	10	Standard
>	Tb	159	519922.9	1.4				ug/L	538219	Standard
	Ho	165	440.0	7.1				ug/L	8	Standard
	Tl	203	71.3	14.1	**0.0102**	0.002	15.2	ug/L	1	Standard
	Tl	205	106.7	28.6	**0.0144**	0.005	32.1	ug/L	3	Standard
	Pb	206	6685.8	2.0	**2.6711**	0.090	3.4	ug/L	80	Standard
	Pb	207	5141.9	3.9	**2.2822**	0.047	2.0	ug/L	73	Standard
	Pb	208	12350.0	1.6	**2.2338**	0.008	0.3	ug/L	190	Standard
	U	238	1507.4	1.3	**0.4234**	0.005	1.2	ug/L	0	Standard
>	Bi	209	265127.4	1.9				ug/L	276439	Standard

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	Na	23	290.0	18.6	**73.8981**	12.846	17.4	mg/L	2	Standard
	Mg	24	35875.8	0.9	**36.4429**	0.679	1.9	mg/L	37	Standard
	K	39	15.0	33.3	**0.4995**	0.294	58.9	mg/L	3	Standard
	Ca	43	288.3	20.7	**72.9431**	18.556	25.4	mg/L	43	Standard
	Fe	54	59946.3	2.4	**28.9334**	0.488	1.7	mg/L	262	Standard
	Fe	57	18149.2	1.4	**31.1839**	0.841	2.7	mg/L	65	Standard
>	**Sc-1**	45	26970.7	1.6				mg/L	26874	Standard
	Cl	35	558733.3	1.3				ug/L	141022	Standard
	Kr	83	172.3	16.8				ug/L	75	Standard
	Br	81	4404.0	3.9				ug/L	2810	Standard
	P	31	681283.9	1.5				ug/L	458976	Standard
	S	34	79794.8	3.6				ug/L	103378	Standard
	Sr	88	330.0	2.6				ug/L	30	Standard
	C	12	6.7	86.6				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	561.0	13.6				mg/L	10	Standard
	Ho-1	165	440.0	7.1				mg/L	8	Standard
	Er	166	466.7	11.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		99.078	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		100.480	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.286
|	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	95.908
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311079309
Sample Date/Time: Monday, November 18, 2013 14:00:14
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	334297.8	7.0				ug/L	269614	Standard
	Be	9	15.0	0.0	**-0.0120**	0.000	2.5	ug/L	23	Standard
	Al	27	1870.1	42.8	**0.0002**	0.004	1652.6	ug/L	1170	Standard
	Sc	45	28700.6	6.2				ug/L	26874	Standard
	Ti	47	13.3	22.9	**-0.0540**	0.010	19.2	ug/L	25	Standard
	V	51	333.0	32.9	**-0.1424**	0.011	7.9	ug/L	1686	Standard
	Cr	52	4597.8	35.6	**-0.1147**	0.228	198.9	ug/L	6098	Standard
	Cr	53	683.4	57.5	**0.3311**	0.283	85.5	ug/L	193	Standard
	Mn	55	1115.7	13.5	**-0.0687**	0.013	19.4	ug/L	1232	Standard
	Co	59	67.3	4.8	**-0.0093**	0.001	8.0	ug/L	106	Standard
	Ni	60	310.7	8.0	**-0.1056**	0.012	11.5	ug/L	556	Standard
	Cu	65	88.0	8.9	**-0.0315**	0.004	13.5	ug/L	124	Standard
	Zn	66	924.7	25.8	**0.3409**	0.106	31.0	ug/L	196	Standard
>	**Ge**	72	564401.5	7.2				ug/L	473313	Standard
	As	75	-319.0	68.4	**0.0204**	0.145	711.9	ug/L	-286	Standard
	Se	82	-88.6	78.4	**-0.2198**	0.446	202.7	ug/L	-33	Standard
	Se-1	77	53.3	1.1	**-0.3409**	0.035	10.3	ug/L	86	Standard
>	**Ga**	71	35.0	28.6				mg/L	35	Standard
	Rb	85	15.0	0.0				ug/L	13	Standard
	Y	89	536172.6	5.6				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	14.0	37.4	**-0.0124**	0.001	8.6	ug/L	10	Standard
	Ag	107	67.7	14.6	**-0.0069**	0.001	8.4	ug/L	53	Standard
	Cd	111	3.0	33.6	**-0.0018**	0.000	25.0	mg/L	1	Standard
	Cd	114	20.6	35.6	**-0.0065**	0.001	18.3	ug/L	32	Standard
>	**In**	115	628450.4	8.2				ug/L	494305	Standard
	Sn	118	103.3	14.1	**0.0059**	0.009	155.2	ug/L	53	Standard
	Sb	123	26.8	14.9	**0.0064**	0.001	8.4	ug/L	7	Standard
	Ba	135	10.7	28.6	**-0.0080**	0.001	13.2	ug/L	11	Standard
	Ce	140	28.3	10.2				ug/L	10	Standard
>	**Tb**	159	710964.5	8.7				ug/L	538219	Standard
	Ho	165	10.0	132.3				ug/L	8	Standard
	Tl	203	3.7	103.3	**-0.0017**	0.000	22.8	ug/L	1	Standard
	Tl	205	13.3	142.0	**0.0005**	0.002	315.9	ug/L	3	Standard
	Pb	206	114.7	16.5	**-0.0102**	0.002	24.5	ug/L	80	Standard
	Pb	207	110.3	14.1	**0.0018**	0.001	51.5	ug/L	73	Standard
	Pb	208	259.7	14.6	**-0.0059**	0.001	19.6	ug/L	190	Standard
	U	238	0.7	86.6	**-0.0017**	0.000	6.7	ug/L	0	Standard
>	**Bi**	209	388401.2	11.6				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	33.3	8.7	**-0.0000**	0.002	7389.2	mg/L	37	Standard
K	39	1.7	173.2	**-0.2954**	0.149	50.3	mg/L	3	Standard
Ca	43	31.7	24.1	**-1.8046**	1.560	86.5	mg/L	43	Standard
Fe	54	134.0	45.0	**-0.0646**	0.030	46.8	mg/L	262	Standard
Fe	57	93.3	18.8	**0.0546**	0.030	54.2	mg/L	65	Standard
> **Sc-1**	45	28700.6	6.2				mg/L	26874	Standard
Cl	35	57893.3	22.2				ug/L	141022	Standard
Kr	83	155.7	67.1				ug/L	75	Standard
Br	81	1083.4	21.7				ug/L	2810	Standard
P	31	196769.7	42.9				ug/L	458976	Standard
S	34	41583.9	22.6				ug/L	103378	Standard
Sr	88	55.0	41.7				ug/L	30	Standard
C	12	6.7	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.5	107.6				mg/L	10	Standard
Ho-1	165	10.0	132.3				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		123.991	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		119.245	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	127.138
|	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	140.502
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1311079313 WG452687-03
Sample Date/Time: Monday, November 18, 2013 14:03:18
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	277028.2	4.6				ug/L	269614	Standard
	Be	9	28.3	36.7	**-0.0067**	0.004	54.2	ug/L	23	Standard
	Al	27	3769237.3	1.7	**17.4971**	0.525	3.0	ug/L	1170	Standard
	Sc	45	25795.3	3.0				ug/L	26874	Standard
	Ti	47	130.3	8.7	**0.4145**	0.044	10.7	ug/L	25	Standard
	V	51	129409.6	1.3	**18.0469**	0.022	0.1	ug/L	1686	Standard
	Cr	52	33600.3	20.9	**4.1908**	0.986	23.5	ug/L	6098	Standard
	Cr	53	8394.1	20.8	**6.5025**	1.352	20.8	ug/L	193	Standard
	Mn	55	34379.3	1.5	**2.3981**	0.014	0.6	ug/L	1232	Standard
	Co	59	1029.4	5.5	**0.0939**	0.005	5.1	ug/L	106	Standard
	Ni	60	4983.2	0.8	**1.6026**	0.036	2.2	ug/L	556	Standard
	Cu	65	2197.8	3.2	**0.7702**	0.030	3.9	ug/L	124	Standard
	Zn	66	5421.3	6.0	**3.5433**	0.214	6.0	ug/L	196	Standard
>	**Ge**	72	479528.7	1.2				ug/L	473313	Standard
	As	75	330.7	26.5	**0.4374**	0.060	13.8	ug/L	-286	Standard
	Se	82	89.1	44.0	**0.8930**	0.260	29.1	ug/L	-33	Standard
	Se-1	77	394.7	16.6	**2.8420**	0.618	21.7	ug/L	86	Standard
>	**Ga**	71	465.0	10.9				mg/L	35	Standard
	Rb	85	207474.3	1.1				ug/L	13	Standard
	Y	89	435241.5	0.9				ug/L	439493	Standard
>	**Rh**	103	118.3	19.1				ug/L	5	Standard
	Mo	98	26609.5	1.4	**6.8092**	0.041	0.6	ug/L	10	Standard
	Ag	107	68.0	4.4	**-0.0047**	0.000	7.4	ug/L	53	Standard
	Cd	111	10.7	60.4	**0.0020**	0.003	148.9	mg/L	1	Standard
	Cd	114	132.6	22.4	**0.0144**	0.005	35.4	ug/L	32	Standard
>	**In**	115	493952.3	1.1				ug/L	494305	Standard
	Sn	118	90.0	13.7	**0.0124**	0.009	69.6	ug/L	53	Standard
	Sb	123	402.9	2.9	**0.1506**	0.006	4.1	ug/L	7	Standard
	Ba	135	23409.7	0.2	**12.7750**	0.139	1.1	ug/L	11	Standard
	Ce	140	246.7	25.5				ug/L	10	Standard
>	**Tb**	159	519355.0	1.0				ug/L	538219	Standard
	Ho	165	11.7	65.5				ug/L	8	Standard
	Tl	203	70.0	13.6	**0.0101**	0.002	16.4	ug/L	1	Standard
	Tl	205	88.3	6.5	**0.0118**	0.001	6.9	ug/L	3	Standard
	Pb	206	399.0	1.8	**0.1211**	0.003	2.4	ug/L	80	Standard
	Pb	207	329.7	4.5	**0.1174**	0.007	5.8	ug/L	73	Standard
	Pb	208	785.3	2.5	**0.1071**	0.003	3.2	ug/L	190	Standard
	U	238	216.3	1.2	**0.0596**	0.001	1.1	ug/L	0	Standard
>	**Bi**	209	263321.5	0.2				ug/L	276439	Standard

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Na	23	143.3	8.1	**38.1184**	4.103	10.8	mg/L	2	Standard
Mg	24	44943.3	2.4	**47.7592**	1.606	3.4	mg/L	37	Standard
K	39	125.0	28.8	**7.2574**	2.089	28.8	mg/L	3	Standard
Ca	43	181.7	16.6	**44.6281**	10.726	24.0	mg/L	43	Standard
Fe	54	280.6	8.8	**0.0157**	0.011	71.9	mg/L	262	Standard
Fe	57	326.7	15.6	**0.4907**	0.078	15.8	mg/L	65	Standard
> **Sc-1**	45	25795.3	3.0				mg/L	26874	Standard
Cl	35	208339.5	1.7				ug/L	141022	Standard
Kr	83	117.7	19.0				ug/L	75	Standard
Br	81	10820.5	3.4				ug/L	2810	Standard
P	31	533191.3	3.0				ug/L	458976	Standard
S	34	79189.8	1.7				ug/L	103378	Standard
Sr	88	561.7	2.6				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	270.0	24.3				mg/L	0	Standard
Dy	164	24.9	23.8				mg/L	10	Standard
Ho-1	165	11.7	65.5				mg/L	8	Standard
Er	166	36.7	15.7				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		102.750	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.313	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	99.929
	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	95.255
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079313DP WG452687-10
Sample Date/Time: Monday, November 18, 2013 14:06:23
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	279905.4	1.3				ug/L	269614	Standard
	Be	9	38.3	27.2	**-0.0036**	0.004	98.8	ug/L	23	Standard
	Al	27	3808329.1	0.6	**17.4821**	0.148	0.8	ug/L	1170	Standard
	Sc	45	25780.2	1.2				ug/L	26874	Standard
	Ti	47	120.0	13.9	**0.3747**	0.068	18.0	ug/L	25	Standard
	V	51	128768.2	2.1	**17.9846**	0.281	1.6	ug/L	1686	Standard
	Cr	52	29103.0	6.1	**3.5490**	0.282	8.0	ug/L	6098	Standard
	Cr	53	9176.1	0.3	**7.1366**	0.058	0.8	ug/L	193	Standard
	Mn	55	35578.7	1.4	**2.4909**	0.043	1.7	ug/L	1232	Standard
	Co	59	1014.7	2.2	**0.0926**	0.003	2.9	ug/L	106	Standard
	Ni	60	5006.8	1.4	**1.6138**	0.021	1.3	ug/L	556	Standard
	Cu	65	2002.8	2.2	**0.6976**	0.014	2.0	ug/L	124	Standard
	Zn	66	5623.0	9.8	**3.6895**	0.389	10.5	ug/L	196	Standard
>	Ge	72	478764.6	0.5				ug/L	473313	Standard
	As	75	337.3	10.6	**0.4422**	0.025	5.6	ug/L	-286	Standard
	Se	82	95.2	11.9	**0.9346**	0.079	8.4	ug/L	-33	Standard
	Se-1	77	589.0	2.4	**4.6184**	0.150	3.2	ug/L	86	Standard
>	Ga	71	441.7	13.7				mg/L	35	Standard
	Rb	85	212150.1	1.1				ug/L	13	Standard
	Y	89	433964.1	1.1				ug/L	439493	Standard
>	Rh	103	116.7	21.6				ug/L	5	Standard
	Mo	98	26724.4	1.6	**6.8716**	0.103	1.5	ug/L	10	Standard
	Ag	107	55.7	23.9	**-0.0065**	0.002	31.1	ug/L	53	Standard
	Cd	111	16.0	32.4	**0.0044**	0.002	52.7	mg/L	1	Standard
	Cd	114	114.3	30.6	**0.0113**	0.006	56.1	ug/L	32	Standard
>	In	115	491591.5	0.5				ug/L	494305	Standard
	Sn	118	90.0	21.1	**0.0127**	0.014	113.5	ug/L	53	Standard
	Sb	123	382.1	5.4	**0.1434**	0.008	5.9	ug/L	7	Standard
	Ba	135	23413.7	0.7	**12.8379**	0.133	1.0	ug/L	11	Standard
	Ce	140	176.7	11.4				ug/L	10	Standard
>	Tb	159	521920.7	0.8				ug/L	538219	Standard
	Ho	165	13.3	57.3				ug/L	8	Standard
	Tl	203	81.7	22.8	**0.0122**	0.003	26.9	ug/L	1	Standard
	Tl	205	115.0	17.4	**0.0156**	0.003	18.1	ug/L	3	Standard
	Pb	206	358.3	2.2	**0.1046**	0.004	3.5	ug/L	80	Standard
	Pb	207	286.7	4.8	**0.0980**	0.007	6.7	ug/L	73	Standard
	Pb	208	643.0	1.7	**0.0808**	0.002	2.3	ug/L	190	Standard
	U	238	216.3	7.1	**0.0596**	0.004	7.4	ug/L	0	Standard
>	Bi	209	263137.3	0.3				ug/L	276439	Standard

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Na	23	138.3	18.2	**36.6740**	6.347	17.3	mg/L	2	Standard
Mg	24	45713.9	1.9	**48.5802**	0.339	0.7	mg/L	37	Standard
K	39	116.7	9.9	**6.7843**	0.797	11.7	mg/L	3	Standard
Ca	43	160.0	19.5	**37.8509**	8.903	23.5	mg/L	43	Standard
Fe	54	294.8	5.3	**0.0231**	0.010	41.4	mg/L	262	Standard
Fe	57	298.3	22.3	**0.4411**	0.119	27.1	mg/L	65	Standard
> **Sc-1**	45	25780.2	1.2				mg/L	26874	Standard
Cl	35	212611.4	0.6				ug/L	141022	Standard
Kr	83	104.7	9.7				ug/L	75	Standard
Br	81	10113.4	0.6				ug/L	2810	Standard
P	31	527486.1	2.2				ug/L	458976	Standard
S	34	82799.0	0.9				ug/L	103378	Standard
Sr	88	495.0	5.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	313.3	25.6				mg/L	0	Standard
Dy	164	15.7	34.4				mg/L	10	Standard
Ho-1	165	13.3	57.3				mg/L	8	Standard
Er	166	20.0	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		103.817	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.152	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	99.451
	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	95.188
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311079313DP WG452687-10
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Method 6020 - Summary Report

Sample ID: L1311079309
Sample Date/Time: Monday, November 18, 2013 14:09:29
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	303108.8	3.1				ug/L	269614	Standard
	Be	9	25.0	34.6	**-0.0086**	0.003	30.4	ug/L	23	Standard
	Al	27	6392320.1	1.3	**27.1127**	0.668	2.5	ug/L	1170	Standard
	Sc	45	27595.1	3.1				ug/L	26874	Standard
	Ti	47	83.0	3.2	**0.2056**	0.012	5.9	ug/L	25	Standard
	V	51	1855.9	4.7	**0.0615**	0.014	23.1	ug/L	1686	Standard
	Cr	52	10952.4	23.8	**0.7911**	0.349	44.1	ug/L	6098	Standard
	Cr	53	2583.6	57.0	**1.7627**	1.078	61.2	ug/L	193	Standard
	Mn	55	824305.1	1.4	**56.5046**	1.133	2.0	ug/L	1232	Standard
	Co	59	1099.4	2.2	**0.0933**	0.003	3.7	ug/L	106	Standard
	Ni	60	4871.8	1.3	**1.4403**	0.002	0.2	ug/L	556	Standard
	Cu	65	3183.7	1.5	**1.0595**	0.025	2.4	ug/L	124	Standard
	Zn	66	20921.8	1.7	**13.2424**	0.156	1.2	ug/L	196	Standard
>	Ge	72	515069.9	1.2				ug/L	473313	Standard
	As	75	-17.7	384.1	**0.2004**	0.044	21.7	ug/L	-286	Standard
	Se	82	-3.9	215.2	**0.2761**	0.053	19.1	ug/L	-33	Standard
	Se-1	77	194.3	4.4	**0.8933**	0.091	10.2	ug/L	86	Standard
>	Ga	71	45.0	29.4				mg/L	35	Standard
	Rb	85	15693.1	3.0				ug/L	13	Standard
	Y	89	473657.0	1.2				ug/L	439493	Standard
>	Rh	103	60.0	8.3				ug/L	5	Standard
	Mo	98	1256.7	4.0	**0.2805**	0.012	4.3	ug/L	10	Standard
	Ag	107	53.7	10.6	**-0.0075**	0.001	11.0	ug/L	53	Standard
	Cd	111	10.7	63.3	**0.0016**	0.003	176.8	mg/L	1	Standard
	Cd	114	72.2	21.9	**0.0025**	0.003	101.9	ug/L	32	Standard
>	In	115	538483.8	1.3				ug/L	494305	Standard
	Sn	118	540.0	8.4	**0.3227**	0.036	11.3	ug/L	53	Standard
	Sb	123	254.2	5.5	**0.0865**	0.005	5.6	ug/L	7	Standard
	Ba	135	28278.0	0.3	**14.1575**	0.219	1.5	ug/L	11	Standard
	Ce	140	125.0	6.9				ug/L	10	Standard
>	Tb	159	557230.5	0.8				ug/L	538219	Standard
	Ho	165	16.7	17.3				ug/L	8	Standard
	Tl	203	29.3	7.1	**0.0025**	0.000	12.9	ug/L	1	Standard
	Tl	205	35.0	28.6	**0.0038**	0.001	34.0	ug/L	3	Standard
	Pb	206	290.3	8.2	**0.0657**	0.009	14.1	ug/L	80	Standard
	Pb	207	243.0	3.3	**0.0678**	0.004	5.3	ug/L	73	Standard
	Pb	208	582.7	4.0	**0.0595**	0.004	7.2	ug/L	190	Standard
	U	238	4.0	86.6	**-0.0008**	0.001	107.1	ug/L	0	Standard
>	Bi	209	290322.8	0.4				ug/L	276439	Standard

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	Na	23	55.0	39.6	**13.3761**	5.498	41.1	mg/L	2	Standard
	Mg	24	10235.1	1.3	**10.1448**	0.402	4.0	mg/L	37	Standard
	K	39	26.7	10.8	**1.1514**	0.209	18.1	mg/L	3	Standard
	Ca	43	80.0	21.7	**12.2128**	4.894	40.1	mg/L	43	Standard
	Fe	54	781.1	7.9	**0.2437**	0.028	11.6	mg/L	262	Standard
	Fe	57	276.7	21.2	**0.3697**	0.102	27.6	mg/L	65	Standard
>	**Sc-1**	45	27595.1	3.1				mg/L	26874	Standard
	Cl	35	185552.8	1.7				ug/L	141022	Standard
	Kr	83	97.7	8.5				ug/L	75	Standard
	Br	81	7465.2	7.6				ug/L	2810	Standard
	P	31	526277.9	1.1				ug/L	458976	Standard
	S	34	96211.2	0.9				ug/L	103378	Standard
	Sr	88	250.0	17.1				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	16.5	124.5				mg/L	10	Standard
	Ho-1	165	16.7	17.3				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		112.423	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		108.822	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.937
|	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	105.022
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079301
Sample Date/Time: Monday, November 18, 2013 14:14:58
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	259522.8	2.2				ug/L	269614	Standard
	Be	9	23.3	53.9	**-0.0078**	0.005	58.4	ug/L	23	Standard
	Al	27	263112.0	1.8	**1.2967**	0.051	3.9	ug/L	1170	Standard
	Sc	45	23329.6	2.0				ug/L	26874	Standard
	Ti	47	25.0	25.0	**0.0059**	0.026	442.1	ug/L	25	Standard
	V	51	1479.6	4.1	**0.0397**	0.010	24.4	ug/L	1686	Standard
	Cr	52	4941.5	10.2	**0.0729**	0.079	108.6	ug/L	6098	Standard
	Cr	53	328.3	28.5	**0.1372**	0.079	57.4	ug/L	193	Standard
	Mn	55	52375.7	1.7	**3.9716**	0.068	1.7	ug/L	1232	Standard
	Co	59	611.7	3.3	**0.0537**	0.002	4.0	ug/L	106	Standard
	Ni	60	775.0	3.5	**0.0968**	0.011	11.0	ug/L	556	Standard
	Cu	65	211.3	2.4	**0.0250**	0.002	7.1	ug/L	124	Standard
	Zn	66	37442.2	2.2	**27.2769**	0.536	2.0	ug/L	196	Standard
>	Ge	72	450908.2	0.3				ug/L	473313	Standard
	As	75	-292.5	16.7	**-0.0001**	0.036	24689.7	ug/L	-286	Standard
	Se	82	-49.0	30.7	**-0.0453**	0.107	235.8	ug/L	-33	Standard
	Se-1	77	81.0	11.3	**0.0292**	0.087	297.6	ug/L	86	Standard
>	Ga	71	50.0	43.6				mg/L	35	Standard
	Rb	85	768.4	11.4				ug/L	13	Standard
	Y	89	406127.4	2.0				ug/L	439493	Standard
>	Rh	103	13.3	21.7				ug/L	5	Standard
	Mo	98	116.8	7.8	**0.0161**	0.002	14.7	ug/L	10	Standard
	Ag	107	51.0	21.8	**-0.0069**	0.002	25.7	ug/L	53	Standard
	Cd	111	13.5	11.4	**0.0036**	0.001	20.8	mg/L	1	Standard
	Cd	114	43.6	23.0	**-0.0012**	0.002	154.5	ug/L	32	Standard
>	In	115	473110.8	0.7				ug/L	494305	Standard
	Sn	118	53.0	8.6	**-0.0141**	0.003	23.8	ug/L	53	Standard
	Sb	123	63.5	7.0	**0.0235**	0.002	6.9	ug/L	7	Standard
	Ba	135	1344.4	3.0	**0.7542**	0.024	3.1	ug/L	11	Standard
	Ce	140	606.7	6.9				ug/L	10	Standard
>	Tb	159	488029.6	1.5				ug/L	538219	Standard
	Ho	165	33.3	31.2				ug/L	8	Standard
	Tl	203	14.0	12.4	**0.0003**	0.000	104.6	ug/L	1	Standard
	Tl	205	18.3	15.7	**0.0019**	0.000	21.8	ug/L	3	Standard
	Pb	206	120.0	7.4	**0.0065**	0.004	54.8	ug/L	80	Standard
	Pb	207	103.0	14.4	**0.0140**	0.007	46.3	ug/L	73	Standard
	Pb	208	222.0	8.1	**0.0022**	0.003	153.2	ug/L	190	Standard
	U	238	10.0	43.6	**0.0009**	0.001	129.8	ug/L	0	Standard
>	Bi	209	266551.2	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0558**	0.837	1499.5	mg/L	2	Standard
Mg	24	553.3	11.2	**0.6190**	0.081	13.1	mg/L	37	Standard
K	39	1.7	173.2	**-0.2707**	0.191	70.7	mg/L	3	Standard
Ca	43	28.3	20.4	**-0.9087**	1.717	189.0	mg/L	43	Standard
Fe	54	154.3	20.2	**-0.0402**	0.016	39.0	mg/L	262	Standard
Fe	57	95.0	22.9	**0.0931**	0.047	50.1	mg/L	65	Standard
> **Sc-1**	45	23329.6	2.0				mg/L	26874	Standard
Cl	35	143231.9	1.6				ug/L	141022	Standard
Kr	83	101.7	14.1				ug/L	75	Standard
Br	81	2960.3	5.2				ug/L	2810	Standard
P	31	159497.2	2.7				ug/L	458976	Standard
S	34	98304.6	1.2				ug/L	103378	Standard
Sr	88	41.7	18.3				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	35.9	31.8				mg/L	10	Standard
Ho-1	165	33.3	31.2				mg/L	8	Standard
Er	166	16.7	34.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.257	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		95.266	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	95.712
	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	96.423
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079303
Sample Date/Time: Monday, November 18, 2013 14:18:03
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	250963.7	2.3				ug/L	269614	Standard
	Be	9	23.3	32.7	**-0.0076**	0.003	38.7	ug/L	23	Standard
	Al	27	358624.6	0.6	**1.8301**	0.033	1.8	ug/L	1170	Standard
	Sc	45	22531.7	1.7				ug/L	26874	Standard
	Ti	47	15.7	13.3	**-0.0319**	0.009	27.7	ug/L	25	Standard
	V	51	275.2	30.0	**-0.1400**	0.013	9.1	ug/L	1686	Standard
	Cr	52	41690.6	0.4	**5.8782**	0.025	0.4	ug/L	6098	Standard
	Cr	53	7373.5	3.1	**6.1851**	0.192	3.1	ug/L	193	Standard
	Mn	55	29968.6	3.0	**2.2572**	0.068	3.0	ug/L	1232	Standard
	Co	59	122.0	18.1	**-0.0013**	0.003	191.2	ug/L	106	Standard
	Ni	60	857.7	3.8	**0.1348**	0.013	9.9	ug/L	556	Standard
	Cu	65	416.0	2.8	**0.1103**	0.005	4.1	ug/L	124	Standard
	Zn	66	4050.9	3.0	**2.8312**	0.090	3.2	ug/L	196	Standard
>	Ge	72	442578.5	0.2				ug/L	473313	Standard
	As	75	-296.5	21.9	**-0.0070**	0.048	682.9	ug/L	-286	Standard
	Se	82	-51.5	27.1	**-0.0700**	0.101	144.2	ug/L	-33	Standard
	Se-1	77	93.0	9.4	**0.1626**	0.088	53.9	ug/L	86	Standard
>	Ga	71	31.7	48.2				mg/L	35	Standard
	Rb	85	606.7	16.3				ug/L	13	Standard
	Y	89	400592.4	1.5				ug/L	439493	Standard
>	Rh	103	5.0	100.0				ug/L	5	Standard
	Mo	98	156.5	0.8	**0.0273**	0.000	1.5	ug/L	10	Standard
	Ag	107	46.7	12.9	**-0.0075**	0.001	12.3	ug/L	53	Standard
	Cd	111	3.5	44.1	**-0.0012**	0.001	60.7	mg/L	1	Standard
	Cd	114	1395.7	7.7	**0.2573**	0.019	7.4	ug/L	32	Standard
>	In	115	466080.4	0.7				ug/L	494305	Standard
	Sn	118	12403.7	1.7	**9.9967**	0.214	2.1	ug/L	53	Standard
	Sb	123	129.1	5.6	**0.0501**	0.003	6.3	ug/L	7	Standard
	Ba	135	562.7	0.7	**0.3132**	0.003	0.8	ug/L	11	Standard
	Ce	140	43.3	13.3				ug/L	10	Standard
>	Tb	159	482949.9	0.9				ug/L	538219	Standard
	Ho	165	6.7	114.6				ug/L	8	Standard
	Tl	203	16.3	15.4	**0.0007**	0.000	60.9	ug/L	1	Standard
	Tl	205	26.7	71.0	**0.0031**	0.003	86.7	ug/L	3	Standard
	Pb	206	125.0	9.1	**0.0094**	0.005	50.1	ug/L	80	Standard
	Pb	207	88.7	1.7	**0.0083**	0.001	9.1	ug/L	73	Standard
	Pb	208	239.0	2.3	**0.0061**	0.001	17.5	ug/L	190	Standard
	U	238	6.7	56.8	**0.0000**	0.001	2771.1	ug/L	0	Standard
>	Bi	209	261897.8	0.2				ug/L	276439	Standard

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	Na	23	8.3	91.7	**2.1346**	2.330	109.2	mg/L	2	Standard
	Mg	24	1463.4	9.7	**1.7498**	0.185	10.6	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2650**	0.201	75.9	mg/L	3	Standard
	Ca	43	16.7	86.6	**-4.6304**	4.932	106.5	mg/L	43	Standard
	Fe	54	136.7	30.2	**-0.0468**	0.026	54.5	mg/L	262	Standard
	Fe	57	105.0	4.8	**0.1198**	0.007	5.9	mg/L	65	Standard
>	**Sc-1**	45	22531.7	1.7				mg/L	26874	Standard
	Cl	35	144252.2	1.7				ug/L	141022	Standard
	Kr	83	105.7	7.2				ug/L	75	Standard
	Br	81	2780.3	3.2				ug/L	2810	Standard
	P	31	164437.3	5.1				ug/L	458976	Standard
	S	34	97185.7	0.9				ug/L	103378	Standard
	Sr	88	56.7	5.1				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	-0.2	173.2				mg/L	10	Standard
	Ho-1	165	6.7	114.6				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.082	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		93.506	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	94.290
	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	94.740
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079303PS WG453185-01
Sample Date/Time: Monday, November 18, 2013 14:21:08
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	284794.6	2.8				ug/L	269614	Standard
	Be	9	163539.6	0.8	**52.1686**	1.043	2.0	ug/L	23	Standard
	Al	27	392990.1	4.1	**1.7661**	0.026	1.5	ug/L	1170	Standard
	Sc	45	26367.9	1.7				ug/L	26874	Standard
	Ti	47	31.0	11.2	**0.0179**	0.013	72.8	ug/L	25	Standard
	V	51	344844.2	0.8	**46.2498**	0.516	1.1	ug/L	1686	Standard
	Cr	52	390239.1	1.3	**53.5564**	0.484	0.9	ug/L	6098	Standard
	Cr	53	74590.3	6.1	**56.2780**	2.813	5.0	ug/L	193	Standard
	Mn	55	735134.0	0.8	**51.7192**	0.406	0.8	ug/L	1232	Standard
	Co	59	484722.2	0.5	**49.1914**	0.394	0.8	ug/L	106	Standard
	Ni	60	145318.9	0.2	**50.0834**	0.492	1.0	ug/L	556	Standard
	Cu	65	144242.0	0.5	**52.0043**	0.382	0.7	ug/L	124	Standard
	Zn	66	79259.5	2.1	**52.0708**	0.533	1.0	ug/L	196	Standard
>	Ge	72	501702.7	1.2				ug/L	473313	Standard
	As	75	76914.4	0.6	**50.3143**	0.278	0.6	ug/L	-286	Standard
	Se	82	7847.8	1.6	**50.1437**	0.423	0.8	ug/L	-33	Standard
	Se-1	77	5727.7	1.8	**49.1188**	1.467	3.0	ug/L	86	Standard
>	Ga	71	71.7	28.2				mg/L	35	Standard
	Rb	85	775.0	9.3				ug/L	13	Standard
	Y	89	457829.3	0.6				ug/L	439493	Standard
>	Rh	103	26.7	65.8				ug/L	5	Standard
	Mo	98	219.6	5.1	**0.0374**	0.003	6.7	ug/L	10	Standard
	Ag	107	381955.8	0.1	**54.0464**	0.163	0.3	ug/L	53	Standard
	Cd	111	117504.3	0.9	**50.1103**	0.269	0.5	mg/L	1	Standard
	Cd	114	291225.3	0.7	**49.0672**	0.155	0.3	ug/L	32	Standard
>	In	115	528767.5	0.4				ug/L	494305	Standard
	Sn	118	14007.8	1.3	**9.9502**	0.135	1.4	ug/L	53	Standard
	Sb	123	139401.1	0.3	**49.1428**	0.123	0.2	ug/L	7	Standard
	Ba	135	101010.3	0.3	**51.5273**	0.261	0.5	ug/L	11	Standard
	Ce	140	81.7	12.7				ug/L	10	Standard
>	Tb	159	541522.6	0.8				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	312912.6	0.7	**50.3667**	0.739	1.5	ug/L	1	Standard
	Tl	205	417213.3	1.1	**54.3869**	0.945	1.7	ug/L	3	Standard
	Pb	206	146528.2	0.9	**54.9659**	0.373	0.7	ug/L	80	Standard
	Pb	207	130702.0	0.6	**54.4243**	0.192	0.4	ug/L	73	Standard
	Pb	208	290565.2	0.4	**49.4353**	0.373	0.8	ug/L	190	Standard
	U	238	181246.3	0.3	**47.3124**	0.256	0.5	ug/L	0	Standard
>	Bi	209	286479.4	0.7				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0014**	0.743	54107.6	mg/L	2	Standard
Mg	24	1610.1	8.2	**1.6411**	0.113	6.9	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	15.0	145.3	**-5.8554**	6.496	110.9	mg/L	43	Standard
Fe	54	391.2	13.7	**0.0677**	0.028	41.7	mg/L	262	Standard
Fe	57	110.0	15.7	**0.0968**	0.027	27.8	mg/L	65	Standard
> **Sc-1**	45	26367.9	1.7				mg/L	26874	Standard
Cl	35	157022.3	1.8				ug/L	141022	Standard
Kr	83	106.3	6.9				ug/L	75	Standard
Br	81	3317.0	4.1				ug/L	2810	Standard
P	31	481807.4	2.6				ug/L	458976	Standard
S	34	100951.9	2.0				ug/L	103378	Standard
Sr	88	33.3	31.2				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	2.7	219.6				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	13.3	43.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		105.630	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		105.998	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	106.972
|	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	103.632
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311079303PS WG453185-01
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Method 6020 - Summary Report

Sample ID: L1311079303SDL WG453185-02
Sample Date/Time: Monday, November 18, 2013 14:24:13
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 125
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	247642.5	0.8				ug/L	269614	Standard
	Be	9	48.3	57.0	**0.0016**	0.010	618.0	ug/L	23	Standard
	Al	27	1188.4	28.5	**-0.0010**	0.002	181.9	ug/L	1170	Standard
	Sc	45	22955.7	0.9				ug/L	26874	Standard
	Ti	47	11.7	4.9	**-0.0484**	0.002	4.4	ug/L	25	Standard
	V	51	1402.9	2.2	**0.0347**	0.004	11.1	ug/L	1686	Standard
	Cr	52	5390.3	18.0	**0.1675**	0.149	88.7	ug/L	6098	Standard
	Cr	53	186.7	32.3	**0.0227**	0.051	226.2	ug/L	193	Standard
	Mn	55	831.0	35.1	**-0.0720**	0.023	31.9	ug/L	1232	Standard
	Co	59	116.0	54.8	**-0.0019**	0.007	391.4	ug/L	106	Standard
	Ni	60	467.0	13.0	**-0.0162**	0.024	147.3	ug/L	556	Standard
	Cu	65	75.0	20.7	**-0.0288**	0.007	22.5	ug/L	124	Standard
	Zn	66	930.4	49.8	**0.5049**	0.344	68.1	ug/L	196	Standard
>	Ge	72	437314.9	0.9				ug/L	473313	Standard
	As	75	-237.2	6.2	**0.0346**	0.010	29.8	ug/L	-286	Standard
	Se	82	-36.5	11.2	**0.0348**	0.028	79.9	ug/L	-33	Standard
	Se-1	77	72.0	12.0	**-0.0366**	0.081	222.1	ug/L	86	Standard
>	Ga	71	23.3	68.9				mg/L	35	Standard
	Rb	85	28.3	40.8				ug/L	13	Standard
	Y	89	396210.8	1.3				ug/L	439493	Standard
>	Rh	103	1.7	173.2				ug/L	5	Standard
	Mo	98	7.9	12.0	**-0.0131**	0.000	1.9	ug/L	10	Standard
	Ag	107	94.7	63.3	**0.0003**	0.010	3748.0	ug/L	53	Standard
	Cd	111	10.0	78.2	**0.0019**	0.004	194.5	mg/L	1	Standard
	Cd	114	43.4	69.4	**-0.0011**	0.006	507.9	ug/L	32	Standard
>	In	115	466022.7	0.6				ug/L	494305	Standard
	Sn	118	58.0	17.0	**-0.0094**	0.008	85.2	ug/L	53	Standard
	Sb	123	193.1	32.1	**0.0758**	0.025	33.3	ug/L	7	Standard
	Ba	135	15.7	48.3	**-0.0034**	0.004	127.6	ug/L	11	Standard
	Ce	140	20.0	75.0				ug/L	10	Standard
>	Tb	159	477814.6	1.3				ug/L	538219	Standard
	Ho	165	6.7	114.6				ug/L	8	Standard
	Tl	203	33.3	69.7	**0.0037**	0.004	110.2	ug/L	1	Standard
	Tl	205	45.0	96.9	**0.0057**	0.006	108.4	ug/L	3	Standard
	Pb	206	103.3	24.7	**0.0003**	0.010	4090.6	ug/L	80	Standard
	Pb	207	85.3	23.0	**0.0066**	0.009	134.9	ug/L	73	Standard
	Pb	208	185.0	21.0	**-0.0042**	0.007	171.9	ug/L	190	Standard
	U	238	13.3	92.6	**0.0019**	0.003	182.8	ug/L	0	Standard
>	Bi	209	263539.6	0.5				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	41.7	54.1	**0.0177**	0.026	149.3	mg/L	37	Standard
K	39	3.3	86.6	**-0.1517**	0.199	131.1	mg/L	3	Standard
Ca	43	16.7	75.5	**-4.7076**	4.201	89.2	mg/L	43	Standard
Fe	54	90.8	27.9	**-0.0748**	0.014	19.3	mg/L	262	Standard
Fe	57	68.3	11.2	**0.0417**	0.017	40.0	mg/L	65	Standard
> **Sc-1**	45	22955.7	0.9				mg/L	26874	Standard
Cl	35	147505.7	3.2				ug/L	141022	Standard
Kr	83	89.0	8.1				ug/L	75	Standard
Br	81	2460.2	6.9				ug/L	2810	Standard
P	31	151559.6	2.8				ug/L	458976	Standard
S	34	101000.7	3.0				ug/L	103378	Standard
Sr	88	38.3	27.2				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.7	103.3				mg/L	10	Standard
Ho-1	165	6.7	114.6				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.851	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.394	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	94.278
	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	95.334
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311079303SDL WG453185-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 14:27:20
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	281589.6	3.5				ug/L	269614	Standard
	Be	9	154774.9	1.2	**49.9503**	1.598	3.2	ug/L	23	Standard
	Al	27	9823386.2	0.5	**44.8648**	1.390	3.1	ug/L	1170	Standard
	Sc	45	25915.5	1.3				ug/L	26874	Standard
	Ti	47	25831.0	1.9	**98.4828**	2.162	2.2	ug/L	25	Standard
	V	51	341610.4	2.1	**46.4491**	1.164	2.5	ug/L	1686	Standard
	Cr	52	335265.4	2.7	**46.5572**	1.271	2.7	ug/L	6098	Standard
	Cr	53	62731.3	2.0	**47.9828**	1.122	2.3	ug/L	193	Standard
	Mn	55	688818.2	1.2	**49.1240**	0.881	1.8	ug/L	1232	Standard
	Co	59	467114.1	1.7	**48.0569**	0.897	1.9	ug/L	106	Standard
	Ni	60	140495.8	1.1	**49.0854**	0.892	1.8	ug/L	556	Standard
	Cu	65	136203.5	0.8	**49.7787**	0.338	0.7	ug/L	124	Standard
	Zn	66	74784.8	0.4	**49.8043**	0.162	0.3	ug/L	196	Standard
>	Ge	72	494877.2	0.7				ug/L	473313	Standard
	As	75	75195.9	0.6	**49.8704**	0.540	1.1	ug/L	-286	Standard
	Se	82	7681.1	0.5	**49.7615**	0.583	1.2	ug/L	-33	Standard
	Se-1	77	5719.1	2.2	**49.7165**	0.891	1.8	ug/L	86	Standard
>	Ga	71	55.0	9.1				mg/L	35	Standard
	Rb	85	1153.4	4.8				ug/L	13	Standard
	Y	89	448568.3	0.5				ug/L	439493	Standard
>	Rh	103	23.3	32.7				ug/L	5	Standard
	Mo	98	424491.7	0.5	**103.6254**	0.775	0.7	ug/L	10	Standard
	Ag	107	365816.6	0.6	**52.7508**	0.616	1.2	ug/L	53	Standard
	Cd	111	114587.6	0.3	**49.8005**	0.519	1.0	mg/L	1	Standard
	Cd	114	290200.5	1.9	**49.8250**	0.715	1.4	ug/L	32	Standard
>	In	115	518897.7	1.2				ug/L	494305	Standard
	Sn	118	70279.6	1.6	**51.1045**	0.752	1.5	ug/L	53	Standard
	Sb	123	134981.9	0.4	**48.4959**	0.752	1.5	ug/L	7	Standard
	Ba	135	96181.0	0.7	**50.0038**	0.948	1.9	ug/L	11	Standard
	Ce	140	40.0	33.1				ug/L	10	Standard
>	Tb	159	532079.7	0.2				ug/L	538219	Standard
	Ho	165	10.0	50.0				ug/L	8	Standard
	Tl	203	299878.9	0.3	**49.5164**	0.338	0.7	ug/L	1	Standard
	Tl	205	397649.1	0.8	**53.1766**	0.611	1.1	ug/L	3	Standard
	Pb	206	138985.9	0.2	**53.4860**	0.100	0.2	ug/L	80	Standard
	Pb	207	124745.1	0.4	**53.2885**	0.155	0.3	ug/L	73	Standard
	Pb	208	275701.6	0.7	**48.1197**	0.423	0.9	ug/L	190	Standard
	U	238	175628.0	0.5	**47.0330**	0.333	0.7	ug/L	0	Standard
>	Bi	209	279244.8	0.4				ug/L	276439	Standard

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Na	23	16.7	34.6	**4.0169**	1.515	37.7	mg/L	2	Standard
Mg	24	5095.9	1.5	**5.3604**	0.151	2.8	mg/L	37	Standard
K	39	68.3	30.5	**3.7890**	1.272	33.6	mg/L	3	Standard
Ca	43	31.7	59.8	**-0.8522**	5.651	663.1	mg/L	43	Standard
Fe	54	11619.7	5.3	**5.7392**	0.386	6.7	mg/L	262	Standard
Fe	57	3417.1	3.0	**6.0300**	0.100	1.7	mg/L	65	Standard
> **Sc-1**	45	25915.5	1.3				mg/L	26874	Standard
Cl	35	161345.2	0.8				ug/L	141022	Standard
Kr	83	96.3	8.6				ug/L	75	Standard
Br	81	2730.2	3.7				ug/L	2810	Standard
P	31	519280.2	1.7				ug/L	458976	Standard
S	34	132952.5	1.4				ug/L	103378	Standard
Sr	88	36.7	34.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	2.4	225.8				mg/L	10	Standard
Ho-1	165	10.0	50.0				mg/L	8	Standard
Er	166	20.0	50.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.442	
Be	9	99.901		
Al	27	89.730		
Sc	45			
Ti	47	98.483		
V	51	92.898		
Cr	52	93.114		
Cr	53			
Mn	55	98.248		
Co	59	96.114		
Ni	60	98.171		
Cu	65	99.557		
Zn	66	99.609		
> Ge	72		104.556	
As	75	99.741		
Se	82	99.523		
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	103.625	
	Ag	107	105.502	
	Cd	111	99.601	
	Cd	114		
>	In	115		104.975
	Sn	118	102.209	
	Sb	123	96.992	
	Ba	135	100.008	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.033	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.239	
	U	238	94.066	
>	Bi	209		101.015
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Al	27	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 14:30:24
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	272434.9	2.2				ug/L	269614	Standard
	Be	9	100.0	15.0	**0.0173**	0.006	32.3	ug/L	23	Standard
	Al	27	5395.0	106.4	**0.0187**	0.028	149.3	ug/L	1170	Standard
	Sc	45	24860.4	2.3				ug/L	26874	Standard
	Ti	47	20.7	14.0	**-0.0176**	0.011	63.3	ug/L	25	Standard
	V	51	1333.5	16.1	**0.0055**	0.032	574.2	ug/L	1686	Standard
	Cr	52	13920.8	105.3	**1.3399**	2.153	160.7	ug/L	6098	Standard
	Cr	53	560.0	100.1	**0.3055**	0.448	146.7	ug/L	193	Standard
	Mn	55	20384.7	159.9	**1.3745**	2.423	176.3	ug/L	1232	Standard
	Co	59	564.4	119.9	**0.0448**	0.072	161.7	ug/L	106	Standard
	Ni	60	518.0	5.7	**-0.0145**	0.012	84.5	ug/L	556	Standard
	Cu	65	202.0	39.6	**0.0162**	0.030	185.2	ug/L	124	Standard
	Zn	66	2794.9	138.4	**1.7409**	2.690	154.5	ug/L	196	Standard
>	**Ge**	72	480674.5	0.8				ug/L	473313	Standard
	As	75	-310.4	16.4	**0.0006**	0.036	5756.7	ug/L	-286	Standard
	Se	82	-49.8	30.8	**-0.0297**	0.103	346.2	ug/L	-33	Standard
	Se-1	77	83.3	18.1	**0.0014**	0.133	9233.4	ug/L	86	Standard
>	**Ga**	71	35.0	14.3				mg/L	35	Standard
	Rb	85	28.3	27.0				ug/L	13	Standard
	Y	89	440349.0	0.5				ug/L	439493	Standard
>	**Rh**	103	5.0	0.0				ug/L	5	Standard
	Mo	98	202.9	64.4	**0.0359**	0.033	91.7	ug/L	10	Standard
	Ag	107	261.0	77.0	**0.0238**	0.030	125.4	ug/L	53	Standard
	Cd	111	36.1	128.3	**0.0132**	0.021	155.8	mg/L	1	Standard
	Cd	114	122.3	119.9	**0.0121**	0.026	212.5	ug/L	32	Standard
>	**In**	115	502481.8	0.8				ug/L	494305	Standard
	Sn	118	99.3	23.7	**0.0182**	0.017	95.5	ug/L	53	Standard
	Sb	123	343.9	26.1	**0.1263**	0.034	27.1	ug/L	7	Standard
	Ba	135	87.3	50.7	**0.0343**	0.023	68.3	ug/L	11	Standard
	Ce	140	11.7	89.2				ug/L	10	Standard
>	**Tb**	159	522562.7	1.1				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	95.0	94.3	**0.0136**	0.015	109.3	ug/L	1	Standard
	Tl	205	98.3	81.7	**0.0125**	0.011	85.8	ug/L	3	Standard
	Pb	206	185.3	40.5	**0.0297**	0.029	96.9	ug/L	80	Standard
	Pb	207	166.7	46.8	**0.0394**	0.033	84.2	ug/L	73	Standard
	Pb	208	252.7	21.2	**0.0059**	0.009	155.8	ug/L	190	Standard
	U	238	32.3	61.4	**0.0068**	0.005	77.7	ug/L	0	Standard
>	**Bi**	209	277951.7	0.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	36.7	28.4	**0.0086**	0.011	134.0	mg/L	37	Standard
K	39	5.0	100.0	**-0.0581**	0.327	562.1	mg/L	3	Standard
Ca	43	21.7	13.3	**-3.5531**	0.863	24.3	mg/L	43	Standard
Fe	54	267.5	28.5	**0.0145**	0.041	285.4	mg/L	262	Standard
Fe	57	70.0	7.1	**0.0340**	0.007	21.8	mg/L	65	Standard
Sc-1	45	24860.4	2.3				mg/L	26874	Standard
Cl	35	156288.7	1.5				ug/L	141022	Standard
Kr	83	103.7	9.1				ug/L	75	Standard
Br	81	2743.6	6.2				ug/L	2810	Standard
P	31	485397.1	3.0				ug/L	458976	Standard
S	34	121728.9	2.3				ug/L	103378	Standard
Sr	88	35.0	24.7				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	6.0	100.7				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	13.3	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		101.046	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.555	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.654
|	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	100.547
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Cr	52	
QC Std 7	Mn	55	

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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Monday, November 18, 2013 14:38:56
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	276359.5	1.3				ug/L	269614	Standard
	Be	9	33.3	22.9	**-0.0051**	0.003	50.9	ug/L	23	Standard
	Al	27	975.0	7.6	**-0.0026**	0.000	15.2	ug/L	1170	Standard
	Sc	45	25039.0	1.4				ug/L	26874	Standard
	Ti	47	12.0	30.0	**-0.0511**	0.014	28.4	ug/L	25	Standard
	V	51	1278.2	4.5	**-0.0004**	0.008	1937.2	ug/L	1686	Standard
	Cr	52	4519.0	0.6	**-0.0285**	0.001	5.0	ug/L	6098	Standard
	Cr	53	155.0	12.9	**-0.0154**	0.015	100.3	ug/L	193	Standard
	Mn	55	937.0	1.4	**-0.0694**	0.001	1.2	ug/L	1232	Standard
	Co	59	82.7	9.1	**-0.0065**	0.001	12.9	ug/L	106	Standard
	Ni	60	489.7	4.7	**-0.0228**	0.008	33.3	ug/L	556	Standard
	Cu	65	111.0	6.8	**-0.0176**	0.003	16.5	ug/L	124	Standard
	Zn	66	366.0	1.7	**0.0575**	0.003	5.7	ug/L	196	Standard
>	**Ge**	72	475357.1	0.4				ug/L	473313	Standard
	As	75	-280.8	6.6	**0.0189**	0.012	62.8	ug/L	-286	Standard
	Se	82	-43.9	8.6	**0.0066**	0.024	367.3	ug/L	-33	Standard
	Se-1	77	78.0	8.0	**-0.0385**	0.060	155.6	ug/L	86	Standard
>	**Ga**	71	23.3	24.7				mg/L	35	Standard
	Rb	85	21.7	104.1				ug/L	13	Standard
	Y	89	436397.2	0.7				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	13.4	16.0	**-0.0118**	0.001	4.6	ug/L	10	Standard
	Ag	107	48.0	12.7	**-0.0078**	0.001	11.3	ug/L	53	Standard
	Cd	111	1.3	43.9	**-0.0023**	0.000	11.1	mg/L	1	Standard
	Cd	114	13.6	1.2	**-0.0070**	0.000	0.4	ug/L	32	Standard
>	**In**	115	501310.7	0.4				ug/L	494305	Standard
	Sn	118	51.0	11.8	**-0.0180**	0.005	25.2	ug/L	53	Standard
	Sb	123	34.9	8.2	**0.0115**	0.001	9.7	ug/L	7	Standard
	Ba	135	8.3	36.7	**-0.0080**	0.002	20.3	ug/L	11	Standard
	Ce	140	13.3	78.1				ug/L	10	Standard
>	**Tb**	159	515839.2	0.6				ug/L	538219	Standard
	Ho	165	8.3	124.9				ug/L	8	Standard
	Tl	203	2.7	43.3	**-0.0017**	0.000	11.5	ug/L	1	Standard
	Tl	205	3.3	86.6	**-0.0002**	0.000	171.8	ug/L	3	Standard
	Pb	206	82.3	7.4	**-0.0095**	0.002	24.4	ug/L	80	Standard
	Pb	207	86.0	12.9	**0.0054**	0.005	86.8	ug/L	73	Standard
	Pb	208	185.0	10.4	**-0.0054**	0.003	60.6	ug/L	190	Standard
	U	238	0.0		**-0.0019**	0.000	0.0	ug/L	0	Standard
>	**Bi**	209	273580.6	0.6				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0405**	0.811	2001.2	mg/L	2	Standard
Mg	24	36.7	41.7	**0.0082**	0.017	201.1	mg/L	37	Standard
K	39	6.7	43.3	**0.0417**	0.190	454.3	mg/L	3	Standard
Ca	43	8.3	69.3	**-7.7500**	1.756	22.7	mg/L	43	Standard
Fe	54	287.4	5.4	**0.0237**	0.010	43.3	mg/L	262	Standard
Fe	57	70.0	32.7	**0.0328**	0.041	124.4	mg/L	65	Standard
> **Sc-1**	45	25039.0	1.4				mg/L	26874	Standard
Cl	35	147155.8	0.5				ug/L	141022	Standard
Kr	83	94.7	5.8				ug/L	75	Standard
Br	81	2596.9	10.2				ug/L	2810	Standard
P	31	462653.2	3.0				ug/L	458976	Standard
S	34	105563.2	1.1				ug/L	103378	Standard
Sr	88	31.7	39.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.4	109.4				mg/L	10	Standard
Ho-1	165	8.3	124.9				mg/L	8	Standard
Er	166	13.3	43.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		102.502	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		100.432	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	101.417
	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	98.966
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Ca	43	

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Method 6020 - Summary Report

Sample ID: L1311079308
Sample Date/Time: Monday, November 18, 2013 14:42:01
Number of Replicates: 3
Autosampler Position: 328
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	261892.9	1.9				ug/L	269614	Standard
	Be	9	211.7	13.8	**0.0573**	0.009	15.8	ug/L	23	Standard
	Al	27	66183999.0	0.2	**324.9043**	6.925	2.1	ug/L	1170	Standard
	Sc	45	25870.4	3.0				ug/L	26874	Standard
	Ti	47	5318.3	2.1	**21.8383**	0.625	2.9	ug/L	25	Standard
	V	51	1710266.5	7.7	**252.0418**	17.951	7.1	ug/L	1686	Standard
	Cr	52	178511977.7	1.6	**27193.2963**	788.477	2.9	ug/L	6098	Standard
	Cr	53	28932252.2	1.8	**23982.4673**	120.674	0.5	ug/L	193	Standard
	Mn	55	4499113.1	0.7	**347.6061**	5.014	1.4	ug/L	1232	Standard
	Co	59	16097.5	2.3	**1.7747**	0.017	1.0	ug/L	106	Standard
	Ni	60	72824.6	1.3	**27.4061**	0.295	1.1	ug/L	556	Standard
	Cu	65	254173.8	2.1	**100.4418**	0.524	0.5	ug/L	124	Standard
	Zn	66	36433.4	1.9	**26.1261**	0.041	0.2	ug/L	196	Standard
>	Ge	72	457950.2	1.8				ug/L	473313	Standard
	As	75	1122.2	4.0	**1.0125**	0.018	1.8	ug/L	-286	Standard
	Se	82	10.0	43.8	**0.3702**	0.030	8.2	ug/L	-33	Standard
	Se-1	77	126.3	6.4	**0.4506**	0.096	21.3	ug/L	86	Standard
>	Ga	71	3327.0	6.4				mg/L	35	Standard
	Rb	85	15244.3	2.2				ug/L	13	Standard
	Y	89	424446.7	1.0				ug/L	439493	Standard
>	Rh	103	65.0	7.7				ug/L	5	Standard
	Mo	98	17955.0	2.4	**4.8074**	0.078	1.6	ug/L	10	Standard
	Ag	107	2682.9	2.8	**0.4110**	0.019	4.7	ug/L	53	Standard
	Cd	111	54.5	21.5	**0.0232**	0.006	25.8	mg/L	1	Standard
	Cd	114	15590.1	2.6	**2.9365**	0.093	3.2	ug/L	32	Standard
>	In	115	471650.0	1.8				ug/L	494305	Standard
	Sn	118	135704.8	1.8	**108.6329**	1.712	1.6	ug/L	53	Standard
	Sb	123	3311.5	1.1	**1.3075**	0.021	1.6	ug/L	7	Standard
	Ba	135	21605.7	2.5	**12.3457**	0.110	0.9	ug/L	11	Standard
	Ce	140	16340.5	2.6				ug/L	10	Standard
>	Tb	159	510132.4	1.8				ug/L	538219	Standard
	Ho	165	443.3	11.1				ug/L	8	Standard
	Tl	203	79.3	7.2	**0.0120**	0.001	6.7	ug/L	1	Standard
	Tl	205	88.3	3.3	**0.0121**	0.000	2.4	ug/L	3	Standard
	Pb	206	6723.5	3.0	**2.7626**	0.039	1.4	ug/L	80	Standard
	Pb	207	5351.9	1.4	**2.4462**	0.045	1.8	ug/L	73	Standard
	Pb	208	12413.6	1.2	**2.3105**	0.012	0.5	ug/L	190	Standard
	U	238	1525.4	4.9	**0.4405**	0.014	3.2	ug/L	0	Standard
>	Bi	209	257794.0	1.7				ug/L	276439	Standard

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	Na	23	305.0	9.1	**81.3878**	9.846	12.1	mg/L	2	Standard
	Mg	24	37745.3	1.8	**40.0067**	1.917	4.8	mg/L	37	Standard
	K	39	10.0	50.0	**0.2270**	0.299	131.9	mg/L	3	Standard
	Ca	43	333.3	4.3	**89.8676**	4.956	5.5	mg/L	43	Standard
	Fe	54	60235.0	3.4	**30.3210**	0.836	2.8	mg/L	262	Standard
	Fe	57	19025.3	3.4	**34.0856**	0.957	2.8	mg/L	65	Standard
>	**Sc-1**	45	25870.4	3.0				mg/L	26874	Standard
	Cl	35	571482.8	1.0				ug/L	141022	Standard
	Kr	83	111.7	6.8				ug/L	75	Standard
	Br	81	4350.6	6.5				ug/L	2810	Standard
	P	31	677920.6	1.2				ug/L	458976	Standard
	S	34	74971.8	3.1				ug/L	103378	Standard
	Sr	88	333.3	22.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	16.7	69.3				mg/L	0	Standard
	Dy	164	704.2	14.2				mg/L	10	Standard
	Ho-1	165	443.3	11.1				mg/L	8	Standard
	Er	166	400.0	2.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		97.136	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.754	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	95.417
|	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	93.255
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	

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Cu 65 Upper, S, EEE	Cu	65
Sn 118 Upper, S, EEE	Sn	118

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Method 6020 - Summary Report

Sample ID: L1311063002 WG452687-02
Sample Date/Time: Monday, November 18, 2013 14:47:00
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	307493.2	2.2				ug/L	269614	Standard
	Be	9	8489.0	1.8	**2.4933**	0.101	4.0	ug/L	23	Standard
	Al	27	64150024.4	0.4	**268.2237**	5.466	2.0	ug/L	1170	Standard
	Sc	45	30622.6	1.9				ug/L	26874	Standard
	Ti	47	29.7	8.5	**0.0287**	0.011	37.7	ug/L	25	Standard
	V	51	19077.7	2.9	**2.7505**	0.070	2.5	ug/L	1686	Standard
	Cr	52	14236.9	101.0	**1.5655**	2.273	145.2	ug/L	6098	Standard
	Cr	53	1500.1	61.8	**1.1584**	0.802	69.3	ug/L	193	Standard
	Mn	55	397635183.4	1.9	**32024.9594**	413.763	1.3	ug/L	1232	Standard
	Co	59	5260843.1	1.1	**609.7265**	3.342	0.5	ug/L	106	Standard
	Ni	60	929434.5	1.6	**366.9871**	4.905	1.3	ug/L	556	Standard
	Cu	65	25045.7	1.3	**10.2618**	0.125	1.2	ug/L	124	Standard
	Zn	66	389874860.5	0.8	**293583.4873**	1154.268	0.4	ug/L	196	Standard
>	**Ge**	72	439392.9	0.6				ug/L	473313	Standard
	As	75	9660.9	3.2	**7.3964**	0.192	2.6	ug/L	-286	Standard
	Se	82	789.0	12.9	**6.0205**	0.709	11.8	ug/L	-33	Standard
	Se-1	77	461.0	7.1	**3.8280**	0.342	8.9	ug/L	86	Standard
>	**Ga**	71	6931.6	3.0				mg/L	35	Standard
	Rb	85	17618.6	2.1				ug/L	13	Standard
	Y	89	3447634.9	0.2				ug/L	439493	Standard
>	**Rh**	103	75.0	6.7				ug/L	5	Standard
	Mo	98	132.9	16.5	**0.0237**	0.006	25.5	ug/L	10	Standard
	Ag	107	1241.1	7.0	**0.1999**	0.014	6.9	ug/L	53	Standard
	Cd	111	53786.8	1.5	**28.0691**	0.153	0.5	mg/L	1	Standard
	Cd	114	134571.2	1.3	**27.7455**	0.478	1.7	ug/L	32	Standard
>	**In**	115	432080.1	1.2				ug/L	494305	Standard
	Sn	118	83.0	49.0	**0.0160**	0.035	218.2	ug/L	53	Standard
	Sb	123	91.0	10.4	**0.0377**	0.004	10.0	ug/L	7	Standard
	Ba	135	2412.2	1.6	**1.4937**	0.012	0.8	ug/L	11	Standard
	Ce	140	4847130.4	1.1				ug/L	10	Standard
>	**Tb**	159	620698.4	1.3				ug/L	538219	Standard
	Ho	165	128926.3	1.4				ug/L	8	Standard
	Tl	203	73.0	29.3	**0.0112**	0.004	32.9	ug/L	1	Standard
	Tl	205	81.7	15.4	**0.0114**	0.002	14.4	ug/L	3	Standard
	Pb	206	1689.1	2.5	**0.6809**	0.017	2.5	ug/L	80	Standard
	Pb	207	1362.1	3.1	**0.6146**	0.010	1.6	ug/L	73	Standard
	Pb	208	3184.5	3.3	**0.5796**	0.016	2.8	ug/L	190	Standard
	U	238	127.0	15.2	**0.0360**	0.006	16.7	ug/L	0	Standard
>	**Bi**	209	251361.8	2.1				ug/L	276439	Standard

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	Na	23	103.3	14.8	**22.9691**	3.808	16.6	mg/L	2	Standard
	Mg	24	18441.2	1.4	**16.4795**	0.106	0.6	mg/L	37	Standard
	K	39	55.0	55.3	**2.4450**	1.513	61.9	mg/L	3	Standard
	Ca	43	128.3	12.5	**22.2052**	3.536	15.9	mg/L	43	Standard
	Fe	54	116793.7	2.0	**49.7637**	1.915	3.8	mg/L	262	Standard
	Fe	57	33306.6	2.1	**50.4714**	1.889	3.7	mg/L	65	Standard
>	**Sc-1**	45	30622.6	1.9				mg/L	26874	Standard
	Cl	35	910339.4	1.4				ug/L	141022	Standard
	Kr	83	1416.1	2.9				ug/L	75	Standard
	Br	81	3303.7	3.7				ug/L	2810	Standard
	P	31	194214.6	3.7				ug/L	458976	Standard
	S	34	80645.8	2.2				ug/L	103378	Standard
	Sr	88	490.0	17.0				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	200368.8	1.1				mg/L	10	Standard
	Ho-1	165	128926.3	1.4				mg/L	8	Standard
	Er	166	113275.2	1.4				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		114.049	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.833	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	87.412
|	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	90.928
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063003
Sample Date/Time: Monday, November 18, 2013 14:50:05
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	308687.3	2.4				ug/L	269614	Standard
	Be	9	9549.7	3.2	**2.7968**	0.157	5.6	ug/L	23	Standard
	Al	27	65629463.5	1.8	**273.3024**	2.652	1.0	ug/L	1170	Standard
	Sc	45	30256.8	1.1				ug/L	26874	Standard
	Ti	47	36.3	15.2	**0.0575**	0.023	40.7	ug/L	25	Standard
	V	51	21741.3	1.0	**3.1639**	0.039	1.2	ug/L	1686	Standard
	Cr	52	4796.8	21.8	**0.0705**	0.164	233.1	ug/L	6098	Standard
	Cr	53	386.7	12.4	**0.1953**	0.042	21.4	ug/L	193	Standard
	Mn	55	412335353.9	0.6	**33246.7968**	227.722	0.7	ug/L	1232	Standard
	Co	59	5497577.9	1.0	**637.8684**	6.427	1.0	ug/L	106	Standard
	Ni	60	986251.0	1.5	**389.8610**	5.912	1.5	ug/L	556	Standard
	Cu	65	27308.6	2.1	**11.2065**	0.239	2.1	ug/L	124	Standard
	Zn	66	412272271.1	1.0	**310785.4945**	2926.481	0.9	ug/L	196	Standard
>	Ge	72	438917.3	0.2				ug/L	473313	Standard
	As	75	10154.5	1.2	**7.7724**	0.087	1.1	ug/L	-286	Standard
	Se	82	835.2	2.8	**6.3646**	0.173	2.7	ug/L	-33	Standard
	Se-1	77	500.7	3.9	**4.2270**	0.204	4.8	ug/L	86	Standard
>	Ga	71	7692.0	0.1				mg/L	35	Standard
	Rb	85	18402.8	4.2				ug/L	13	Standard
	Y	89	3640430.8	0.9				ug/L	439493	Standard
>	Rh	103	70.0	18.9				ug/L	5	Standard
	Mo	98	138.3	1.7	**0.0261**	0.001	3.6	ug/L	10	Standard
	Ag	107	1308.1	4.3	**0.2160**	0.010	4.7	ug/L	53	Standard
	Cd	111	57445.9	1.7	**30.5646**	0.435	1.4	mg/L	1	Standard
	Cd	114	142975.0	1.5	**30.0519**	0.356	1.2	ug/L	32	Standard
>	In	115	423797.2	0.6				ug/L	494305	Standard
	Sn	118	58.3	14.0	**-0.0044**	0.007	157.7	ug/L	53	Standard
	Sb	123	68.0	7.8	**0.0284**	0.002	7.9	ug/L	7	Standard
	Ba	135	2814.6	2.0	**1.7793**	0.035	2.0	ug/L	11	Standard
	Ce	140	5140527.8	1.1				ug/L	10	Standard
>	Tb	159	627999.9	1.2				ug/L	538219	Standard
	Ho	165	136882.6	3.0				ug/L	8	Standard
	Tl	203	68.7	7.5	**0.0105**	0.001	8.5	ug/L	1	Standard
	Tl	205	96.7	16.6	**0.0137**	0.002	16.6	ug/L	3	Standard
	Pb	206	1896.5	2.1	**0.7741**	0.013	1.7	ug/L	80	Standard
	Pb	207	1542.7	1.7	**0.7047**	0.009	1.2	ug/L	73	Standard
	Pb	208	3579.2	1.3	**0.6601**	0.004	0.6	ug/L	190	Standard
	U	238	125.3	12.0	**0.0356**	0.004	11.9	ug/L	0	Standard
>	Bi	209	249936.0	0.8				ug/L	276439	Standard

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Na	23	126.7	24.1	**28.5852**	7.213	25.2	mg/L	2	Standard
Mg	24	19085.3	2.2	**17.2621**	0.354	2.1	mg/L	37	Standard
K	39	53.3	5.4	**2.4067**	0.129	5.4	mg/L	3	Standard
Ca	43	128.3	23.5	**22.6687**	7.965	35.1	mg/L	43	Standard
Fe	54	117720.1	1.9	**50.7481**	1.201	2.4	mg/L	262	Standard
Fe	57	33921.3	1.4	**52.0137**	1.315	2.5	mg/L	65	Standard
> **Sc-1**	45	30256.8	1.1				mg/L	26874	Standard
Cl	35	952524.3	0.8				ug/L	141022	Standard
Kr	83	1536.7	4.4				ug/L	75	Standard
Br	81	3507.1	7.7				ug/L	2810	Standard
P	31	204613.0	2.7				ug/L	458976	Standard
S	34	84463.1	0.5				ug/L	103378	Standard
Sr	88	498.3	16.2				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	215540.4	2.4				mg/L	10	Standard
Ho-1	165	136882.6	3.0				mg/L	8	Standard
Er	166	121542.2	1.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		114.492	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.733	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.736
|	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	90.413
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311079308
Sample Date/Time: Monday, November 18, 2013 14:54:21
Number of Replicates: 3
Autosampler Position: 328
Sample Description: 5000
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	245112.0	1.3				ug/L	269614	Standard
	Be	9	38.3	32.8	**-0.0018**	0.005	261.3	ug/L	23	Standard
	Al	27	17526.0	36.9	**0.0845**	0.033	38.5	ug/L	1170	Standard
	Sc	45	22146.2	1.4				ug/L	26874	Standard
	Ti	47	10.3	20.1	**-0.0544**	0.009	15.9	ug/L	25	Standard
	V	51	584.1	28.3	**-0.0921**	0.026	28.3	ug/L	1686	Standard
	Cr	52	18776.4	24.1	**2.2823**	0.675	29.6	ug/L	6098	Standard
	Cr	53	2950.3	26.2	**2.4045**	0.637	26.5	ug/L	193	Standard
	Mn	55	26508.4	54.7	**1.9911**	1.163	58.4	ug/L	1232	Standard
	Co	59	401.0	47.1	**0.0310**	0.022	70.0	ug/L	106	Standard
	Ni	60	431.0	30.4	**-0.0318**	0.049	154.3	ug/L	556	Standard
	Cu	65	287.7	16.1	**0.0587**	0.020	34.4	ug/L	124	Standard
	Zn	66	36159.2	57.4	**26.9019**	15.187	56.5	ug/L	196	Standard
>	Ge	72	439515.7	1.3				ug/L	473313	Standard
	As	75	-423.1	27.1	**-0.1021**	0.081	79.6	ug/L	-286	Standard
	Se	82	-95.3	37.4	**-0.3879**	0.249	64.3	ug/L	-33	Standard
	Se-1	77	73.0	3.6	**-0.0298**	0.027	90.8	ug/L	86	Standard
>	Ga	71	30.0	33.3				mg/L	35	Standard
	Rb	85	93.3	22.3				ug/L	13	Standard
	Y	89	394564.5	2.0				ug/L	439493	Standard
>	Rh	103	0.0					ug/L	5	Standard
	Mo	98	5.0	64.8	**-0.0138**	0.001	6.3	ug/L	10	Standard
	Ag	107	50.3	15.4	**-0.0068**	0.001	20.0	ug/L	53	Standard
	Cd	111	7.7	66.9	**0.0008**	0.002	299.1	mg/L	1	Standard
	Cd	114	28.5	29.7	**-0.0040**	0.002	39.9	ug/L	32	Standard
>	In	115	462134.8	1.3				ug/L	494305	Standard
	Sn	118	56.3	12.8	**-0.0104**	0.005	52.7	ug/L	53	Standard
	Sb	123	42.2	21.4	**0.0155**	0.004	23.5	ug/L	7	Standard
	Ba	135	13.0	15.4	**-0.0049**	0.001	22.7	ug/L	11	Standard
	Ce	140	470.0	65.8				ug/L	10	Standard
>	Tb	159	479660.4	1.6				ug/L	538219	Standard
	Ho	165	10.0	50.0				ug/L	8	Standard
	Tl	203	7.7	27.2	**-0.0008**	0.000	45.5	ug/L	1	Standard
	Tl	205	10.0	100.0	**0.0007**	0.001	194.9	ug/L	3	Standard
	Pb	206	85.0	16.6	**-0.0073**	0.006	78.5	ug/L	80	Standard
	Pb	207	73.7	13.0	**0.0012**	0.004	359.4	ug/L	73	Standard
	Pb	208	155.7	5.2	**-0.0097**	0.001	14.6	ug/L	190	Standard
	U	238	0.7	86.6	**-0.0017**	0.000	9.8	ug/L	0	Standard
>	Bi	209	264418.0	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0895**	0.896	1000.9	mg/L	2	Standard
Mg	24	41.7	36.7	**0.0197**	0.019	96.0	mg/L	37	Standard
K	39	1.7	173.2	**-0.2630**	0.205	77.8	mg/L	3	Standard
Ca	43	16.7	45.8	**-4.4524**	2.772	62.3	mg/L	43	Standard
Fe	54	105.5	33.6	**-0.0643**	0.020	31.9	mg/L	262	Standard
Fe	57	61.7	12.4	**0.0326**	0.015	45.2	mg/L	65	Standard
> **Sc-1**	45	22146.2	1.4				mg/L	26874	Standard
Cl	35	131370.9	3.6				ug/L	141022	Standard
Kr	83	159.7	15.1				ug/L	75	Standard
Br	81	2266.8	5.4				ug/L	2810	Standard
P	31	157007.8	1.9				ug/L	458976	Standard
S	34	102690.7	4.8				ug/L	103378	Standard
Sr	88	43.3	13.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	25.9	56.9				mg/L	10	Standard
Ho-1	165	10.0	50.0				mg/L	8	Standard
Er	166	16.7	124.9				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		90.912	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.859	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	93.492
	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	95.651
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079313 WG452687-03
Sample Date/Time: Monday, November 18, 2013 14:57:26
Number of Replicates: 3
Autosampler Position: 329
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	269011.2	2.2				ug/L	269614	Standard
	Be	9	31.7	32.9	**-0.0053**	0.004	69.2	ug/L	23	Standard
	Al	27	3632244.5	1.1	**17.3508**	0.203	1.2	ug/L	1170	Standard
	Sc	45	25292.8	1.3				ug/L	26874	Standard
	Ti	47	152.7	38.7	**0.5107**	0.234	45.8	ug/L	25	Standard
	V	51	122432.8	1.1	**17.3119**	0.238	1.4	ug/L	1686	Standard
	Cr	52	24863.4	2.1	**2.9765**	0.082	2.8	ug/L	6098	Standard
	Cr	53	7525.2	14.2	**5.9006**	0.833	14.1	ug/L	193	Standard
	Mn	55	34154.1	3.5	**2.4179**	0.102	4.2	ug/L	1232	Standard
	Co	59	1004.7	4.3	**0.0929**	0.005	5.4	ug/L	106	Standard
	Ni	60	4869.8	4.1	**1.5868**	0.081	5.1	ug/L	556	Standard
	Cu	65	2260.5	5.0	**0.8061**	0.048	5.9	ug/L	124	Standard
	Zn	66	5515.7	19.7	**3.6656**	0.783	21.3	ug/L	196	Standard
>	Ge	72	472754.5	0.5				ug/L	473313	Standard
	As	75	319.1	6.5	**0.4324**	0.013	3.1	ug/L	-286	Standard
	Se	82	83.7	11.4	**0.8647**	0.062	7.2	ug/L	-33	Standard
	Se-1	77	482.0	21.6	**3.6948**	0.942	25.5	ug/L	86	Standard
>	Ga	71	420.0	6.0				mg/L	35	Standard
	Rb	85	202178.3	0.5				ug/L	13	Standard
	Y	89	430760.3	1.7				ug/L	439493	Standard
>	Rh	103	98.3	26.1				ug/L	5	Standard
	Mo	98	25850.8	0.2	**6.7628**	0.007	0.1	ug/L	10	Standard
	Ag	107	73.3	2.1	**-0.0036**	0.000	6.8	ug/L	53	Standard
	Cd	111	10.2	85.2	**0.0019**	0.004	218.2	mg/L	1	Standard
	Cd	114	121.0	20.6	**0.0129**	0.005	35.8	ug/L	32	Standard
>	In	115	483155.1	0.1				ug/L	494305	Standard
	Sn	118	88.0	12.9	**0.0124**	0.009	72.0	ug/L	53	Standard
	Sb	123	344.6	7.5	**0.1315**	0.010	7.6	ug/L	7	Standard
	Ba	135	22788.1	1.5	**12.7124**	0.174	1.4	ug/L	11	Standard
	Ce	140	228.3	18.6				ug/L	10	Standard
>	Tb	159	506846.6	0.6				ug/L	538219	Standard
	Ho	165	20.0	66.1				ug/L	8	Standard
	Tl	203	70.3	20.7	**0.0105**	0.003	24.8	ug/L	1	Standard
	Tl	205	95.0	19.0	**0.0131**	0.003	20.3	ug/L	3	Standard
	Pb	206	394.3	8.5	**0.1231**	0.013	10.9	ug/L	80	Standard
	Pb	207	367.7	1.0	**0.1387**	0.001	0.7	ug/L	73	Standard
	Pb	208	766.7	4.8	**0.1071**	0.007	6.7	ug/L	190	Standard
	U	238	210.3	5.3	**0.0593**	0.003	5.2	ug/L	0	Standard
>	Bi	209	256952.9	0.4				ug/L	276439	Standard

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Na	23	138.3	23.0	**37.5040**	9.163	24.4	mg/L	2	Standard
Mg	24	43480.7	3.3	**47.1005**	1.506	3.2	mg/L	37	Standard
K	39	110.0	15.7	**6.5077**	1.166	17.9	mg/L	3	Standard
Ca	43	125.0	6.9	**28.0902**	2.715	9.7	mg/L	43	Standard
Fe	54	319.9	7.2	**0.0390**	0.014	36.0	mg/L	262	Standard
Fe	57	261.7	8.6	**0.3843**	0.044	11.5	mg/L	65	Standard
> **Sc-1**	45	25292.8	1.3				mg/L	26874	Standard
Cl	35	207803.5	1.3				ug/L	141022	Standard
Kr	83	126.7	5.3				ug/L	75	Standard
Br	81	10980.7	8.1				ug/L	2810	Standard
P	31	524314.6	1.9				ug/L	458976	Standard
S	34	85608.1	4.0				ug/L	103378	Standard
Sr	88	506.7	22.2				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	256.7	11.9				mg/L	0	Standard
Dy	164	25.5	45.8				mg/L	10	Standard
Ho-1	165	20.0	66.1				mg/L	8	Standard
Er	166	23.3	65.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		99.776	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.882	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	97.744
	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	92.951
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311079313DP WG452687-10
Sample Date/Time: Monday, November 18, 2013 15:00:30
Number of Replicates: 3
Autosampler Position: 330
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	282936.5	2.2				ug/L	269614	Standard
	Be	9	43.3	46.6	**-0.0021**	0.007	332.6	ug/L	23	Standard
	Al	27	3847016.7	0.9	**17.4730**	0.252	1.4	ug/L	1170	Standard
	Sc	45	25508.1	2.3				ug/L	26874	Standard
	Ti	47	117.3	5.7	**0.3668**	0.027	7.2	ug/L	25	Standard
	V	51	130751.3	1.7	**18.3735**	0.298	1.6	ug/L	1686	Standard
	Cr	52	26502.2	5.7	**3.1915**	0.216	6.8	ug/L	6098	Standard
	Cr	53	10443.6	12.9	**8.1900**	1.073	13.1	ug/L	193	Standard
	Mn	55	39776.0	15.7	**2.8181**	0.463	16.4	ug/L	1232	Standard
	Co	59	1115.4	10.0	**0.1040**	0.012	11.6	ug/L	106	Standard
	Ni	60	5157.9	2.3	**1.6797**	0.054	3.2	ug/L	556	Standard
	Cu	65	1997.1	4.8	**0.6999**	0.039	5.5	ug/L	124	Standard
	Zn	66	25381.6	139.2	**17.4292**	24.526	140.7	ug/L	196	Standard
>	**Ge**	72	475987.0	0.9				ug/L	473313	Standard
	As	75	379.9	15.5	**0.4726**	0.038	8.1	ug/L	-286	Standard
	Se	82	97.6	20.7	**0.9546**	0.140	14.7	ug/L	-33	Standard
	Se-1	77	648.7	5.8	**5.1992**	0.398	7.6	ug/L	86	Standard
>	**Ga**	71	493.3	11.7				mg/L	35	Standard
	Rb	85	213057.6	0.6				ug/L	13	Standard
	Y	89	432311.6	1.5				ug/L	439493	Standard
>	**Rh**	103	110.0	9.1				ug/L	5	Standard
	Mo	98	27461.1	0.7	**7.0961**	0.065	0.9	ug/L	10	Standard
	Ag	107	62.7	16.1	**-0.0054**	0.002	28.9	ug/L	53	Standard
	Cd	111	18.7	73.4	**0.0057**	0.006	110.3	mg/L	1	Standard
	Cd	114	136.2	18.0	**0.0153**	0.004	28.8	ug/L	32	Standard
>	**In**	115	489208.5	0.3				ug/L	494305	Standard
	Sn	118	81.0	12.8	**0.0061**	0.008	129.3	ug/L	53	Standard
	Sb	123	320.9	3.8	**0.1208**	0.004	3.6	ug/L	7	Standard
	Ba	135	24105.8	0.9	**13.2818**	0.106	0.8	ug/L	11	Standard
	Ce	140	273.3	43.3				ug/L	10	Standard
>	**Tb**	159	516729.5	2.2				ug/L	538219	Standard
	Ho	165	18.3	41.7				ug/L	8	Standard
	Tl	203	76.3	22.6	**0.0114**	0.003	26.7	ug/L	1	Standard
	Tl	205	105.0	9.5	**0.0144**	0.001	9.5	ug/L	3	Standard
	Pb	206	343.0	8.3	**0.1003**	0.012	11.9	ug/L	80	Standard
	Pb	207	305.0	3.5	**0.1083**	0.006	5.1	ug/L	73	Standard
	Pb	208	675.3	6.9	**0.0886**	0.008	9.2	ug/L	190	Standard
	U	238	226.7	8.0	**0.0635**	0.005	8.1	ug/L	0	Standard
>	**Bi**	209	259378.7	0.5				ug/L	276439	Standard

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Na	23	121.7	13.2	**32.6648**	5.111	15.6	mg/L	2	Standard
Mg	24	46925.9	1.2	**50.4152**	0.830	1.6	mg/L	37	Standard
K	39	131.7	20.9	**7.7946**	1.746	22.4	mg/L	3	Standard
Ca	43	150.0	12.0	**35.4338**	6.094	17.2	mg/L	43	Standard
Fe	54	286.0	22.2	**0.0199**	0.031	153.6	mg/L	262	Standard
Fe	57	226.7	21.4	**0.3157**	0.083	26.3	mg/L	65	Standard
> **Sc-1**	45	25508.1	2.3				mg/L	26874	Standard
Cl	35	215092.8	1.4				ug/L	141022	Standard
Kr	83	118.3	14.9				ug/L	75	Standard
Br	81	10276.8	3.3				ug/L	2810	Standard
P	31	539418.5	2.1				ug/L	458976	Standard
S	34	82497.3	0.5				ug/L	103378	Standard
Sr	88	493.3	6.2				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	236.7	27.2				mg/L	0	Standard
Dy	164	21.4	17.3				mg/L	10	Standard
Ho-1	165	18.3	41.7				mg/L	8	Standard
Er	166	40.0	109.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.941	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		100.565	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	98.969
	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	93.828
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311079313DP WG452687-10
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Method 6020 - Summary Report

Sample ID: L1311079303
Sample Date/Time: Monday, November 18, 2013 15:03:35
Number of Replicates: 3
Autosampler Position: 331
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	347320.5	55.8				ug/L	269614	Standard
	Be	9	11.7	24.7	**-0.0123**	0.002	15.5	ug/L	23	Standard
	Al	27	1011.7	21.0	**-0.0027**	0.002	69.5	ug/L	1170	Standard
	Sc	45	30005.0	59.6				ug/L	26874	Standard
	Ti	47	12.3	32.8	**-0.0495**	0.024	48.7	ug/L	25	Standard
	V	51	679.0	42.4	**-0.0931**	0.033	35.6	ug/L	1686	Standard
	Cr	52	2682.6	41.3	**-0.3300**	0.128	38.9	ug/L	6098	Standard
	Cr	53	205.0	20.0	**0.0180**	0.056	313.4	ug/L	193	Standard
	Mn	55	1317.1	9.4	**-0.0367**	0.059	159.6	ug/L	1232	Standard
	Co	59	80.0	9.8	**-0.0064**	0.006	86.9	ug/L	106	Standard
	Ni	60	381.3	16.2	**-0.0494**	0.111	225.2	ug/L	556	Standard
	Cu	65	99.3	39.8	**-0.0261**	0.009	32.7	ug/L	124	Standard
	Zn	66	1615.1	50.1	**1.1837**	1.425	120.4	ug/L	196	Standard
>	Ge	72	563440.2	51.5				ug/L	473313	Standard
	As	75	-259.4	80.4	**0.0510**	0.118	231.2	ug/L	-286	Standard
	Se	82	-71.9	87.7	**-0.1351**	0.350	258.8	ug/L	-33	Standard
	Se-1	77	66.0	17.9	**-0.1630**	0.251	154.2	ug/L	86	Standard
>	Ga	71	26.7	39.0				mg/L	35	Standard
	Rb	85	35.0	37.8				ug/L	13	Standard
	Y	89	542493.8	52.2				ug/L	439493	Standard
>	Rh	103	3.3	86.6				ug/L	5	Standard
	Mo	98	17.1	61.9	**-0.0120**	0.001	8.3	ug/L	10	Standard
	Ag	107	59.7	43.5	**-0.0076**	0.001	11.2	ug/L	53	Standard
	Cd	111	1.6	93.8	**-0.0021**	0.001	35.5	mg/L	1	Standard
	Cd	114	9.8	77.2	**-0.0079**	0.001	13.8	ug/L	32	Standard
>	In	115	628272.8	51.0				ug/L	494305	Standard
	Sn	118	69.3	63.0	**-0.0163**	0.021	127.9	ug/L	53	Standard
	Sb	123	20.2	23.4	**0.0052**	0.002	42.3	ug/L	7	Standard
	Ba	135	8.3	30.2	**-0.0086**	0.001	10.6	ug/L	11	Standard
	Ce	140	8.3	91.7				ug/L	10	Standard
>	Tb	159	693010.1	50.4				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	16.7	96.4	**0.0010**	0.004	412.7	ug/L	1	Standard
	Tl	205	26.7	109.9	**0.0035**	0.006	168.8	ug/L	3	Standard
	Pb	206	122.3	38.2	**-0.0043**	0.006	131.5	ug/L	80	Standard
	Pb	207	96.3	49.5	**-0.0005**	0.001	207.3	ug/L	73	Standard
	Pb	208	252.7	33.9	**-0.0023**	0.009	401.9	ug/L	190	Standard
	U	238	1.0	100.0	**-0.0017**	0.000	11.4	ug/L	0	Standard
>	Bi	209	366951.0	51.2				ug/L	276439	Standard

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Na	23	5.0	100.0	**1.2679**	1.469	115.9	mg/L	2	Standard
Mg	24	43.3	13.3	**0.0180**	0.028	158.0	mg/L	37	Standard
K	39	5.0	173.2	**-0.2196**	0.280	127.5	mg/L	3	Standard
Ca	43	28.3	36.7	**-1.4977**	4.940	329.8	mg/L	43	Standard
Fe	54	149.5	61.0	**-0.0468**	0.048	103.0	mg/L	262	Standard
Fe	57	78.3	13.3	**0.0577**	0.093	161.4	mg/L	65	Standard
> **Sc-1**	45	30005.0	59.6				mg/L	26874	Standard
Cl	35	72352.7	42.9				ug/L	141022	Standard
Kr	83	132.0	80.0				ug/L	75	Standard
Br	81	1343.4	55.3				ug/L	2810	Standard
P	31	195753.2	69.2				ug/L	458976	Standard
S	34	45547.6	49.0				ug/L	103378	Standard
Sr	88	60.0					ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.8	104.1				mg/L	10	Standard
Ho-1	165	5.0	100.0				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		128.821	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		119.042	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	127.102
|	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	132.742
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

Sample ID: L1311079303
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Method 6020 - Summary Report

Sample ID: L1311079303PS WG453185-01
Sample Date/Time: Monday, November 18, 2013 15:06:40
Number of Replicates: 3
Autosampler Position: 332
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	286452.7	1.2				ug/L	269614	Standard
	Be	9	158624.4	1.0	**50.2946**	0.862	1.7	ug/L	23	Standard
	Al	27	372826.6	1.0	**1.6659**	0.022	1.3	ug/L	1170	Standard
	Sc	45	26307.8	1.7				ug/L	26874	Standard
	Ti	47	20.0	8.7	**-0.0242**	0.007	30.7	ug/L	25	Standard
	V	51	329960.3	1.1	**43.8155**	0.849	1.9	ug/L	1686	Standard
	Cr	52	371273.1	1.5	**50.4172**	0.647	1.3	ug/L	6098	Standard
	Cr	53	71850.0	1.4	**53.6947**	0.432	0.8	ug/L	193	Standard
	Mn	55	695374.9	1.5	**48.4397**	0.974	2.0	ug/L	1232	Standard
	Co	59	459688.4	1.9	**46.1956**	0.939	2.0	ug/L	106	Standard
	Ni	60	140936.9	1.2	**48.0880**	0.198	0.4	ug/L	556	Standard
	Cu	65	140772.3	1.0	**50.2563**	0.508	1.0	ug/L	124	Standard
	Zn	66	76687.6	1.2	**49.8856**	0.267	0.5	ug/L	196	Standard
>	Ge	72	506644.3	1.2				ug/L	473313	Standard
	As	75	74554.9	1.7	**48.2999**	0.240	0.5	ug/L	-286	Standard
	Se	82	7506.9	1.1	**47.5159**	0.267	0.6	ug/L	-33	Standard
	Se-1	77	5539.3	1.7	**46.9971**	0.595	1.3	ug/L	86	Standard
>	Ga	71	88.3	8.6				mg/L	35	Standard
	Rb	85	668.3	4.1				ug/L	13	Standard
	Y	89	465199.2	2.2				ug/L	439493	Standard
>	Rh	103	16.7	75.5				ug/L	5	Standard
	Mo	98	204.8	12.5	**0.0340**	0.006	18.1	ug/L	10	Standard
	Ag	107	370376.2	0.9	**52.5689**	0.553	1.1	ug/L	53	Standard
	Cd	111	113043.9	1.0	**48.3556**	0.215	0.4	mg/L	1	Standard
	Cd	114	283125.0	0.3	**47.8495**	0.231	0.5	ug/L	32	Standard
>	In	115	527151.0	0.6				ug/L	494305	Standard
	Sn	118	13447.6	2.6	**9.5787**	0.208	2.2	ug/L	53	Standard
	Sb	123	135217.5	0.7	**47.8138**	0.105	0.2	ug/L	7	Standard
	Ba	135	96813.7	0.8	**49.5367**	0.167	0.3	ug/L	11	Standard
	Ce	140	68.3	33.8				ug/L	10	Standard
>	Tb	159	540907.1	1.4				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	299354.1	0.7	**48.3687**	0.280	0.6	ug/L	1	Standard
	Tl	205	398073.2	0.5	**52.0909**	0.388	0.7	ug/L	3	Standard
	Pb	206	137930.3	0.3	**51.9401**	0.148	0.3	ug/L	80	Standard
	Pb	207	122806.4	0.4	**51.3341**	0.214	0.4	ug/L	73	Standard
	Pb	208	274880.2	0.8	**46.9457**	0.333	0.7	ug/L	190	Standard
	U	238	171781.4	1.2	**45.0148**	0.415	0.9	ug/L	0	Standard
>	Bi	209	285365.9	0.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	1538.4	3.9	**1.5711**	0.044	2.8	mg/L	37	Standard
K	39	1.7	173.2	**-0.2829**	0.170	60.2	mg/L	3	Standard
Ca	43	13.3	43.3	**-6.4039**	1.625	25.4	mg/L	43	Standard
Fe	54	361.6	10.4	**0.0535**	0.022	40.3	mg/L	262	Standard
Fe	57	90.0	27.8	**0.0624**	0.045	72.7	mg/L	65	Standard
> **Sc-1**	45	26307.8	1.7				mg/L	26874	Standard
Cl	35	152979.1	0.7				ug/L	141022	Standard
Kr	83	102.7	3.1				ug/L	75	Standard
Br	81	3363.7	2.1				ug/L	2810	Standard
P	31	465236.5	2.0				ug/L	458976	Standard
S	34	95530.2	1.4				ug/L	103378	Standard
Sr	88	18.3	56.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.7	100.8				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		106.245	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		107.042	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	106.645
	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	103.229
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079303
Sample Date/Time: Monday, November 18, 2013 15:13:20
Number of Replicates: 3
Autosampler Position: 331
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	243418.2	1.1				ug/L	269614	Standard
	Be	9	53.3	10.8	**0.0038**	0.002	53.5	ug/L	23	Standard
	Al	27	324204.7	2.3	**1.7047**	0.026	1.5	ug/L	1170	Standard
	Sc	45	22471.7	1.4				ug/L	26874	Standard
	Ti	47	21.7	23.7	**-0.0062**	0.022	359.6	ug/L	25	Standard
	V	51	827.1	7.5	**-0.0556**	0.010	17.8	ug/L	1686	Standard
	Cr	52	48195.7	35.7	**6.9065**	2.673	38.7	ug/L	6098	Standard
	Cr	53	7238.4	8.5	**6.0768**	0.507	8.3	ug/L	193	Standard
	Mn	55	130985.9	146.6	**10.3063**	15.295	148.4	ug/L	1232	Standard
	Co	59	1387.2	156.1	**0.1438**	0.248	172.7	ug/L	106	Standard
	Ni	60	783.0	11.2	**0.1058**	0.033	31.1	ug/L	556	Standard
	Cu	65	366.0	8.5	**0.0900**	0.012	13.5	ug/L	124	Standard
	Zn	66	15500.0	133.5	**11.3633**	15.402	135.5	ug/L	196	Standard
>	Ge	72	441960.7	0.5				ug/L	473313	Standard
	As	75	-275.5	2.6	**0.0082**	0.004	54.7	ug/L	-286	Standard
	Se	82	-53.0	8.9	**-0.0809**	0.033	41.3	ug/L	-33	Standard
	Se-1	77	79.7	8.1	**0.0319**	0.062	195.4	ug/L	86	Standard
>	Ga	71	65.0	20.4				mg/L	35	Standard
	Rb	85	566.7	8.8				ug/L	13	Standard
	Y	89	395825.9	1.3				ug/L	439493	Standard
>	Rh	103	5.0	100.0				ug/L	5	Standard
	Mo	98	143.1	12.1	**0.0242**	0.005	19.8	ug/L	10	Standard
	Ag	107	91.3	42.0	**-0.0001**	0.006	4642.0	ug/L	53	Standard
	Cd	111	8.8	11.3	**0.0014**	0.000	33.7	mg/L	1	Standard
	Cd	114	1236.6	4.8	**0.2298**	0.012	5.2	ug/L	32	Standard
>	In	115	460492.0	0.2				ug/L	494305	Standard
	Sn	118	11064.7	1.0	**9.0195**	0.076	0.8	ug/L	53	Standard
	Sb	123	194.2	16.8	**0.0771**	0.013	17.1	ug/L	7	Standard
	Ba	135	511.0	4.7	**0.2869**	0.014	4.9	ug/L	11	Standard
	Ce	140	93.3	43.6				ug/L	10	Standard
>	Tb	159	475929.2	0.3				ug/L	538219	Standard
	Ho	165	5.0	173.2				ug/L	8	Standard
	Tl	203	36.3	3.2	**0.0043**	0.000	5.5	ug/L	1	Standard
	Tl	205	75.0	76.9	**0.0101**	0.008	81.6	ug/L	3	Standard
	Pb	206	115.0	2.6	**0.0059**	0.002	25.9	ug/L	80	Standard
	Pb	207	95.7	18.3	**0.0120**	0.008	66.1	ug/L	73	Standard
	Pb	208	231.3	10.3	**0.0052**	0.004	81.3	ug/L	190	Standard
	U	238	20.3	76.2	**0.0040**	0.004	111.1	ug/L	0	Standard
>	Bi	209	258787.7	0.6				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0813**	0.881	1084.7	mg/L	2	Standard
Mg	24	1325.1	10.9	**1.5854**	0.183	11.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2620**	0.206	78.8	mg/L	3	Standard
Ca	43	18.3	41.7	**-3.9808**	2.634	66.2	mg/L	43	Standard
Fe	54	169.5	7.9	**-0.0278**	0.009	30.6	mg/L	262	Standard
Fe	57	95.0	27.9	**0.1000**	0.056	56.3	mg/L	65	Standard
> **Sc-1**	45	22471.7	1.4				mg/L	26874	Standard
Cl	35	151470.7	0.4				ug/L	141022	Standard
Kr	83	100.7	7.6				ug/L	75	Standard
Br	81	2653.6	6.6				ug/L	2810	Standard
P	31	165901.8	1.8				ug/L	458976	Standard
S	34	102153.2	0.7				ug/L	103378	Standard
Sr	88	40.0	37.5				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.2	186.4				mg/L	10	Standard
Ho-1	165	5.0	173.2				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		90.284	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.376	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	93.159
|	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	93.615
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311079303SDL WG453185-02
Sample Date/Time: Monday, November 18, 2013 15:16:33
Number of Replicates: 3
Autosampler Position: 333
Sample Description: 125
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	240148.4	1.4				ug/L	269614	Standard
	Be	9	31.7	18.2	**-0.0041**	0.002	52.0	ug/L	23	Standard
	Al	27	67438.1	0.6	**0.3538**	0.003	0.9	ug/L	1170	Standard
	Sc	45	22271.4	2.7				ug/L	26874	Standard
	Ti	47	14.0	32.7	**-0.0373**	0.020	52.9	ug/L	25	Standard
	V	51	983.4	17.9	**-0.0275**	0.027	97.2	ug/L	1686	Standard
	Cr	52	11299.9	3.0	**1.1422**	0.048	4.2	ug/L	6098	Standard
	Cr	53	1548.4	7.0	**1.2282**	0.087	7.1	ug/L	193	Standard
	Mn	55	2977.3	14.9	**0.1061**	0.038	35.5	ug/L	1232	Standard
	Co	59	86.7	14.1	**-0.0051**	0.002	29.6	ug/L	106	Standard
	Ni	60	504.7	3.6	**0.0023**	0.008	342.8	ug/L	556	Standard
	Cu	65	141.0	9.2	**-0.0005**	0.006	1106.6	ug/L	124	Standard
	Zn	66	1353.1	16.8	**0.8450**	0.180	21.2	ug/L	196	Standard
>	**Ge**	72	429753.4	0.8				ug/L	473313	Standard
	As	75	-321.6	7.8	**-0.0327**	0.021	63.9	ug/L	-286	Standard
	Se	82	-70.4	3.3	**-0.2211**	0.013	5.9	ug/L	-33	Standard
	Se-1	77	75.0	11.4	**0.0070**	0.088	1255.1	ug/L	86	Standard
>	**Ga**	71	31.7	63.8				mg/L	35	Standard
	Rb	85	143.3	14.5				ug/L	13	Standard
	Y	89	392847.7	0.4				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	32.9	36.3	**-0.0060**	0.003	56.8	ug/L	10	Standard
	Ag	107	54.0	8.5	**-0.0060**	0.001	11.3	ug/L	53	Standard
	Cd	111	3.6	104.5	**-0.0011**	0.002	177.4	mg/L	1	Standard
	Cd	114	261.5	5.6	**0.0422**	0.003	7.5	ug/L	32	Standard
>	**In**	115	451421.3	0.9				ug/L	494305	Standard
	Sn	118	2304.8	1.4	**1.8724**	0.043	2.3	ug/L	53	Standard
	Sb	123	52.4	23.8	**0.0202**	0.005	26.4	ug/L	7	Standard
	Ba	135	103.7	2.9	**0.0495**	0.002	4.7	ug/L	11	Standard
	Ce	140	21.7	66.6				ug/L	10	Standard
>	**Tb**	159	466981.4	1.5				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	10.0	20.0	**-0.0003**	0.000	110.8	ug/L	1	Standard
	Tl	205	10.0	50.0	**0.0008**	0.001	94.3	ug/L	3	Standard
	Pb	206	89.7	3.4	**-0.0040**	0.001	33.8	ug/L	80	Standard
	Pb	207	77.0	6.0	**0.0040**	0.002	53.5	ug/L	73	Standard
	Pb	208	176.3	8.5	**-0.0046**	0.003	60.5	ug/L	190	Standard
	U	238	0.7	173.2	**-0.0017**	0.000	20.3	ug/L	0	Standard
>	**Bi**	209	254763.7	0.2				ug/L	276439	Standard

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	Na	23	3.3	86.6	**0.6069**	0.897	147.8	mg/L	2	Standard
	Mg	24	310.0	12.8	**0.3500**	0.051	14.6	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2623**	0.206	78.5	mg/L	3	Standard
	Ca	43	16.7	45.8	**-4.4598**	2.828	63.4	mg/L	43	Standard
	Fe	54	116.5	14.0	**-0.0582**	0.008	14.0	mg/L	262	Standard
	Fe	57	75.0	6.7	**0.0597**	0.008	14.2	mg/L	65	Standard
>	**Sc-1**	45	22271.4	2.7				mg/L	26874	Standard
	Cl	35	145296.2	2.0				ug/L	141022	Standard
	Kr	83	114.3	0.5				ug/L	75	Standard
	Br	81	2346.8	5.8				ug/L	2810	Standard
	P	31	151054.9	3.5				ug/L	458976	Standard
	S	34	103217.1	1.5				ug/L	103378	Standard
	Sr	88	35.0	49.5				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	3.0	201.4				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	8	Standard
	Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		89.071	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.797	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.324
	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	92.159
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311079303SDL WG453185-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 15:19:40
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	274703.8	2.4				ug/L	269614	Standard
	Be	9	149973.8	2.1	**49.5934**	1.308	2.6	ug/L	23	Standard
	Al	27	9531789.7	1.7	**44.5997**	0.648	1.5	ug/L	1170	Standard
	Sc	45	24615.0	4.7				ug/L	26874	Standard
	Ti	47	25122.8	1.5	**98.7535**	0.171	0.2	ug/L	25	Standard
	V	51	324994.8	2.0	**45.5546**	0.394	0.9	ug/L	1686	Standard
	Cr	52	319349.2	2.7	**45.7102**	0.915	2.0	ug/L	6098	Standard
	Cr	53	61313.8	1.7	**48.3528**	0.214	0.4	ug/L	193	Standard
	Mn	55	660031.1	1.2	**48.5295**	0.216	0.4	ug/L	1232	Standard
	Co	59	449677.2	2.3	**47.6948**	0.317	0.7	ug/L	106	Standard
	Ni	60	134576.1	1.5	**48.4732**	0.526	1.1	ug/L	556	Standard
	Cu	65	132094.7	0.8	**49.7805**	0.436	0.9	ug/L	124	Standard
	Zn	66	72382.1	0.4	**49.7074**	0.676	1.4	ug/L	196	Standard
>	Ge	72	479970.7	1.6				ug/L	473313	Standard
	As	75	72986.4	1.2	**49.9093**	0.445	0.9	ug/L	-286	Standard
	Se	82	7487.2	1.9	**50.0128**	1.032	2.1	ug/L	-33	Standard
	Se-1	77	5550.7	1.6	**49.7673**	1.405	2.8	ug/L	86	Standard
>	Ga	71	41.7	36.7				mg/L	35	Standard
	Rb	85	1150.0	5.4				ug/L	13	Standard
	Y	89	441027.9	1.7				ug/L	439493	Standard
>	Rh	103	25.0	40.0				ug/L	5	Standard
	Mo	98	413462.4	2.0	**103.8182**	2.266	2.2	ug/L	10	Standard
	Ag	107	353218.3	0.8	**52.3882**	0.511	1.0	ug/L	53	Standard
	Cd	111	111061.1	1.1	**49.6466**	0.673	1.4	mg/L	1	Standard
	Cd	114	282241.0	1.5	**49.8441**	0.614	1.2	ug/L	32	Standard
>	In	115	504461.0	0.4				ug/L	494305	Standard
	Sn	118	67749.5	0.6	**50.6730**	0.402	0.8	ug/L	53	Standard
	Sb	123	131807.9	1.1	**48.7060**	0.654	1.3	ug/L	7	Standard
	Ba	135	93260.1	0.3	**49.8658**	0.269	0.5	ug/L	11	Standard
	Ce	140	45.0	22.2				ug/L	10	Standard
>	Tb	159	516004.7	0.6				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	290516.2	0.7	**49.5261**	0.115	0.2	ug/L	1	Standard
	Tl	205	386687.3	0.6	**53.3903**	0.711	1.3	ug/L	3	Standard
	Pb	206	134409.3	1.3	**53.4024**	0.552	1.0	ug/L	80	Standard
	Pb	207	120924.3	0.3	**53.3341**	0.443	0.8	ug/L	73	Standard
	Pb	208	267361.0	0.5	**48.1798**	0.544	1.1	ug/L	190	Standard
	U	238	170706.3	0.0	**47.1995**	0.405	0.9	ug/L	0	Standard
>	Bi	209	270472.2	0.9				ug/L	276439	Standard

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	Na	23	21.7	48.0	**5.5998**	2.781	49.7	mg/L	2	Standard
	Mg	24	4859.1	1.7	**5.3855**	0.169	3.1	mg/L	37	Standard
	K	39	103.3	35.7	**6.2211**	2.115	34.0	mg/L	3	Standard
	Ca	43	30.0	44.1	**-0.8812**	4.077	462.7	mg/L	43	Standard
	Fe	54	11234.0	2.2	**5.8473**	0.235	4.0	mg/L	262	Standard
	Fe	57	3233.7	3.2	**6.0176**	0.347	5.8	mg/L	65	Standard
>	**Sc-1**	45	24615.0	4.7				mg/L	26874	Standard
	Cl	35	153388.8	2.5				ug/L	141022	Standard
	Kr	83	115.0	13.9				ug/L	75	Standard
	Br	81	2706.9	6.3				ug/L	2810	Standard
	P	31	503679.6	1.6				ug/L	458976	Standard
	S	34	127889.1	0.2				ug/L	103378	Standard
	Sr	88	60.0	16.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	-0.3	86.6				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.888	
	Be	9	99.187		
	Al	27	89.199		
	Sc	45			
	Ti	47	98.753		
	V	51	91.109		
	Cr	52	91.420		
	Cr	53			
	Mn	55	97.059		
	Co	59	95.390		
	Ni	60	96.946		
	Cu	65	99.561		
	Zn	66	99.415		
>	Ge	72		101.407	
	As	75	99.819		
	Se	82	100.026		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	103.818	
|	Ag	107	104.776	
|	Cd	111	99.293	
|	Cd	114		
|>	In	115		102.055
|	Sn	118	101.346	
|	Sb	123	97.412	
⌊	Ba	135	99.732	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	99.052	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	96.360	
|	U	238	94.399	
⌊>	Bi	209		97.841
⌈	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Al	27	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 15:22:45
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	272130.6	1.1				ug/L	269614	Standard
	Be	9	116.7	101.3	**0.0231**	0.040	173.2	ug/L	23	Standard
	Al	27	8470.8	147.3	**0.0332**	0.060	179.3	ug/L	1170	Standard
	Sc	45	25349.5	2.9				ug/L	26874	Standard
	Ti	47	22.7	64.3	**-0.0088**	0.057	648.3	ug/L	25	Standard
	V	51	1043.6	1.9	**-0.0337**	0.003	7.9	ug/L	1686	Standard
	Cr	52	4091.6	14.9	**-0.0912**	0.086	94.5	ug/L	6098	Standard
	Cr	53	770.0	134.4	**0.4732**	0.821	173.6	ug/L	193	Standard
	Mn	55	3709.6	123.9	**0.1360**	0.340	250.0	ug/L	1232	Standard
	Co	59	157.0	69.5	**0.0014**	0.012	821.0	ug/L	106	Standard
	Ni	60	574.3	36.9	**0.0079**	0.076	959.2	ug/L	556	Standard
	Cu	65	197.3	64.1	**0.0151**	0.048	314.8	ug/L	124	Standard
	Zn	66	16370.7	165.8	**11.1384**	18.785	168.7	ug/L	196	Standard
>	Ge	72	475206.6	0.7				ug/L	473313	Standard
	As	75	-318.0	15.7	**-0.0069**	0.035	508.8	ug/L	-286	Standard
	Se	82	-56.2	14.3	**-0.0760**	0.053	70.3	ug/L	-33	Standard
	Se-1	77	76.3	4.6	**-0.0538**	0.030	55.0	ug/L	86	Standard
>	Ga	71	45.0	69.4				mg/L	35	Standard
	Rb	85	36.7	103.3				ug/L	13	Standard
	Y	89	437138.3	0.9				ug/L	439493	Standard
>	Rh	103	0.0					ug/L	5	Standard
	Mo	98	92.4	40.6	**0.0081**	0.009	115.0	ug/L	10	Standard
	Ag	107	92.0	33.9	**-0.0013**	0.004	345.1	ug/L	53	Standard
	Cd	111	19.9	161.2	**0.0059**	0.014	239.9	mg/L	1	Standard
	Cd	114	54.4	84.8	**0.0002**	0.008	5181.5	ug/L	32	Standard
>	In	115	502494.6	1.9				ug/L	494305	Standard
	Sn	118	85.3	14.9	**0.0077**	0.009	116.1	ug/L	53	Standard
	Sb	123	300.9	38.4	**0.1106**	0.045	40.7	ug/L	7	Standard
	Ba	135	21.0	86.6	**-0.0013**	0.010	743.6	ug/L	11	Standard
	Ce	140	65.0	166.6				ug/L	10	Standard
>	Tb	159	518842.6	0.7				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	49.0	115.4	**0.0062**	0.010	155.9	ug/L	1	Standard
	Tl	205	56.7	68.5	**0.0071**	0.005	75.8	ug/L	3	Standard
	Pb	206	102.7	13.8	**-0.0014**	0.006	397.2	ug/L	80	Standard
	Pb	207	90.3	24.6	**0.0075**	0.010	132.6	ug/L	73	Standard
	Pb	208	193.7	2.3	**-0.0038**	0.001	30.7	ug/L	190	Standard
	U	238	17.0	65.5	**0.0028**	0.003	109.6	ug/L	0	Standard
>	Bi	209	272999.7	1.1				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0173**	0.771	4458.9	mg/L	2	Standard
Mg	24	60.0	33.3	**0.0329**	0.021	63.6	mg/L	37	Standard
K	39	3.3	86.6	**-0.1765**	0.177	100.5	mg/L	3	Standard
Ca	43	13.3	43.3	**-6.2009**	1.918	30.9	mg/L	43	Standard
Fe	54	287.5	18.2	**0.0214**	0.023	107.9	mg/L	262	Standard
Fe	57	70.0	21.4	**0.0315**	0.026	84.0	mg/L	65	Standard
> **Sc-1**	45	25349.5	2.9				mg/L	26874	Standard
Cl	35	148988.3	1.0				ug/L	141022	Standard
Kr	83	110.3	6.2				ug/L	75	Standard
Br	81	2673.6	8.9				ug/L	2810	Standard
P	31	479952.9	3.6				ug/L	458976	Standard
S	34	121797.7	1.8				ug/L	103378	Standard
Sr	88	30.0	16.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	2.9	187.9				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		100.933	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		100.400	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	101.657
	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	98.756
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063004
Sample Date/Time: Monday, November 18, 2013 15:26:49
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	301071.9	0.7				ug/L	269614	Standard
	Be	9	7992.1	2.3	**2.3956**	0.064	2.7	ug/L	23	Standard
	Al	27	63486884.2	1.1	**271.0285**	1.506	0.6	ug/L	1170	Standard
	Sc	45	29650.7	1.7				ug/L	26874	Standard
	Ti	47	31.3	21.3	**0.0392**	0.029	74.9	ug/L	25	Standard
	V	51	17026.8	1.1	**2.4990**	0.032	1.3	ug/L	1686	Standard
	Cr	52	5377.8	47.9	**0.1830**	0.419	228.9	ug/L	6098	Standard
	Cr	53	958.4	120.8	**0.7092**	1.025	144.5	ug/L	193	Standard
	Mn	55	379207711.4	2.1	**31280.1642**	394.286	1.3	ug/L	1232	Standard
	Co	59	4972140.8	0.9	**590.2415**	1.898	0.3	ug/L	106	Standard
	Ni	60	887360.1	0.8	**358.8710**	2.114	0.6	ug/L	556	Standard
	Cu	65	22284.7	1.1	**9.3464**	0.048	0.5	ug/L	124	Standard
	Zn	66	376330046.3	0.8	**290253.8521**	717.221	0.2	ug/L	196	Standard
>	Ge	72	428998.2	0.9				ug/L	473313	Standard
	As	75	9563.4	3.2	**7.4964**	0.197	2.6	ug/L	-286	Standard
	Se	82	706.3	9.6	**5.5461**	0.491	8.9	ug/L	-33	Standard
	Se-1	77	448.3	2.3	**3.8089**	0.071	1.9	ug/L	86	Standard
>	Ga	71	6491.4	2.8				mg/L	35	Standard
	Rb	85	17108.0	1.5				ug/L	13	Standard
	Y	89	3349528.4	0.8				ug/L	439493	Standard
>	Rh	103	81.7	7.1				ug/L	5	Standard
	Mo	98	165.2	33.7	**0.0346**	0.017	48.3	ug/L	10	Standard
	Ag	107	1228.4	8.0	**0.2038**	0.016	8.0	ug/L	53	Standard
	Cd	111	50653.7	0.7	**27.1937**	0.263	1.0	mg/L	1	Standard
	Cd	114	127200.0	1.4	**26.9755**	0.318	1.2	ug/L	32	Standard
>	In	115	420055.8	1.6				ug/L	494305	Standard
	Sn	118	66.3	10.0	**0.0032**	0.006	183.1	ug/L	53	Standard
	Sb	123	125.5	18.4	**0.0542**	0.011	19.5	ug/L	7	Standard
	Ba	135	2346.5	1.5	**1.4946**	0.006	0.4	ug/L	11	Standard
	Ce	140	4516926.6	0.7				ug/L	10	Standard
>	Tb	159	593163.9	1.9				ug/L	538219	Standard
	Ho	165	121276.8	1.0				ug/L	8	Standard
	Tl	203	119.0	83.7	**0.0201**	0.018	91.9	ug/L	1	Standard
	Tl	205	145.0	44.8	**0.0213**	0.010	45.5	ug/L	3	Standard
	Pb	206	1614.8	1.5	**0.6647**	0.003	0.5	ug/L	80	Standard
	Pb	207	1350.1	4.4	**0.6235**	0.023	3.6	ug/L	73	Standard
	Pb	208	3070.8	2.7	**0.5710**	0.010	1.8	ug/L	190	Standard
	U	238	136.0	32.5	**0.0394**	0.013	33.2	ug/L	0	Standard
>	Bi	209	245770.9	1.5				ug/L	276439	Standard

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	Na	23	108.3	21.3	**24.8412**	5.162	20.8	mg/L	2	Standard
	Mg	24	18508.0	1.7	**17.0817**	0.141	0.8	mg/L	37	Standard
	K	39	56.7	22.2	**2.6499**	0.724	27.3	mg/L	3	Standard
	Ca	43	143.3	24.7	**27.3351**	9.829	36.0	mg/L	43	Standard
	Fe	54	117438.9	0.3	**51.6685**	0.871	1.7	mg/L	262	Standard
	Fe	57	33086.1	2.5	**51.7569**	0.580	1.1	mg/L	65	Standard
>	**Sc-1**	45	29650.7	1.7				mg/L	26874	Standard
	Cl	35	916768.4	0.7				ug/L	141022	Standard
	Kr	83	1315.7	1.0				ug/L	75	Standard
	Br	81	3423.7	3.7				ug/L	2810	Standard
	P	31	191625.8	4.6				ug/L	458976	Standard
	S	34	87973.1	3.0				ug/L	103378	Standard
	Sr	88	436.7	9.3				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	184523.3	1.6				mg/L	10	Standard
	Ho-1	165	121276.8	1.0				mg/L	8	Standard
	Er	166	105962.7	1.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		111.668	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.637	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	84.979
|	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	88.906
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063006S WG452687-08
Sample Date/Time: Monday, November 18, 2013 15:29:54
Number of Replicates: 3
Autosampler Position: 319
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	312726.2	0.9				ug/L	269614	Standard
	Be	9	22698.7	0.6	**6.5780**	0.075	1.1	ug/L	23	Standard
	Al	27	64373112.3	0.9	**264.6020**	4.639	1.8	ug/L	1170	Standard
	Sc	45	29734.1	1.1				ug/L	26874	Standard
	Ti	47	32.7	12.7	**0.0451**	0.018	41.0	ug/L	25	Standard
	V	51	50684.9	2.2	**7.8017**	0.176	2.3	ug/L	1686	Standard
	Cr	52	33124.9	3.1	**4.6957**	0.167	3.6	ug/L	6098	Standard
	Cr	53	5674.4	2.2	**4.8838**	0.107	2.2	ug/L	193	Standard
	Mn	55	401197742.8	1.5	**33109.4801**	484.711	1.5	ug/L	1232	Standard
	Co	59	5317877.4	2.3	**631.5306**	13.954	2.2	ug/L	106	Standard
	Ni	60	956048.8	1.9	**386.8080**	7.083	1.8	ug/L	556	Standard
	Cu	65	35766.8	1.3	**15.0431**	0.184	1.2	ug/L	124	Standard
	Zn	66	395698868.1	0.8	**305309.2209**	2092.230	0.7	ug/L	196	Standard
>	Ge	72	428829.2	0.1				ug/L	473313	Standard
	As	75	16817.0	1.7	**13.0277**	0.226	1.7	ug/L	-286	Standard
	Se	82	1527.1	2.9	**11.6483**	0.328	2.8	ug/L	-33	Standard
	Se-1	77	1101.4	5.8	**10.4616**	0.642	6.1	ug/L	86	Standard
>	Ga	71	7070.0	1.0				mg/L	35	Standard
	Rb	85	17743.7	1.8				ug/L	13	Standard
	Y	89	3508309.0	0.4				ug/L	439493	Standard
>	Rh	103	103.3	15.6				ug/L	5	Standard
	Mo	98	131.1	10.7	**0.0242**	0.004	17.0	ug/L	10	Standard
	Ag	107	30912.2	1.9	**5.4685**	0.125	2.3	ug/L	53	Standard
	Cd	111	64274.5	0.8	**34.3512**	0.373	1.1	mg/L	1	Standard
	Cd	114	162502.1	1.3	**34.3092**	0.382	1.1	ug/L	32	Standard
>	In	115	421931.3	0.6				ug/L	494305	Standard
	Sn	118	53.3	12.1	**-0.0087**	0.006	68.0	ug/L	53	Standard
	Sb	123	12919.0	1.9	**5.7068**	0.143	2.5	ug/L	7	Standard
	Ba	135	10528.0	1.6	**6.7199**	0.135	2.0	ug/L	11	Standard
	Ce	140	4989269.1	1.1				ug/L	10	Standard
>	Tb	159	609808.2	0.7				ug/L	538219	Standard
	Ho	165	133055.2	2.3				ug/L	8	Standard
	Tl	203	28729.9	1.8	**5.3644**	0.086	1.6	ug/L	1	Standard
	Tl	205	36524.0	2.3	**5.5244**	0.114	2.1	ug/L	3	Standard
	Pb	206	14770.9	2.4	**6.3929**	0.116	1.8	ug/L	80	Standard
	Pb	207	12546.9	1.8	**6.0344**	0.066	1.1	ug/L	73	Standard
	Pb	208	28871.0	1.7	**5.6663**	0.080	1.4	ug/L	190	Standard
	U	238	17489.4	1.2	**5.2966**	0.055	1.0	ug/L	0	Standard
>	Bi	209	246852.8	0.9				ug/L	276439	Standard

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	Na	23	85.0	10.2	**19.3742**	2.171	11.2	mg/L	2	Standard
	Mg	24	18629.8	1.3	**17.1483**	0.395	2.3	mg/L	37	Standard
	K	39	43.3	17.6	**1.9234**	0.400	20.8	mg/L	3	Standard
	Ca	43	136.7	12.8	**25.3959**	4.579	18.0	mg/L	43	Standard
	Fe	54	119015.5	2.5	**52.2029**	0.896	1.7	mg/L	262	Standard
	Fe	57	33620.6	0.5	**52.4530**	0.458	0.9	mg/L	65	Standard
>	**Sc-1**	45	29734.1	1.1				mg/L	26874	Standard
	Cl	35	936611.5	1.6				ug/L	141022	Standard
	Kr	83	1397.4	2.5				ug/L	75	Standard
	Br	81	3180.3	7.0				ug/L	2810	Standard
	P	31	193094.5	1.6				ug/L	458976	Standard
	S	34	85198.9	1.4				ug/L	103378	Standard
	Sr	88	520.0	10.1				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	207807.8	1.6				mg/L	10	Standard
	Ho-1	165	133055.2	2.3				mg/L	8	Standard
	Er	166	114467.5	1.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		115.990	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.602	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.358
|	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	89.297
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063008SD WG452687-09
Sample Date/Time: Monday, November 18, 2013 15:32:59
Number of Replicates: 3
Autosampler Position: 320
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	298993.8	2.1				ug/L	269614	Standard
	Be	9	21006.2	2.2	**6.3698**	0.263	4.1	ug/L	23	Standard
	Al	27	61880139.5	1.1	**266.1029**	7.122	2.7	ug/L	1170	Standard
	Sc	45	29467.0	0.3				ug/L	26874	Standard
	Ti	47	33.7	26.0	**0.0492**	0.039	79.7	ug/L	25	Standard
	V	51	46184.2	0.5	**7.0712**	0.066	0.9	ug/L	1686	Standard
	Cr	52	31632.7	1.4	**4.4376**	0.062	1.4	ug/L	6098	Standard
	Cr	53	5639.4	5.5	**4.8373**	0.253	5.2	ug/L	193	Standard
	Mn	55	376701691.9	0.2	**30995.5447**	176.231	0.6	ug/L	1232	Standard
	Co	59	4993922.6	1.4	**591.2635**	4.305	0.7	ug/L	106	Standard
	Ni	60	895283.7	1.0	**361.1542**	5.966	1.7	ug/L	556	Standard
	Cu	65	33916.6	1.0	**14.2201**	0.250	1.8	ug/L	124	Standard
	Zn	66	370271607.7	1.0	**284836.3367**	2261.340	0.8	ug/L	196	Standard
>	Ge	72	430119.2	0.7				ug/L	473313	Standard
	As	75	16302.7	0.6	**12.5992**	0.168	1.3	ug/L	-286	Standard
	Se	82	1517.5	4.0	**11.5452**	0.524	4.5	ug/L	-33	Standard
	Se-1	77	1036.4	1.0	**9.7688**	0.146	1.5	ug/L	86	Standard
>	Ga	71	6784.9	3.6				mg/L	35	Standard
	Rb	85	17069.6	2.1				ug/L	13	Standard
	Y	89	3324648.8	1.3				ug/L	439493	Standard
>	Rh	103	73.3	7.9				ug/L	5	Standard
	Mo	98	132.2	12.5	**0.0245**	0.005	19.5	ug/L	10	Standard
	Ag	107	29466.0	0.3	**5.2098**	0.024	0.5	ug/L	53	Standard
	Cd	111	60156.0	0.2	**32.1386**	0.244	0.8	mg/L	1	Standard
	Cd	114	148753.4	1.3	**31.3939**	0.226	0.7	ug/L	32	Standard
>	In	115	422078.5	0.5				ug/L	494305	Standard
	Sn	118	62.7	10.6	**-0.0003**	0.006	1987.6	ug/L	53	Standard
	Sb	123	12209.4	0.4	**5.3909**	0.050	0.9	ug/L	7	Standard
	Ba	135	10086.7	0.9	**6.4352**	0.080	1.2	ug/L	11	Standard
	Ce	140	4502527.4	0.7				ug/L	10	Standard
>	Tb	159	603115.2	1.0				ug/L	538219	Standard
	Ho	165	120332.6	0.7				ug/L	8	Standard
	Tl	203	27166.7	0.2	**5.0603**	0.013	0.3	ug/L	1	Standard
	Tl	205	34298.8	0.7	**5.1754**	0.038	0.7	ug/L	3	Standard
	Pb	206	13960.8	0.9	**6.0256**	0.031	0.5	ug/L	80	Standard
	Pb	207	11679.5	1.2	**5.6016**	0.044	0.8	ug/L	73	Standard
	Pb	208	27439.3	0.5	**5.3705**	0.051	0.9	ug/L	190	Standard
	U	238	16573.4	1.4	**5.0068**	0.051	1.0	ug/L	0	Standard
>	Bi	209	247447.3	0.4				ug/L	276439	Standard

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	Na	23	111.7	5.2	**25.8057**	1.294	5.0	mg/L	2	Standard
	Mg	24	17885.6	1.8	**16.6087**	0.268	1.6	mg/L	37	Standard
	K	39	43.3	24.0	**1.9445**	0.554	28.5	mg/L	3	Standard
	Ca	43	141.7	8.9	**27.0368**	3.259	12.1	mg/L	43	Standard
	Fe	54	116062.4	1.8	**51.3694**	0.810	1.6	mg/L	262	Standard
	Fe	57	33233.1	0.6	**52.3152**	0.231	0.4	mg/L	65	Standard
>	**Sc-1**	45	29467.0	0.3				mg/L	26874	Standard
	Cl	35	896401.6	1.1				ug/L	141022	Standard
	Kr	83	1370.7	2.4				ug/L	75	Standard
	Br	81	3060.3	5.1				ug/L	2810	Standard
	P	31	190407.3	0.9				ug/L	458976	Standard
	S	34	83472.6	0.9				ug/L	103378	Standard
	Sr	88	461.7	14.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	187754.8	1.0				mg/L	10	Standard
	Ho-1	165	120332.6	0.7				mg/L	8	Standard
	Er	166	105583.4	2.1				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		110.897	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.874	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.388
|	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	89.512
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063009
Sample Date/Time: Monday, November 18, 2013 15:36:04
Number of Replicates: 3
Autosampler Position: 321
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	237839.6	2.4				ug/L	269614	Standard
	Be	9	46.7	24.7	**0.0018**	0.005	261.1	ug/L	23	Standard
	Al	27	860592.2	1.1	**4.6448**	0.067	1.4	ug/L	1170	Standard
	Sc	45	22002.6	0.8				ug/L	26874	Standard
	Ti	47	112.3	18.2	**0.4070**	0.094	23.0	ug/L	25	Standard
	V	51	702.9	6.0	**-0.0688**	0.007	10.4	ug/L	1686	Standard
	Cr	52	3984.5	3.8	**-0.0293**	0.022	73.8	ug/L	6098	Standard
	Cr	53	1935.1	3.4	**1.6116**	0.065	4.0	ug/L	193	Standard
	Mn	55	90499.7	31.9	**7.4973**	2.447	32.6	ug/L	1232	Standard
	Co	59	1077.4	35.6	**0.1154**	0.047	40.3	ug/L	106	Standard
	Ni	60	1593.1	9.4	**0.4576**	0.064	14.1	ug/L	556	Standard
	Cu	65	3886.8	2.0	**1.6173**	0.024	1.5	ug/L	124	Standard
	Zn	66	117433.7	50.9	**92.5161**	47.323	51.2	ug/L	196	Standard
>	**Ge**	72	419611.5	0.6				ug/L	473313	Standard
	As	75	925.5	7.0	**0.9325**	0.047	5.0	ug/L	-286	Standard
	Se	82	405.6	7.6	**3.3806**	0.221	6.5	ug/L	-33	Standard
	Se-1	77	300.0	2.5	**2.3671**	0.062	2.6	ug/L	86	Standard
>	**Ga**	71	113.3	9.2				mg/L	35	Standard
	Rb	85	4689.1	4.5				ug/L	13	Standard
	Y	89	382047.6	1.7				ug/L	439493	Standard
>	**Rh**	103	60.0	22.0				ug/L	5	Standard
	Mo	98	4005.7	2.6	**1.1470**	0.032	2.8	ug/L	10	Standard
	Ag	107	83.0	6.3	**-0.0008**	0.001	119.6	ug/L	53	Standard
	Cd	111	217.5	6.7	**0.1094**	0.008	6.9	mg/L	1	Standard
	Cd	114	593.2	5.3	**0.1116**	0.006	5.6	ug/L	32	Standard
>	**In**	115	436626.6	0.1				ug/L	494305	Standard
	Sn	118	69.0	13.0	**0.0033**	0.008	239.1	ug/L	53	Standard
	Sb	123	142.2	3.4	**0.0592**	0.002	3.4	ug/L	7	Standard
	Ba	135	32426.3	0.6	**20.0242**	0.119	0.6	ug/L	11	Standard
	Ce	140	2658.6	13.4				ug/L	10	Standard
>	**Tb**	159	460927.6	0.0				ug/L	538219	Standard
	Ho	165	71.7	24.5				ug/L	8	Standard
	Tl	203	46.3	22.7	**0.0067**	0.002	29.5	ug/L	1	Standard
	Tl	205	63.3	31.9	**0.0091**	0.003	33.2	ug/L	3	Standard
	Pb	206	556.0	1.3	**0.2057**	0.005	2.2	ug/L	80	Standard
	Pb	207	484.0	5.1	**0.2072**	0.013	6.2	ug/L	73	Standard
	Pb	208	1047.7	0.8	**0.1732**	0.002	1.2	ug/L	190	Standard
	U	238	479.3	3.7	**0.1465**	0.005	3.3	ug/L	0	Standard
>	**Bi**	209	241515.8	1.0				ug/L	276439	Standard

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Na	23	5.0	173.2	**1.1340**	2.705	238.5	mg/L	2	Standard
Mg	24	67464.9	0.7	**84.0351**	0.779	0.9	mg/L	37	Standard
K	39	5.0	100.0	**-0.0205**	0.363	1772.3	mg/L	3	Standard
Ca	43	20.0	25.0	**-3.2564**	1.781	54.7	mg/L	43	Standard
Fe	54	267.6	20.0	**0.0327**	0.033	101.0	mg/L	262	Standard
Fe	57	105.0	25.2	**0.1248**	0.054	43.4	mg/L	65	Standard
> **Sc-1**	45	22002.6	0.8				mg/L	26874	Standard
Cl	35	122795.2	2.7				ug/L	141022	Standard
Kr	83	153.0	1.7				ug/L	75	Standard
Br	81	73320.3	1.8				ug/L	2810	Standard
P	31	193821.2	5.7				ug/L	458976	Standard
S	34	73389.1	3.2				ug/L	103378	Standard
Sr	88	288.3	14.0				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	130.3	41.3				mg/L	10	Standard
Ho-1	165	71.7	24.5				mg/L	8	Standard
Er	166	63.3	87.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		88.215	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		88.654	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	88.331
	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	87.367
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311063009
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Method 6020 - Summary Report

Sample ID: L1311063010
Sample Date/Time: Monday, November 18, 2013 15:39:08
Number of Replicates: 3
Autosampler Position: 322
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	367182.3	12.3				ug/L	269614	Standard
	Be	9	13.3	78.1	**-0.0129**	0.002	16.4	ug/L	23	Standard
	Al	27	3989.1	91.3	**0.0078**	0.015	191.8	ug/L	1170	Standard
	Sc	45	31558.3	14.3				ug/L	26874	Standard
	Ti	47	11.7	21.6	**-0.0615**	0.010	15.8	ug/L	25	Standard
	V	51	491.8	11.5	**-0.1265**	0.004	3.4	ug/L	1686	Standard
	Cr	52	2931.7	58.9	**-0.3371**	0.241	71.5	ug/L	6098	Standard
	Cr	53	228.3	56.3	**0.0107**	0.098	919.5	ug/L	193	Standard
	Mn	55	33451.9	137.0	**2.0043**	3.027	151.0	ug/L	1232	Standard
	Co	59	493.3	117.7	**0.0296**	0.056	187.9	ug/L	106	Standard
	Ni	60	368.3	12.0	**-0.0937**	0.022	23.1	ug/L	556	Standard
	Cu	65	165.0	27.6	**-0.0093**	0.018	189.1	ug/L	124	Standard
	Zn	66	12344.9	80.3	**6.9653**	6.364	91.4	ug/L	196	Standard
>	**Ge**	72	598942.9	9.1				ug/L	473313	Standard
	As	75	-445.6	55.3	**-0.0271**	0.127	469.4	ug/L	-286	Standard
	Se	82	-131.5	62.2	**-0.3840**	0.416	108.2	ug/L	-33	Standard
	Se-1	77	57.3	7.9	**-0.3360**	0.034	10.1	ug/L	86	Standard
>	**Ga**	71	33.3	43.3				mg/L	35	Standard
	Rb	85	98.3	89.9				ug/L	13	Standard
	Y	89	565572.6	6.6				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	16.3	46.3	**-0.0120**	0.002	13.6	ug/L	10	Standard
	Ag	107	80.3	27.5	**-0.0057**	0.003	50.2	ug/L	53	Standard
	Cd	111	25.6	156.4	**0.0064**	0.015	228.9	mg/L	1	Standard
	Cd	114	71.6	135.0	**0.0008**	0.014	1798.5	ug/L	32	Standard
>	**In**	115	655241.1	6.0				ug/L	494305	Standard
	Sn	118	66.3	23.4	**-0.0178**	0.011	62.6	ug/L	53	Standard
	Sb	123	33.6	37.0	**0.0081**	0.004	48.8	ug/L	7	Standard
	Ba	135	20.7	96.1	**-0.0037**	0.009	236.7	ug/L	11	Standard
	Ce	140	973.4	153.2				ug/L	10	Standard
>	**Tb**	159	726191.3	4.2				ug/L	538219	Standard
	Ho	165	40.0	120.5				ug/L	8	Standard
	Tl	203	46.7	106.7	**0.0034**	0.006	178.9	ug/L	1	Standard
	Tl	205	55.0	96.2	**0.0046**	0.005	114.2	ug/L	3	Standard
	Pb	206	137.3	13.9	**-0.0046**	0.006	136.3	ug/L	80	Standard
	Pb	207	111.0	16.4	**0.0015**	0.007	468.8	ug/L	73	Standard
	Pb	208	283.0	8.7	**-0.0035**	0.004	126.5	ug/L	190	Standard
	U	238	2.7	108.3	**-0.0013**	0.001	42.8	ug/L	0	Standard
>	**Bi**	209	397113.8	4.4				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	61.7	56.9	**0.0240**	0.038	157.7	mg/L	37	Standard
K	39	1.7	173.2	**-0.2836**	0.169	59.6	mg/L	3	Standard
Ca	43	30.0	60.1	**-2.4040**	5.785	240.6	mg/L	43	Standard
Fe	54	152.8	16.7	**-0.0633**	0.003	4.3	mg/L	262	Standard
Fe	57	116.7	27.6	**0.0807**	0.065	80.4	mg/L	65	Standard
> **Sc-1**	45	31558.3	14.3				mg/L	26874	Standard
Cl	35	56204.2	10.8				ug/L	141022	Standard
Kr	83	259.0	55.9				ug/L	75	Standard
Br	81	1266.7	5.4				ug/L	2810	Standard
P	31	197042.2	31.7				ug/L	458976	Standard
S	34	40827.5	15.4				ug/L	103378	Standard
Sr	88	55.0	15.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	42.2	135.1				mg/L	10	Standard
Ho-1	165	40.0	120.5				mg/L	8	Standard
Er	166	23.3	65.5				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		136.188	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		126.543	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	132.558
|	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	143.653
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ge 72 Int Std for sample	Ge	72	Rerun sample
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1311063011
Sample Date/Time: Monday, November 18, 2013 15:42:13
Number of Replicates: 3
Autosampler Position: 323
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	235467.3	0.6				ug/L	269614	Standard
	Be	9	40.0	37.5	**-0.0006**	0.006	905.3	ug/L	23	Standard
	Al	27	35060766.0	1.1	**191.3755**	0.823	0.4	ug/L	1170	Standard
	Sc	45	21618.7	1.8				ug/L	26874	Standard
	Ti	47	91.3	14.0	**0.3089**	0.058	18.7	ug/L	25	Standard
	V	51	1084.6	2.5	**-0.0089**	0.003	35.3	ug/L	1686	Standard
	Cr	52	3167.7	0.6	**-0.1694**	0.002	1.4	ug/L	6098	Standard
	Cr	53	248.3	16.4	**0.0837**	0.037	44.7	ug/L	193	Standard
	Mn	55	45795100.0	0.7	**3829.8463**	21.525	0.6	ug/L	1232	Standard
	Co	59	102838.5	0.4	**12.3614**	0.047	0.4	ug/L	106	Standard
	Ni	60	11622.8	2.0	**4.5662**	0.075	1.6	ug/L	556	Standard
	Cu	65	3273.4	3.9	**1.3411**	0.062	4.6	ug/L	124	Standard
	Zn	66	8562852.6	0.2	**6695.2924**	32.071	0.5	ug/L	196	Standard
>	Ge	72	423161.6	0.6				ug/L	473313	Standard
	As	75	2141.5	2.7	**1.8656**	0.036	1.9	ug/L	-286	Standard
	Se	82	-44.5	36.2	**-0.0342**	0.122	358.3	ug/L	-33	Standard
	Se-1	77	72.7	8.4	**-0.0053**	0.063	1199.3	ug/L	86	Standard
>	Ga	71	475.0	8.6				mg/L	35	Standard
	Rb	85	4824.1	3.8				ug/L	13	Standard
	Y	89	374517.8	1.5				ug/L	439493	Standard
>	Rh	103	70.0	18.9				ug/L	5	Standard
	Mo	98	503.8	0.6	**0.1329**	0.001	0.9	ug/L	10	Standard
	Ag	107	69.0	8.7	**-0.0030**	0.001	35.7	ug/L	53	Standard
	Cd	111	26.3	38.0	**0.0109**	0.005	47.9	mg/L	1	Standard
	Cd	114	73.7	23.6	**0.0058**	0.004	62.6	ug/L	32	Standard
>	In	115	430960.4	0.3				ug/L	494305	Standard
	Sn	118	47.3	8.5	**-0.0149**	0.003	23.1	ug/L	53	Standard
	Sb	123	89.3	12.8	**0.0371**	0.005	13.1	ug/L	7	Standard
	Ba	135	3846.8	0.9	**2.3957**	0.014	0.6	ug/L	11	Standard
	Ce	140	1086.7	12.7				ug/L	10	Standard
>	Tb	159	456723.9	1.3				ug/L	538219	Standard
	Ho	165	61.7	33.8				ug/L	8	Standard
	Tl	203	56.7	7.1	**0.0087**	0.001	9.7	ug/L	1	Standard
	Tl	205	60.0	16.7	**0.0086**	0.001	17.1	ug/L	3	Standard
	Pb	206	130.0	12.3	**0.0162**	0.007	45.0	ug/L	80	Standard
	Pb	207	130.3	7.1	**0.0326**	0.004	12.7	ug/L	73	Standard
	Pb	208	262.3	9.5	**0.0148**	0.005	34.3	ug/L	190	Standard
	U	238	6.0	50.0	**0.0000**	0.001	40687.3	ug/L	0	Standard
>	Bi	209	240600.0	0.9				ug/L	276439	Standard

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	Na	23	120.0	18.2	**38.0856**	7.569	19.9	mg/L	2	Standard
	Mg	24	8730.8	1.6	**11.0437**	0.321	2.9	mg/L	37	Standard
	K	39	5.0	100.0	**-0.0176**	0.366	2079.9	mg/L	3	Standard
	Ca	43	153.3	30.8	**44.9590**	17.550	39.0	mg/L	43	Standard
	Fe	54	79154.3	0.2	**47.7542**	0.806	1.7	mg/L	262	Standard
	Fe	57	22358.2	1.8	**47.9747**	1.155	2.4	mg/L	65	Standard
>	**Sc-1**	45	21618.7	1.8				mg/L	26874	Standard
	Cl	35	413080.0	0.6				ug/L	141022	Standard
	Kr	83	165.7	6.4				ug/L	75	Standard
	Br	81	3803.8	4.2				ug/L	2810	Standard
	P	31	199939.7	3.1				ug/L	458976	Standard
	S	34	86115.7	0.5				ug/L	103378	Standard
	Sr	88	408.3	7.1				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	87.6	49.3				mg/L	10	Standard
	Ho-1	165	61.7	33.8				mg/L	8	Standard
	Er	166	50.0	20.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		87.335	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		89.404	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	87.185
|	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	87.035
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311076312
Sample Date/Time: Monday, November 18, 2013 15:45:18
Number of Replicates: 3
Autosampler Position: 324
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	333348.8	45.4				ug/L	269614	Standard
	Be	9	15.0	33.3	**-0.0116**	0.002	14.5	ug/L	23	Standard
	Al	27	2800.4	91.7	**0.0021**	0.006	268.0	ug/L	1170	Standard
	Sc	45	28056.6	47.9				ug/L	26874	Standard
	Ti	47	8.7	17.6	**-0.0645**	0.015	23.8	ug/L	25	Standard
	V	51	513.4	42.6	**-0.1148**	0.027	23.8	ug/L	1686	Standard
	Cr	52	1916.8	34.9	**-0.4283**	0.090	21.0	ug/L	6098	Standard
	Cr	53	128.3	22.8	**-0.0408**	0.030	72.7	ug/L	193	Standard
	Mn	55	4938.5	78.7	**0.1778**	0.281	158.3	ug/L	1232	Standard
	Co	59	106.7	32.6	**-0.0042**	0.005	116.1	ug/L	106	Standard
	Ni	60	297.3	18.5	**-0.0864**	0.069	79.9	ug/L	556	Standard
	Cu	65	118.3	33.0	**-0.0173**	0.015	85.3	ug/L	124	Standard
	Zn	66	2482.9	29.8	**1.4005**	0.255	18.2	ug/L	196	Standard
>	Ge	72	540863.2	46.9				ug/L	473313	Standard
	As	75	-326.4	73.6	**0.0005**	0.171	32454.3	ug/L	-286	Standard
	Se	82	-95.0	78.4	**-0.2911**	0.514	176.5	ug/L	-33	Standard
	Se-1	77	63.3	12.7	**-0.1884**	0.178	94.7	ug/L	86	Standard
>	Ga	71	28.3	66.8				mg/L	35	Standard
	Rb	85	26.7	28.6				ug/L	13	Standard
	Y	89	530816.0	42.9				ug/L	439493	Standard
>	Rh	103	1.7	173.2				ug/L	5	Standard
	Mo	98	11.2	45.4	**-0.0129**	0.000	2.9	ug/L	10	Standard
	Ag	107	62.7	35.2	**-0.0070**	0.001	16.1	ug/L	53	Standard
	Cd	111	3.3	34.8	**-0.0014**	0.001	64.1	mg/L	1	Standard
	Cd	114	6.4	105.7	**-0.0081**	0.002	20.6	ug/L	32	Standard
>	In	115	601347.3	40.0				ug/L	494305	Standard
	Sn	118	72.7	51.7	**-0.0123**	0.013	109.3	ug/L	53	Standard
	Sb	123	31.0	29.4	**0.0084**	0.001	13.1	ug/L	7	Standard
	Ba	135	7.7	39.8	**-0.0088**	0.002	18.2	ug/L	11	Standard
	Ce	140	23.3	86.6				ug/L	10	Standard
>	Tb	159	639298.6	38.9				ug/L	538219	Standard
	Ho	165	5.0	173.2				ug/L	8	Standard
	Tl	203	12.0	71.2	**-0.0002**	0.002	771.2	ug/L	1	Standard
	Tl	205	18.3	128.9	**0.0021**	0.004	182.1	ug/L	3	Standard
	Pb	206	116.0	30.8	**-0.0054**	0.003	56.1	ug/L	80	Standard
	Pb	207	94.0	27.7	**0.0010**	0.004	358.0	ug/L	73	Standard
	Pb	208	257.3	28.1	**-0.0013**	0.005	346.1	ug/L	190	Standard
	U	238	0.7	86.6	**-0.0017**	0.000	9.2	ug/L	0	Standard
>	Bi	209	348234.9	39.0				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	45.0	67.6	**0.0114**	0.014	126.3	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	18.3	31.5	**-3.8400**	5.009	130.4	mg/L	43	Standard
Fe	54	139.6	62.1	**-0.0615**	0.039	63.2	mg/L	262	Standard
Fe	57	105.0	12.6	**0.0988**	0.068	69.1	mg/L	65	Standard
> **Sc-1**	45	28056.6	47.9				mg/L	26874	Standard
Cl	35	67845.7	34.7				ug/L	141022	Standard
Kr	83	173.7	74.4				ug/L	75	Standard
Br	81	1226.7	45.2				ug/L	2810	Standard
P	31	226272.1	59.2				ug/L	458976	Standard
S	34	52848.0	39.1				ug/L	103378	Standard
Sr	88	60.0	54.6				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.0	100.7				mg/L	10	Standard
Ho-1	165	5.0	173.2				mg/L	8	Standard
Er	166	13.3	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		123.639	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		114.272	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	121.655
|	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	125.972
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Cr 52 Lower	Cr	52	
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

Sample ID: L1311076312
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Method 6020 - Summary Report

Sample ID: L1311076316
Sample Date/Time: Monday, November 18, 2013 15:48:23
Number of Replicates: 3
Autosampler Position: 325
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	329278.3	64.9				ug/L	269614	Standard
	Be	9	18.3	68.6	-0.0107	0.004	35.6	ug/L	23	Standard
	Al	27	1108.4	27.0	-0.0018	0.002	127.8	ug/L	1170	Standard
	Sc	45	29626.0	67.5				ug/L	26874	Standard
	Ti	47	11.7	17.8	-0.0462	0.029	63.2	ug/L	25	Standard
	V	51	558.2	65.7	-0.1098	0.047	42.5	ug/L	1686	Standard
	Cr	52	2201.2	51.2	-0.3820	0.141	37.0	ug/L	6098	Standard
	Cr	53	110.0	34.3	-0.0448	0.045	101.7	ug/L	193	Standard
	Mn	55	2666.4	95.8	0.0611	0.192	314.7	ug/L	1232	Standard
	Co	59	94.0	31.5	-0.0045	0.005	115.5	ug/L	106	Standard
	Ni	60	314.3	15.0	-0.0583	0.114	195.0	ug/L	556	Standard
	Cu	65	102.7	38.0	-0.0208	0.014	68.9	ug/L	124	Standard
	Zn	66	1647.4	19.2	1.0994	0.708	64.4	ug/L	196	Standard
>	Ge	72	552922.5	65.9				ug/L	473313	Standard
	As	75	-338.1	56.3	-0.0138	0.123	888.6	ug/L	-286	Standard
	Se	82	-85.7	62.7	-0.2636	0.354	134.2	ug/L	-33	Standard
	Se-1	77	56.7	18.7	-0.1917	0.282	147.1	ug/L	86	Standard
>	Ga	71	28.3	44.4				mg/L	35	Standard
	Rb	85	28.3	10.2				ug/L	13	Standard
	Y	89	513775.6	63.1				ug/L	439493	Standard
>	Rh	103	1.7	173.2				ug/L	5	Standard
	Mo	98	8.1	68.0	-0.0133	0.001	10.2	ug/L	10	Standard
	Ag	107	59.3	78.4	-0.0080	0.001	14.6	ug/L	53	Standard
	Cd	111	1.7	69.6	-0.0021	0.001	26.5	mg/L	1	Standard
	Cd	114	14.8	112.5	-0.0078	0.002	20.3	ug/L	32	Standard
>	In	115	595038.0	62.5				ug/L	494305	Standard
	Sn	118	70.0	65.9	-0.0120	0.027	228.9	ug/L	53	Standard
	Sb	123	22.8	63.9	0.0055	0.002	32.7	ug/L	7	Standard
	Ba	135	8.3	18.3	-0.0077	0.002	31.0	ug/L	11	Standard
	Ce	140	38.3	92.5				ug/L	10	Standard
>	Tb	159	623867.3	61.2				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	6.0	60.1	-0.0010	0.001	108.7	ug/L	1	Standard
	Tl	205	13.3	57.3	0.0011	0.001	124.6	ug/L	3	Standard
	Pb	206	109.7	65.7	-0.0075	0.002	24.9	ug/L	80	Standard
	Pb	207	92.0	69.1	-0.0001	0.004	7906.7	ug/L	73	Standard
	Pb	208	221.7	52.2	-0.0053	0.003	49.2	ug/L	190	Standard
	U	238	0.0		-0.0019	0.000	0.0	ug/L	0	Standard
>	Bi	209	335693.8	60.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	38.3	7.5	**0.0156**	0.028	180.0	mg/L	37	Standard
K	39	3.3	86.6	**-0.0633**	0.318	502.1	mg/L	3	Standard
Ca	43	28.3	53.9	**-2.3370**	1.301	55.7	mg/L	43	Standard
Fe	54	196.2	69.5	**-0.0346**	0.066	190.7	mg/L	262	Standard
Fe	57	98.3	28.0	**0.1325**	0.207	156.0	mg/L	65	Standard
> **Sc-1**	45	29626.0	67.5				mg/L	26874	Standard
Cl	35	76157.2	50.5				ug/L	141022	Standard
Kr	83	149.7	66.6				ug/L	75	Standard
Br	81	1503.4	61.0				ug/L	2810	Standard
P	31	243722.8	68.9				ug/L	458976	Standard
S	34	58742.5	54.2				ug/L	103378	Standard
Sr	88	75.0	53.3				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.2	186.4				mg/L	10	Standard
Ho-1	165	8.3	34.6				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		122.129	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		116.820	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	120.379
|	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	121.435
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
In 115 Int Std for sample	In	115	Rerun sample
Bi 209 Int Std for sample	Bi	209	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1311077201
Sample Date/Time: Monday, November 18, 2013 15:51:27
Number of Replicates: 3
Autosampler Position: 326
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	282288.4	2.8				ug/L	269614	Standard
	Be	9	7843.7	0.8	**2.5093**	0.064	2.5	ug/L	23	Standard
	Al	27	30029090.9	0.9	**136.8170**	5.004	3.7	ug/L	1170	Standard
	Sc	45	26237.7	1.5				ug/L	26874	Standard
	Ti	47	143.0	10.3	**0.4890**	0.060	12.3	ug/L	25	Standard
	V	51	4656.0	4.4	**0.5026**	0.030	5.9	ug/L	1686	Standard
	Cr	52	8693.8	0.9	**0.6283**	0.009	1.5	ug/L	6098	Standard
	Cr	53	1153.4	8.9	**0.8138**	0.083	10.1	ug/L	193	Standard
	Mn	55	54426611.4	0.9	**4192.5845**	31.710	0.8	ug/L	1232	Standard
	Co	59	647220.1	0.9	**71.7343**	0.841	1.2	ug/L	106	Standard
	Ni	60	198861.6	0.9	**74.9400**	0.401	0.5	ug/L	556	Standard
	Cu	65	9102.1	1.2	**3.5277**	0.030	0.8	ug/L	124	Standard
	Zn	66	268120.2	0.5	**192.9088**	0.660	0.3	ug/L	196	Standard
>	Ge	72	459404.4	0.3				ug/L	473313	Standard
	As	75	5661.0	0.7	**4.2388**	0.031	0.7	ug/L	-286	Standard
	Se	82	-32.3	75.7	**0.0772**	0.169	219.3	ug/L	-33	Standard
	Se-1	77	149.7	15.2	**0.6675**	0.215	32.2	ug/L	86	Standard
>	Ga	71	1121.7	5.2				mg/L	35	Standard
	Rb	85	177357.1	0.9				ug/L	13	Standard
	Y	89	902836.9	1.4				ug/L	439493	Standard
>	Rh	103	136.7	24.4				ug/L	5	Standard
	Mo	98	218.8	2.8	**0.0450**	0.002	4.3	ug/L	10	Standard
	Ag	107	53.0	13.2	**-0.0064**	0.001	18.0	ug/L	53	Standard
	Cd	111	1117.8	1.6	**0.5450**	0.009	1.6	mg/L	1	Standard
	Cd	114	2825.9	2.7	**0.5379**	0.017	3.1	ug/L	32	Standard
>	In	115	460065.2	0.5				ug/L	494305	Standard
	Sn	118	163.7	6.2	**0.0780**	0.009	11.6	ug/L	53	Standard
	Sb	123	125.0	9.0	**0.0492**	0.005	9.8	ug/L	7	Standard
	Ba	135	8297.6	1.7	**4.8538**	0.103	2.1	ug/L	11	Standard
	Ce	140	439455.3	0.5				ug/L	10	Standard
>	Tb	159	512093.7	0.7				ug/L	538219	Standard
	Ho	165	20752.5	1.1				ug/L	8	Standard
	Tl	203	355.3	4.7	**0.0641**	0.002	3.8	ug/L	1	Standard
	Tl	205	428.3	9.7	**0.0640**	0.006	9.2	ug/L	3	Standard
	Pb	206	1090.7	1.0	**0.4323**	0.004	0.9	ug/L	80	Standard
	Pb	207	877.4	0.8	**0.3913**	0.002	0.4	ug/L	73	Standard
	Pb	208	2065.7	1.3	**0.3690**	0.008	2.1	ug/L	190	Standard
	U	238	1139.0	2.5	**0.3425**	0.005	1.5	ug/L	0	Standard
>	Bi	209	247352.2	1.1				ug/L	276439	Standard

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	Na	23	306.7	9.8	**80.5751**	9.030	11.2	mg/L	2	Standard
	Mg	24	3180.3	0.4	**3.2919**	0.060	1.8	mg/L	37	Standard
	K	39	61.7	23.4	**3.3332**	0.848	25.4	mg/L	3	Standard
	Ca	43	358.3	8.2	**95.7805**	7.778	8.1	mg/L	43	Standard
	Fe	54	102510.5	1.2	**50.9585**	0.468	0.9	mg/L	262	Standard
	Fe	57	29458.6	2.1	**52.0775**	0.329	0.6	mg/L	65	Standard
>	**Sc-1**	45	26237.7	1.5				mg/L	26874	Standard
	Cl	35	575929.2	0.5				ug/L	141022	Standard
	Kr	83	230.3	8.9				ug/L	75	Standard
	Br	81	6548.1	6.5				ug/L	2810	Standard
	P	31	536600.1	0.3				ug/L	458976	Standard
	S	34	83569.9	1.6				ug/L	103378	Standard
	Sr	88	841.7	14.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	31115.6	0.4				mg/L	10	Standard
	Ho-1	165	20752.5	1.1				mg/L	8	Standard
	Er	166	18331.1	1.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.701	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		97.061	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	93.073
|	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	89.478
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311077202
Sample Date/Time: Monday, November 18, 2013 15:54:33
Number of Replicates: 3
Autosampler Position: 327
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	291679.5	1.4				ug/L	269614	Standard
	Be	9	8695.8	0.5	**2.6925**	0.027	1.0	ug/L	23	Standard
	Al	27	31333755.7	2.0	**138.1105**	4.488	3.2	ug/L	1170	Standard
	Sc	45	27171.0	2.1				ug/L	26874	Standard
	Ti	47	143.3	3.3	**0.4815**	0.022	4.6	ug/L	25	Standard
	V	51	3740.8	3.2	**0.3597**	0.021	5.9	ug/L	1686	Standard
	Cr	52	9419.9	1.9	**0.7169**	0.035	4.9	ug/L	6098	Standard
	Cr	53	1321.7	5.5	**0.9367**	0.069	7.4	ug/L	193	Standard
	Mn	55	57938580.8	0.9	**4395.5707**	75.856	1.7	ug/L	1232	Standard
	Co	59	694785.2	0.8	**75.8375**	1.079	1.4	ug/L	106	Standard
	Ni	60	209226.4	0.3	**77.6561**	0.611	0.8	ug/L	556	Standard
	Cu	65	9874.9	0.2	**3.7732**	0.027	0.7	ug/L	124	Standard
	Zn	66	300682.1	7.1	**213.0097**	13.719	6.4	ug/L	196	Standard
>	**Ge**	72	466512.4	0.9				ug/L	473313	Standard
	As	75	5247.5	1.7	**3.8882**	0.086	2.2	ug/L	-286	Standard
	Se	82	-13.7	118.1	**0.2080**	0.110	52.9	ug/L	-33	Standard
	Se-1	77	149.0	8.8	**0.6400**	0.127	19.9	ug/L	86	Standard
>	**Ga**	71	1236.7	4.3				mg/L	35	Standard
	Rb	85	187113.3	0.5				ug/L	13	Standard
	Y	89	940665.4	0.8				ug/L	439493	Standard
>	**Rh**	103	170.0	8.8				ug/L	5	Standard
	Mo	98	171.5	2.1	**0.0313**	0.001	2.8	ug/L	10	Standard
	Ag	107	70.7	4.3	**-0.0037**	0.001	14.9	ug/L	53	Standard
	Cd	111	1252.2	1.5	**0.6015**	0.012	2.0	mg/L	1	Standard
	Cd	114	3143.4	1.3	**0.5900**	0.005	0.8	ug/L	32	Standard
>	**In**	115	467243.2	0.5				ug/L	494305	Standard
	Sn	118	71.7	8.2	**0.0015**	0.005	307.9	ug/L	53	Standard
	Sb	123	120.5	9.8	**0.0466**	0.005	10.6	ug/L	7	Standard
	Ba	135	8772.9	0.6	**5.0533**	0.052	1.0	ug/L	11	Standard
	Ce	140	466582.8	1.5				ug/L	10	Standard
>	**Tb**	159	525407.0	1.2				ug/L	538219	Standard
	Ho	165	22326.4	1.1				ug/L	8	Standard
	Tl	203	380.3	1.7	**0.0675**	0.001	1.1	ug/L	1	Standard
	Tl	205	515.0	10.1	**0.0757**	0.008	10.7	ug/L	3	Standard
	Pb	206	1196.4	1.3	**0.4690**	0.010	2.1	ug/L	80	Standard
	Pb	207	1002.0	1.6	**0.4428**	0.008	1.9	ug/L	73	Standard
	Pb	208	2195.1	2.6	**0.3867**	0.009	2.3	ug/L	190	Standard
	U	238	1230.7	1.5	**0.3636**	0.007	1.8	ug/L	0	Standard
>	**Bi**	209	251849.3	0.6				ug/L	276439	Standard

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Na	23	321.7	10.3	**81.6533**	9.947	12.2	mg/L	2	Standard
Mg	24	3255.4	4.5	**3.2551**	0.199	6.1	mg/L	37	Standard
K	39	43.3	29.0	**2.1338**	0.695	32.6	mg/L	3	Standard
Ca	43	380.0	9.9	**98.2742**	9.021	9.2	mg/L	43	Standard
Fe	54	104521.5	2.8	**50.1710**	1.105	2.2	mg/L	262	Standard
Fe	57	30308.6	1.1	**51.7513**	0.764	1.5	mg/L	65	Standard
> **Sc-1**	45	27171.0	2.1				mg/L	26874	Standard
Cl	35	597884.2	0.3				ug/L	141022	Standard
Kr	83	216.0	7.5				ug/L	75	Standard
Br	81	6838.2	3.7				ug/L	2810	Standard
P	31	552328.9	0.6				ug/L	458976	Standard
S	34	82830.8	0.5				ug/L	103378	Standard
Sr	88	788.4	4.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	33282.9	1.4				mg/L	10	Standard
Ho-1	165	22326.4	1.1				mg/L	8	Standard
Er	166	20230.2	1.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		108.184	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		98.563	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	94.525
|	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	91.105
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 15:57:39
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	272311.1	2.2				ug/L	269614	Standard
	Be	9	151210.8	0.6	**50.4407**	0.842	1.7	ug/L	23	Standard
	Al	27	9734707.1	0.9	**45.9605**	1.288	2.8	ug/L	1170	Standard
	Sc	45	25825.3	2.0				ug/L	26874	Standard
	Ti	47	26531.5	0.6	**102.5710**	0.371	0.4	ug/L	25	Standard
	V	51	338134.5	3.1	**46.6157**	1.254	2.7	ug/L	1686	Standard
	Cr	52	332751.2	1.8	**46.8586**	0.632	1.3	ug/L	6098	Standard
	Cr	53	63625.0	2.0	**49.3486**	0.846	1.7	ug/L	193	Standard
	Mn	55	683217.7	1.2	**49.4048**	0.468	0.9	ug/L	1232	Standard
	Co	59	466490.1	2.0	**48.6630**	0.781	1.6	ug/L	106	Standard
	Ni	60	139029.3	1.1	**49.2521**	0.613	1.2	ug/L	556	Standard
	Cu	65	135648.2	0.6	**50.2725**	0.439	0.9	ug/L	124	Standard
	Zn	66	74802.5	0.3	**50.5179**	0.198	0.4	ug/L	196	Standard
>	Ge	72	488026.8	0.4				ug/L	473313	Standard
	As	75	74726.5	0.7	**50.2510**	0.289	0.6	ug/L	-286	Standard
	Se	82	7572.1	1.1	**49.7415**	0.460	0.9	ug/L	-33	Standard
	Se-1	77	5705.1	1.5	**50.3005**	0.617	1.2	ug/L	86	Standard
>	Ga	71	61.7	16.9				mg/L	35	Standard
	Rb	85	1190.0	3.4				ug/L	13	Standard
	Y	89	453037.0	0.9				ug/L	439493	Standard
>	Rh	103	25.0	20.0				ug/L	5	Standard
	Mo	98	421136.4	1.4	**105.2208**	1.183	1.1	ug/L	10	Standard
	Ag	107	361390.2	0.5	**53.3371**	0.322	0.6	ug/L	53	Standard
	Cd	111	113378.1	1.1	**50.4304**	0.147	0.3	mg/L	1	Standard
	Cd	114	287355.5	1.9	**50.4948**	0.420	0.8	ug/L	32	Standard
>	In	115	506966.7	1.1				ug/L	494305	Standard
	Sn	118	68109.1	0.9	**50.6903**	0.117	0.2	ug/L	53	Standard
	Sb	123	134892.9	0.3	**49.6013**	0.407	0.8	ug/L	7	Standard
	Ba	135	95306.2	0.9	**50.7082**	0.103	0.2	ug/L	11	Standard
	Ce	140	73.3	37.6				ug/L	10	Standard
>	Tb	159	525090.6	0.5				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	294270.5	0.3	**50.0398**	0.045	0.1	ug/L	1	Standard
	Tl	205	385696.0	0.9	**53.1157**	0.363	0.7	ug/L	3	Standard
	Pb	206	134817.2	0.5	**53.4297**	0.175	0.3	ug/L	80	Standard
	Pb	207	120844.7	0.3	**53.1629**	0.134	0.3	ug/L	73	Standard
	Pb	208	269183.3	0.2	**48.3838**	0.040	0.1	ug/L	190	Standard
	U	238	172364.5	0.4	**47.5364**	0.234	0.5	ug/L	0	Standard
>	Bi	209	271152.1	0.2				ug/L	276439	Standard

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Na	23	26.7	47.2	**6.7596**	3.482	51.5	mg/L	2	Standard
Mg	24	4879.1	6.3	**5.1452**	0.234	4.6	mg/L	37	Standard
K	39	83.3	12.5	**4.7170**	0.537	11.4	mg/L	3	Standard
Ca	43	33.3	22.9	**-0.2632**	2.459	934.4	mg/L	43	Standard
Fe	54	11503.9	2.8	**5.6974**	0.105	1.8	mg/L	262	Standard
Fe	57	3342.0	1.4	**5.9198**	0.198	3.4	mg/L	65	Standard
> **Sc-1**	45	25825.3	2.0				mg/L	26874	Standard
Cl	35	145847.5	2.1				ug/L	141022	Standard
Kr	83	125.0	3.7				ug/L	75	Standard
Br	81	2786.9	2.0				ug/L	2810	Standard
P	31	460722.7	2.5				ug/L	458976	Standard
S	34	109039.3	1.0				ug/L	103378	Standard
Sr	88	36.7	20.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	9.8	101.7				mg/L	10	Standard
Ho-1	165	5.0	100.0				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		101.000	
Be	9	100.881		
Al	27	91.921		
Sc	45			
Ti	47	102.571		
V	51	93.231		
Cr	52	93.717		
Cr	53			
Mn	55	98.810		
Co	59	97.326		
Ni	60	98.504		
Cu	65	100.545		
Zn	66	101.036		
> Ge	72		103.109	
As	75	100.502		
Se	82	99.483		
Se-1	77			
> Ga	71			
Rb	85			

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Y	89			
> Rh	103			
Mo	98	105.221		
Ag	107	106.674		
Cd	111	100.861		
Cd	114			
> In	115			102.561
Sn	118	101.381		
Sb	123	99.203		
Ba	135	101.416		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	100.080		
Tl	205			
Pb	206			
Pb	207			
Pb	208	96.768		
U	238	95.073		
> Bi	209			98.087
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 16:00:44
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	277383.0	1.4				ug/L	269614	Standard
	Be	9	55.0	48.1	**0.0019**	0.008	446.9	ug/L	23	Standard
	Al	27	9362.4	122.0	**0.0365**	0.054	146.5	ug/L	1170	Standard
	Sc	45	26237.7	2.5				ug/L	26874	Standard
	Ti	47	11.7	17.8	**-0.0534**	0.008	14.8	ug/L	25	Standard
	V	51	1223.0	7.8	**-0.0119**	0.012	103.7	ug/L	1686	Standard
	Cr	52	5420.4	37.9	**0.0862**	0.291	337.2	ug/L	6098	Standard
	Cr	53	188.3	46.8	**0.0079**	0.068	864.7	ug/L	193	Standard
	Mn	55	100388.7	161.1	**7.1397**	11.719	164.1	ug/L	1232	Standard
	Co	59	1273.5	145.5	**0.1176**	0.193	164.3	ug/L	106	Standard
	Ni	60	434.7	28.2	**-0.0463**	0.043	92.5	ug/L	556	Standard
	Cu	65	172.0	2.5	**0.0042**	0.002	37.3	ug/L	124	Standard
	Zn	66	13874.3	153.5	**9.2106**	14.425	156.6	ug/L	196	Standard
>	**Ge**	72	485509.3	0.6				ug/L	473313	Standard
	As	75	-346.9	8.6	**-0.0215**	0.019	88.5	ug/L	-286	Standard
	Se	82	-67.3	4.5	**-0.1406**	0.019	13.2	ug/L	-33	Standard
	Se-1	77	80.7	11.8	**-0.0297**	0.084	281.4	ug/L	86	Standard
>	**Ga**	71	33.3	45.8				mg/L	35	Standard
	Rb	85	65.0	93.6				ug/L	13	Standard
	Y	89	452650.5	0.7				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	101.8	29.3	**0.0101**	0.007	73.9	ug/L	10	Standard
	Ag	107	105.0	38.1	**0.0004**	0.006	1398.6	ug/L	53	Standard
	Cd	111	26.2	53.8	**0.0087**	0.006	71.6	mg/L	1	Standard
	Cd	114	53.1	65.9	**-0.0002**	0.006	3600.5	ug/L	32	Standard
>	**In**	115	510158.9	0.2				ug/L	494305	Standard
	Sn	118	70.0	21.0	**-0.0046**	0.011	234.5	ug/L	53	Standard
	Sb	123	322.8	25.6	**0.1165**	0.030	26.0	ug/L	7	Standard
	Ba	135	34.3	64.6	**0.0056**	0.012	208.2	ug/L	11	Standard
	Ce	140	103.3	54.0				ug/L	10	Standard
>	**Tb**	159	527834.4	1.4				ug/L	538219	Standard
	Ho	165	13.3	57.3				ug/L	8	Standard
	Tl	203	52.7	44.8	**0.0067**	0.004	58.1	ug/L	1	Standard
	Tl	205	95.0	68.4	**0.0123**	0.009	72.8	ug/L	3	Standard
	Pb	206	108.3	0.5	**0.0007**	0.001	80.2	ug/L	80	Standard
	Pb	207	95.3	5.3	**0.0095**	0.002	19.8	ug/L	73	Standard
	Pb	208	219.7	9.4	**0.0008**	0.004	508.0	ug/L	190	Standard
	U	238	28.0	49.6	**0.0058**	0.004	66.3	ug/L	0	Standard
>	**Bi**	209	273639.7	0.9				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	43.3	26.6	**0.0135**	0.013	93.9	mg/L	37	Standard
K	39	1.7	173.2	**-0.2825**	0.171	60.5	mg/L	3	Standard
Ca	43	25.0	40.0	**-2.8763**	3.144	109.3	mg/L	43	Standard
Fe	54	372.5	23.1	**0.0599**	0.048	80.2	mg/L	262	Standard
Fe	57	83.3	6.9	**0.0509**	0.009	18.4	mg/L	65	Standard
> **Sc-1**	45	26237.7	2.5				mg/L	26874	Standard
Cl	35	148511.7	1.0				ug/L	141022	Standard
Kr	83	119.3	1.7				ug/L	75	Standard
Br	81	2920.3	3.0				ug/L	2810	Standard
P	31	455082.1	2.3				ug/L	458976	Standard
S	34	107760.4	2.8				ug/L	103378	Standard
Sr	88	30.0	44.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	179.8				mg/L	10	Standard
Ho-1	165	13.3	57.3				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		102.881	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		102.577	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	103.207
	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	98.987
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Mn	55	

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Method 6020 - Summary Report

Sample ID: PBW 48 WG452939-03
Sample Date/Time: Monday, November 18, 2013 16:12:49
Number of Replicates: 3
Autosampler Position: 205
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	246116.7	2.1				ug/L	269614	Standard
	Be	9	30.0	50.0	**-0.0049**	0.006	117.4	ug/L	23	Standard
	Al	27	993.4	5.4	**-0.0019**	0.000	19.1	ug/L	1170	Standard
	Sc	45	23264.5	2.7				ug/L	26874	Standard
	Ti	47	10.3	20.1	**-0.0533**	0.009	16.1	ug/L	25	Standard
	V	51	981.0	4.5	**-0.0275**	0.004	13.9	ug/L	1686	Standard
	Cr	52	3561.8	3.6	**-0.1121**	0.014	12.6	ug/L	6098	Standard
	Cr	53	108.3	14.8	**-0.0432**	0.015	34.4	ug/L	193	Standard
	Mn	55	794.4	36.6	**-0.0738**	0.023	30.7	ug/L	1232	Standard
	Co	59	76.3	7.9	**-0.0063**	0.001	9.9	ug/L	106	Standard
	Ni	60	443.0	6.1	**-0.0220**	0.015	65.9	ug/L	556	Standard
	Cu	65	55.0	7.3	**-0.0367**	0.001	4.1	ug/L	124	Standard
	Zn	66	1176.7	22.4	**0.7099**	0.193	27.2	ug/L	196	Standard
>	**Ge**	72	428674.5	2.0				ug/L	473313	Standard
	As	75	-292.3	12.9	**-0.0108**	0.027	253.9	ug/L	-286	Standard
	Se	82	-52.0	5.3	**-0.0856**	0.018	21.1	ug/L	-33	Standard
	Se-1	77	69.3	2.2	**-0.0488**	0.013	26.9	ug/L	86	Standard
>	**Ga**	71	33.3	45.8				mg/L	35	Standard
	Rb	85	18.3	56.8				ug/L	13	Standard
	Y	89	388902.1	1.7				ug/L	439493	Standard
>	**Rh**	103	8.3	34.6				ug/L	5	Standard
	Mo	98	7.4	24.4	**-0.0131**	0.000	3.8	ug/L	10	Standard
	Ag	107	52.7	12.1	**-0.0062**	0.001	17.0	ug/L	53	Standard
	Cd	111	1.0	101.1	**-0.0024**	0.000	20.7	mg/L	1	Standard
	Cd	114	13.8	36.3	**-0.0067**	0.001	15.4	ug/L	32	Standard
>	**In**	115	447085.2	1.4				ug/L	494305	Standard
	Sn	118	44.0	6.0	**-0.0192**	0.003	13.5	ug/L	53	Standard
	Sb	123	112.2	2.7	**0.0453**	0.001	3.2	ug/L	7	Standard
	Ba	135	5.3	28.6	**-0.0093**	0.001	9.4	ug/L	11	Standard
	Ce	140	10.0	132.3				ug/L	10	Standard
>	**Tb**	159	468311.2	1.2				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	3.7	68.6	**-0.0015**	0.000	33.3	ug/L	1	Standard
	Tl	205	6.7	114.6	**0.0003**	0.001	353.7	ug/L	3	Standard
	Pb	206	80.3	8.7	**-0.0070**	0.002	34.2	ug/L	80	Standard
	Pb	207	68.7	12.7	**0.0010**	0.004	416.9	ug/L	73	Standard
	Pb	208	162.7	1.3	**-0.0064**	0.001	18.4	ug/L	190	Standard
	U	238	1.0	173.2	**-0.0016**	0.001	32.8	ug/L	0	Standard
>	**Bi**	209	247718.0	2.3				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	46.7	60.9	**0.0233**	0.033	143.8	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	16.7	34.6	**-4.7378**	1.994	42.1	mg/L	43	Standard
Fe	54	84.4	36.1	**-0.0789**	0.018	22.6	mg/L	262	Standard
Fe	57	76.7	16.4	**0.0564**	0.025	43.9	mg/L	65	Standard
Sc-1	45	23264.5	2.7				mg/L	26874	Standard
Cl	35	119726.0	2.4				ug/L	141022	Standard
Kr	83	104.7	2.4				ug/L	75	Standard
Br	81	2340.2	2.7				ug/L	2810	Standard
P	31	140452.1	4.4				ug/L	458976	Standard
S	34	85173.8	1.7				ug/L	103378	Standard
Sr	88	43.3	40.5				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	179.8				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.285	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.569	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	90.447
	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	89.610
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: LCSW 48 WG452939-04
Sample Date/Time: Monday, November 18, 2013 16:15:54
Number of Replicates: 3
Autosampler Position: 206
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	282181.2	2.6				ug/L	269614	Standard
	Be	9	75325.1	1.5	**24.2386**	0.337	1.4	ug/L	23	Standard
	Al	27	5894.8	64.3	**0.0200**	0.018	90.5	ug/L	1170	Standard
	Sc	45	26376.3	2.9				ug/L	26874	Standard
	Ti	47	21.7	7.1	**-0.0142**	0.006	42.3	ug/L	25	Standard
	V	51	165184.2	1.5	**22.8701**	0.307	1.3	ug/L	1686	Standard
	Cr	52	165057.9	0.5	**23.0921**	0.250	1.1	ug/L	6098	Standard
	Cr	53	31225.5	3.3	**24.3505**	0.823	3.4	ug/L	193	Standard
	Mn	55	355533.2	6.6	**25.8679**	1.961	7.6	ug/L	1232	Standard
	Co	59	224861.6	0.1	**23.6449**	0.240	1.0	ug/L	106	Standard
	Ni	60	70707.0	1.4	**25.1562**	0.224	0.9	ug/L	556	Standard
	Cu	65	68940.5	0.2	**25.7323**	0.192	0.7	ug/L	124	Standard
	Zn	66	41496.8	3.1	**28.1760**	1.139	4.0	ug/L	196	Standard
>	Ge	72	484034.1	1.0				ug/L	473313	Standard
	As	75	36493.2	0.9	**24.8506**	0.040	0.2	ug/L	-286	Standard
	Se	82	3649.1	0.5	**24.3246**	0.129	0.5	ug/L	-33	Standard
	Se-1	77	2721.9	0.5	**23.8063**	0.216	0.9	ug/L	86	Standard
>	Ga	71	41.7	36.7				mg/L	35	Standard
	Rb	85	58.3	27.6				ug/L	13	Standard
	Y	89	453149.1	1.4				ug/L	439493	Standard
>	Rh	103	16.7	34.6				ug/L	5	Standard
	Mo	98	78.2	67.6	**0.0041**	0.013	320.1	ug/L	10	Standard
	Ag	107	181306.7	0.7	**26.3967**	0.179	0.7	ug/L	53	Standard
	Cd	111	54329.8	0.5	**23.8462**	0.293	1.2	mg/L	1	Standard
	Cd	114	136859.9	0.6	**23.7281**	0.133	0.6	ug/L	32	Standard
>	In	115	513766.0	0.9				ug/L	494305	Standard
	Sn	118	80.7	10.5	**0.0029**	0.006	216.1	ug/L	53	Standard
	Sb	123	67217.9	0.3	**24.3886**	0.221	0.9	ug/L	7	Standard
	Ba	135	46640.0	1.3	**24.4806**	0.314	1.3	ug/L	11	Standard
	Ce	140	103.3	5.6				ug/L	10	Standard
>	Tb	159	526924.9	1.1				ug/L	538219	Standard
	Ho	165	6.7	114.6				ug/L	8	Standard
	Tl	203	145939.2	0.6	**24.3931**	0.126	0.5	ug/L	1	Standard
	Tl	205	194752.1	1.2	**26.3660**	0.530	2.0	ug/L	3	Standard
	Pb	206	67896.5	0.6	**26.4293**	0.138	0.5	ug/L	80	Standard
	Pb	207	58604.8	0.9	**25.3259**	0.142	0.6	ug/L	73	Standard
	Pb	208	135434.2	1.3	**23.9089**	0.189	0.8	ug/L	190	Standard
	U	238	84083.0	0.4	**22.7945**	0.258	1.1	ug/L	0	Standard
>	Bi	209	275851.9	0.8				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0056**	0.750	13473.9	mg/L	2	Standard
Mg	24	50.0	34.6	**0.0202**	0.018	91.3	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	13.3	57.3	**-6.3551**	2.352	37.0	mg/L	43	Standard
Fe	54	310.8	18.2	**0.0273**	0.025	92.3	mg/L	262	Standard
Fe	57	88.3	18.2	**0.0594**	0.032	53.7	mg/L	65	Standard
> **Sc-1**	45	26376.3	2.9				mg/L	26874	Standard
Cl	35	131803.0	2.6				ug/L	141022	Standard
Kr	83	126.0	5.7				ug/L	75	Standard
Br	81	4390.6	0.2				ug/L	2810	Standard
P	31	447468.1	0.3				ug/L	458976	Standard
S	34	86338.6	0.4				ug/L	103378	Standard
Sr	88	40.0	25.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	0	Standard
Dy	164	9.7	103.3				mg/L	10	Standard
Ho-1	165	6.7	114.6				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.661	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		102.265	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.937
|	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	99.788
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311063038 WG452939-01
Sample Date/Time: Monday, November 18, 2013 16:18:59
Number of Replicates: 3
Autosampler Position: 207
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	256511.5	0.5				ug/L	269614	Standard
	Be	9	683.3	9.7	**0.2260**	0.025	10.9	ug/L	23	Standard
	Al	27	12018308.4	0.3	**60.2165**	0.462	0.8	ug/L	1170	Standard
	Sc	45	23136.0	2.1				ug/L	26874	Standard
	Ti	47	41.0	21.7	**0.0799**	0.038	48.1	ug/L	25	Standard
	V	51	868.6	8.6	**-0.0465**	0.013	27.0	ug/L	1686	Standard
	Cr	52	3244.3	3.5	**-0.1690**	0.020	11.9	ug/L	6098	Standard
	Cr	53	206.7	15.6	**0.0420**	0.029	67.9	ug/L	193	Standard
	Mn	55	72541759.0	1.5	**5927.3668**	74.350	1.3	ug/L	1232	Standard
	Co	59	782609.3	2.7	**92.0051**	2.137	2.3	ug/L	106	Standard
	Ni	60	296787.6	1.9	**118.7499**	1.854	1.6	ug/L	556	Standard
	Cu	65	1130276.2	2.3	**472.4814**	8.721	1.8	ug/L	124	Standard
	Zn	66	89569745.3	1.7	**68426.1192**	956.827	1.4	ug/L	196	Standard
>	**Ge**	72	433104.1	0.6				ug/L	473313	Standard
	As	75	1595.4	2.1	**1.4158**	0.029	2.1	ug/L	-286	Standard
	Se	82	80.6	3.1	**0.8939**	0.022	2.4	ug/L	-33	Standard
	Se-1	77	123.7	7.0	**0.4919**	0.089	18.1	ug/L	86	Standard
>	**Ga**	71	603.3	6.0				mg/L	35	Standard
	Rb	85	4882.5	4.4				ug/L	13	Standard
	Y	89	494803.5	1.1				ug/L	439493	Standard
>	**Rh**	103	106.7	15.1				ug/L	5	Standard
	Mo	98	95.3	6.8	**0.0119**	0.002	15.1	ug/L	10	Standard
	Ag	107	353.0	5.4	**0.0442**	0.003	7.5	ug/L	53	Standard
	Cd	111	64692.1	2.1	**32.6976**	0.546	1.7	mg/L	1	Standard
	Cd	114	160875.0	1.1	**32.1235**	0.246	0.8	ug/L	32	Standard
>	**In**	115	446114.4	0.5				ug/L	494305	Standard
	Sn	118	49.7	7.1	**-0.0143**	0.003	22.0	ug/L	53	Standard
	Sb	123	79.8	11.4	**0.0319**	0.004	12.4	ug/L	7	Standard
	Ba	135	1304.1	3.4	**0.7761**	0.023	3.0	ug/L	11	Standard
	Ce	140	109203.9	1.5				ug/L	10	Standard
>	**Tb**	159	489408.9	0.8				ug/L	538219	Standard
	Ho	165	4063.9	3.1				ug/L	8	Standard
	Tl	203	67.0	9.3	**0.0100**	0.001	11.6	ug/L	1	Standard
	Tl	205	68.3	54.9	**0.0093**	0.005	58.6	ug/L	3	Standard
	Pb	206	578.7	2.5	**0.2032**	0.007	3.5	ug/L	80	Standard
	Pb	207	497.3	6.0	**0.2017**	0.015	7.5	ug/L	73	Standard
	Pb	208	1148.0	6.2	**0.1821**	0.013	7.0	ug/L	190	Standard
	U	238	92.0	8.7	**0.0252**	0.002	9.5	ug/L	0	Standard
>	**Bi**	209	253933.3	0.4				ug/L	276439	Standard

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	Na	23	58.3	13.1	**17.0433**	2.452	14.4	mg/L	2	Standard
	Mg	24	4807.4	4.8	**5.6641**	0.210	3.7	mg/L	37	Standard
	K	39	15.0	33.3	**0.6472**	0.357	55.2	mg/L	3	Standard
	Ca	43	78.3	47.0	**16.0354**	12.453	77.7	mg/L	43	Standard
	Fe	54	12916.6	3.5	**7.1748**	0.282	3.9	mg/L	262	Standard
	Fe	57	3560.4	3.3	**7.0565**	0.258	3.7	mg/L	65	Standard
>	**Sc-1**	45	23136.0	2.1				mg/L	26874	Standard
	Cl	35	297956.3	1.6				ug/L	141022	Standard
	Kr	83	414.0	5.1				ug/L	75	Standard
	Br	81	3083.6	7.5				ug/L	2810	Standard
	P	31	213201.3	1.2				ug/L	458976	Standard
	S	34	79761.1	2.5				ug/L	103378	Standard
	Sr	88	141.7	10.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	6444.8	2.6				mg/L	10	Standard
	Ho-1	165	4063.9	3.1				mg/L	8	Standard
	Er	166	3617.1	1.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		95.140	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.505	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.251
|	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	91.859
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063038S WG452939-05
Sample Date/Time: Monday, November 18, 2013 16:22:04
Number of Replicates: 3
Autosampler Position: 208
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	256550.5	0.9				ug/L	269614	Standard
	Be	9	16005.1	1.3	**5.6514**	0.073	1.3	ug/L	23	Standard
	Al	27	12129031.8	1.7	**60.7597**	0.749	1.2	ug/L	1170	Standard
	Sc	45	23149.3	1.2				ug/L	26874	Standard
	Ti	47	38.3	14.4	**0.0684**	0.025	36.1	ug/L	25	Standard
	V	51	32451.5	1.7	**4.8764**	0.055	1.1	ug/L	1686	Standard
	Cr	52	32991.2	0.2	**4.6186**	0.048	1.0	ug/L	6098	Standard
	Cr	53	5972.8	2.8	**5.0938**	0.170	3.3	ug/L	193	Standard
	Mn	55	72720459.6	1.4	**5939.1473**	81.275	1.4	ug/L	1232	Standard
	Co	59	827796.5	2.5	**97.2742**	2.336	2.4	ug/L	106	Standard
	Ni	60	308978.1	1.5	**123.5795**	1.820	1.5	ug/L	556	Standard
	Cu	65	1139009.5	0.9	**475.9180**	2.764	0.6	ug/L	124	Standard
	Zn	66	88807956.4	0.9	**67811.8263**	549.008	0.8	ug/L	196	Standard
>	Ge	72	433323.6	0.8				ug/L	473313	Standard
	As	75	9350.9	1.7	**7.2648**	0.167	2.3	ug/L	-286	Standard
	Se	82	937.5	2.2	**7.1945**	0.112	1.6	ug/L	-33	Standard
	Se-1	77	729.7	2.2	**6.5995**	0.160	2.4	ug/L	86	Standard
>	Ga	71	763.4	2.0				mg/L	35	Standard
	Rb	85	4884.1	3.6				ug/L	13	Standard
	Y	89	492442.7	1.7				ug/L	439493	Standard
>	Rh	103	123.3	16.4				ug/L	5	Standard
	Mo	98	90.5	11.4	**0.0104**	0.003	28.1	ug/L	10	Standard
	Ag	107	33608.6	0.1	**5.6030**	0.052	0.9	ug/L	53	Standard
	Cd	111	75234.3	1.9	**37.8880**	0.414	1.1	mg/L	1	Standard
	Cd	114	186588.6	0.5	**37.1254**	0.127	0.3	ug/L	32	Standard
>	In	115	447739.7	0.9				ug/L	494305	Standard
	Sn	118	60.0	8.3	**-0.0058**	0.004	67.9	ug/L	53	Standard
	Sb	123	13656.0	1.1	**5.6839**	0.022	0.4	ug/L	7	Standard
	Ba	135	10164.4	1.4	**6.1127**	0.107	1.7	ug/L	11	Standard
	Ce	140	109042.7	0.8				ug/L	10	Standard
>	Tb	159	485633.8	1.0				ug/L	538219	Standard
	Ho	165	4058.9	2.4				ug/L	8	Standard
	Tl	203	29599.6	1.4	**5.3347**	0.040	0.8	ug/L	1	Standard
	Tl	205	37884.0	1.6	**5.5308**	0.052	0.9	ug/L	3	Standard
	Pb	206	14154.6	0.7	**5.9107**	0.054	0.9	ug/L	80	Standard
	Pb	207	12182.2	1.1	**5.6537**	0.043	0.8	ug/L	73	Standard
	Pb	208	28128.8	0.9	**5.3266**	0.049	0.9	ug/L	190	Standard
	U	238	17528.1	1.8	**5.1237**	0.071	1.4	ug/L	0	Standard
>	Bi	209	255737.6	0.7				ug/L	276439	Standard

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	Na	23	51.7	36.6	**15.0322**	5.704	37.9	mg/L	2	Standard
	Mg	24	4727.4	3.4	**5.5674**	0.205	3.7	mg/L	37	Standard
	K	39	15.0	57.7	**0.6398**	0.585	91.4	mg/L	3	Standard
	Ca	43	76.7	32.8	**15.4454**	8.627	55.9	mg/L	43	Standard
	Fe	54	13152.5	0.7	**7.3025**	0.083	1.1	mg/L	262	Standard
	Fe	57	3820.5	5.8	**7.5725**	0.428	5.6	mg/L	65	Standard
>	**Sc-1**	45	23149.3	1.2				mg/L	26874	Standard
	Cl	35	299636.1	1.3				ug/L	141022	Standard
	Kr	83	410.7	11.1				ug/L	75	Standard
	Br	81	2893.6	8.0				ug/L	2810	Standard
	P	31	215539.1	1.1				ug/L	458976	Standard
	S	34	81376.3	0.7				ug/L	103378	Standard
	Sr	88	196.7	28.1				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	0	Standard
	Dy	164	6507.6	3.8				mg/L	10	Standard
	Ho-1	165	4058.9	2.4				mg/L	8	Standard
	Er	166	3700.5	4.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		95.155	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.551	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	90.580
	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	92.511
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063038SD WG452939-06
Sample Date/Time: Monday, November 18, 2013 16:25:08
Number of Replicates: 3
Autosampler Position: 209
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	260105.1	3.2				ug/L	269614	Standard
	Be	9	14944.0	1.6	**5.2072**	0.204	3.9	ug/L	23	Standard
	Al	27	11633954.5	0.9	**57.5114**	1.331	2.3	ug/L	1170	Standard
	Sc	45	23526.6	0.4				ug/L	26874	Standard
	Ti	47	40.7	12.1	**0.0777**	0.020	26.1	ug/L	25	Standard
	V	51	30438.1	1.7	**4.5465**	0.095	2.1	ug/L	1686	Standard
	Cr	52	31528.8	0.7	**4.3656**	0.078	1.8	ug/L	6098	Standard
	Cr	53	5335.9	1.9	**4.5193**	0.108	2.4	ug/L	193	Standard
	Mn	55	70690822.6	0.6	**5753.1251**	20.216	0.4	ug/L	1232	Standard
	Co	59	803411.8	0.2	**94.0811**	0.753	0.8	ug/L	106	Standard
	Ni	60	302923.7	0.8	**120.7386**	2.117	1.8	ug/L	556	Standard
	Cu	65	1107180.4	0.4	**461.0274**	5.875	1.3	ug/L	124	Standard
	Zn	66	87020320.5	1.0	**66215.5809**	764.247	1.2	ug/L	196	Standard
>	Ge	72	434849.5	0.9				ug/L	473313	Standard
	As	75	8817.1	1.0	**6.8381**	0.040	0.6	ug/L	-286	Standard
	Se	82	912.6	0.9	**6.9884**	0.041	0.6	ug/L	-33	Standard
	Se-1	77	678.0	0.1	**6.0550**	0.068	1.1	ug/L	86	Standard
>	Ga	71	763.4	13.4				mg/L	35	Standard
	Rb	85	4749.1	3.5				ug/L	13	Standard
	Y	89	494134.7	1.7				ug/L	439493	Standard
>	Rh	103	138.3	11.6				ug/L	5	Standard
	Mo	98	88.7	8.7	**0.0097**	0.002	22.9	ug/L	10	Standard
	Ag	107	32024.5	0.9	**5.2854**	0.038	0.7	ug/L	53	Standard
	Cd	111	72656.7	1.1	**36.2323**	0.286	0.8	mg/L	1	Standard
	Cd	114	181409.7	1.0	**35.7395**	0.270	0.8	ug/L	32	Standard
>	In	115	452174.6	0.3				ug/L	494305	Standard
	Sn	118	60.0	15.3	**-0.0063**	0.008	119.9	ug/L	53	Standard
	Sb	123	13010.8	0.6	**5.3623**	0.047	0.9	ug/L	7	Standard
	Ba	135	9765.8	1.1	**5.8143**	0.047	0.8	ug/L	11	Standard
	Ce	140	106659.1	1.1				ug/L	10	Standard
>	Tb	159	492641.2	0.8				ug/L	538219	Standard
	Ho	165	3918.8	5.3				ug/L	8	Standard
	Tl	203	27973.1	1.7	**5.0067**	0.071	1.4	ug/L	1	Standard
	Tl	205	35546.7	1.2	**5.1539**	0.053	1.0	ug/L	3	Standard
	Pb	206	13400.6	0.6	**5.5546**	0.013	0.2	ug/L	80	Standard
	Pb	207	11469.7	0.2	**5.2843**	0.021	0.4	ug/L	73	Standard
	Pb	208	26470.0	0.6	**4.9754**	0.019	0.4	ug/L	190	Standard
	U	238	16662.2	1.5	**4.8370**	0.077	1.6	ug/L	0	Standard
>	Bi	209	257512.9	0.4				ug/L	276439	Standard

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	Na	23	43.3	17.6	**12.3185**	2.206	17.9	mg/L	2	Standard
	Mg	24	4490.7	3.2	**5.2010**	0.158	3.0	mg/L	37	Standard
	K	39	15.0	33.3	**0.6284**	0.341	54.2	mg/L	3	Standard
	Ca	43	91.7	3.1	**19.9568**	0.920	4.6	mg/L	43	Standard
	Fe	54	12268.6	1.3	**6.6918**	0.104	1.6	mg/L	262	Standard
	Fe	57	3757.1	2.0	**7.3245**	0.120	1.6	mg/L	65	Standard
>	**Sc-1**	45	23526.6	0.4				mg/L	26874	Standard
	Cl	35	293918.2	0.8				ug/L	141022	Standard
	Kr	83	417.0	4.6				ug/L	75	Standard
	Br	81	2866.9	4.4				ug/L	2810	Standard
	P	31	214786.7	0.6				ug/L	458976	Standard
	S	34	81094.8	1.0				ug/L	103378	Standard
	Sr	88	180.0	24.2				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	0	Standard
	Dy	164	6496.8	6.0				mg/L	10	Standard
	Ho-1	165	3918.8	5.3				mg/L	8	Standard
	Er	166	3647.1	9.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		96.473	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.874	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	91.477
|	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	93.154
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

L1311087401

Sample ID: ~~L1311084701~~
Sample Date/Time: Monday, November 18, 2013 16:28:13
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	271258.8	1.8				ug/L	269614	Standard
	Be	9	43.3	46.6	**-0.0015**	0.007	457.9	ug/L	23	Standard
	Al	27	6564522.5	0.6	**31.1065**	0.674	2.2	ug/L	1170	Standard
	Sc	45	26194.3	1.0				ug/L	26874	Standard
	Ti	47	91.0	14.3	**0.2626**	0.051	19.2	ug/L	25	Standard
	V	51	1549.9	2.2	**0.0382**	0.005	11.8	ug/L	1686	Standard
	Cr	52	4799.8	1.3	**0.0127**	0.009	72.6	ug/L	6098	Standard
	Cr	53	435.0	17.2	**0.2082**	0.060	28.8	ug/L	193	Standard
	Mn	55	30324828.4	0.4	**2257.4186**	11.058	0.5	ug/L	1232	Standard
	Co	59	5137.5	1.5	**0.5350**	0.008	1.6	ug/L	106	Standard
	Ni	60	3685.8	0.4	**1.1443**	0.003	0.3	ug/L	556	Standard
	Cu	65	1108.0	8.7	**0.3621**	0.036	9.8	ug/L	124	Standard
	Zn	66	8300.7	26.6	**5.5772**	1.516	27.2	ug/L	196	Standard
>	Ge	72	475382.5	0.3				ug/L	473313	Standard
	As	75	6659.0	1.8	**4.7897**	0.091	1.9	ug/L	-286	Standard
	Se	82	3.0	1045.0	**0.3212**	0.209	65.1	ug/L	-33	Standard
	Se-1	77	109.3	3.5	**0.2493**	0.038	15.1	ug/L	86	Standard
>	Ga	71	316.7	0.9				mg/L	35	Standard
	Rb	85	3377.0	5.5				ug/L	13	Standard
	Y	89	433267.4	2.0				ug/L	439493	Standard
>	Rh	103	186.7	29.5				ug/L	5	Standard
	Mo	98	313548.6	0.7	**80.6845**	0.376	0.5	ug/L	10	Standard
	Ag	107	66.7	7.1	**-0.0048**	0.001	15.1	ug/L	53	Standard
	Cd	111	-74.6	27.6	**-0.0371**	0.009	25.5	mg/L	1	Standard
	Cd	114	459.5	2.8	**0.0737**	0.002	2.9	ug/L	32	Standard
>	In	115	492205.3	0.2				ug/L	494305	Standard
	Sn	118	80.0	11.3	**0.0050**	0.007	140.2	ug/L	53	Standard
	Sb	123	199.8	0.8	**0.0742**	0.001	1.0	ug/L	7	Standard
	Ba	135	63921.6	0.8	**35.0254**	0.254	0.7	ug/L	11	Standard
	Ce	140	851.7	12.6				ug/L	10	Standard
>	Tb	159	515351.4	1.9				ug/L	538219	Standard
	Ho	165	15.0	33.3				ug/L	8	Standard
	Tl	203	94.0	4.3	**0.0142**	0.001	4.8	ug/L	1	Standard
	Tl	205	143.3	5.3	**0.0194**	0.001	5.4	ug/L	3	Standard
	Pb	206	131.7	3.1	**0.0113**	0.002	14.8	ug/L	80	Standard
	Pb	207	101.0	6.0	**0.0133**	0.003	20.8	ug/L	73	Standard
	Pb	208	252.7	6.5	**0.0079**	0.003	38.0	ug/L	190	Standard
	U	238	243.0	7.2	**0.0665**	0.005	7.5	ug/L	0	Standard
>	Bi	209	266009.8	0.1				ug/L	276439	Standard

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	Na	23	75.0	20.0	**19.3765**	3.836	19.8	mg/L	2	Standard
	Mg	24	9949.9	2.3	**10.3839**	0.320	3.1	mg/L	37	Standard
	K	39	31.7	9.1	**1.5325**	0.194	12.6	mg/L	3	Standard
	Ca	43	116.7	13.8	**24.2787**	4.620	19.0	mg/L	43	Standard
	Fe	54	1925.8	5.2	**0.8348**	0.048	5.8	mg/L	262	Standard
	Fe	57	681.7	5.6	**1.1130**	0.076	6.8	mg/L	65	Standard
>	**Sc-1**	45	26194.3	1.0				mg/L	26874	Standard
	Cl	35	169739.6	1.3				ug/L	141022	Standard
	Kr	83	151.3	12.6				ug/L	75	Standard
	Br	81	15004.1	4.4				ug/L	2810	Standard
	P	31	480575.3	3.6				ug/L	458976	Standard
	S	34	90464.3	0.2				ug/L	103378	Standard
	Sr	88	828.4	3.9				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	45.2	44.2				mg/L	10	Standard
	Ho-1	165	15.0	33.3				mg/L	8	Standard
	Er	166	30.0	57.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		100.610	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		100.437	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	99.575
|	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	96.227
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

L1311087402

Sample ID: ~~L1311084702~~
Sample Date/Time: Monday, November 18, 2013 16:31:46
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	273560.3	2.6				ug/L	269614	Standard
	Be	9	36.7	7.9	**-0.0039**	0.001	33.5	ug/L	23	Standard
	Al	27	8808089.0	0.8	**41.3976**	1.137	2.7	ug/L	1170	Standard
	Sc	45	26182.6	1.7				ug/L	26874	Standard
	Ti	47	77.3	10.8	**0.2085**	0.034	16.4	ug/L	25	Standard
	V	51	2214.3	5.0	**0.1326**	0.014	10.3	ug/L	1686	Standard
	Cr	52	5398.0	3.3	**0.1004**	0.021	20.7	ug/L	6098	Standard
	Cr	53	546.7	10.8	**0.2973**	0.047	15.7	ug/L	193	Standard
	Mn	55	15071989.6	1.6	**1121.9432**	19.908	1.8	ug/L	1232	Standard
	Co	59	2302.5	2.5	**0.2313**	0.005	2.0	ug/L	106	Standard
	Ni	60	5357.6	2.6	**1.7549**	0.057	3.2	ug/L	556	Standard
	Cu	65	1203.0	12.3	**0.3986**	0.060	15.0	ug/L	124	Standard
	Zn	66	9472.5	78.6	**6.4184**	5.244	81.7	ug/L	196	Standard
>	Ge	72	475379.9	0.7				ug/L	473313	Standard
	As	75	73289.7	0.9	**50.5941**	0.179	0.4	ug/L	-286	Standard
	Se	82	11.6	100.8	**0.3785**	0.078	20.6	ug/L	-33	Standard
	Se-1	77	118.0	7.2	**0.3290**	0.081	24.7	ug/L	86	Standard
>	Ga	71	2508.5	2.3				mg/L	35	Standard
	Rb	85	24493.1	2.4				ug/L	13	Standard
	Y	89	440602.0	1.4				ug/L	439493	Standard
>	Rh	103	356.7	15.0				ug/L	5	Standard
	Mo	98	409377.0	0.5	**106.3104**	0.609	0.6	ug/L	10	Standard
	Ag	107	62.0	17.4	**-0.0055**	0.002	30.3	ug/L	53	Standard
	Cd	111	-70.8	28.0	**-0.0357**	0.009	25.9	mg/L	1	Standard
	Cd	114	801.3	9.0	**0.1369**	0.013	9.4	ug/L	32	Standard
>	In	115	487757.0	0.2				ug/L	494305	Standard
	Sn	118	137.0	13.4	**0.0497**	0.014	28.4	ug/L	53	Standard
	Sb	123	429.1	6.8	**0.1625**	0.011	6.9	ug/L	7	Standard
	Ba	135	71302.4	0.1	**39.4276**	0.017	0.0	ug/L	11	Standard
	Ce	140	388.3	11.0				ug/L	10	Standard
>	Tb	159	513352.2	1.0				ug/L	538219	Standard
	Ho	165	18.3	15.7				ug/L	8	Standard
	Tl	203	145.7	7.6	**0.0235**	0.002	7.9	ug/L	1	Standard
	Tl	205	205.0	19.0	**0.0286**	0.006	19.3	ug/L	3	Standard
	Pb	206	116.0	5.2	**0.0058**	0.002	42.9	ug/L	80	Standard
	Pb	207	103.3	4.5	**0.0151**	0.002	12.8	ug/L	73	Standard
	Pb	208	255.3	2.6	**0.0092**	0.001	12.9	ug/L	190	Standard
	U	238	10180.8	1.5	**2.9086**	0.032	1.1	ug/L	0	Standard
>	Bi	209	261586.1	0.4				ug/L	276439	Standard

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	Na	23	123.3	20.8	**32.1850**	6.727	20.9	mg/L	2	Standard
	Mg	24	11024.0	3.3	**11.5152**	0.484	4.2	mg/L	37	Standard
	K	39	20.0	25.0	**0.8299**	0.319	38.5	mg/L	3	Standard
	Ca	43	176.7	9.1	**42.0936**	4.231	10.1	mg/L	43	Standard
	Fe	54	735.7	1.4	**0.2410**	0.010	4.1	mg/L	262	Standard
	Fe	57	450.0	4.8	**0.7020**	0.036	5.2	mg/L	65	Standard
>	**Sc-1**	45	26182.6	1.7				mg/L	26874	Standard
	Cl	35	179250.8	0.6				ug/L	141022	Standard
	Kr	83	121.0	4.4				ug/L	75	Standard
	Br	81	12515.2	6.1				ug/L	2810	Standard
	P	31	475071.8	2.1				ug/L	458976	Standard
	S	34	88576.8	4.0				ug/L	103378	Standard
	Sr	88	1463.4	5.3				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	393.3	17.3				mg/L	0	Standard
	Dy	164	41.9	13.8				mg/L	10	Standard
	Ho-1	165	18.3	15.7				mg/L	8	Standard
	Er	166	30.0	0.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		101.464	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		100.437	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.675
|	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	94.627
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Mo 98 Upper, S, EEE	Mo	98	

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Sample ID: ~~L1311084702~~
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Method 6020 - Summary Report

L1311087403

Sample ID: ~~L1311084703~~
Sample Date/Time: Monday, November 18, 2013 16:34:51
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	289240.3	1.9				ug/L	269614	Standard
	Be	9	40.0	12.5	**-0.0035**	0.002	44.9	ug/L	23	Standard
	Al	27	10434171.4	1.0	**46.3668**	0.543	1.2	ug/L	1170	Standard
	Sc	45	26221.0	4.7				ug/L	26874	Standard
	Ti	47	127.7	26.1	**0.4039**	0.132	32.6	ug/L	25	Standard
	V	51	2113.4	5.5	**0.1155**	0.012	10.8	ug/L	1686	Standard
	Cr	52	4886.5	1.1	**0.0190**	0.011	57.1	ug/L	6098	Standard
	Cr	53	946.7	10.9	**0.6105**	0.088	14.4	ug/L	193	Standard
	Mn	55	1839570.1	1.3	**135.5761**	2.327	1.7	ug/L	1232	Standard
	Co	59	40160.5	0.5	**4.2484**	0.062	1.5	ug/L	106	Standard
	Ni	60	9089.7	1.5	**3.0875**	0.037	1.2	ug/L	556	Standard
	Cu	65	7624.6	4.0	**2.8183**	0.121	4.3	ug/L	124	Standard
	Zn	66	10066.0	66.8	**6.7494**	4.653	68.9	ug/L	196	Standard
>	Ge	72	479765.1	1.7				ug/L	473313	Standard
	As	75	223.0	31.7	**0.3643**	0.050	13.8	ug/L	-286	Standard
	Se	82	65.8	9.6	**0.7380**	0.048	6.5	ug/L	-33	Standard
	Se-1	77	188.3	11.4	**0.9618**	0.225	23.4	ug/L	86	Standard
>	Ga	71	145.0	19.2				mg/L	35	Standard
	Rb	85	67466.6	2.4				ug/L	13	Standard
	Y	89	438884.4	3.0				ug/L	439493	Standard
>	Rh	103	198.3	15.2				ug/L	5	Standard
	Mo	98	99242.8	1.2	**25.6436**	0.190	0.7	ug/L	10	Standard
	Ag	107	92.0	36.2	**-0.0009**	0.005	570.6	ug/L	53	Standard
	Cd	111	58.5	134.1	**0.0241**	0.036	150.6	mg/L	1	Standard
	Cd	114	531.4	45.4	**0.0873**	0.044	50.9	ug/L	32	Standard
>	In	115	489978.9	0.9				ug/L	494305	Standard
	Sn	118	571.0	5.6	**0.3840**	0.029	7.5	ug/L	53	Standard
	Sb	123	1081.0	1.5	**0.4098**	0.009	2.1	ug/L	7	Standard
	Ba	135	46234.1	0.6	**25.4459**	0.109	0.4	ug/L	11	Standard
	Ce	140	446.7	25.4				ug/L	10	Standard
>	Tb	159	517301.6	1.1				ug/L	538219	Standard
	Ho	165	35.0	28.6				ug/L	8	Standard
	Tl	203	263.0	20.2	**0.0441**	0.009	20.6	ug/L	1	Standard
	Tl	205	351.7	1.6	**0.0494**	0.001	1.5	ug/L	3	Standard
	Pb	206	356.0	4.9	**0.1042**	0.007	6.8	ug/L	80	Standard
	Pb	207	286.7	8.2	**0.0985**	0.010	10.6	ug/L	73	Standard
	Pb	208	672.0	4.3	**0.0867**	0.006	6.5	ug/L	190	Standard
	U	238	1727.8	2.1	**0.4912**	0.011	2.3	ug/L	0	Standard
>	Bi	209	262048.0	0.5				ug/L	276439	Standard

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Na	23	126.7	39.7	**32.7834**	11.991	36.6	mg/L	2	Standard
Mg	24	10415.2	0.7	**10.8734**	0.502	4.6	mg/L	37	Standard
K	39	45.0	33.3	**2.3211**	0.820	35.3	mg/L	3	Standard
Ca	43	161.7	8.9	**37.7836**	6.280	16.6	mg/L	43	Standard
Fe	54	642.5	12.9	**0.1956**	0.056	28.6	mg/L	262	Standard
Fe	57	336.7	3.7	**0.5001**	0.005	1.1	mg/L	65	Standard
> **Sc-1**	45	26221.0	4.7				mg/L	26874	Standard
Cl	35	171508.0	1.4				ug/L	141022	Standard
Kr	83	116.7	4.7				ug/L	75	Standard
Br	81	11167.4	1.3				ug/L	2810	Standard
P	31	511435.6	2.0				ug/L	458976	Standard
S	34	77115.7	0.3				ug/L	103378	Standard
Sr	88	1036.7	2.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	13.3	43.3				mg/L	0	Standard
Dy	164	38.2	49.2				mg/L	10	Standard
Ho-1	165	35.0	28.6				mg/L	8	Standard
Er	166	36.7	78.7				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		107.279	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		101.363	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	99.125
|	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	94.794
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

L1311087403PS

Sample ID: L~~1311084703PS~~ WG453208-01
Sample Date/Time: Monday, November 18, 2013 16:37:56
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	295066.2	2.1				ug/L	269614	Standard
	Be	9	151889.3	1.4	**46.7524**	0.489	1.0	ug/L	23	Standard
	Al	27	11330356.1	1.5	**49.3557**	0.678	1.4	ug/L	1170	Standard
	Sc	45	27885.6	2.0				ug/L	26874	Standard
	Ti	47	141.3	8.5	**0.4300**	0.053	12.3	ug/L	25	Standard
	V	51	346655.9	0.4	**46.1671**	0.605	1.3	ug/L	1686	Standard
	Cr	52	342405.8	0.4	**46.5797**	0.945	2.0	ug/L	6098	Standard
	Cr	53	63521.2	1.3	**47.5884**	0.789	1.7	ug/L	193	Standard
	Mn	55	3079541.2	0.5	**215.5951**	3.862	1.8	ug/L	1232	Standard
	Co	59	504445.9	0.4	**50.8389**	0.965	1.9	ug/L	106	Standard
	Ni	60	143676.0	0.4	**49.1662**	0.628	1.3	ug/L	556	Standard
	Cu	65	133449.5	1.4	**47.7664**	0.150	0.3	ug/L	124	Standard
	Zn	66	74304.3	4.1	**48.4475**	1.259	2.6	ug/L	196	Standard
>	**Ge**	72	505281.2	1.7				ug/L	473313	Standard
	As	75	72834.2	1.2	**47.3212**	0.272	0.6	ug/L	-286	Standard
	Se	82	7250.9	1.3	**46.0299**	0.331	0.7	ug/L	-33	Standard
	Se-1	77	5401.6	0.8	**45.9478**	1.108	2.4	ug/L	86	Standard
>	**Ga**	71	160.0	20.5				mg/L	35	Standard
	Rb	85	74409.0	2.5				ug/L	13	Standard
	Y	89	460144.6	0.8				ug/L	439493	Standard
>	**Rh**	103	266.7	13.3				ug/L	5	Standard
	Mo	98	109434.1	1.2	**26.8329**	0.240	0.9	ug/L	10	Standard
	Ag	107	340108.7	0.7	**49.2812**	0.425	0.9	ug/L	53	Standard
	Cd	111	107103.9	0.8	**46.7727**	0.097	0.2	mg/L	1	Standard
	Cd	114	264171.6	0.8	**45.5787**	0.308	0.7	ug/L	32	Standard
>	**In**	115	516357.9	0.6				ug/L	494305	Standard
	Sn	118	311.3	1.9	**0.1714**	0.006	3.3	ug/L	53	Standard
	Sb	123	130754.2	0.5	**47.2025**	0.116	0.2	ug/L	7	Standard
	Ba	135	141422.6	0.4	**73.8816**	0.172	0.2	ug/L	11	Standard
	Ce	140	363.3	4.2				ug/L	10	Standard
>	**Tb**	159	535129.9	0.9				ug/L	538219	Standard
	Ho	165	33.3	8.7				ug/L	8	Standard
	Tl	203	288796.1	0.8	**48.6414**	0.366	0.8	ug/L	1	Standard
	Tl	205	377814.5	1.0	**51.5369**	0.697	1.4	ug/L	3	Standard
	Pb	206	132757.8	0.7	**52.1115**	0.279	0.5	ug/L	80	Standard
	Pb	207	118683.7	0.2	**51.7146**	0.204	0.4	ug/L	73	Standard
	Pb	208	263631.7	0.9	**46.9334**	0.335	0.7	ug/L	190	Standard
	U	238	174935.5	1.3	**47.7871**	0.731	1.5	ug/L	0	Standard
>	**Bi**	209	273758.7	0.4				ug/L	276439	Standard

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	Na	23	105.0	24.7	**25.7254**	6.862	26.7	mg/L	2	Standard
	Mg	24	11175.8	3.0	**10.9609**	0.484	4.4	mg/L	37	Standard
	K	39	33.3	52.7	**1.5045**	0.991	65.9	mg/L	3	Standard
	Ca	43	140.0	15.6	**28.6281**	5.284	18.5	mg/L	43	Standard
	Fe	54	877.7	2.1	**0.2851**	0.005	1.9	mg/L	262	Standard
	Fe	57	371.7	18.3	**0.5230**	0.115	22.0	mg/L	65	Standard
>	**Sc-1**	45	27885.6	2.0				mg/L	26874	Standard
	Cl	35	181549.3	1.0				ug/L	141022	Standard
	Kr	83	119.0	1.7				ug/L	75	Standard
	Br	81	11531.1	1.2				ug/L	2810	Standard
	P	31	695106.2	1.5				ug/L	458976	Standard
	S	34	80850.2	1.2				ug/L	103378	Standard
	Sr	88	1136.7	3.4				ug/L	30	Standard
	C	12	6.7	86.6				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	86.6				mg/L	0	Standard
	Dy	164	24.4	123.6				mg/L	10	Standard
	Ho-1	165	33.3	8.7				mg/L	8	Standard
	Er	166	46.7	32.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		109.440	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		106.754	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.461
|	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	99.030
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

L1311087403SDL

Sample ID: L~~1311084703SD~~L WG453208-02
Sample Date/Time: Monday, November 18, 2013 16:41:00
Number of Replicates: 3
Autosampler Position: 214
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	250631.2	1.4				ug/L	269614	Standard
	Be	9	58.3	49.5	**0.0051**	0.010	206.1	ug/L	23	Standard
	Al	27	1796347.5	1.1	**9.2071**	0.204	2.2	ug/L	1170	Standard
	Sc	45	23361.3	0.8				ug/L	26874	Standard
	Ti	47	36.0	0.0	**0.0566**	0.000	0.3	ug/L	25	Standard
	V	51	1315.2	1.8	**0.0210**	0.004	18.4	ug/L	1686	Standard
	Cr	52	4263.3	1.4	**-0.0119**	0.010	84.9	ug/L	6098	Standard
	Cr	53	371.7	4.7	**0.1833**	0.015	8.3	ug/L	193	Standard
	Mn	55	336822.3	1.2	**27.1058**	0.314	1.2	ug/L	1232	Standard
	Co	59	7241.1	0.5	**0.8275**	0.004	0.5	ug/L	106	Standard
	Ni	60	1980.8	1.4	**0.5843**	0.012	2.0	ug/L	556	Standard
	Cu	65	943.7	2.8	**0.3307**	0.011	3.3	ug/L	124	Standard
	Zn	66	3386.7	1.5	**2.3639**	0.038	1.6	ug/L	196	Standard
>	Ge	72	437518.7	0.1				ug/L	473313	Standard
	As	75	-163.6	17.8	**0.0897**	0.022	24.1	ug/L	-286	Standard
	Se	82	-17.2	53.6	**0.1755**	0.067	38.2	ug/L	-33	Standard
	Se-1	77	105.0	5.8	**0.2929**	0.061	20.9	ug/L	86	Standard
>	Ga	71	73.3	32.2				mg/L	35	Standard
	Rb	85	12458.5	1.3				ug/L	13	Standard
	Y	89	394400.6	0.3				ug/L	439493	Standard
>	Rh	103	51.7	20.1				ug/L	5	Standard
	Mo	98	17504.6	0.5	**4.8361**	0.055	1.1	ug/L	10	Standard
	Ag	107	80.0	14.4	**-0.0019**	0.002	100.4	ug/L	53	Standard
	Cd	111	6.9	157.8	**0.0005**	0.005	1070.5	mg/L	1	Standard
	Cd	114	72.1	24.9	**0.0046**	0.003	74.5	ug/L	32	Standard
>	In	115	457122.1	0.8				ug/L	494305	Standard
	Sn	118	106.3	4.6	**0.0315**	0.004	14.1	ug/L	53	Standard
	Sb	123	412.3	5.8	**0.1666**	0.009	5.2	ug/L	7	Standard
	Ba	135	8568.1	0.7	**5.0446**	0.048	1.0	ug/L	11	Standard
	Ce	140	71.7	26.4				ug/L	10	Standard
>	Tb	159	478424.7	0.9				ug/L	538219	Standard
	Ho	165	6.7	86.6				ug/L	8	Standard
	Tl	203	84.3	24.0	**0.0129**	0.004	27.5	ug/L	1	Standard
	Tl	205	113.3	31.3	**0.0157**	0.005	32.1	ug/L	3	Standard
	Pb	206	139.3	6.7	**0.0162**	0.004	23.9	ug/L	80	Standard
	Pb	207	106.7	6.6	**0.0173**	0.003	19.2	ug/L	73	Standard
	Pb	208	286.7	10.0	**0.0158**	0.005	32.1	ug/L	190	Standard
	U	238	339.3	3.2	**0.0965**	0.004	3.7	ug/L	0	Standard
>	Bi	209	258058.8	0.7				ug/L	276439	Standard

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Na	23	20.0	66.1	**5.4910**	3.885	70.8	mg/L	2	Standard
Mg	24	1975.1	3.0	**2.2865**	0.086	3.7	mg/L	37	Standard
K	39	10.0	100.0	**0.2928**	0.674	230.3	mg/L	3	Standard
Ca	43	40.0	37.5	**2.9814**	4.960	166.4	mg/L	43	Standard
Fe	54	169.6	5.9	**-0.0316**	0.006	17.9	mg/L	262	Standard
Fe	57	120.0	4.2	**0.1419**	0.008	5.8	mg/L	65	Standard
> **Sc-1**	45	23361.3	0.8				mg/L	26874	Standard
Cl	35	139630.5	1.4				ug/L	141022	Standard
Kr	83	91.0	8.6				ug/L	75	Standard
Br	81	3850.5	7.9				ug/L	2810	Standard
P	31	215639.3	2.6				ug/L	458976	Standard
S	34	89332.8	3.3				ug/L	103378	Standard
Sr	88	235.0	5.6				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	9.2	103.5				mg/L	10	Standard
Ho-1	165	6.7	86.6				mg/L	8	Standard
Er	166	16.7	69.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		92.959	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.437	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.478
	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	93.351
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Sample ID: ~~L1311084703SD~~L WG453208-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 16:44:07
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	271363.8	1.4				ug/L	269614	Standard
	Be	9	151534.0	0.8	**50.7208**	0.952	1.9	ug/L	23	Standard
	Al	27	9507712.5	0.9	**45.0308**	0.480	1.1	ug/L	1170	Standard
	Sc	45	25947.2	0.3				ug/L	26874	Standard
	Ti	47	25743.2	0.3	**101.4339**	0.196	0.2	ug/L	25	Standard
	V	51	334459.0	1.1	**47.0011**	0.680	1.4	ug/L	1686	Standard
	Cr	52	328348.2	1.0	**47.1317**	0.368	0.8	ug/L	6098	Standard
	Cr	53	61144.8	0.6	**48.3355**	0.469	1.0	ug/L	193	Standard
	Mn	55	671175.7	1.5	**49.4692**	0.929	1.9	ug/L	1232	Standard
	Co	59	450321.4	0.9	**47.8807**	0.499	1.0	ug/L	106	Standard
	Ni	60	136144.6	0.2	**49.1558**	0.265	0.5	ug/L	556	Standard
	Cu	65	132390.6	0.7	**50.0057**	0.176	0.4	ug/L	124	Standard
	Zn	66	73565.5	1.8	**50.6387**	1.057	2.1	ug/L	196	Standard
>	Ge	72	478832.3	0.4				ug/L	473313	Standard
	As	75	73599.6	0.8	**50.4430**	0.373	0.7	ug/L	-286	Standard
	Se	82	7502.2	1.0	**50.2253**	0.376	0.7	ug/L	-33	Standard
	Se-1	77	5526.0	0.8	**49.6483**	0.229	0.5	ug/L	86	Standard
>	Ga	71	70.0	21.4				mg/L	35	Standard
	Rb	85	1156.7	9.3				ug/L	13	Standard
	Y	89	433832.2	1.2				ug/L	439493	Standard
>	Rh	103	20.0	50.0				ug/L	5	Standard
	Mo	98	413127.5	0.3	**105.5209**	0.312	0.3	ug/L	10	Standard
	Ag	107	350839.5	0.5	**52.9320**	0.105	0.2	ug/L	53	Standard
	Cd	111	110444.7	0.7	**50.2213**	0.352	0.7	mg/L	1	Standard
	Cd	114	281621.5	1.0	**50.5936**	0.459	0.9	ug/L	32	Standard
>	In	115	495909.5	0.4				ug/L	494305	Standard
	Sn	118	66462.5	1.2	**50.5673**	0.618	1.2	ug/L	53	Standard
	Sb	123	131216.4	0.3	**49.3232**	0.319	0.6	ug/L	7	Standard
	Ba	135	91720.5	1.0	**49.8890**	0.629	1.3	ug/L	11	Standard
	Ce	140	46.7	89.9				ug/L	10	Standard
>	Tb	159	508855.5	0.4				ug/L	538219	Standard
	Ho	165	3.3	173.2				ug/L	8	Standard
	Tl	203	286630.5	0.2	**49.3821**	0.142	0.3	ug/L	1	Standard
	Tl	205	379456.5	1.0	**52.9449**	0.596	1.1	ug/L	3	Standard
	Pb	206	130534.9	0.7	**52.4129**	0.376	0.7	ug/L	80	Standard
	Pb	207	117910.7	0.8	**52.5545**	0.435	0.8	ug/L	73	Standard
	Pb	208	264977.7	0.2	**48.2546**	0.146	0.3	ug/L	190	Standard
	U	238	171387.6	0.3	**47.8888**	0.179	0.4	ug/L	0	Standard
>	Bi	209	267630.3	0.1				ug/L	276439	Standard

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Na	23	16.7	69.3	**4.0175**	3.076	76.6	mg/L	2	Standard
Mg	24	4912.5	3.0	**5.1584**	0.139	2.7	mg/L	37	Standard
K	39	78.3	41.5	**4.3911**	1.971	44.9	mg/L	3	Standard
Ca	43	38.3	27.2	**1.1541**	3.102	268.8	mg/L	43	Standard
Fe	54	11275.2	2.4	**5.5553**	0.151	2.7	mg/L	262	Standard
Fe	57	3278.7	5.8	**5.7755**	0.338	5.9	mg/L	65	Standard
> **Sc-1**	45	25947.2	0.3				mg/L	26874	Standard
Cl	35	154250.6	0.7				ug/L	141022	Standard
Kr	83	107.3	19.2				ug/L	75	Standard
Br	81	2636.9	9.9				ug/L	2810	Standard
P	31	508459.7	4.1				ug/L	458976	Standard
S	34	126702.6	0.7				ug/L	103378	Standard
Sr	88	46.7	27.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.5	173.2				mg/L	10	Standard
Ho-1	165	3.3	173.2				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		100.649	
Be	9	101.442		
Al	27	90.062		
Sc	45			
Ti	47	101.434		
V	51	94.002		
Cr	52	94.263		
Cr	53			
Mn	55	98.938		
Co	59	95.761		
Ni	60	98.312		
Cu	65	100.011		
Zn	66	101.277		
> Ge	72		101.166	
As	75	100.886		
Se	82	100.451		
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	105.521	
	Ag	107	105.864	
	Cd	111	100.443	
	Cd	114		
>	In	115		100.325
	Sn	118	101.135	
	Sb	123	98.646	
	Ba	135	99.778	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.764	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.509	
	U	238	95.778	
>	Bi	209		96.813
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 16:47:12
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	266327.2	1.3				ug/L	269614	Standard
	Be	9	55.0	41.7	**0.0027**	0.008	292.1	ug/L	23	Standard
	Al	27	1136.7	14.1	**-0.0016**	0.001	46.5	ug/L	1170	Standard
	Sc	45	25790.3	3.2				ug/L	26874	Standard
	Ti	47	14.3	10.7	**-0.0403**	0.006	15.3	ug/L	25	Standard
	V	51	1114.4	3.6	**-0.0193**	0.007	35.6	ug/L	1686	Standard
	Cr	52	3939.5	2.6	**-0.0978**	0.020	20.2	ug/L	6098	Standard
	Cr	53	158.3	21.5	**-0.0094**	0.028	295.2	ug/L	193	Standard
	Mn	55	1392.7	39.6	**-0.0327**	0.042	129.4	ug/L	1232	Standard
	Co	59	82.7	9.1	**-0.0063**	0.001	13.8	ug/L	106	Standard
	Ni	60	432.3	3.5	**-0.0395**	0.004	11.2	ug/L	556	Standard
	Cu	65	128.3	18.3	**-0.0097**	0.009	97.7	ug/L	124	Standard
	Zn	66	730.4	13.2	**0.3247**	0.068	20.8	ug/L	196	Standard
>	**Ge**	72	462856.0	0.7				ug/L	473313	Standard
	As	75	-357.5	4.7	**-0.0405**	0.011	26.3	ug/L	-286	Standard
	Se	82	-67.1	1.2	**-0.1610**	0.008	4.9	ug/L	-33	Standard
	Se-1	77	80.3	5.0	**0.0026**	0.033	1260.8	ug/L	86	Standard
>	**Ga**	71	40.0	37.5				mg/L	35	Standard
	Rb	85	15.0	33.3				ug/L	13	Standard
	Y	89	429502.5	0.3				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	77.6	61.8	**0.0050**	0.012	243.8	ug/L	10	Standard
	Ag	107	74.7	24.3	**-0.0034**	0.003	75.6	ug/L	53	Standard
	Cd	111	11.9	159.9	**0.0026**	0.009	339.2	mg/L	1	Standard
	Cd	114	40.3	75.5	**-0.0021**	0.005	261.4	ug/L	32	Standard
>	**In**	115	483155.0	1.9				ug/L	494305	Standard
	Sn	118	52.7	13.5	**-0.0153**	0.005	31.3	ug/L	53	Standard
	Sb	123	268.0	26.6	**0.1016**	0.026	25.3	ug/L	7	Standard
	Ba	135	12.3	103.3	**-0.0057**	0.007	122.2	ug/L	11	Standard
	Ce	140	8.3	34.6				ug/L	10	Standard
>	**Tb**	159	496051.3	0.6				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	24.3	120.7	**0.0021**	0.005	244.9	ug/L	1	Standard
	Tl	205	21.7	70.5	**0.0023**	0.002	90.3	ug/L	3	Standard
	Pb	206	87.3	21.3	**-0.0064**	0.008	119.4	ug/L	80	Standard
	Pb	207	75.0	20.5	**0.0017**	0.007	404.4	ug/L	73	Standard
	Pb	208	174.3	5.9	**-0.0063**	0.002	34.2	ug/L	190	Standard
	U	238	10.3	39.1	**0.0010**	0.001	107.9	ug/L	0	Standard
>	**Bi**	209	265170.8	1.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	36.7	7.9	**0.0071**	0.003	36.9	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	13.3	57.3	**-6.2659**	2.413	38.5	mg/L	43	Standard
Fe	54	280.4	3.9	**0.0158**	0.008	51.8	mg/L	262	Standard
Fe	57	66.7	18.9	**0.0239**	0.027	111.5	mg/L	65	Standard
> **Sc-1**	45	25790.3	3.2				mg/L	26874	Standard
Cl	35	148836.2	1.7				ug/L	141022	Standard
Kr	83	117.7	1.8				ug/L	75	Standard
Br	81	2883.6	7.0				ug/L	2810	Standard
P	31	461957.0	2.1				ug/L	458976	Standard
S	34	117317.6	2.1				ug/L	103378	Standard
Sr	88	31.7	39.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	3.2	186.4				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		98.781	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		97.791	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	97.744
	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	95.924
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311063032
Sample Date/Time: Monday, November 18, 2013 16:50:18
Number of Replicates: 3
Autosampler Position: 215
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	241111.7	0.7				ug/L	269614	Standard
	Be	9	25.0	34.6	**-0.0067**	0.003	47.8	ug/L	23	Standard
	Al	27	174330.7	1.6	**0.9223**	0.019	2.0	ug/L	1170	Standard
	Sc	45	23032.5	2.8				ug/L	26874	Standard
	Ti	47	21.3	11.8	**-0.0046**	0.010	223.7	ug/L	25	Standard
	V	51	1028.5	3.3	**-0.0196**	0.003	17.4	ug/L	1686	Standard
	Cr	52	3529.4	4.0	**-0.1160**	0.019	16.3	ug/L	6098	Standard
	Cr	53	176.7	5.9	**0.0176**	0.009	50.4	ug/L	193	Standard
	Mn	55	19843.8	124.8	**1.4887**	2.019	135.6	ug/L	1232	Standard
	Co	59	348.3	99.4	**0.0258**	0.041	157.0	ug/L	106	Standard
	Ni	60	653.7	4.6	**0.0636**	0.010	16.0	ug/L	556	Standard
	Cu	65	326.7	11.7	**0.0785**	0.017	22.3	ug/L	124	Standard
	Zn	66	4426.2	64.9	**3.2419**	2.270	70.0	ug/L	196	Standard
>	Ge	72	427721.7	1.2				ug/L	473313	Standard
	As	75	-229.2	12.5	**0.0366**	0.024	65.5	ug/L	-286	Standard
	Se	82	-41.8	10.4	**-0.0103**	0.033	316.4	ug/L	-33	Standard
	Se-1	77	73.3	6.7	**-0.0068**	0.042	621.2	ug/L	86	Standard
>	Ga	71	41.7	38.6				mg/L	35	Standard
	Rb	85	1855.1	9.3				ug/L	13	Standard
	Y	89	388095.3	1.8				ug/L	439493	Standard
>	Rh	103	13.3	21.7				ug/L	5	Standard
	Mo	98	588.9	12.7	**0.1538**	0.021	13.9	ug/L	10	Standard
	Ag	107	81.3	42.2	**-0.0012**	0.006	487.2	ug/L	53	Standard
	Cd	111	9.6	49.1	**0.0020**	0.002	119.3	mg/L	1	Standard
	Cd	114	25.2	63.2	**-0.0044**	0.003	74.0	ug/L	32	Standard
>	In	115	441425.9	0.1				ug/L	494305	Standard
	Sn	118	53.3	7.8	**-0.0108**	0.004	33.2	ug/L	53	Standard
	Sb	123	127.3	8.3	**0.0523**	0.004	8.5	ug/L	7	Standard
	Ba	135	36668.0	0.5	**22.3988**	0.127	0.6	ug/L	11	Standard
	Ce	140	35.0	57.1				ug/L	10	Standard
>	Tb	159	455841.1	1.2				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	22.0	12.0	**0.0020**	0.001	25.4	ug/L	1	Standard
	Tl	205	38.3	60.2	**0.0052**	0.004	68.2	ug/L	3	Standard
	Pb	206	90.0	7.3	**-0.0022**	0.003	140.4	ug/L	80	Standard
	Pb	207	86.0	14.3	**0.0101**	0.006	60.1	ug/L	73	Standard
	Pb	208	204.7	2.3	**0.0026**	0.001	36.7	ug/L	190	Standard
	U	238	105.3	14.7	**0.0305**	0.005	15.5	ug/L	0	Standard
>	Bi	209	243612.9	0.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0661**	0.855	1293.7	mg/L	2	Standard
Mg	24	14468.6	3.3	**17.2097**	1.041	6.1	mg/L	37	Standard
K	39	1.7	173.2	**-0.2628**	0.205	78.0	mg/L	3	Standard
Ca	43	21.7	26.6	**-2.9890**	2.058	68.9	mg/L	43	Standard
Fe	54	129.6	13.9	**-0.0528**	0.011	20.3	mg/L	262	Standard
Fe	57	76.7	21.0	**0.0578**	0.030	52.6	mg/L	65	Standard
> **Sc-1**	45	23032.5	2.8				mg/L	26874	Standard
Cl	35	129480.3	1.8				ug/L	141022	Standard
Kr	83	97.0	5.5				ug/L	75	Standard
Br	81	3040.3	2.9				ug/L	2810	Standard
P	31	207563.8	1.2				ug/L	458976	Standard
S	34	102460.5	3.4				ug/L	103378	Standard
Sr	88	90.0	5.6				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	13.2	116.4				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		89.428	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.368	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	89.302
|	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	88.125
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311063033
Sample Date/Time: Monday, November 18, 2013 16:59:29
Number of Replicates: 3
Autosampler Position: 216
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	253927.3	2.0				ug/L	269614	Standard
	Be	9	31.7	9.1	**-0.0047**	0.001	24.3	ug/L	23	Standard
	Al	27	7779308.0	3.0	**39.3965**	1.942	4.9	ug/L	1170	Standard
	Sc	45	22995.8	2.9				ug/L	26874	Standard
	Ti	47	29.3	16.8	**0.0299**	0.022	72.8	ug/L	25	Standard
	V	51	1703.1	16.2	**0.0852**	0.044	51.6	ug/L	1686	Standard
	Cr	52	7439.4	45.1	**0.5137**	0.544	106.0	ug/L	6098	Standard
	Cr	53	218.3	38.5	**0.0534**	0.074	139.2	ug/L	193	Standard
	Mn	55	32898.4	154.3	**2.5647**	4.171	162.6	ug/L	1232	Standard
	Co	59	747.4	91.9	**0.0730**	0.081	111.2	ug/L	106	Standard
	Ni	60	3119.0	9.5	**1.0560**	0.125	11.9	ug/L	556	Standard
	Cu	65	2171.8	1.1	**0.8533**	0.014	1.7	ug/L	124	Standard
	Zn	66	176202.7	5.5	**135.1880**	7.749	5.7	ug/L	196	Standard
>	Ge	72	430666.0	0.6				ug/L	473313	Standard
	As	75	-213.8	5.0	**0.0497**	0.007	14.5	ug/L	-286	Standard
	Se	82	-24.8	36.9	**0.1179**	0.066	56.4	ug/L	-33	Standard
	Se-1	77	75.3	11.3	**0.0089**	0.088	993.9	ug/L	86	Standard
>	Ga	71	36.7	15.7				mg/L	35	Standard
	Rb	85	3417.1	5.6				ug/L	13	Standard
	Y	89	393491.6	1.6				ug/L	439493	Standard
>	Rh	103	120.0	29.2				ug/L	5	Standard
	Mo	98	94.2	105.4	**0.0117**	0.028	243.1	ug/L	10	Standard
	Ag	107	103.3	94.5	**0.0024**	0.016	672.5	ug/L	53	Standard
	Cd	111	101.9	65.4	**0.0489**	0.034	69.3	mg/L	1	Standard
	Cd	114	264.6	51.7	**0.0437**	0.027	62.9	ug/L	32	Standard
>	In	115	444013.3	1.0				ug/L	494305	Standard
	Sn	118	76.3	49.8	**0.0085**	0.032	379.2	ug/L	53	Standard
	Sb	123	102.9	18.1	**0.0417**	0.008	19.0	ug/L	7	Standard
	Ba	135	1388.4	6.6	**0.8311**	0.056	6.7	ug/L	11	Standard
	Ce	140	733.4	154.9				ug/L	10	Standard
>	Tb	159	463738.6	1.0				ug/L	538219	Standard
	Ho	165	20.0	86.6				ug/L	8	Standard
	Tl	203	94.0	156.6	**0.0153**	0.027	178.3	ug/L	1	Standard
	Tl	205	20.0	152.1	**0.0023**	0.005	196.9	ug/L	3	Standard
	Pb	206	148.7	51.0	**0.0227**	0.032	142.2	ug/L	80	Standard
	Pb	207	123.0	24.7	**0.0273**	0.014	51.4	ug/L	73	Standard
	Pb	208	237.7	14.9	**0.0085**	0.007	76.4	ug/L	190	Standard
	U	238	143.3	16.2	**0.0415**	0.007	16.0	ug/L	0	Standard
>	Bi	209	246791.1	1.0				ug/L	276439	Standard

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Na	23	60.0	14.4	**17.6103**	2.234	12.7	mg/L	2	Standard
Mg	24	1316.7	3.5	**1.5393**	0.088	5.7	mg/L	37	Standard
K	39	15.0	33.3	**0.6496**	0.332	51.2	mg/L	3	Standard
Ca	43	90.0	11.1	**20.0468**	2.553	12.7	mg/L	43	Standard
Fe	54	122.6	2.7	**-0.0567**	0.003	5.4	mg/L	262	Standard
Fe	57	163.3	17.9	**0.2340**	0.064	27.4	mg/L	65	Standard
> **Sc-1**	45	22995.8	2.9				mg/L	26874	Standard
Cl	35	202831.2	6.6				ug/L	141022	Standard
Kr	83	96.7	8.8				ug/L	75	Standard
Br	81	2506.9	9.6				ug/L	2810	Standard
P	31	212418.8	1.3				ug/L	458976	Standard
S	34	95034.4	5.7				ug/L	103378	Standard
Sr	88	388.3	25.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	31.6	122.3				mg/L	10	Standard
Ho-1	165	20.0	86.6				mg/L	8	Standard
Er	166	36.7	103.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		94.182	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.990	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	89.826
	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	89.275
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311063034
Sample Date/Time: Monday, November 18, 2013 17:02:34
Number of Replicates: 3
Autosampler Position: 217
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	249047.1	1.5				ug/L	269614	Standard
	Be	9	60.0	52.0	**0.0059**	0.012	199.0	ug/L	23	Standard
	Al	27	7394084.6	1.1	**38.1567**	0.376	1.0	ug/L	1170	Standard
	Sc	45	23373.0	0.7				ug/L	26874	Standard
	Ti	47	22.3	43.5	**-0.0006**	0.043	6805.4	ug/L	25	Standard
	V	51	1857.6	3.1	**0.1096**	0.008	7.4	ug/L	1686	Standard
	Cr	52	6236.6	1.3	**0.3194**	0.015	4.7	ug/L	6098	Standard
	Cr	53	195.0	21.9	**0.0330**	0.039	116.9	ug/L	193	Standard
	Mn	55	1568.8	42.8	**-0.0100**	0.056	556.4	ug/L	1232	Standard
	Co	59	410.7	7.3	**0.0332**	0.003	9.8	ug/L	106	Standard
	Ni	60	3478.4	3.4	**1.2017**	0.051	4.3	ug/L	556	Standard
	Cu	65	2076.1	5.2	**0.8139**	0.048	5.9	ug/L	124	Standard
	Zn	66	172155.0	3.7	**132.1891**	5.253	4.0	ug/L	196	Standard
>	Ge	72	430301.2	0.6				ug/L	473313	Standard
	As	75	-269.5	13.4	**0.0071**	0.028	393.7	ug/L	-286	Standard
	Se	82	-41.2	31.7	**-0.0045**	0.098	2191.1	ug/L	-33	Standard
	Se-1	77	86.7	9.6	**0.1245**	0.087	69.7	ug/L	86	Standard
>	Ga	71	31.7	24.1				mg/L	35	Standard
	Rb	85	3215.3	2.0				ug/L	13	Standard
	Y	89	385466.8	0.5				ug/L	439493	Standard
>	Rh	103	85.0	20.4				ug/L	5	Standard
	Mo	98	35.0	13.6	**-0.0052**	0.001	24.9	ug/L	10	Standard
	Ag	107	57.0	17.3	**-0.0054**	0.002	30.8	ug/L	53	Standard
	Cd	111	79.6	16.2	**0.0375**	0.007	17.4	mg/L	1	Standard
	Cd	114	173.5	26.4	**0.0254**	0.009	36.1	ug/L	32	Standard
>	In	115	443989.6	0.6				ug/L	494305	Standard
	Sn	118	57.0	10.5	**-0.0079**	0.005	61.9	ug/L	53	Standard
	Sb	123	72.6	10.7	**0.0290**	0.003	10.7	ug/L	7	Standard
	Ba	135	1298.7	1.8	**0.7766**	0.010	1.2	ug/L	11	Standard
	Ce	140	18.3	41.7				ug/L	10	Standard
>	Tb	159	459756.4	0.8				ug/L	538219	Standard
	Ho	165	6.7	86.6				ug/L	8	Standard
	Tl	203	10.3	81.2	**-0.0002**	0.002	763.0	ug/L	1	Standard
	Tl	205	11.7	65.5	**0.0011**	0.001	108.1	ug/L	3	Standard
	Pb	206	121.0	5.2	**0.0107**	0.003	28.4	ug/L	80	Standard
	Pb	207	96.0	10.4	**0.0143**	0.005	36.0	ug/L	73	Standard
	Pb	208	246.0	8.8	**0.0101**	0.004	42.4	ug/L	190	Standard
	U	238	156.7	22.4	**0.0456**	0.011	24.0	ug/L	0	Standard
>	Bi	209	247271.5	0.7				ug/L	276439	Standard

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	Na	23	80.0	6.3	**23.2636**	1.356	5.8	mg/L	2	Standard
	Mg	24	1270.1	12.1	**1.4578**	0.178	12.2	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2675**	0.197	73.6	mg/L	3	Standard
	Ca	43	93.3	16.4	**20.7325**	5.289	25.5	mg/L	43	Standard
	Fe	54	132.4	11.6	**-0.0524**	0.008	15.8	mg/L	262	Standard
	Fe	57	180.0	15.5	**0.2613**	0.057	21.9	mg/L	65	Standard
>	**Sc-1**	45	23373.0	0.7				mg/L	26874	Standard
	Cl	35	219696.9	1.4				ug/L	141022	Standard
	Kr	83	108.0	9.4				ug/L	75	Standard
	Br	81	2606.9	3.2				ug/L	2810	Standard
	P	31	225039.9	3.1				ug/L	458976	Standard
	S	34	105645.4	0.2				ug/L	103378	Standard
	Sr	88	381.7	13.1				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	9.5	177.6				mg/L	10	Standard
	Ho-1	165	6.7	86.6				mg/L	8	Standard
	Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		92.372	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.913	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	89.821
	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	89.449
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311063035
Sample Date/Time: Monday, November 18, 2013 17:05:39
Number of Replicates: 3
Autosampler Position: 218
Sample Description: 5
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	246584.2	2.1				ug/L	269614	Standard
	Be	9	73.3	39.4	**0.0110**	0.011	98.2	ug/L	23	Standard
	Al	27	8904691.8	1.2	**46.4166**	0.578	1.2	ug/L	1170	Standard
	Sc	45	22995.8	1.0				ug/L	26874	Standard
	Ti	47	163.7	9.7	**0.6214**	0.076	12.2	ug/L	25	Standard
	V	51	2578.3	3.0	**0.2235**	0.009	4.0	ug/L	1686	Standard
	Cr	52	6679.5	3.0	**0.3932**	0.023	5.8	ug/L	6098	Standard
	Cr	53	348.3	9.2	**0.1686**	0.026	15.2	ug/L	193	Standard
	Mn	55	17507.8	8.3	**1.3032**	0.107	8.2	ug/L	1232	Standard
	Co	59	1004.4	7.9	**0.1037**	0.009	8.4	ug/L	106	Standard
	Ni	60	4753.1	1.9	**1.7201**	0.049	2.8	ug/L	556	Standard
	Cu	65	2701.9	2.8	**1.0797**	0.041	3.8	ug/L	124	Standard
	Zn	66	271079.9	0.7	**208.6856**	2.545	1.2	ug/L	196	Standard
>	**Ge**	72	429420.9	0.9				ug/L	473313	Standard
	As	75	-229.5	3.4	**0.0372**	0.007	19.7	ug/L	-286	Standard
	Se	82	-32.3	5.5	**0.0608**	0.015	24.5	ug/L	-33	Standard
	Se-1	77	86.3	7.4	**0.1232**	0.072	58.1	ug/L	86	Standard
>	**Ga**	71	240.0	13.7				mg/L	35	Standard
	Rb	85	8337.3	2.6				ug/L	13	Standard
	Y	89	388863.9	1.1				ug/L	439493	Standard
>	**Rh**	103	63.3	29.9				ug/L	5	Standard
	Mo	98	69.1	108.5	**0.0045**	0.021	473.9	ug/L	10	Standard
	Ag	107	113.3	65.5	**0.0041**	0.012	301.5	ug/L	53	Standard
	Cd	111	169.0	1.2	**0.0831**	0.001	1.5	mg/L	1	Standard
	Cd	114	470.2	13.4	**0.0850**	0.013	14.8	ug/L	32	Standard
>	**In**	115	443333.0	0.3				ug/L	494305	Standard
	Sn	118	56.3	8.4	**-0.0084**	0.004	47.0	ug/L	53	Standard
	Sb	123	101.1	2.2	**0.0410**	0.001	2.1	ug/L	7	Standard
	Ba	135	2642.2	0.7	**1.5955**	0.015	1.0	ug/L	11	Standard
	Ce	140	1946.8	1.3				ug/L	10	Standard
>	**Tb**	159	463018.3	2.0				ug/L	538219	Standard
	Ho	165	66.7	4.3				ug/L	8	Standard
	Tl	203	34.7	78.3	**0.0043**	0.005	116.4	ug/L	1	Standard
	Tl	205	36.7	56.8	**0.0049**	0.003	64.3	ug/L	3	Standard
	Pb	206	313.7	3.6	**0.0950**	0.005	5.5	ug/L	80	Standard
	Pb	207	255.3	2.8	**0.0916**	0.004	3.9	ug/L	73	Standard
	Pb	208	574.0	3.9	**0.0752**	0.004	5.4	ug/L	190	Standard
	U	238	511.3	8.1	**0.1533**	0.012	8.0	ug/L	0	Standard
>	**Bi**	209	246454.0	0.7				ug/L	276439	Standard

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	Na	23	95.0	24.1	**28.1475**	6.718	23.9	mg/L	2	Standard
	Mg	24	1156.7	5.5	**1.3470**	0.070	5.2	mg/L	37	Standard
	K	39	13.3	21.7	**0.5375**	0.207	38.4	mg/L	3	Standard
	Ca	43	111.7	10.3	**27.4370**	4.195	15.3	mg/L	43	Standard
	Fe	54	292.3	12.2	**0.0397**	0.020	49.8	mg/L	262	Standard
	Fe	57	251.7	12.9	**0.4120**	0.068	16.5	mg/L	65	Standard
>	**Sc-1**	45	22995.8	1.0				mg/L	26874	Standard
	Cl	35	231651.4	0.3				ug/L	141022	Standard
	Kr	83	108.0	3.7				ug/L	75	Standard
	Br	81	2653.6	8.1				ug/L	2810	Standard
	P	31	222137.3	4.8				ug/L	458976	Standard
	S	34	104539.4	1.1				ug/L	103378	Standard
	Sr	88	293.3	6.5				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	99.8	15.6				mg/L	10	Standard
	Ho-1	165	66.7	4.3				mg/L	8	Standard
	Er	166	73.3	31.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		91.458	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.727	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	89.688
|	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	89.153
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063036
Sample Date/Time: Monday, November 18, 2013 17:08:44
Number of Replicates: 3
Autosampler Position: 219
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	242585.2	1.5				ug/L	269614	Standard
	Be	9	48.3	15.8	**0.0020**	0.003	129.9	ug/L	23	Standard
	Al	27	8543974.3	1.4	**45.2733**	1.138	2.5	ug/L	1170	Standard
	Sc	45	23553.3	1.5				ug/L	26874	Standard
	Ti	47	28.0	3.6	**0.0255**	0.005	18.5	ug/L	25	Standard
	V	51	1801.8	4.4	**0.1041**	0.011	10.7	ug/L	1686	Standard
	Cr	52	6143.9	1.6	**0.3158**	0.014	4.4	ug/L	6098	Standard
	Cr	53	196.7	20.4	**0.0365**	0.037	100.7	ug/L	193	Standard
	Mn	55	3439.4	2.1	**0.1470**	0.007	4.7	ug/L	1232	Standard
	Co	59	546.3	1.2	**0.0500**	0.001	1.7	ug/L	106	Standard
	Ni	60	4385.6	5.2	**1.5882**	0.095	6.0	ug/L	556	Standard
	Cu	65	2295.5	3.4	**0.9172**	0.032	3.5	ug/L	124	Standard
	Zn	66	256886.4	0.6	**199.6170**	1.297	0.6	ug/L	196	Standard
>	Ge	72	425384.5	0.5				ug/L	473313	Standard
	As	75	-212.4	9.3	**0.0486**	0.016	32.9	ug/L	-286	Standard
	Se	82	-18.2	15.3	**0.1645**	0.022	13.1	ug/L	-33	Standard
	Se-1	77	77.0	4.7	**0.0354**	0.041	116.2	ug/L	86	Standard
>	Ga	71	33.3	52.7				mg/L	35	Standard
	Rb	85	5511.0	0.2				ug/L	13	Standard
	Y	89	379293.9	0.5				ug/L	439493	Standard
>	Rh	103	80.0	10.8				ug/L	5	Standard
	Mo	98	19.4	24.7	**-0.0096**	0.001	14.5	ug/L	10	Standard
	Ag	107	59.0	11.9	**-0.0050**	0.001	24.0	ug/L	53	Standard
	Cd	111	126.3	3.0	**0.0615**	0.002	2.6	mg/L	1	Standard
	Cd	114	373.6	5.3	**0.0658**	0.005	6.9	ug/L	32	Standard
>	In	115	442366.8	1.0				ug/L	494305	Standard
	Sn	118	53.3	14.3	**-0.0108**	0.007	64.2	ug/L	53	Standard
	Sb	123	77.8	8.4	**0.0313**	0.003	9.0	ug/L	7	Standard
	Ba	135	1611.4	1.7	**0.9704**	0.025	2.5	ug/L	11	Standard
	Ce	140	151.7	7.6				ug/L	10	Standard
>	Tb	159	458775.1	2.6				ug/L	538219	Standard
	Ho	165	25.0	20.0				ug/L	8	Standard
	Tl	203	12.0	33.3	**0.0001**	0.001	700.8	ug/L	1	Standard
	Tl	205	16.7	96.4	**0.0018**	0.002	132.3	ug/L	3	Standard
	Pb	206	110.7	20.3	**0.0064**	0.010	151.4	ug/L	80	Standard
	Pb	207	91.0	22.0	**0.0121**	0.010	79.9	ug/L	73	Standard
	Pb	208	234.7	6.9	**0.0081**	0.003	40.5	ug/L	190	Standard
	U	238	502.7	2.7	**0.1509**	0.004	2.7	ug/L	0	Standard
>	Bi	209	246131.4	0.3				ug/L	276439	Standard

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	Na	23	91.7	22.0	**26.5160**	5.883	22.2	mg/L	2	Standard
	Mg	24	1091.7	5.0	**1.2395**	0.079	6.4	mg/L	37	Standard
	K	39	5.0	100.0	**-0.0446**	0.334	749.1	mg/L	3	Standard
	Ca	43	110.0	23.6	**26.0036**	8.735	33.6	mg/L	43	Standard
	Fe	54	164.1	3.1	**-0.0354**	0.003	9.2	mg/L	262	Standard
	Fe	57	225.0	15.4	**0.3471**	0.066	19.1	mg/L	65	Standard
>	**Sc-1**	45	23553.3	1.5				mg/L	26874	Standard
	Cl	35	232855.8	1.0				ug/L	141022	Standard
	Kr	83	88.0	2.0				ug/L	75	Standard
	Br	81	2523.5	3.6				ug/L	2810	Standard
	P	31	209915.9	1.2				ug/L	458976	Standard
	S	34	104364.9	0.7				ug/L	103378	Standard
	Sr	88	281.7	23.4				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	24.6	79.8				mg/L	10	Standard
	Ho-1	165	25.0	20.0				mg/L	8	Standard
	Er	166	43.3	58.1				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		89.975	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		89.874	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	89.493
|	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	89.036
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063037
Sample Date/Time: Monday, November 18, 2013 17:11:48
Number of Replicates: 3
Autosampler Position: 220
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	246675.9	2.3				ug/L	269614	Standard
	Be	9	693.3	2.2	**0.2395**	0.012	4.9	ug/L	23	Standard
	Al	27	10652201.3	0.8	**55.5116**	0.875	1.6	ug/L	1170	Standard
	Sc	45	22715.4	3.4				ug/L	26874	Standard
	Ti	47	36.3	28.1	**0.0639**	0.047	72.8	ug/L	25	Standard
	V	51	845.8	4.0	**-0.0466**	0.006	12.8	ug/L	1686	Standard
	Cr	52	3026.0	2.7	**-0.1915**	0.015	7.8	ug/L	6098	Standard
	Cr	53	190.0	25.1	**0.0316**	0.042	133.8	ug/L	193	Standard
	Mn	55	63196118.9	0.9	**5298.3121**	40.587	0.8	ug/L	1232	Standard
	Co	59	686984.5	2.2	**82.8660**	1.426	1.7	ug/L	106	Standard
	Ni	60	265352.3	1.3	**108.9228**	1.038	1.0	ug/L	556	Standard
	Cu	65	1166453.9	1.5	**500.3262**	5.931	1.2	ug/L	124	Standard
	Zn	66	81004689.3	0.8	**63495.7152**	273.249	0.4	ug/L	196	Standard
>	Ge	72	422106.0	0.4				ug/L	473313	Standard
	As	75	1155.0	2.1	**1.1062**	0.022	2.0	ug/L	-286	Standard
	Se	82	82.4	30.9	**0.9230**	0.194	21.1	ug/L	-33	Standard
	Se-1	77	119.7	9.8	**0.4827**	0.118	24.4	ug/L	86	Standard
>	Ga	71	740.0	7.1				mg/L	35	Standard
	Rb	85	4980.8	6.2				ug/L	13	Standard
	Y	89	478585.0	2.2				ug/L	439493	Standard
>	Rh	103	130.0	11.5				ug/L	5	Standard
	Mo	98	73.6	18.5	**0.0063**	0.004	71.1	ug/L	10	Standard
	Ag	107	269.7	13.4	**0.0314**	0.007	21.6	ug/L	53	Standard
	Cd	111	59639.7	1.9	**30.8659**	0.267	0.9	mg/L	1	Standard
	Cd	114	148478.0	1.7	**30.3580**	0.290	1.0	ug/L	32	Standard
>	In	115	435713.2	2.0				ug/L	494305	Standard
	Sn	118	42.3	9.5	**-0.0197**	0.003	14.2	ug/L	53	Standard
	Sb	123	77.2	3.2	**0.0315**	0.001	1.8	ug/L	7	Standard
	Ba	135	1150.0	3.0	**0.7000**	0.032	4.5	ug/L	11	Standard
	Ce	140	112358.4	0.6				ug/L	10	Standard
>	Tb	159	470322.1	1.2				ug/L	538219	Standard
	Ho	165	4290.6	3.9				ug/L	8	Standard
	Tl	203	64.0	11.8	**0.0098**	0.001	13.1	ug/L	1	Standard
	Tl	205	61.7	40.0	**0.0086**	0.004	42.3	ug/L	3	Standard
	Pb	206	643.0	2.6	**0.2377**	0.007	2.9	ug/L	80	Standard
	Pb	207	526.7	3.7	**0.2221**	0.006	2.9	ug/L	73	Standard
	Pb	208	1238.7	2.7	**0.2059**	0.005	2.5	ug/L	190	Standard
	U	238	92.0	3.3	**0.0260**	0.001	2.4	ug/L	0	Standard
>	Bi	209	247304.1	1.2				ug/L	276439	Standard

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Na	23	50.0	26.5	**14.7685**	3.674	24.9	mg/L	2	Standard
Mg	24	4205.6	2.6	**5.0490**	0.252	5.0	mg/L	37	Standard
K	39	13.3	86.6	**0.5522**	0.810	146.6	mg/L	3	Standard
Ca	43	75.0	23.1	**15.4548**	6.522	42.2	mg/L	43	Standard
Fe	54	9622.4	3.5	**5.4148**	0.219	4.0	mg/L	262	Standard
Fe	57	2830.3	7.3	**5.7058**	0.601	10.5	mg/L	65	Standard
> **Sc-1**	45	22715.4	3.4				mg/L	26874	Standard
Cl	35	284609.6	0.4				ug/L	141022	Standard
Kr	83	380.0	8.9				ug/L	75	Standard
Br	81	2896.9	3.5				ug/L	2810	Standard
P	31	210781.6	4.9				ug/L	458976	Standard
S	34	88630.2	2.1				ug/L	103378	Standard
Sr	88	168.3	18.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	6789.5	5.2				mg/L	10	Standard
Ho-1	165	4290.6	3.9				mg/L	8	Standard
Er	166	3940.5	0.9				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.492	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		89.181	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	88.147
|	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	89.461
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Cu 65 Upper, S, EEE	Cu	65	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311063039
Sample Date/Time: Monday, November 18, 2013 17:14:53
Number of Replicates: 3
Autosampler Position: 221
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	240163.4	0.4				ug/L	269614	Standard
	Be	9	48.3	21.5	**0.0022**	0.004	175.1	ug/L	23	Standard
	Al	27	7040984.6	2.0	**37.6747**	0.614	1.6	ug/L	1170	Standard
	Sc	45	22788.8	3.5				ug/L	26874	Standard
	Ti	47	50.0	17.4	**0.1230**	0.040	32.2	ug/L	25	Standard
	V	51	1186.5	3.2	**0.0061**	0.007	121.9	ug/L	1686	Standard
	Cr	52	3882.8	4.6	**-0.0559**	0.030	54.6	ug/L	6098	Standard
	Cr	53	223.3	10.1	**0.0599**	0.021	35.4	ug/L	193	Standard
	Mn	55	11047492.5	1.6	**917.4529**	11.208	1.2	ug/L	1232	Standard
	Co	59	22409.9	0.7	**2.6633**	0.029	1.1	ug/L	106	Standard
	Ni	60	3274.0	3.2	**1.1321**	0.033	3.0	ug/L	556	Standard
	Cu	65	2291.5	1.5	**0.9140**	0.012	1.4	ug/L	124	Standard
	Zn	66	128475.1	0.5	**99.5729**	0.483	0.5	ug/L	196	Standard
>	**Ge**	72	426077.4	0.8				ug/L	473313	Standard
	As	75	-67.0	61.4	**0.1605**	0.031	19.6	ug/L	-286	Standard
	Se	82	-80.4	15.4	**-0.3006**	0.094	31.1	ug/L	-33	Standard
	Se-1	77	89.7	7.3	**0.1636**	0.062	37.7	ug/L	86	Standard
>	**Ga**	71	223.3	26.7				mg/L	35	Standard
	Rb	85	21014.6	2.1				ug/L	13	Standard
	Y	89	397466.9	1.8				ug/L	439493	Standard
>	**Rh**	103	53.3	21.7				ug/L	5	Standard
	Mo	98	73.6	26.6	**0.0057**	0.006	97.4	ug/L	10	Standard
	Ag	107	51.0	13.7	**-0.0064**	0.001	18.4	ug/L	53	Standard
	Cd	111	2912.9	0.3	**1.4688**	0.008	0.6	mg/L	1	Standard
	Cd	114	7297.2	0.6	**1.4473**	0.006	0.4	ug/L	32	Standard
>	**In**	115	446362.2	0.2				ug/L	494305	Standard
	Sn	118	46.7	21.7	**-0.0169**	0.009	50.7	ug/L	53	Standard
	Sb	123	91.2	9.0	**0.0366**	0.003	9.1	ug/L	7	Standard
	Ba	135	2954.3	2.8	**1.7732**	0.053	3.0	ug/L	11	Standard
	Ce	140	27702.0	2.3				ug/L	10	Standard
>	**Tb**	159	464252.3	1.0				ug/L	538219	Standard
	Ho	165	386.7	10.5				ug/L	8	Standard
	Tl	203	111.0	12.7	**0.0182**	0.003	14.1	ug/L	1	Standard
	Tl	205	145.0	23.9	**0.0209**	0.005	24.8	ug/L	3	Standard
	Pb	206	291.3	7.0	**0.0827**	0.009	10.5	ug/L	80	Standard
	Pb	207	229.0	4.4	**0.0767**	0.005	6.3	ug/L	73	Standard
	Pb	208	566.0	4.8	**0.0714**	0.005	7.6	ug/L	190	Standard
	U	238	70.7	9.0	**0.0192**	0.002	9.7	ug/L	0	Standard
>	**Bi**	209	251373.7	0.1				ug/L	276439	Standard

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Na	23	70.0	12.4	**20.8036**	2.094	10.1	mg/L	2	Standard
Mg	24	2546.9	2.7	**3.0358**	0.171	5.6	mg/L	37	Standard
K	39	21.7	35.3	**1.1155**	0.485	43.5	mg/L	3	Standard
Ca	43	98.3	25.6	**23.1105**	7.732	33.5	mg/L	43	Standard
Fe	54	4808.5	3.2	**2.6351**	0.147	5.6	mg/L	262	Standard
Fe	57	1591.8	8.3	**3.1572**	0.366	11.6	mg/L	65	Standard
> **Sc-1**	45	22788.8	3.5				mg/L	26874	Standard
Cl	35	198769.3	0.5				ug/L	141022	Standard
Kr	83	157.7	8.1				ug/L	75	Standard
Br	81	4940.8	7.5				ug/L	2810	Standard
P	31	203482.6	1.9				ug/L	458976	Standard
S	34	97635.3	2.0				ug/L	103378	Standard
Sr	88	270.0	13.0				ug/L	30	Standard
C	12	13.3	43.3				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	546.3	17.6				mg/L	10	Standard
Ho-1	165	386.7	10.5				mg/L	8	Standard
Er	166	356.7	18.7				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		89.077	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.020	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.301
|	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	90.933
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311076701
Sample Date/Time: Monday, November 18, 2013 17:17:58
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	247119.4	1.8				ug/L	269614	Standard
	Be	9	10048.3	0.6	**3.6783**	0.043	1.2	ug/L	23	Standard
	Al	27	54896090.3	1.6	**285.5329**	1.865	0.7	ug/L	1170	Standard
	Sc	45	28797.4	3.3				ug/L	26874	Standard
	Ti	47	8941.0	1.8	**41.0041**	0.651	1.6	ug/L	25	Standard
	V	51	15014.2	1.1	**2.2868**	0.023	1.0	ug/L	1686	Standard
	Cr	52	42779.3	0.1	**6.5713**	0.036	0.5	ug/L	6098	Standard
	Cr	53	6518.1	3.7	**5.8835**	0.203	3.4	ug/L	193	Standard
	Mn	55	70573476.8	0.7	**6079.6851**	23.269	0.4	ug/L	1232	Standard
	Co	59	899035.1	0.9	**111.4389**	0.572	0.5	ug/L	106	Standard
	Ni	60	507144.1	0.8	**214.1027**	1.238	0.6	ug/L	556	Standard
	Cu	65	80100.8	0.3	**35.2491**	0.215	0.6	ug/L	124	Standard
	Zn	66	549476.8	0.4	**442.3796**	2.793	0.6	ug/L	196	Standard
>	Ge	72	410797.5	0.4				ug/L	473313	Standard
	As	75	1702.9	5.4	**1.5665**	0.070	4.4	ug/L	-286	Standard
	Se	82	-69.0	27.2	**-0.2349**	0.148	63.0	ug/L	-33	Standard
	Se-1	77	169.3	3.8	**1.0449**	0.061	5.9	ug/L	86	Standard
>	Ga	71	3583.8	7.4				mg/L	35	Standard
	Rb	85	60606.0	1.0				ug/L	13	Standard
	Y	89	867098.8	0.8				ug/L	439493	Standard
>	Rh	103	620.0	6.4				ug/L	5	Standard
	Mo	98	250.5	7.4	**0.0634**	0.006	9.6	ug/L	10	Standard
	Ag	107	103.3	11.2	**0.0042**	0.002	55.3	ug/L	53	Standard
	Cd	111	1641.5	4.0	**0.9135**	0.028	3.1	mg/L	1	Standard
	Cd	114	4086.7	2.0	**0.8923**	0.025	2.8	ug/L	32	Standard
>	In	115	403874.6	1.0				ug/L	494305	Standard
	Sn	118	269.7	5.9	**0.1959**	0.017	8.7	ug/L	53	Standard
	Sb	123	141.9	15.2	**0.0640**	0.010	15.7	ug/L	7	Standard
	Ba	135	53473.9	0.5	**35.7103**	0.184	0.5	ug/L	11	Standard
	Ce	140	232155.1	0.4				ug/L	10	Standard
>	Tb	159	468447.4	1.5				ug/L	538219	Standard
	Ho	165	23050.9	0.6				ug/L	8	Standard
	Tl	203	645.3	5.2	**0.1342**	0.006	4.7	ug/L	1	Standard
	Tl	205	830.0	3.2	**0.1414**	0.005	3.8	ug/L	3	Standard
	Pb	206	1014.4	4.5	**0.4581**	0.019	4.2	ug/L	80	Standard
	Pb	207	760.4	1.4	**0.3839**	0.003	0.8	ug/L	73	Standard
	Pb	208	1836.7	2.1	**0.3722**	0.006	1.6	ug/L	190	Standard
	U	238	5788.8	3.9	**1.9822**	0.064	3.2	ug/L	0	Standard
>	Bi	209	218157.1	0.7				ug/L	276439	Standard

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Na	23	1401.7	6.2	**336.3477**	9.502	2.8	mg/L	2	Standard
Mg	24	6924.9	4.7	**6.5593**	0.137	2.1	mg/L	37	Standard
K	39	58.3	58.3	**2.8107**	1.827	65.0	mg/L	3	Standard
Ca	43	1980.1	6.9	**524.1533**	34.812	6.6	mg/L	43	Standard
Fe	54	104330.6	1.0	**47.2667**	1.149	2.4	mg/L	262	Standard
Fe	57	32994.2	1.5	**53.1701**	0.991	1.9	mg/L	65	Standard
> **Sc-1**	45	28797.4	3.3				mg/L	26874	Standard
Cl	35	406258.2	1.1				ug/L	141022	Standard
Kr	83	321.7	6.3				ug/L	75	Standard
Br	81	5247.6	1.6				ug/L	2810	Standard
P	31	592415.4	1.9				ug/L	458976	Standard
S	34	91503.9	1.8				ug/L	103378	Standard
Sr	88	3753.8	2.8				ug/L	30	Standard
C	12	20.0	100.0				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	35744.2	1.8				mg/L	10	Standard
Ho-1	165	23050.9	0.6				mg/L	8	Standard
Er	166	19836.3	3.1				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.657	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		86.792	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	81.705
|	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	78.917
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311076702
Sample Date/Time: Monday, November 18, 2013 17:21:02
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	282019.0	3.4				ug/L	269614	Standard
	Be	9	53.3	5.4	**0.0011**	0.001	79.1	ug/L	23	Standard
	Al	27	47392604.9	1.0	**216.1858**	8.733	4.0	ug/L	1170	Standard
	Sc	45	26241.0	2.7				ug/L	26874	Standard
	Ti	47	59.0	0.0	**0.1457**	0.003	1.9	ug/L	25	Standard
	V	51	1871.6	2.9	**0.0954**	0.010	10.2	ug/L	1686	Standard
	Cr	52	6982.6	2.8	**0.3772**	0.040	10.7	ug/L	6098	Standard
	Cr	53	490.0	13.4	**0.2689**	0.054	20.0	ug/L	193	Standard
	Mn	55	1755952.7	0.8	**136.2132**	1.986	1.5	ug/L	1232	Standard
	Co	59	18923.8	0.9	**2.0993**	0.039	1.8	ug/L	106	Standard
	Ni	60	33733.9	1.9	**12.6460**	0.185	1.5	ug/L	556	Standard
	Cu	65	6839.5	2.2	**2.6577**	0.075	2.8	ug/L	124	Standard
	Zn	66	36694.4	2.5	**26.4377**	0.419	1.6	ug/L	196	Standard
>	**Ge**	72	455795.0	1.1				ug/L	473313	Standard
	As	75	-125.4	5.3	**0.1220**	0.004	3.6	ug/L	-286	Standard
	Se	82	32.6	28.8	**0.5293**	0.069	13.0	ug/L	-33	Standard
	Se-1	77	111.7	8.6	**0.3143**	0.083	26.5	ug/L	86	Standard
>	**Ga**	71	155.0	8.5				mg/L	35	Standard
	Rb	85	66428.8	3.5				ug/L	13	Standard
	Y	89	420352.4	1.8				ug/L	439493	Standard
>	**Rh**	103	255.0	18.9				ug/L	5	Standard
	Mo	98	167.1	9.4	**0.0299**	0.005	15.3	ug/L	10	Standard
	Ag	107	70.0	2.9	**-0.0038**	0.000	5.8	ug/L	53	Standard
	Cd	111	84.8	20.8	**0.0378**	0.008	21.5	mg/L	1	Standard
	Cd	114	210.1	16.8	**0.0304**	0.006	20.9	ug/L	32	Standard
>	**In**	115	469613.3	0.9				ug/L	494305	Standard
	Sn	118	122.3	7.7	**0.0420**	0.008	20.2	ug/L	53	Standard
	Sb	123	128.9	9.5	**0.0496**	0.004	9.0	ug/L	7	Standard
	Ba	135	4369.3	1.9	**2.4979**	0.057	2.3	ug/L	11	Standard
	Ce	140	591.7	9.0				ug/L	10	Standard
>	**Tb**	159	491692.6	0.5				ug/L	538219	Standard
	Ho	165	21.7	35.3				ug/L	8	Standard
	Tl	203	232.0	3.1	**0.0405**	0.001	2.7	ug/L	1	Standard
	Tl	205	323.3	8.5	**0.0474**	0.004	7.9	ug/L	3	Standard
	Pb	206	310.7	1.6	**0.0913**	0.003	3.1	ug/L	80	Standard
	Pb	207	264.3	12.0	**0.0937**	0.016	16.7	ug/L	73	Standard
	Pb	208	603.0	2.4	**0.0788**	0.003	4.3	ug/L	190	Standard
	U	238	587.3	3.2	**0.1732**	0.006	3.7	ug/L	0	Standard
>	**Bi**	209	250892.6	0.8				ug/L	276439	Standard

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Na	23	270.0	16.7	**70.6308**	9.980	14.1	mg/L	2	Standard
Mg	24	7757.0	4.5	**8.0763**	0.427	5.3	mg/L	37	Standard
K	39	36.7	39.4	**1.8182**	0.836	46.0	mg/L	3	Standard
Ca	43	391.7	11.6	**105.7414**	14.012	13.3	mg/L	43	Standard
Fe	54	362.3	15.5	**0.0536**	0.023	42.8	mg/L	262	Standard
Fe	57	598.3	7.8	**0.9643**	0.103	10.7	mg/L	65	Standard
> **Sc-1**	45	26241.0	2.7				mg/L	26874	Standard
Cl	35	455882.7	0.2				ug/L	141022	Standard
Kr	83	114.7	3.9				ug/L	75	Standard
Br	81	6481.4	6.8				ug/L	2810	Standard
P	31	443692.8	0.4				ug/L	458976	Standard
S	34	109762.9	1.5				ug/L	103378	Standard
Sr	88	1083.4	6.0				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	42.1	27.8				mg/L	10	Standard
Ho-1	165	21.7	35.3				mg/L	8	Standard
Er	166	26.7	57.3				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		104.601	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		96.299	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	95.005
|	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	90.759
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311076706 WG452939-02
Sample Date/Time: Monday, November 18, 2013 17:24:07
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	289638.4	2.7				ug/L	269614	Standard
	Be	9	22710.3	0.7	**7.1098**	0.169	2.4	ug/L	23	Standard
	Al	27	38987901.3	1.4	**173.1072**	5.875	3.4	ug/L	1170	Standard
	Sc	45	31324.0	3.9				ug/L	26874	Standard
	Ti	47	221.7	12.8	**0.8174**	0.113	13.8	ug/L	25	Standard
	V	51	20018.6	0.3	**2.7788**	0.013	0.5	ug/L	1686	Standard
	Cr	52	64218.8	0.3	**9.1152**	0.083	0.9	ug/L	6098	Standard
	Cr	53	11135.8	1.5	**9.1171**	0.185	2.0	ug/L	193	Standard
	Mn	55	25363448.9	1.2	**1965.3575**	34.752	1.8	ug/L	1232	Standard
	Co	59	612675.8	1.2	**68.3026**	0.566	0.8	ug/L	106	Standard
	Ni	60	397870.9	0.3	**151.0267**	0.519	0.3	ug/L	556	Standard
	Cu	65	51056.2	0.6	**20.1832**	0.117	0.6	ug/L	124	Standard
	Zn	66	733869.6	0.4	**531.4830**	4.825	0.9	ug/L	196	Standard
>	Ge	72	456713.6	0.6				ug/L	473313	Standard
	As	75	300.1	26.2	**0.4266**	0.056	13.1	ug/L	-286	Standard
	Se	82	-5.8	423.8	**0.2600**	0.172	66.1	ug/L	-33	Standard
	Se-1	77	173.0	4.5	**0.8989**	0.068	7.5	ug/L	86	Standard
>	Ga	71	4088.9	1.3				mg/L	35	Standard
	Rb	85	74380.5	0.7				ug/L	13	Standard
	Y	89	1053623.4	0.9				ug/L	439493	Standard
>	Rh	103	153.3	11.5				ug/L	5	Standard
	Mo	98	160.4	7.5	**0.0299**	0.003	10.8	ug/L	10	Standard
	Ag	107	58.3	15.5	**-0.0053**	0.001	27.7	ug/L	53	Standard
	Cd	111	1132.8	2.2	**0.5644**	0.013	2.3	mg/L	1	Standard
	Cd	114	2816.9	2.8	**0.5480**	0.018	3.2	ug/L	32	Standard
>	In	115	450338.8	0.4				ug/L	494305	Standard
	Sn	118	62.0	16.4	**-0.0044**	0.008	188.0	ug/L	53	Standard
	Sb	123	111.6	12.4	**0.0447**	0.006	12.6	ug/L	7	Standard
	Ba	135	2787.9	1.0	**1.6577**	0.014	0.9	ug/L	11	Standard
	Ce	140	336228.3	1.1				ug/L	10	Standard
>	Tb	159	523006.6	1.5				ug/L	538219	Standard
	Ho	165	32892.3	0.5				ug/L	8	Standard
	Tl	203	1068.4	0.4	**0.1972**	0.002	1.0	ug/L	1	Standard
	Tl	205	1388.4	5.2	**0.2091**	0.012	5.6	ug/L	3	Standard
	Pb	206	664.3	3.1	**0.2472**	0.009	3.7	ug/L	80	Standard
	Pb	207	530.3	3.7	**0.2241**	0.010	4.7	ug/L	73	Standard
	Pb	208	1212.4	5.8	**0.2009**	0.013	6.5	ug/L	190	Standard
	U	238	3270.4	1.5	**0.9878**	0.009	0.9	ug/L	0	Standard
>	Bi	209	247121.0	0.6				ug/L	276439	Standard

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Na	23	298.3	15.6	**65.5380**	10.260	15.7	mg/L	2	Standard
Mg	24	1255.1	2.6	**1.0672**	0.034	3.2	mg/L	37	Standard
K	39	11.7	49.5	**0.2152**	0.306	142.4	mg/L	3	Standard
Ca	43	333.3	3.1	**72.3990**	0.912	1.3	mg/L	43	Standard
Fe	54	149423.3	0.2	**62.3073**	2.531	4.1	mg/L	262	Standard
Fe	57	43494.0	1.3	**64.4977**	2.699	4.2	mg/L	65	Standard
> **Sc-1**	45	31324.0	3.9				mg/L	26874	Standard
Cl	35	730823.6	2.8				ug/L	141022	Standard
Kr	83	293.7	6.1				ug/L	75	Standard
Br	81	13235.8	5.2				ug/L	2810	Standard
P	31	634410.0	2.2				ug/L	458976	Standard
S	34	98734.2	2.9				ug/L	103378	Standard
Sr	88	906.7	2.5				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	50400.0	0.7				mg/L	10	Standard
Ho-1	165	32892.3	0.5				mg/L	8	Standard
Er	166	28005.9	0.9				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		107.427	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		96.493	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	91.105
|	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	89.394
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

Sample ID: L1311076706 WG452939-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 17:27:14
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	263678.8	2.4				ug/L	269614	Standard
	Be	9	145926.0	0.7	**50.2768**	1.171	2.3	ug/L	23	Standard
	Al	27	9400993.8	1.2	**45.8288**	0.633	1.4	ug/L	1170	Standard
	Sc	45	25339.5	2.8				ug/L	26874	Standard
	Ti	47	25892.1	1.8	**103.6855**	2.768	2.7	ug/L	25	Standard
	V	51	328577.2	0.5	**46.9202**	0.457	1.0	ug/L	1686	Standard
	Cr	52	320710.5	0.9	**46.7741**	0.193	0.4	ug/L	6098	Standard
	Cr	53	61067.8	0.6	**49.0594**	0.748	1.5	ug/L	193	Standard
	Mn	55	689910.8	7.8	**51.6528**	3.539	6.9	ug/L	1232	Standard
	Co	59	439384.3	0.4	**47.4729**	0.367	0.8	ug/L	106	Standard
	Ni	60	133402.1	1.4	**48.9421**	0.591	1.2	ug/L	556	Standard
	Cu	65	130630.4	0.1	**50.1410**	0.522	1.0	ug/L	124	Standard
	Zn	66	75898.9	6.9	**53.0796**	3.247	6.1	ug/L	196	Standard
>	Ge	72	471228.8	1.0				ug/L	473313	Standard
	As	75	72308.4	0.7	**50.3611**	0.605	1.2	ug/L	-286	Standard
	Se	82	7334.7	1.1	**49.9050**	1.020	2.0	ug/L	-33	Standard
	Se-1	77	5429.0	1.2	**49.5676**	0.910	1.8	ug/L	86	Standard
>	Ga	71	48.3	26.0				mg/L	35	Standard
	Rb	85	1160.0	4.3				ug/L	13	Standard
	Y	89	432009.2	0.7				ug/L	439493	Standard
>	Rh	103	26.7	28.6				ug/L	5	Standard
	Mo	98	405796.1	1.2	**104.2561**	1.978	1.9	ug/L	10	Standard
	Ag	107	347869.5	0.5	**52.7913**	0.716	1.4	ug/L	53	Standard
	Cd	111	108403.4	0.9	**49.5783**	0.360	0.7	mg/L	1	Standard
	Cd	114	277161.1	1.4	**50.0795**	0.479	1.0	ug/L	32	Standard
>	In	115	493082.4	1.4				ug/L	494305	Standard
	Sn	118	66866.6	1.3	**51.1674**	0.102	0.2	ug/L	53	Standard
	Sb	123	131463.3	0.8	**49.7018**	0.386	0.8	ug/L	7	Standard
	Ba	135	91443.1	0.6	**50.0265**	0.485	1.0	ug/L	11	Standard
	Ce	140	98.3	50.9				ug/L	10	Standard
>	Tb	159	505775.8	1.3				ug/L	538219	Standard
	Ho	165	13.3	57.3				ug/L	8	Standard
	Tl	203	289161.8	1.2	**49.4905**	0.417	0.8	ug/L	1	Standard
	Tl	205	369717.0	1.4	**51.2494**	0.905	1.8	ug/L	3	Standard
	Pb	206	132637.4	1.0	**52.9099**	0.709	1.3	ug/L	80	Standard
	Pb	207	118765.7	0.6	**52.5890**	0.418	0.8	ug/L	73	Standard
	Pb	208	263813.3	0.6	**47.7282**	0.466	1.0	ug/L	190	Standard
	U	238	173127.9	1.0	**48.0575**	0.383	0.8	ug/L	0	Standard
>	Bi	209	269396.9	0.4				ug/L	276439	Standard

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Na	23	6.7	43.3	**1.3956**	0.794	56.9	mg/L	2	Standard
Mg	24	4897.5	2.2	**5.2688**	0.143	2.7	mg/L	37	Standard
K	39	50.0	20.0	**2.7304**	0.537	19.7	mg/L	3	Standard
Ca	43	56.7	13.5	**7.0816**	2.545	35.9	mg/L	43	Standard
Fe	54	11307.8	3.6	**5.7082**	0.134	2.3	mg/L	262	Standard
Fe	57	3255.3	1.4	**5.8755**	0.117	2.0	mg/L	65	Standard
> **Sc-1**	45	25339.5	2.8				mg/L	26874	Standard
Cl	35	140976.9	1.3				ug/L	141022	Standard
Kr	83	102.3	11.8				ug/L	75	Standard
Br	81	2793.6	10.3				ug/L	2810	Standard
P	31	427372.9	3.3				ug/L	458976	Standard
S	34	108997.6	3.3				ug/L	103378	Standard
Sr	88	60.0	22.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	2.9	217.0				mg/L	10	Standard
Ho-1	165	13.3	57.3				mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		97.798	
Be	9	100.554		
Al	27	91.658		
Sc	45			
Ti	47	103.685		
V	51	93.840		
Cr	52	93.548		
Cr	53			
Mn	55	103.306		
Co	59	94.946		
Ni	60	97.884		
Cu	65	100.282		
Zn	66	106.159		
> Ge	72		99.560	
As	75	100.722		
Se	82	99.810		
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	104.256	
	Ag	107	105.583	
	Cd	111	99.157	
	Cd	114		
>	In	115		99.753
	Sn	118	102.335	
	Sb	123	99.404	
	Ba	135	100.053	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.981	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	95.456	
	U	238	96.115	
>	Bi	209		97.453
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 17:30:18
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	264804.7	2.2				ug/L	269614	Standard
	Be	9	81.7	9.4	**0.0120**	0.003	26.9	ug/L	23	Standard
	Al	27	2407.0	87.4	**0.0047**	0.011	225.2	ug/L	1170	Standard
	Sc	45	26282.8	3.0				ug/L	26874	Standard
	Ti	47	12.0	22.0	**-0.0511**	0.011	20.6	ug/L	25	Standard
	V	51	1219.9	1.7	**-0.0087**	0.003	38.6	ug/L	1686	Standard
	Cr	52	4309.6	1.6	**-0.0594**	0.010	16.0	ug/L	6098	Standard
	Cr	53	136.7	7.6	**-0.0301**	0.008	27.9	ug/L	193	Standard
	Mn	55	1470.7	31.3	**-0.0297**	0.034	114.8	ug/L	1232	Standard
	Co	59	109.3	31.6	**-0.0037**	0.004	100.3	ug/L	106	Standard
	Ni	60	347.3	5.8	**-0.0748**	0.007	9.4	ug/L	556	Standard
	Cu	65	154.3	13.0	**-0.0012**	0.008	651.6	ug/L	124	Standard
	Zn	66	607.3	5.1	**0.2253**	0.021	9.3	ug/L	196	Standard
>	**Ge**	72	475553.7	0.4				ug/L	473313	Standard
	As	75	-306.1	9.1	**0.0015**	0.020	1328.8	ug/L	-286	Standard
	Se	82	-53.9	23.0	**-0.0601**	0.083	138.5	ug/L	-33	Standard
	Se-1	77	82.0	14.6	**-0.0020**	0.112	5484.6	ug/L	86	Standard
>	**Ga**	71	26.7	21.7				mg/L	35	Standard
	Rb	85	23.3	53.9				ug/L	13	Standard
	Y	89	444461.5	0.4				ug/L	439493	Standard
>	**Rh**	103	8.3	69.3				ug/L	5	Standard
	Mo	98	81.9	47.7	**0.0056**	0.010	177.3	ug/L	10	Standard
	Ag	107	85.3	25.3	**-0.0022**	0.003	147.0	ug/L	53	Standard
	Cd	111	5.2	87.5	**-0.0005**	0.002	391.3	mg/L	1	Standard
	Cd	114	30.0	58.4	**-0.0041**	0.003	76.8	ug/L	32	Standard
>	**In**	115	499509.5	0.3				ug/L	494305	Standard
	Sn	118	61.7	5.7	**-0.0098**	0.003	26.7	ug/L	53	Standard
	Sb	123	260.5	30.6	**0.0957**	0.030	30.9	ug/L	7	Standard
	Ba	135	13.7	37.5	**-0.0051**	0.003	53.9	ug/L	11	Standard
	Ce	140	13.3	114.6				ug/L	10	Standard
>	**Tb**	159	513078.3	1.1				ug/L	538219	Standard
	Ho	165	8.3	34.6				ug/L	8	Standard
	Tl	203	28.3	71.4	**0.0027**	0.003	128.4	ug/L	1	Standard
	Tl	205	31.7	112.0	**0.0037**	0.005	132.6	ug/L	3	Standard
	Pb	206	99.7	8.2	**-0.0023**	0.003	146.5	ug/L	80	Standard
	Pb	207	89.0	8.5	**0.0071**	0.003	46.7	ug/L	73	Standard
	Pb	208	198.0	10.6	**-0.0028**	0.004	133.1	ug/L	190	Standard
	U	238	13.0	90.7	**0.0017**	0.003	188.4	ug/L	0	Standard
>	**Bi**	209	271074.1	0.5				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	55.0	24.1	**0.0257**	0.015	58.5	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	20.0	66.1	**-4.4710**	3.799	85.0	mg/L	43	Standard
Fe	54	274.5	16.7	**0.0101**	0.023	228.4	mg/L	262	Standard
Fe	57	70.0	18.9	**0.0274**	0.026	94.9	mg/L	65	Standard
> **Sc-1**	45	26282.8	3.0				mg/L	26874	Standard
Cl	35	145304.1	1.0				ug/L	141022	Standard
Kr	83	110.0	11.4				ug/L	75	Standard
Br	81	2626.9	6.0				ug/L	2810	Standard
P	31	432262.7	3.6				ug/L	458976	Standard
S	34	107473.2	1.2				ug/L	103378	Standard
Sr	88	46.7	30.9				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	9.8	99.2				mg/L	10	Standard
Ho-1	165	8.3	34.6				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		98.216	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		100.473	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	101.053
	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	98.059
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311076706DP WG452939-07
Sample Date/Time: Monday, November 18, 2013 17:33:24
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	285559.1	3.0				ug/L	269614	Standard
	Be	9	21259.9	1.9	**6.7505**	0.201	3.0	ug/L	23	Standard
	Al	27	36395166.1	1.0	**163.9202**	5.542	3.4	ug/L	1170	Standard
	Sc	45	30929.9	0.4				ug/L	26874	Standard
	Ti	47	195.3	11.4	**0.7237**	0.097	13.4	ug/L	25	Standard
	V	51	19021.6	2.2	**2.6819**	0.075	2.8	ug/L	1686	Standard
	Cr	52	59285.4	0.7	**8.5239**	0.047	0.5	ug/L	6098	Standard
	Cr	53	10500.3	2.0	**8.7445**	0.152	1.7	ug/L	193	Standard
	Mn	55	23462889.9	0.9	**1850.5884**	17.889	1.0	ug/L	1232	Standard
	Co	59	568236.2	0.9	**64.4832**	0.225	0.3	ug/L	106	Standard
	Ni	60	371215.2	1.3	**143.4268**	2.075	1.4	ug/L	556	Standard
	Cu	65	47413.7	1.6	**19.0772**	0.389	2.0	ug/L	124	Standard
	Zn	66	686432.6	0.7	**506.0374**	6.180	1.2	ug/L	196	Standard
>	Ge	72	448669.9	0.6				ug/L	473313	Standard
	As	75	235.7	25.4	**0.3837**	0.044	11.6	ug/L	-286	Standard
	Se	82	-42.7	50.5	**-0.0020**	0.151	7630.4	ug/L	-33	Standard
	Se-1	77	146.7	2.4	**0.6724**	0.029	4.4	ug/L	86	Standard
>	Ga	71	3777.1	3.7				mg/L	35	Standard
	Rb	85	70999.3	1.3				ug/L	13	Standard
	Y	89	1000994.4	0.7				ug/L	439493	Standard
>	Rh	103	115.0	13.0				ug/L	5	Standard
	Mo	98	97.8	19.0	**0.0125**	0.005	41.2	ug/L	10	Standard
	Ag	107	61.3	2.5	**-0.0047**	0.000	5.3	ug/L	53	Standard
	Cd	111	1055.9	7.0	**0.5308**	0.039	7.4	mg/L	1	Standard
	Cd	114	2553.2	7.8	**0.5003**	0.038	7.7	ug/L	32	Standard
>	In	115	446282.6	0.5				ug/L	494305	Standard
	Sn	118	75.7	9.0	**0.0077**	0.006	79.2	ug/L	53	Standard
	Sb	123	189.0	7.2	**0.0774**	0.005	6.9	ug/L	7	Standard
	Ba	135	2659.6	1.1	**1.5954**	0.024	1.5	ug/L	11	Standard
	Ce	140	317133.5	1.6				ug/L	10	Standard
>	Tb	159	517090.8	0.6				ug/L	538219	Standard
	Ho	165	31419.2	0.8				ug/L	8	Standard
	Tl	203	978.7	5.1	**0.1818**	0.009	4.9	ug/L	1	Standard
	Tl	205	1278.4	3.4	**0.1939**	0.006	2.8	ug/L	3	Standard
	Pb	206	623.7	3.8	**0.2316**	0.012	5.3	ug/L	80	Standard
	Pb	207	517.0	5.6	**0.2195**	0.014	6.5	ug/L	73	Standard
	Pb	208	1173.4	0.5	**0.1950**	0.003	1.4	ug/L	190	Standard
	U	238	3056.3	0.7	**0.9300**	0.007	0.7	ug/L	0	Standard
>	Bi	209	245276.4	0.7				ug/L	276439	Standard

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	Na	23	231.7	14.4	**51.4471**	7.640	14.9	mg/L	2	Standard
	Mg	24	1128.4	7.6	**0.9681**	0.072	7.4	mg/L	37	Standard
	K	39	16.7	34.6	**0.4708**	0.294	62.4	mg/L	3	Standard
	Ca	43	340.0	14.0	**75.0935**	11.814	15.7	mg/L	43	Standard
	Fe	54	139974.9	0.7	**59.0430**	0.210	0.4	mg/L	262	Standard
	Fe	57	40681.2	1.2	**61.0275**	0.691	1.1	mg/L	65	Standard
>	**Sc-1**	45	30929.9	0.4				mg/L	26874	Standard
	Cl	35	694010.2	1.3				ug/L	141022	Standard
	Kr	83	260.3	8.0				ug/L	75	Standard
	Br	81	2866.9	8.1				ug/L	2810	Standard
	P	31	587083.9	1.9				ug/L	458976	Standard
	S	34	88995.6	0.9				ug/L	103378	Standard
	Sr	88	820.0	3.7				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	47230.3	1.5				mg/L	10	Standard
	Ho-1	165	31419.2	0.8				mg/L	8	Standard
	Er	166	26453.1	2.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.914	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.793	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.285
|	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	88.727
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311076707
Sample Date/Time: Monday, November 18, 2013 17:36:29
Number of Replicates: 3
Autosampler Position: 226
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	282092.4	1.9				ug/L	269614	Standard
	Be	9	21425.1	2.9	**6.8839**	0.176	2.6	ug/L	23	Standard
	Al	27	36857495.4	1.4	**167.9803**	4.422	2.6	ug/L	1170	Standard
	Sc	45	30084.8	0.8				ug/L	26874	Standard
	Ti	47	201.7	7.2	**0.7530**	0.062	8.3	ug/L	25	Standard
	V	51	18568.2	1.1	**2.6229**	0.019	0.7	ug/L	1686	Standard
	Cr	52	60380.4	1.0	**8.7260**	0.071	0.8	ug/L	6098	Standard
	Cr	53	10335.2	4.2	**8.6357**	0.398	4.6	ug/L	193	Standard
	Mn	55	24029166.5	0.9	**1901.6696**	12.673	0.7	ug/L	1232	Standard
	Co	59	571072.6	0.6	**65.0286**	0.649	1.0	ug/L	106	Standard
	Ni	60	370873.0	0.7	**143.7792**	0.626	0.4	ug/L	556	Standard
	Cu	65	49424.1	0.6	**19.9554**	0.110	0.6	ug/L	124	Standard
	Zn	66	693398.4	0.5	**512.8977**	2.244	0.4	ug/L	196	Standard
>	Ge	72	447147.2	0.5				ug/L	473313	Standard
	As	75	216.0	41.9	**0.3698**	0.067	18.0	ug/L	-286	Standard
	Se	82	-43.8	68.3	**-0.0116**	0.214	1850.7	ug/L	-33	Standard
	Se-1	77	156.0	2.3	**0.7684**	0.028	3.6	ug/L	86	Standard
>	Ga	71	3882.2	1.1				mg/L	35	Standard
	Rb	85	69601.2	1.1				ug/L	13	Standard
	Y	89	1009537.0	2.8				ug/L	439493	Standard
>	Rh	103	143.3	5.3				ug/L	5	Standard
	Mo	98	101.3	9.8	**0.0137**	0.003	22.0	ug/L	10	Standard
	Ag	107	66.3	9.8	**-0.0038**	0.001	27.0	ug/L	53	Standard
	Cd	111	1085.6	4.5	**0.5490**	0.028	5.2	mg/L	1	Standard
	Cd	114	2684.5	4.6	**0.5296**	0.021	4.0	ug/L	32	Standard
>	In	115	443708.8	0.7				ug/L	494305	Standard
	Sn	118	88.3	4.6	**0.0188**	0.003	15.7	ug/L	53	Standard
	Sb	123	145.3	3.8	**0.0595**	0.003	4.3	ug/L	7	Standard
	Ba	135	2631.6	1.9	**1.5878**	0.041	2.6	ug/L	11	Standard
	Ce	140	321553.2	1.2				ug/L	10	Standard
>	Tb	159	516916.6	1.8				ug/L	538219	Standard
	Ho	165	30791.3	1.4				ug/L	8	Standard
	Tl	203	1001.4	3.0	**0.1843**	0.006	3.1	ug/L	1	Standard
	Tl	205	1273.4	2.5	**0.1914**	0.006	2.9	ug/L	3	Standard
	Pb	206	714.0	2.7	**0.2682**	0.007	2.6	ug/L	80	Standard
	Pb	207	573.3	4.2	**0.2443**	0.012	5.1	ug/L	73	Standard
	Pb	208	1361.7	2.4	**0.2299**	0.007	3.1	ug/L	190	Standard
	U	238	3130.7	1.8	**0.9436**	0.013	1.4	ug/L	0	Standard
>	Bi	209	247604.8	0.4				ug/L	276439	Standard

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	Na	23	260.0	23.4	**59.3889**	13.894	23.4	mg/L	2	Standard
	Mg	24	1161.7	8.4	**1.0269**	0.091	8.8	mg/L	37	Standard
	K	39	23.3	118.0	**0.8454**	1.445	171.0	mg/L	3	Standard
	Ca	43	301.7	13.3	**67.5933**	10.138	15.0	mg/L	43	Standard
	Fe	54	139874.5	0.9	**60.6633**	0.585	1.0	mg/L	262	Standard
	Fe	57	39767.1	1.6	**61.3299**	0.522	0.9	mg/L	65	Standard
>	**Sc-1**	45	30084.8	0.8				mg/L	26874	Standard
	Cl	35	687039.6	0.5				ug/L	141022	Standard
	Kr	83	256.3	10.0				ug/L	75	Standard
	Br	81	2940.3	4.8				ug/L	2810	Standard
	P	31	587037.5	2.6				ug/L	458976	Standard
	S	34	88113.8	1.2				ug/L	103378	Standard
	Sr	88	813.4	6.5				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	48090.3	2.1				mg/L	10	Standard
	Ho-1	165	30791.3	1.4				mg/L	8	Standard
	Er	166	26302.8	2.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.628	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		94.472	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	89.764
|	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	89.569
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311076708
Sample Date/Time: Monday, November 18, 2013 17:39:34
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	284246.9	1.6				ug/L	269614	Standard
	Be	9	22266.4	1.5	**7.1010**	0.127	1.8	ug/L	23	Standard
	Al	27	37663298.7	1.3	**170.3257**	3.013	1.8	ug/L	1170	Standard
	Sc	45	31283.9	1.2				ug/L	26874	Standard
	Ti	47	208.3	2.3	**0.7730**	0.020	2.5	ug/L	25	Standard
	V	51	19791.6	1.0	**2.7803**	0.032	1.2	ug/L	1686	Standard
	Cr	52	62982.6	0.6	**9.0418**	0.061	0.7	ug/L	6098	Standard
	Cr	53	10658.7	3.0	**8.8264**	0.267	3.0	ug/L	193	Standard
	Mn	55	25012127.7	1.4	**1961.2866**	25.477	1.3	ug/L	1232	Standard
	Co	59	605056.7	1.0	**68.2644**	0.670	1.0	ug/L	106	Standard
	Ni	60	388272.6	0.9	**149.1500**	1.414	0.9	ug/L	556	Standard
	Cu	65	48878.4	1.1	**19.5524**	0.198	1.0	ug/L	124	Standard
	Zn	66	709600.8	0.8	**520.0586**	4.011	0.8	ug/L	196	Standard
>	Ge	72	451291.3	0.1				ug/L	473313	Standard
	As	75	227.2	29.7	**0.3764**	0.049	12.9	ug/L	-286	Standard
	Se	82	-58.9	30.2	**-0.1150**	0.126	109.4	ug/L	-33	Standard
	Se-1	77	173.0	7.1	**0.9190**	0.118	12.8	ug/L	86	Standard
>	Ga	71	4013.9	2.3				mg/L	35	Standard
	Rb	85	71669.1	0.3				ug/L	13	Standard
	Y	89	1032776.2	1.1				ug/L	439493	Standard
>	Rh	103	148.3	29.5				ug/L	5	Standard
	Mo	98	93.1	14.2	**0.0110**	0.004	32.6	ug/L	10	Standard
	Ag	107	73.3	15.9	**-0.0028**	0.002	67.2	ug/L	53	Standard
	Cd	111	1142.9	1.8	**0.5697**	0.010	1.8	mg/L	1	Standard
	Cd	114	2688.4	3.6	**0.5227**	0.015	2.8	ug/L	32	Standard
>	In	115	450153.3	1.3				ug/L	494305	Standard
	Sn	118	69.0	6.3	**0.0015**	0.004	271.9	ug/L	53	Standard
	Sb	123	168.2	13.2	**0.0682**	0.009	13.8	ug/L	7	Standard
	Ba	135	2893.9	0.9	**1.7221**	0.015	0.9	ug/L	11	Standard
	Ce	140	329245.7	1.0				ug/L	10	Standard
>	Tb	159	525487.6	0.9				ug/L	538219	Standard
	Ho	165	32538.2	1.8				ug/L	8	Standard
	Tl	203	1064.4	1.6	**0.1964**	0.002	1.0	ug/L	1	Standard
	Tl	205	1273.4	7.4	**0.1917**	0.016	8.3	ug/L	3	Standard
	Pb	206	675.3	1.1	**0.2519**	0.000	0.1	ug/L	80	Standard
	Pb	207	561.7	2.2	**0.2391**	0.008	3.2	ug/L	73	Standard
	Pb	208	1281.4	2.7	**0.2144**	0.007	3.1	ug/L	190	Standard
	U	238	3214.3	1.1	**0.9704**	0.006	0.6	ug/L	0	Standard
>	Bi	209	247247.5	1.0				ug/L	276439	Standard

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	Na	23	316.7	4.0	**69.6625**	3.097	4.4	mg/L	2	Standard
	Mg	24	1215.0	2.3	**1.0329**	0.014	1.3	mg/L	37	Standard
	K	39	13.3	21.7	**0.2926**	0.143	48.9	mg/L	3	Standard
	Ca	43	391.7	19.2	**87.1306**	19.690	22.6	mg/L	43	Standard
	Fe	54	145216.8	3.2	**60.5558**	1.261	2.1	mg/L	262	Standard
	Fe	57	42324.0	1.6	**62.7762**	0.657	1.0	mg/L	65	Standard
>	**Sc-1**	45	31283.9	1.2				mg/L	26874	Standard
	Cl	35	694461.5	0.6				ug/L	141022	Standard
	Kr	83	283.0	2.0				ug/L	75	Standard
	Br	81	3233.7	9.4				ug/L	2810	Standard
	P	31	602722.3	3.9				ug/L	458976	Standard
	S	34	91656.4	0.1				ug/L	103378	Standard
	Sr	88	928.4	0.8				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	50050.2	3.2				mg/L	10	Standard
	Ho-1	165	32538.2	1.8				mg/L	8	Standard
	Er	166	27488.2	1.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		105.427	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		95.347	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	91.068
|	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	89.440
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311076709
Sample Date/Time: Monday, November 18, 2013 17:42:38
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	292258.7	1.2				ug/L	269614	Standard
	Be	9	22059.4	1.3	**6.8413**	0.119	1.7	ug/L	23	Standard
	Al	27	36855523.6	0.5	**162.0964**	1.975	1.2	ug/L	1170	Standard
	Sc	45	31947.0	1.4				ug/L	26874	Standard
	Ti	47	219.3	10.0	**0.8059**	0.101	12.5	ug/L	25	Standard
	V	51	19062.2	2.5	**2.6282**	0.088	3.4	ug/L	1686	Standard
	Cr	52	62801.9	1.4	**8.8674**	0.211	2.4	ug/L	6098	Standard
	Cr	53	11017.3	2.2	**8.9878**	0.234	2.6	ug/L	193	Standard
	Mn	55	24948308.9	0.4	**1926.7584**	31.850	1.7	ug/L	1232	Standard
	Co	59	605094.4	0.9	**67.2363**	1.125	1.7	ug/L	106	Standard
	Ni	60	384503.9	1.3	**145.4487**	1.056	0.7	ug/L	556	Standard
	Cu	65	49231.5	1.1	**19.3947**	0.273	1.4	ug/L	124	Standard
	Zn	66	707495.4	1.2	**510.6242**	3.232	0.6	ug/L	196	Standard
>	Ge	72	458272.9	1.3				ug/L	473313	Standard
	As	75	214.2	26.0	**0.3649**	0.041	11.2	ug/L	-286	Standard
	Se	82	-48.8	37.5	**-0.0382**	0.126	329.7	ug/L	-33	Standard
	Se-1	77	154.3	9.7	**0.7149**	0.132	18.4	ug/L	86	Standard
>	Ga	71	3900.5	4.8				mg/L	35	Standard
	Rb	85	72409.3	1.8				ug/L	13	Standard
	Y	89	1018821.8	1.0				ug/L	439493	Standard
>	Rh	103	156.7	16.4				ug/L	5	Standard
	Mo	98	89.2	11.3	**0.0099**	0.003	27.7	ug/L	10	Standard
	Ag	107	73.3	16.0	**-0.0028**	0.002	67.0	ug/L	53	Standard
	Cd	111	1129.3	0.7	**0.5636**	0.004	0.8	mg/L	1	Standard
	Cd	114	2886.8	5.1	**0.5629**	0.033	5.9	ug/L	32	Standard
>	In	115	449533.9	0.9				ug/L	494305	Standard
	Sn	118	68.0	22.6	**0.0007**	0.013	1865.4	ug/L	53	Standard
	Sb	123	142.3	2.2	**0.0575**	0.002	3.2	ug/L	7	Standard
	Ba	135	2858.3	1.0	**1.7031**	0.032	1.9	ug/L	11	Standard
	Ce	140	326570.4	0.8				ug/L	10	Standard
>	Tb	159	530889.6	0.9				ug/L	538219	Standard
	Ho	165	31018.4	0.1				ug/L	8	Standard
	Tl	203	1016.0	2.3	**0.1859**	0.004	2.1	ug/L	1	Standard
	Tl	205	1358.4	7.9	**0.2029**	0.017	8.2	ug/L	3	Standard
	Pb	206	737.7	3.3	**0.2765**	0.010	3.5	ug/L	80	Standard
	Pb	207	582.0	4.3	**0.2467**	0.012	4.9	ug/L	73	Standard
	Pb	208	1409.4	1.5	**0.2375**	0.003	1.4	ug/L	190	Standard
	U	238	3196.3	1.7	**0.9574**	0.013	1.4	ug/L	0	Standard
>	Bi	209	249182.3	0.3				ug/L	276439	Standard

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	Na	23	253.3	9.9	**54.4497**	5.083	9.3	mg/L	2	Standard
	Mg	24	1248.4	3.7	**1.0393**	0.027	2.6	mg/L	37	Standard
	K	39	18.3	128.9	**0.5225**	1.167	223.4	mg/L	3	Standard
	Ca	43	326.7	8.8	**69.1439**	6.871	9.9	mg/L	43	Standard
	Fe	54	145360.8	1.5	**59.3732**	1.355	2.3	mg/L	262	Standard
	Fe	57	42121.8	3.2	**61.1703**	1.415	2.3	mg/L	65	Standard
>	**Sc-1**	45	31947.0	1.4				mg/L	26874	Standard
	Cl	35	697680.2	0.8				ug/L	141022	Standard
	Kr	83	278.0	4.8				ug/L	75	Standard
	Br	81	3427.1	8.0				ug/L	2810	Standard
	P	31	605493.0	2.5				ug/L	458976	Standard
	S	34	92317.1	1.5				ug/L	103378	Standard
	Sr	88	896.7	1.2				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	48046.8	1.6				mg/L	10	Standard
	Ho-1	165	31018.4	0.1				mg/L	8	Standard
	Er	166	27000.7	3.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		108.399	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		96.822	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.943
|	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	90.140
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311076710
Sample Date/Time: Monday, November 18, 2013 17:45:44
Number of Replicates: 3
Autosampler Position: 229
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	383149.2	0.8				ug/L	269614	Standard
	Be	9	98841.4	1.4	**23.4211**	0.467	2.0	ug/L	23	Standard
	Al	27	95094233.6	0.1	**319.0173**	2.502	0.8	ug/L	1170	Standard
	Sc	45	66244.5	1.1				ug/L	26874	Standard
	Ti	47	35511.9	0.7	**184.4406**	0.874	0.5	ug/L	25	Standard
	V	51	50180.8	3.7	**9.1450**	0.345	3.8	ug/L	1686	Standard
	Cr	52	263650.8	0.6	**49.9039**	0.229	0.5	ug/L	6098	Standard
	Cr	53	42240.5	1.7	**43.9807**	0.606	1.4	ug/L	193	Standard
	Mn	55	371007388.1	0.4	**36129.4495**	279.755	0.8	ug/L	1232	Standard
	Co	59	9592607.8	1.0	**1344.2712**	16.867	1.3	ug/L	106	Standard
	Ni	60	3931440.6	0.5	**1877.7102**	10.897	0.6	ug/L	556	Standard
	Cu	65	232083.0	0.8	**115.5776**	0.540	0.5	ug/L	124	Standard
	Zn	66	5639824.5	0.9	**5134.5870**	51.956	1.0	ug/L	196	Standard
>	Ge	72	363420.5	0.4				ug/L	473313	Standard
	As	75	-706.2	39.6	**-0.4229**	0.251	59.3	ug/L	-286	Standard
	Se	82	-1979.7	5.6	**-17.0567**	0.949	5.6	ug/L	-33	Standard
	Se-1	77	809.4	3.4	**8.9723**	0.363	4.0	ug/L	86	Standard
>	Ga	71	17508.4	1.1				mg/L	35	Standard
	Rb	85	72143.1	2.3				ug/L	13	Standard
	Y	89	8434544.5	1.7				ug/L	439493	Standard
>	Rh	103	980.0	7.6				ug/L	5	Standard
	Mo	98	314698.5	0.7	**123.1843**	0.770	0.6	ug/L	10	Standard
	Ag	107	336.3	12.9	**0.0628**	0.010	16.6	ug/L	53	Standard
	Cd	111	13181.6	1.6	**9.1831**	0.135	1.5	mg/L	1	Standard
	Cd	114	33126.2	2.2	**9.1119**	0.164	1.8	ug/L	32	Standard
>	In	115	323596.9	0.5				ug/L	494305	Standard
	Sn	118	187.0	5.4	**0.1619**	0.012	7.1	ug/L	53	Standard
	Sb	123	602.2	2.8	**0.3454**	0.011	3.2	ug/L	7	Standard
	Ba	135	209585.3	0.8	**174.7269**	0.656	0.4	ug/L	11	Standard
	Ce	140	4121815.1	0.2				ug/L	10	Standard
>	Tb	159	715224.2	0.8				ug/L	538219	Standard
	Ho	165	336206.0	0.6				ug/L	8	Standard
	Tl	203	2127.8	0.6	**0.5423**	0.008	1.5	ug/L	1	Standard
	Tl	205	2431.9	0.5	**0.5032**	0.003	0.6	ug/L	3	Standard
	Pb	206	14933.0	1.3	**8.8691**	0.046	0.5	ug/L	80	Standard
	Pb	207	11964.7	0.7	**7.8922**	0.045	0.6	ug/L	73	Standard
	Pb	208	30434.2	1.2	**8.1983**	0.028	0.3	ug/L	190	Standard
	U	238	30485.0	3.3	**12.6462**	0.302	2.4	ug/L	0	Standard
>	Bi	209	180221.6	0.9				ug/L	276439	Standard

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Na	23	2763.6	3.1	**288.3783**	7.858	2.7	mg/L	2	Standard
Mg	24	3147.0	5.7	**1.2702**	0.062	4.9	mg/L	37	Standard
K	39	53.3	28.6	**0.8949**	0.379	42.4	mg/L	3	Standard
Ca	43	4824.1	3.7	**555.6830**	20.983	3.8	mg/L	43	Standard
Fe	54	243428.0	0.8	**47.9237**	0.785	1.6	mg/L	262	Standard
Fe	57	81614.2	0.7	**57.1623**	0.682	1.2	mg/L	65	Standard
> **Sc-1**	45	66244.5	1.1				mg/L	26874	Standard
Cl	35	460418.2	1.3				ug/L	141022	Standard
Kr	83	3248.7	3.5				ug/L	75	Standard
Br	81	16909.4	5.3				ug/L	2810	Standard
P	31	1732358.9	1.3				ug/L	458976	Standard
S	34	81190.5	3.5				ug/L	103378	Standard
Sr	88	7620.2	2.1				ug/L	30	Standard
C	12	6.7	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	514661.4	0.9				mg/L	10	Standard
Ho-1	165	336206.0	0.6				mg/L	8	Standard
Er	166	287305.2	1.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		142.110	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		76.782	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	65.465
|	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	65.194
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Upper, S, EEE	Ti	47	
Mn 55 Upper, S, EEE	Mn	55	
Co 59 Upper, S, EEE	Co	59	

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Ni 60 Upper, S, EEE	Ni	60
Cu 65 Upper, S, EEE	Cu	65
Zn 66 Upper, S, EEE	Zn	66
As 75 Lower	As	75
Se 82 Lower	Se	82
Mo 98 Upper, S, EEE	Mo	98
Ba 135 Upper, S, EEE	Ba	135

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Method 6020 - Summary Report

Sample ID: L1311076711
Sample Date/Time: Monday, November 18, 2013 17:48:49
Number of Replicates: 3
Autosampler Position: 230
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	500190.0	1.5				ug/L	269614	Standard
	Be	9	443.3	6.8	**0.0644**	0.004	6.7	ug/L	23	Standard
	Al	27	34343788.8	2.4	**88.2472**	1.734	2.0	ug/L	1170	Standard
	Sc	45	26207.7	2.4				ug/L	26874	Standard
	Ti	47	181.7	10.4	**0.6661**	0.070	10.5	ug/L	25	Standard
	V	51	1925.6	0.7	**0.1082**	0.004	4.0	ug/L	1686	Standard
	Cr	52	7346.1	1.1	**0.4519**	0.025	5.6	ug/L	6098	Standard
	Cr	53	585.0	9.0	**0.3568**	0.051	14.4	ug/L	193	Standard
	Mn	55	5249149.2	1.0	**414.3824**	2.333	0.6	ug/L	1232	Standard
	Co	59	44174.7	1.9	**5.0042**	0.028	0.6	ug/L	106	Standard
	Ni	60	49015.9	2.3	**18.7849**	0.420	2.2	ug/L	556	Standard
	Cu	65	6131.6	1.3	**2.4180**	0.056	2.3	ug/L	124	Standard
	Zn	66	25232.3	1.8	**18.4315**	0.250	1.4	ug/L	196	Standard
>	**Ge**	72	448166.0	1.3				ug/L	473313	Standard
	As	75	134.1	15.9	**0.3095**	0.014	4.6	ug/L	-286	Standard
	Se	82	141.4	7.6	**1.3061**	0.073	5.6	ug/L	-33	Standard
	Se-1	77	147.0	10.7	**0.6781**	0.163	24.1	ug/L	86	Standard
>	**Ga**	71	161.7	11.7				mg/L	35	Standard
	Rb	85	91243.9	0.4				ug/L	13	Standard
	Y	89	438407.2	2.9				ug/L	439493	Standard
>	**Rh**	103	240.0	7.2				ug/L	5	Standard
	Mo	98	14268.1	2.2	**3.9015**	0.097	2.5	ug/L	10	Standard
	Ag	107	55.3	5.2	**-0.0060**	0.000	7.3	ug/L	53	Standard
	Cd	111	90.4	12.8	**0.0413**	0.005	13.0	mg/L	1	Standard
	Cd	114	273.9	19.2	**0.0435**	0.010	24.1	ug/L	32	Standard
>	**In**	115	461514.9	0.7				ug/L	494305	Standard
	Sn	118	103.7	6.4	**0.0284**	0.005	18.1	ug/L	53	Standard
	Sb	123	148.8	4.8	**0.0586**	0.003	4.7	ug/L	7	Standard
	Ba	135	7270.7	2.6	**4.2376**	0.087	2.0	ug/L	11	Standard
	Ce	140	12618.6	3.4				ug/L	10	Standard
>	**Tb**	159	492644.0	1.7				ug/L	538219	Standard
	Ho	165	976.7	13.7				ug/L	8	Standard
	Tl	203	295.7	4.1	**0.0531**	0.003	4.8	ug/L	1	Standard
	Tl	205	391.7	8.2	**0.0586**	0.005	7.7	ug/L	3	Standard
	Pb	206	280.7	3.6	**0.0805**	0.004	5.1	ug/L	80	Standard
	Pb	207	235.3	3.3	**0.0818**	0.004	4.5	ug/L	73	Standard
	Pb	208	539.3	6.3	**0.0682**	0.006	9.3	ug/L	190	Standard
	U	238	1259.7	3.4	**0.3800**	0.011	2.8	ug/L	0	Standard
>	**Bi**	209	246697.5	0.6				ug/L	276439	Standard

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Na	23	420.0	5.5	**110.5544**	6.283	5.7	mg/L	2	Standard
Mg	24	4068.9	4.8	**4.2242**	0.161	3.8	mg/L	37	Standard
K	39	60.0	43.3	**3.2671**	1.678	51.3	mg/L	3	Standard
Ca	43	513.3	3.0	**141.9083**	2.602	1.8	mg/L	43	Standard
Fe	54	1584.1	3.0	**0.6640**	0.024	3.6	mg/L	262	Standard
Fe	57	1173.4	5.8	**1.9854**	0.145	7.3	mg/L	65	Standard
> **Sc-1**	45	26207.7	2.4				mg/L	26874	Standard
Cl	35	496563.2	1.6				ug/L	141022	Standard
Kr	83	119.7	3.9				ug/L	75	Standard
Br	81	19649.4	6.7				ug/L	2810	Standard
P	31	431330.1	2.9				ug/L	458976	Standard
S	34	104625.0	1.3				ug/L	103378	Standard
Sr	88	1106.7	8.8				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	1510.9	10.8				mg/L	10	Standard
Ho-1	165	976.7	13.7				mg/L	8	Standard
Er	166	886.7	11.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		185.521	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		94.687	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	93.366
	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	89.241
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1311046501
Sample Date/Time: Monday, November 18, 2013 17:51:54
Number of Replicates: 3
Autosampler Position: 231
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	251340.0	2.5				ug/L	269614	Standard
	Be	9	120.0	14.4	**0.0272**	0.005	19.4	ug/L	23	Standard
	Al	27	10044000.3	2.7	**51.3573**	0.519	1.0	ug/L	1170	Standard
	Sc	45	26760.3	2.3				ug/L	26874	Standard
	Ti	47	1619.4	2.2	**6.8669**	0.130	1.9	ug/L	25	Standard
	V	51	8781.1	2.0	**1.1690**	0.027	2.3	ug/L	1686	Standard
	Cr	52	9735.8	3.4	**0.8546**	0.025	3.0	ug/L	6098	Standard
	Cr	53	3043.6	4.4	**2.4925**	0.119	4.8	ug/L	193	Standard
	Mn	55	93012.6	13.3	**7.3561**	0.983	13.4	ug/L	1232	Standard
	Co	59	2230.5	13.8	**0.2433**	0.035	14.4	ug/L	106	Standard
	Ni	60	6243.3	5.2	**2.2665**	0.117	5.2	ug/L	556	Standard
	Cu	65	2858.3	3.8	**1.1186**	0.024	2.1	ug/L	124	Standard
	Zn	66	25473.1	1.5	**19.0004**	0.325	1.7	ug/L	196	Standard
>	**Ge**	72	439085.4	1.8				ug/L	473313	Standard
	As	75	2013.7	4.5	**1.7105**	0.058	3.4	ug/L	-286	Standard
	Se	82	851.4	2.7	**6.4809**	0.185	2.9	ug/L	-33	Standard
	Se-1	77	255.7	4.3	**1.7894**	0.148	8.3	ug/L	86	Standard
>	**Ga**	71	470.0	1.1				mg/L	35	Standard
	Rb	85	15025.8	2.2				ug/L	13	Standard
	Y	89	412844.1	2.3				ug/L	439493	Standard
>	**Rh**	103	138.3	9.1				ug/L	5	Standard
	Mo	98	1429.5	5.3	**0.3876**	0.018	4.7	ug/L	10	Standard
	Ag	107	108.0	3.3	**0.0030**	0.001	21.7	ug/L	53	Standard
	Cd	111	37.5	9.4	**0.0159**	0.002	11.5	mg/L	1	Standard
	Cd	114	111.9	24.7	**0.0128**	0.006	44.3	ug/L	32	Standard
>	**In**	115	449445.3	0.8				ug/L	494305	Standard
	Sn	118	239.7	2.3	**0.1450**	0.003	2.4	ug/L	53	Standard
	Sb	123	161.5	5.7	**0.0655**	0.004	6.1	ug/L	7	Standard
	Ba	135	35451.1	2.0	**21.2674**	0.288	1.4	ug/L	11	Standard
	Ce	140	21411.8	3.4				ug/L	10	Standard
>	**Tb**	159	472486.8	1.6				ug/L	538219	Standard
	Ho	165	266.7	9.2				ug/L	8	Standard
	Tl	203	124.0	1.6	**0.0211**	0.000	1.5	ug/L	1	Standard
	Tl	205	160.0	19.0	**0.0236**	0.005	20.5	ug/L	3	Standard
	Pb	206	914.0	1.1	**0.3576**	0.009	2.6	ug/L	80	Standard
	Pb	207	784.4	3.2	**0.3484**	0.011	3.1	ug/L	73	Standard
	Pb	208	1790.7	4.0	**0.3165**	0.013	4.2	ug/L	190	Standard
	U	238	2374.2	1.3	**0.7196**	0.008	1.1	ug/L	0	Standard
>	**Bi**	209	246094.0	1.3				ug/L	276439	Standard

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	Na	23	140.0	15.6	**35.7339**	5.033	14.1	mg/L	2	Standard
	Mg	24	12620.3	2.6	**12.9011**	0.390	3.0	mg/L	37	Standard
	K	39	20.0	50.0	**0.7954**	0.568	71.4	mg/L	3	Standard
	Ca	43	180.0	27.4	**41.8518**	13.876	33.2	mg/L	43	Standard
	Fe	54	823.6	23.6	**0.2746**	0.085	30.9	mg/L	262	Standard
	Fe	57	413.3	17.6	**0.6194**	0.109	17.6	mg/L	65	Standard
>	**Sc-1**	45	26760.3	2.3				mg/L	26874	Standard
	Cl	35	178818.8	2.5				ug/L	141022	Standard
	Kr	83	95.7	2.2				ug/L	75	Standard
	Br	81	134460.8	2.0				ug/L	2810	Standard
	P	31	598149.6	5.4				ug/L	458976	Standard
	S	34	90383.8	0.6				ug/L	103378	Standard
	Sr	88	640.0	7.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	463.9	23.8				mg/L	10	Standard
	Ho-1	165	266.7	9.2				mg/L	8	Standard
	Er	166	196.7	7.8				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.222	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.768	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.925
|	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	89.023
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311046502
Sample Date/Time: Monday, November 18, 2013 17:54:58
Number of Replicates: 3
Autosampler Position: 232
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	247004.4	2.2				ug/L	269614	Standard
	Be	9	36.7	15.7	**-0.0026**	0.002	71.4	ug/L	23	Standard
	Al	27	12089046.0	1.5	**62.9348**	2.317	3.7	ug/L	1170	Standard
	Sc	45	25117.5	1.0				ug/L	26874	Standard
	Ti	47	193.0	8.3	**0.7587**	0.077	10.2	ug/L	25	Standard
	V	51	5776.0	2.3	**0.7356**	0.026	3.5	ug/L	1686	Standard
	Cr	52	8186.5	1.3	**0.6513**	0.026	4.0	ug/L	6098	Standard
	Cr	53	4303.9	2.5	**3.7036**	0.125	3.4	ug/L	193	Standard
	Mn	55	17486.6	28.5	**1.3176**	0.423	32.1	ug/L	1232	Standard
	Co	59	1100.7	13.1	**0.1165**	0.018	15.5	ug/L	106	Standard
	Ni	60	5153.9	2.3	**1.9024**	0.049	2.6	ug/L	556	Standard
	Cu	65	1251.7	1.4	**0.4731**	0.009	1.9	ug/L	124	Standard
	Zn	66	3197.3	3.1	**2.2905**	0.068	3.0	ug/L	196	Standard
>	Ge	72	425227.6	0.7				ug/L	473313	Standard
	As	75	4071.3	2.4	**3.3406**	0.052	1.5	ug/L	-286	Standard
	Se	82	1839.2	1.4	**14.0825**	0.120	0.8	ug/L	-33	Standard
	Se-1	77	512.7	7.9	**4.5118**	0.441	9.8	ug/L	86	Standard
>	Ga	71	26.7	94.4				mg/L	35	Standard
	Rb	85	11874.7	3.1				ug/L	13	Standard
	Y	89	395153.4	0.9				ug/L	439493	Standard
>	Rh	103	173.3	7.3				ug/L	5	Standard
	Mo	98	847.1	1.5	**0.2307**	0.003	1.1	ug/L	10	Standard
	Ag	107	67.0	20.9	**-0.0035**	0.002	70.8	ug/L	53	Standard
	Cd	111	12.0	21.7	**0.0033**	0.001	40.2	mg/L	1	Standard
	Cd	114	34.9	59.5	**-0.0023**	0.004	179.9	ug/L	32	Standard
>	In	115	436361.6	0.6				ug/L	494305	Standard
	Sn	118	64.7	6.2	**-0.0004**	0.003	747.2	ug/L	53	Standard
	Sb	123	134.8	8.3	**0.0561**	0.005	9.0	ug/L	7	Standard
	Ba	135	34294.4	1.4	**21.1907**	0.165	0.8	ug/L	11	Standard
	Ce	140	275.0	10.1				ug/L	10	Standard
>	Tb	159	461780.8	1.6				ug/L	538219	Standard
	Ho	165	11.7	65.5				ug/L	8	Standard
	Tl	203	88.3	9.5	**0.0148**	0.002	11.2	ug/L	1	Standard
	Tl	205	110.0	12.0	**0.0164**	0.002	12.9	ug/L	3	Standard
	Pb	206	130.3	13.1	**0.0165**	0.008	46.5	ug/L	80	Standard
	Pb	207	115.3	5.6	**0.0253**	0.003	12.9	ug/L	73	Standard
	Pb	208	252.0	8.8	**0.0128**	0.004	35.0	ug/L	190	Standard
	U	238	1989.8	3.1	**0.6177**	0.016	2.6	ug/L	0	Standard
>	Bi	209	240164.5	0.6				ug/L	276439	Standard

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Na	23	133.3	16.9	**36.2913**	5.905	16.3	mg/L	2	Standard
Mg	24	15234.3	2.6	**16.5971**	0.423	2.6	mg/L	37	Standard
K	39	15.0	57.7	**0.5619**	0.543	96.6	mg/L	3	Standard
Ca	43	203.3	3.8	**52.5844**	1.932	3.7	mg/L	43	Standard
Fe	54	437.2	9.6	**0.1010**	0.021	20.5	mg/L	262	Standard
Fe	57	328.3	8.4	**0.5110**	0.055	10.7	mg/L	65	Standard
> **Sc-1**	45	25117.5	1.0				mg/L	26874	Standard
Cl	35	186614.9	0.2				ug/L	141022	Standard
Kr	83	100.3	6.4				ug/L	75	Standard
Br	81	273265.8	1.2				ug/L	2810	Standard
P	31	560522.6	3.4				ug/L	458976	Standard
S	34	94748.7	1.2				ug/L	103378	Standard
Sr	88	830.0	5.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	13.0	46.5				mg/L	10	Standard
Ho-1	165	11.7	65.5				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.614	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		89.841	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	88.278
	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	86.878
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311046503
Sample Date/Time: Monday, November 18, 2013 17:58:03
Number of Replicates: 3
Autosampler Position: 233
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	245418.2	3.5				ug/L	269614	Standard
	Be	9	43.3	37.1	**0.0001**	0.006	5202.1	ug/L	23	Standard
	Al	27	5327215.1	0.8	**27.9115**	0.774	2.8	ug/L	1170	Standard
	Sc	45	26194.3	1.8				ug/L	26874	Standard
	Ti	47	266.0	4.7	**1.0704**	0.045	4.2	ug/L	25	Standard
	V	51	13269.3	1.4	**1.9044**	0.010	0.5	ug/L	1686	Standard
	Cr	52	10444.6	1.3	**1.0042**	0.008	0.8	ug/L	6098	Standard
	Cr	53	3257.0	10.2	**2.7398**	0.305	11.1	ug/L	193	Standard
	Mn	55	12997.9	31.0	**0.9298**	0.322	34.6	ug/L	1232	Standard
	Co	59	550.7	20.1	**0.0498**	0.012	25.1	ug/L	106	Standard
	Ni	60	2464.9	2.7	**0.7944**	0.023	2.9	ug/L	556	Standard
	Cu	65	914.7	3.0	**0.3257**	0.015	4.5	ug/L	124	Standard
	Zn	66	4589.0	1.6	**3.3372**	0.029	0.9	ug/L	196	Standard
>	**Ge**	72	429580.0	0.9				ug/L	473313	Standard
	As	75	626.6	12.1	**0.6884**	0.055	8.0	ug/L	-286	Standard
	Se	82	236.0	3.3	**2.0513**	0.046	2.2	ug/L	-33	Standard
	Se-1	77	298.7	5.4	**2.2821**	0.184	8.1	ug/L	86	Standard
>	**Ga**	71	53.3	14.3				mg/L	35	Standard
	Rb	85	21620.4	2.4				ug/L	13	Standard
	Y	89	400594.6	2.0				ug/L	439493	Standard
>	**Rh**	103	90.0	20.0				ug/L	5	Standard
	Mo	98	3691.2	2.2	**1.0416**	0.011	1.1	ug/L	10	Standard
	Ag	107	867.7	4.2	**0.1318**	0.005	3.5	ug/L	53	Standard
	Cd	111	8.3	40.5	**0.0013**	0.002	127.2	mg/L	1	Standard
	Cd	114	37.5	60.5	**-0.0019**	0.004	231.8	ug/L	32	Standard
>	**In**	115	442435.7	1.1				ug/L	494305	Standard
	Sn	118	93.0	9.6	**0.0230**	0.007	30.2	ug/L	53	Standard
	Sb	123	155.9	17.5	**0.0641**	0.011	17.1	ug/L	7	Standard
	Ba	135	63221.3	1.1	**38.5400**	0.097	0.3	ug/L	11	Standard
	Ce	140	811.7	21.8				ug/L	10	Standard
>	**Tb**	159	462286.4	0.1				ug/L	538219	Standard
	Ho	165	20.0	66.1				ug/L	8	Standard
	Tl	203	81.7	11.3	**0.0132**	0.002	13.7	ug/L	1	Standard
	Tl	205	98.3	22.9	**0.0143**	0.003	23.7	ug/L	3	Standard
	Pb	206	237.7	3.5	**0.0622**	0.004	6.6	ug/L	80	Standard
	Pb	207	194.3	7.3	**0.0624**	0.006	10.4	ug/L	73	Standard
	Pb	208	479.3	4.8	**0.0568**	0.004	7.2	ug/L	190	Standard
	U	238	1138.7	4.5	**0.3450**	0.015	4.3	ug/L	0	Standard
>	**Bi**	209	245465.4	0.6				ug/L	276439	Standard

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	Na	23	53.3	37.9	**13.6851**	5.393	39.4	mg/L	2	Standard
	Mg	24	8280.6	3.6	**8.6332**	0.167	1.9	mg/L	37	Standard
	K	39	15.0	33.3	**0.5238**	0.295	56.3	mg/L	3	Standard
	Ca	43	103.3	19.6	**20.3104**	5.719	28.2	mg/L	43	Standard
	Fe	54	316.8	3.7	**0.0317**	0.006	19.0	mg/L	262	Standard
	Fe	57	193.3	9.8	**0.2461**	0.030	12.1	mg/L	65	Standard
>	**Sc-1**	45	26194.3	1.8				mg/L	26874	Standard
	Cl	35	152288.2	0.3				ug/L	141022	Standard
	Kr	83	84.7	6.9				ug/L	75	Standard
	Br	81	28653.7	1.7				ug/L	2810	Standard
	P	31	571105.0	1.1				ug/L	458976	Standard
	S	34	101644.8	1.2				ug/L	103378	Standard
	Sr	88	491.7	5.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	114.6				mg/L	0	Standard
	Dy	164	45.7	83.8				mg/L	10	Standard
	Ho-1	165	20.0	66.1				mg/L	8	Standard
	Er	166	20.0	50.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		91.026	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.760	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	89.507
	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	88.795
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311055701
Sample Date/Time: Monday, November 18, 2013 18:01:08
Number of Replicates: 3
Autosampler Position: 234
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	237183.9	1.4				ug/L	269614	Standard
	Be	9	36.7	20.8	**-0.0020**	0.003	149.6	ug/L	23	Standard
	Al	27	16839742.5	0.4	**91.2661**	1.643	1.8	ug/L	1170	Standard
	Sc	45	24882.1	1.0				ug/L	26874	Standard
	Ti	47	156.0	10.6	**0.5986**	0.081	13.6	ug/L	25	Standard
	V	51	11556.4	1.4	**1.6646**	0.037	2.2	ug/L	1686	Standard
	Cr	52	6531.1	1.8	**0.3862**	0.033	8.5	ug/L	6098	Standard
	Cr	53	3047.0	5.5	**2.5971**	0.158	6.1	ug/L	193	Standard
	Mn	55	385338.5	0.2	**32.1204**	0.381	1.2	ug/L	1232	Standard
	Co	59	664.3	4.1	**0.0646**	0.003	3.9	ug/L	106	Standard
	Ni	60	3295.7	1.1	**1.1518**	0.028	2.5	ug/L	556	Standard
	Cu	65	1208.7	0.2	**0.4579**	0.007	1.4	ug/L	124	Standard
	Zn	66	5707.4	1.2	**4.2696**	0.018	0.4	ug/L	196	Standard
>	Ge	72	422775.9	1.3				ug/L	473313	Standard
	As	75	988.7	7.5	**0.9767**	0.067	6.8	ug/L	-286	Standard
	Se	82	189.8	6.4	**1.7320**	0.103	6.0	ug/L	-33	Standard
	Se-1	77	376.7	6.1	**3.1356**	0.220	7.0	ug/L	86	Standard
>	Ga	71	71.7	38.4				mg/L	35	Standard
	Rb	85	8062.1	2.8				ug/L	13	Standard
	Y	89	390361.5	0.7				ug/L	439493	Standard
>	Rh	103	63.3	25.4				ug/L	5	Standard
	Mo	98	5941.4	1.3	**1.7310**	0.015	0.9	ug/L	10	Standard
	Ag	107	47.3	18.5	**-0.0068**	0.002	23.1	ug/L	53	Standard
	Cd	111	21.7	16.6	**0.0085**	0.002	24.1	mg/L	1	Standard
	Cd	114	111.6	36.5	**0.0136**	0.009	63.1	ug/L	32	Standard
>	In	115	431065.8	1.7				ug/L	494305	Standard
	Sn	118	66.3	8.6	**0.0018**	0.006	329.9	ug/L	53	Standard
	Sb	123	197.5	8.5	**0.0838**	0.006	6.9	ug/L	7	Standard
	Ba	135	63990.9	0.9	**40.0415**	0.288	0.7	ug/L	11	Standard
	Ce	140	395.0	11.0				ug/L	10	Standard
>	Tb	159	455255.1	0.6				ug/L	538219	Standard
	Ho	165	10.0	50.0				ug/L	8	Standard
	Tl	203	70.7	5.4	**0.0118**	0.001	6.9	ug/L	1	Standard
	Tl	205	85.0	10.2	**0.0129**	0.001	11.4	ug/L	3	Standard
	Pb	206	1397.1	5.1	**0.5993**	0.033	5.5	ug/L	80	Standard
	Pb	207	1153.0	3.5	**0.5553**	0.021	3.8	ug/L	73	Standard
	Pb	208	2717.4	1.7	**0.5272**	0.005	1.0	ug/L	190	Standard
	U	238	3989.9	2.1	**1.2714**	0.020	1.5	ug/L	0	Standard
>	Bi	209	234328.5	0.7				ug/L	276439	Standard

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	Na	23	101.7	28.0	**27.8860**	8.001	28.7	mg/L	2	Standard
	Mg	24	36818.0	1.5	**40.5353**	0.353	0.9	mg/L	37	Standard
	K	39	8.3	173.2	**0.1467**	0.914	623.4	mg/L	3	Standard
	Ca	43	93.3	32.7	**18.8295**	9.498	50.4	mg/L	43	Standard
	Fe	54	400.4	7.6	**0.0838**	0.015	17.6	mg/L	262	Standard
	Fe	57	218.3	16.1	**0.3108**	0.063	20.2	mg/L	65	Standard
>	**Sc-1**	45	24882.1	1.0				mg/L	26874	Standard
	Cl	35	162759.6	1.1				ug/L	141022	Standard
	Kr	83	90.3	13.9				ug/L	75	Standard
	Br	81	30741.2	4.0				ug/L	2810	Standard
	P	31	485988.9	1.5				ug/L	458976	Standard
	S	34	108099.3	1.5				ug/L	103378	Standard
	Sr	88	391.7	9.4				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	39.7	43.0				mg/L	10	Standard
	Ho-1	165	10.0	50.0				mg/L	8	Standard
	Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		87.972	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		89.323	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	87.206
	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	84.767
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 18:04:15
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	240021.8	2.3				ug/L	269614	Standard
	Be	9	133539.6	3.0	**50.5319**	1.356	2.7	ug/L	23	Standard
	Al	27	8605441.0	2.3	**46.1054**	2.022	4.4	ug/L	1170	Standard
	Sc	45	25127.5	2.1				ug/L	26874	Standard
	Ti	47	24337.9	1.0	**105.2538**	0.749	0.7	ug/L	25	Standard
	V	51	313334.9	0.5	**48.3316**	0.235	0.5	ug/L	1686	Standard
	Cr	52	306107.4	1.0	**48.2406**	0.102	0.2	ug/L	6098	Standard
	Cr	53	56307.8	2.1	**48.8510**	0.745	1.5	ug/L	193	Standard
	Mn	55	616970.0	1.2	**49.9075**	0.358	0.7	ug/L	1232	Standard
	Co	59	406624.1	0.3	**47.4519**	0.313	0.7	ug/L	106	Standard
	Ni	60	124023.6	1.9	**49.1441**	0.602	1.2	ug/L	556	Standard
	Cu	65	120968.0	0.7	**50.1523**	0.758	1.5	ug/L	124	Standard
	Zn	66	66073.4	0.6	**49.9143**	0.461	0.9	ug/L	196	Standard
>	Ge	72	436281.0	0.8				ug/L	473313	Standard
	As	75	66534.9	0.3	**50.0527**	0.504	1.0	ug/L	-286	Standard
	Se	82	6760.8	0.9	**49.6843**	0.831	1.7	ug/L	-33	Standard
	Se-1	77	5010.8	1.7	**49.4083**	0.845	1.7	ug/L	86	Standard
>	Ga	71	63.3	9.1				mg/L	35	Standard
	Rb	85	1066.7	7.6				ug/L	13	Standard
	Y	89	407346.6	0.6				ug/L	439493	Standard
>	Rh	103	23.3	68.9				ug/L	5	Standard
	Mo	98	370475.3	0.4	**103.9581**	0.398	0.4	ug/L	10	Standard
	Ag	107	316314.8	0.8	**52.4298**	0.417	0.8	ug/L	53	Standard
	Cd	111	99332.3	0.4	**49.6225**	0.163	0.3	mg/L	1	Standard
	Cd	114	250805.7	1.2	**49.4998**	0.408	0.8	ug/L	32	Standard
>	In	115	451393.6	0.4				ug/L	494305	Standard
	Sn	118	60636.8	0.5	**50.6841**	0.082	0.2	ug/L	53	Standard
	Sb	123	121481.0	0.8	**50.1660**	0.314	0.6	ug/L	7	Standard
	Ba	135	83990.5	0.3	**50.1889**	0.196	0.4	ug/L	11	Standard
	Ce	140	95.0	77.9				ug/L	10	Standard
>	Tb	159	467368.9	0.4				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	266364.0	0.3	**49.3382**	0.208	0.4	ug/L	1	Standard
	Tl	205	345266.4	0.8	**51.7954**	0.733	1.4	ug/L	3	Standard
	Pb	206	121523.5	1.3	**52.4589**	0.510	1.0	ug/L	80	Standard
	Pb	207	109149.8	0.9	**52.3034**	0.331	0.6	ug/L	73	Standard
	Pb	208	248064.6	0.9	**48.5681**	0.337	0.7	ug/L	190	Standard
	U	238	161843.5	1.1	**48.6197**	0.577	1.2	ug/L	0	Standard
>	Bi	209	248932.0	0.6				ug/L	276439	Standard

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Na	23	28.3	20.4	**7.3690**	1.498	20.3	mg/L	2	Standard
Mg	24	4777.4	4.4	**5.1836**	0.293	5.7	mg/L	37	Standard
K	39	81.7	19.7	**4.7536**	0.950	20.0	mg/L	3	Standard
Ca	43	46.7	16.4	**4.1057**	2.283	55.6	mg/L	43	Standard
Fe	54	11356.8	2.4	**5.7827**	0.055	1.0	mg/L	262	Standard
Fe	57	3128.7	6.3	**5.6901**	0.353	6.2	mg/L	65	Standard
> **Sc-1**	45	25127.5	2.1				mg/L	26874	Standard
Cl	35	147014.5	1.0				ug/L	141022	Standard
Kr	83	97.3	11.3				ug/L	75	Standard
Br	81	2923.6	3.6				ug/L	2810	Standard
P	31	479823.2	1.2				ug/L	458976	Standard
S	34	135991.0	1.9				ug/L	103378	Standard
Sr	88	43.3	29.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	2.4	209.1				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	20.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		89.024	
Be	9	101.064		
Al	27	92.211		
Sc	45			
Ti	47	105.254		
V	51	96.663		
Cr	52	96.481		
Cr	53			
Mn	55	99.815		
Co	59	94.904		
Ni	60	98.288		
Cu	65	100.305		
Zn	66	99.829		
> Ge	72		92.176	
As	75	100.105		
Se	82	99.369		
Se-1	77			
> Ga	71			
Rb	85			

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Y	89			
> Rh	103			
Mo	98	103.958		
Ag	107	104.860		
Cd	111	99.245		
Cd	114			
> In	115			91.319
Sn	118	101.368		
Sb	123	100.332		
Ba	135	100.378		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	98.676		
Tl	205			
Pb	206			
Pb	207			
Pb	208	97.136		
U	238	97.239		
> Bi	209			90.049
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 18:07:20
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	236175.1	1.6				ug/L	269614	Standard
	Be	9	53.3	5.4	**0.0045**	0.001	30.9	ug/L	23	Standard
	Al	27	855.0	4.8	**-0.0025**	0.000	7.6	ug/L	1170	Standard
	Sc	45	23989.0	0.2				ug/L	26874	Standard
	Ti	47	11.0	56.8	**-0.0502**	0.028	55.1	ug/L	25	Standard
	V	51	981.5	5.4	**-0.0273**	0.008	28.6	ug/L	1686	Standard
	Cr	52	3426.7	1.6	**-0.1338**	0.007	4.9	ug/L	6098	Standard
	Cr	53	160.0	20.5	**0.0026**	0.030	1125.2	ug/L	193	Standard
	Mn	55	989.4	3.4	**-0.0575**	0.002	4.2	ug/L	1232	Standard
	Co	59	80.0	4.5	**-0.0059**	0.000	7.1	ug/L	106	Standard
	Ni	60	273.7	7.3	**-0.0908**	0.008	8.4	ug/L	556	Standard
	Cu	65	165.0	9.2	**0.0098**	0.006	61.7	ug/L	124	Standard
	Zn	66	466.7	5.5	**0.1631**	0.020	12.1	ug/L	196	Standard
>	Ge	72	428559.1	0.5				ug/L	473313	Standard
	As	75	-257.2	18.6	**0.0156**	0.037	238.8	ug/L	-286	Standard
	Se	82	-43.3	18.1	**-0.0210**	0.060	283.3	ug/L	-33	Standard
	Se-1	77	72.0	2.8	**-0.0216**	0.017	79.8	ug/L	86	Standard
>	Ga	71	25.0	52.9				mg/L	35	Standard
	Rb	85	15.0	33.3				ug/L	13	Standard
	Y	89	396445.6	1.7				ug/L	439493	Standard
>	Rh	103	6.7	114.6				ug/L	5	Standard
	Mo	98	59.7	35.5	**0.0017**	0.006	344.6	ug/L	10	Standard
	Ag	107	56.0	13.9	**-0.0056**	0.001	21.8	ug/L	53	Standard
	Cd	111	4.6	45.5	**-0.0006**	0.001	188.5	mg/L	1	Standard
	Cd	114	13.5	1.6	**-0.0068**	0.000	0.4	ug/L	32	Standard
>	In	115	446924.9	0.9				ug/L	494305	Standard
	Sn	118	54.7	14.8	**-0.0102**	0.007	70.1	ug/L	53	Standard
	Sb	123	252.5	35.2	**0.1037**	0.036	35.0	ug/L	7	Standard
	Ba	135	11.3	27.0	**-0.0057**	0.002	33.3	ug/L	11	Standard
	Ce	140	15.0	57.7				ug/L	10	Standard
>	Tb	159	458681.6	1.2				ug/L	538219	Standard
	Ho	165	10.0					ug/L	8	Standard
	Tl	203	7.7	19.9	**-0.0007**	0.000	38.5	ug/L	1	Standard
	Tl	205	11.7	65.5	**0.0011**	0.001	107.3	ug/L	3	Standard
	Pb	206	80.7	10.4	**-0.0070**	0.004	52.0	ug/L	80	Standard
	Pb	207	68.3	7.5	**0.0007**	0.002	344.1	ug/L	73	Standard
	Pb	208	166.0	11.9	**-0.0059**	0.004	64.6	ug/L	190	Standard
	U	238	4.7	75.3	**-0.0005**	0.001	227.2	ug/L	0	Standard
>	Bi	209	248910.3	0.4				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0525**	0.832	1583.5	mg/L	2	Standard
Mg	24	33.3	8.7	**0.0062**	0.003	53.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2713**	0.190	70.1	mg/L	3	Standard
Ca	43	20.0	25.0	**-3.8458**	1.615	42.0	mg/L	43	Standard
Fe	54	316.2	24.2	**0.0458**	0.042	90.9	mg/L	262	Standard
Fe	57	75.0	6.7	**0.0486**	0.010	20.4	mg/L	65	Standard
Sc-1	45	23989.0	0.2				mg/L	26874	Standard
Cl	35	142345.6	1.3				ug/L	141022	Standard
Kr	83	97.7	4.3				ug/L	75	Standard
Br	81	2260.2	6.5				ug/L	2810	Standard
P	31	453923.4	5.4				ug/L	458976	Standard
S	34	130146.8	2.3				ug/L	103378	Standard
Sr	88	48.3	15.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	13.2	86.6				mg/L	10	Standard
Ho-1	165	10.0					mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		87.597	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.545	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	90.415
	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	90.042
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311055702
Sample Date/Time: Monday, November 18, 2013 18:10:27
Number of Replicates: 3
Autosampler Position: 235
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	238994.1	4.3				ug/L	269614	Standard
	Be	9	71.7	17.6	**0.0112**	0.005	47.1	ug/L	23	Standard
	Al	27	16136983.9	1.5	**86.8837**	3.876	4.5	ug/L	1170	Standard
	Sc	45	24880.4	1.7				ug/L	26874	Standard
	Ti	47	195.7	46.2	**0.7856**	0.417	53.1	ug/L	25	Standard
	V	51	11112.4	2.1	**1.6092**	0.017	1.0	ug/L	1686	Standard
	Cr	52	6129.9	3.3	**0.3291**	0.046	13.9	ug/L	6098	Standard
	Cr	53	2620.2	17.8	**2.2382**	0.450	20.1	ug/L	193	Standard
	Mn	55	367831.8	0.6	**30.9287**	0.377	1.2	ug/L	1232	Standard
	Co	59	731.4	9.8	**0.0735**	0.009	12.1	ug/L	106	Standard
	Ni	60	3162.3	18.9	**1.1093**	0.255	23.0	ug/L	556	Standard
	Cu	65	1221.4	2.3	**0.4680**	0.017	3.7	ug/L	124	Standard
	Zn	66	6048.5	8.9	**4.5803**	0.448	9.8	ug/L	196	Standard
>	Ge	72	419042.6	1.2				ug/L	473313	Standard
	As	75	969.4	1.7	**0.9679**	0.013	1.3	ug/L	-286	Standard
	Se	82	178.2	13.7	**1.6572**	0.200	12.1	ug/L	-33	Standard
	Se-1	77	275.7	14.8	**2.1211**	0.453	21.3	ug/L	86	Standard
>	Ga	71	60.0	30.0				mg/L	35	Standard
	Rb	85	7596.9	2.1				ug/L	13	Standard
	Y	89	390024.1	2.0				ug/L	439493	Standard
>	Rh	103	80.0	16.5				ug/L	5	Standard
	Mo	98	5829.2	2.2	**1.7089**	0.039	2.3	ug/L	10	Standard
	Ag	107	106.0	6.5	**0.0035**	0.001	34.5	ug/L	53	Standard
	Cd	111	27.3	54.7	**0.0115**	0.008	68.4	mg/L	1	Standard
	Cd	114	100.8	31.8	**0.0115**	0.007	57.7	ug/L	32	Standard
>	In	115	428332.8	0.1				ug/L	494305	Standard
	Sn	118	94.3	4.8	**0.0268**	0.004	14.6	ug/L	53	Standard
	Sb	123	347.5	3.9	**0.1497**	0.006	3.9	ug/L	7	Standard
	Ba	135	61144.5	0.6	**38.5012**	0.261	0.7	ug/L	11	Standard
	Ce	140	495.0	23.7				ug/L	10	Standard
>	Tb	159	451562.7	2.4				ug/L	538219	Standard
	Ho	165	26.7	28.6				ug/L	8	Standard
	Tl	203	128.0	19.7	**0.0233**	0.005	21.9	ug/L	1	Standard
	Tl	205	225.0	33.6	**0.0355**	0.012	34.8	ug/L	3	Standard
	Pb	206	1371.1	3.5	**0.5928**	0.019	3.3	ug/L	80	Standard
	Pb	207	1168.4	1.8	**0.5683**	0.012	2.1	ug/L	73	Standard
	Pb	208	2780.4	1.2	**0.5455**	0.009	1.7	ug/L	190	Standard
	U	238	3806.5	2.2	**1.2235**	0.022	1.8	ug/L	0	Standard
>	Bi	209	232288.4	0.4				ug/L	276439	Standard

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	Na	23	78.3	13.3	**21.3508**	2.631	12.3	mg/L	2	Standard
	Mg	24	35543.3	1.6	**39.1357**	0.418	1.1	mg/L	37	Standard
	K	39	5.0	100.0	**-0.0612**	0.324	528.7	mg/L	3	Standard
	Ca	43	108.3	32.4	**23.4576**	10.583	45.1	mg/L	43	Standard
	Fe	54	447.4	15.3	**0.1084**	0.034	31.2	mg/L	262	Standard
	Fe	57	286.7	28.2	**0.4387**	0.151	34.3	mg/L	65	Standard
>	**Sc-1**	45	24880.4	1.7				mg/L	26874	Standard
	Cl	35	154326.7	1.1				ug/L	141022	Standard
	Kr	83	107.7	12.4				ug/L	75	Standard
	Br	81	28643.7	0.8				ug/L	2810	Standard
	P	31	472303.2	2.6				ug/L	458976	Standard
	S	34	105585.2	3.4				ug/L	103378	Standard
	Sr	88	403.3	22.7				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	28.7	35.7				mg/L	10	Standard
	Ho-1	165	26.7	28.6				mg/L	8	Standard
	Er	166	26.7	57.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		88.643	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		88.534	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	86.653
	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	84.029
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311058401 WG452456-02
Sample Date/Time: Monday, November 18, 2013 18:13:32
Number of Replicates: 3
Autosampler Position: 236
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	248044.3	1.9				ug/L	269614	Standard
	Be	9	36.7	20.8	**-0.0027**	0.003	99.2	ug/L	23	Standard
	Al	27	3347310.2	1.5	**17.3393**	0.131	0.8	ug/L	1170	Standard
	Sc	45	24882.1	1.9				ug/L	26874	Standard
	Ti	47	143.0	15.1	**0.5302**	0.096	18.1	ug/L	25	Standard
	V	51	20600.5	1.2	**3.0582**	0.044	1.4	ug/L	1686	Standard
	Cr	52	12932.5	2.0	**1.4088**	0.045	3.2	ug/L	6098	Standard
	Cr	53	2530.2	2.3	**2.0973**	0.048	2.3	ug/L	193	Standard
	Mn	55	3475.1	13.5	**0.1472**	0.039	26.5	ug/L	1232	Standard
	Co	59	322.0	13.2	**0.0228**	0.005	22.0	ug/L	106	Standard
	Ni	60	1761.4	4.2	**0.5104**	0.030	5.9	ug/L	556	Standard
	Cu	65	665.3	4.1	**0.2206**	0.011	4.9	ug/L	124	Standard
	Zn	66	4696.1	2.0	**3.4210**	0.081	2.4	ug/L	196	Standard
>	**Ge**	72	429452.8	0.2				ug/L	473313	Standard
	As	75	1260.2	1.5	**1.1709**	0.013	1.1	ug/L	-286	Standard
	Se	82	50.8	19.9	**0.6776**	0.075	11.1	ug/L	-33	Standard
	Se-1	77	146.7	4.8	**0.7364**	0.075	10.2	ug/L	86	Standard
>	**Ga**	71	48.3	26.0				mg/L	35	Standard
	Rb	85	11017.3	3.8				ug/L	13	Standard
	Y	89	397538.3	1.4				ug/L	439493	Standard
>	**Rh**	103	80.0	54.5				ug/L	5	Standard
	Mo	98	5996.2	1.0	**1.6907**	0.017	1.0	ug/L	10	Standard
	Ag	107	70.0	5.2	**-0.0032**	0.001	22.1	ug/L	53	Standard
	Cd	111	4.1	50.4	**-0.0008**	0.001	122.9	mg/L	1	Standard
	Cd	114	34.9	22.3	**-0.0025**	0.002	63.9	ug/L	32	Standard
>	**In**	115	445299.4	1.0				ug/L	494305	Standard
	Sn	118	64.0	10.2	**-0.0021**	0.005	248.4	ug/L	53	Standard
	Sb	123	206.4	6.4	**0.0849**	0.006	7.4	ug/L	7	Standard
	Ba	135	34640.2	1.3	**20.9749**	0.068	0.3	ug/L	11	Standard
	Ce	140	70.0	43.4				ug/L	10	Standard
>	**Tb**	159	460864.5	1.0				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	40.3	20.8	**0.0054**	0.001	27.0	ug/L	1	Standard
	Tl	205	58.3	21.6	**0.0082**	0.002	24.2	ug/L	3	Standard
	Pb	206	340.3	2.6	**0.1076**	0.003	2.5	ug/L	80	Standard
	Pb	207	283.0	4.8	**0.1059**	0.007	6.2	ug/L	73	Standard
	Pb	208	683.0	6.0	**0.0977**	0.008	8.2	ug/L	190	Standard
	U	238	1029.4	3.3	**0.3127**	0.015	4.6	ug/L	0	Standard
>	**Bi**	209	244787.1	1.4				ug/L	276439	Standard

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	Na	23	45.0	40.1	**12.0738**	4.991	41.3	mg/L	2	Standard
	Mg	24	7123.3	4.2	**7.8146**	0.181	2.3	mg/L	37	Standard
	K	39	6.7	173.2	**0.0335**	0.718	2142.9	mg/L	3	Standard
	Ca	43	80.0	25.0	**14.6785**	6.389	43.5	mg/L	43	Standard
	Fe	54	298.0	5.8	**0.0301**	0.008	25.7	mg/L	262	Standard
	Fe	57	166.7	20.0	**0.2150**	0.065	30.4	mg/L	65	Standard
>	**Sc-1**	45	24882.1	1.9				mg/L	26874	Standard
	Cl	35	149489.2	0.5				ug/L	141022	Standard
	Kr	83	93.3	12.7				ug/L	75	Standard
	Br	81	9789.8	8.9				ug/L	2810	Standard
	P	31	547322.3	4.4				ug/L	458976	Standard
	S	34	101706.9	1.5				ug/L	103378	Standard
	Sr	88	441.7	1.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	69.3				mg/L	0	Standard
	Dy	164	-0.2	173.2				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	8	Standard
	Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		92.000	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		90.733	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.086
|	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	88.550
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311058402S WG452456-08
Sample Date/Time: Monday, November 18, 2013 18:16:37
Number of Replicates: 3
Autosampler Position: 237
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	244077.2	1.6				ug/L	269614	Standard
	Be	9	66237.9	2.7	**24.6422**	0.829	3.4	ug/L	23	Standard
	Al	27	3279707.8	2.7	**17.2713**	0.713	4.1	ug/L	1170	Standard
	Sc	45	25488.1	0.6				ug/L	26874	Standard
	Ti	47	163.0	5.5	**0.6104**	0.043	7.1	ug/L	25	Standard
	V	51	171996.2	1.1	**26.5766**	0.297	1.1	ug/L	1686	Standard
	Cr	52	157100.0	1.2	**24.5425**	0.171	0.7	ug/L	6098	Standard
	Cr	53	29271.6	2.9	**25.4532**	0.754	3.0	ug/L	193	Standard
	Mn	55	301043.7	0.6	**24.3993**	0.203	0.8	ug/L	1232	Standard
	Co	59	199942.0	0.9	**23.4375**	0.264	1.1	ug/L	106	Standard
	Ni	60	61093.9	1.0	**24.2250**	0.269	1.1	ug/L	556	Standard
	Cu	65	58898.3	0.7	**24.5049**	0.258	1.1	ug/L	124	Standard
	Zn	66	35713.7	1.4	**27.0179**	0.241	0.9	ug/L	196	Standard
>	**Ge**	72	434182.6	0.6				ug/L	473313	Standard
	As	75	34020.6	0.9	**25.8182**	0.151	0.6	ug/L	-286	Standard
	Se	82	3318.3	1.4	**24.6530**	0.215	0.9	ug/L	-33	Standard
	Se-1	77	2547.2	1.7	**24.8675**	0.395	1.6	ug/L	86	Standard
>	**Ga**	71	48.3	29.9				mg/L	35	Standard
	Rb	85	10812.2	5.2				ug/L	13	Standard
	Y	89	395339.8	0.7				ug/L	439493	Standard
>	**Rh**	103	98.3	10.6				ug/L	5	Standard
	Mo	98	6069.0	0.8	**1.7069**	0.019	1.1	ug/L	10	Standard
	Ag	107	151698.3	0.6	**25.4149**	0.242	1.0	ug/L	53	Standard
	Cd	111	47618.9	0.2	**24.0503**	0.167	0.7	mg/L	1	Standard
	Cd	114	118484.3	3.2	**23.6362**	0.635	2.7	ug/L	32	Standard
>	**In**	115	446463.6	0.6				ug/L	494305	Standard
	Sn	118	1094.0	1.9	**0.8691**	0.012	1.4	ug/L	53	Standard
	Sb	123	58968.5	0.3	**24.6197**	0.086	0.3	ug/L	7	Standard
	Ba	135	74473.3	0.9	**44.9913**	0.182	0.4	ug/L	11	Standard
	Ce	140	85.0	21.2				ug/L	10	Standard
>	**Tb**	159	466405.2	0.9				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	130299.6	0.7	**24.2560**	0.231	1.0	ug/L	1	Standard
	Tl	205	165708.0	1.5	**24.9832**	0.435	1.7	ug/L	3	Standard
	Pb	206	61193.3	1.1	**26.5296**	0.393	1.5	ug/L	80	Standard
	Pb	207	52134.2	0.2	**25.0919**	0.136	0.5	ug/L	73	Standard
	Pb	208	120090.8	0.7	**23.6117**	0.230	1.0	ug/L	190	Standard
	U	238	78741.4	0.3	**23.7732**	0.165	0.7	ug/L	0	Standard
>	**Bi**	209	247682.7	0.4				ug/L	276439	Standard

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	Na	23	30.0	16.7	**7.7154**	1.307	16.9	mg/L	2	Standard
	Mg	24	7000.0	5.5	**7.4960**	0.370	4.9	mg/L	37	Standard
	K	39	15.0	120.2	**0.5481**	1.119	204.1	mg/L	3	Standard
	Ca	43	55.0	18.2	**6.4412**	2.997	46.5	mg/L	43	Standard
	Fe	54	275.4	25.1	**0.0150**	0.036	243.4	mg/L	262	Standard
	Fe	57	155.0	6.5	**0.1859**	0.019	10.2	mg/L	65	Standard
>	**Sc-1**	45	25488.1	0.6				mg/L	26874	Standard
	Cl	35	150586.0	0.3				ug/L	141022	Standard
	Kr	83	99.0	9.9				ug/L	75	Standard
	Br	81	7445.2	5.2				ug/L	2810	Standard
	P	31	547541.0	3.6				ug/L	458976	Standard
	S	34	103749.1	1.7				ug/L	103378	Standard
	Sr	88	415.0	18.5				ug/L	30	Standard
	C	12	10.0	100.0				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	0	Standard
	Dy	164	10.0	173.2				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	8	Standard
	Er	166	0.0					mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		90.528	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.733	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.321
|	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	89.598
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311058403SD WG452456-09
Sample Date/Time: Monday, November 18, 2013 18:19:41
Number of Replicates: 3
Autosampler Position: 238
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	247051.6	1.8				ug/L	269614	Standard
	Be	9	68651.9	0.9	**25.2354**	0.643	2.5	ug/L	23	Standard
	Al	27	3301617.3	0.7	**17.1753**	0.421	2.4	ug/L	1170	Standard
	Sc	45	25680.1	1.5				ug/L	26874	Standard
	Ti	47	160.0	10.8	**0.5985**	0.073	12.2	ug/L	25	Standard
	V	51	175458.3	1.8	**27.1731**	0.484	1.8	ug/L	1686	Standard
	Cr	52	159293.7	0.8	**24.9508**	0.308	1.2	ug/L	6098	Standard
	Cr	53	29446.9	2.6	**25.6621**	0.719	2.8	ug/L	193	Standard
	Mn	55	305768.1	1.3	**24.8369**	0.282	1.1	ug/L	1232	Standard
	Co	59	202583.5	1.4	**23.7968**	0.253	1.1	ug/L	106	Standard
	Ni	60	62044.4	0.3	**24.6576**	0.043	0.2	ug/L	556	Standard
	Cu	65	60471.4	0.0	**25.2143**	0.099	0.4	ug/L	124	Standard
	Zn	66	36877.5	1.6	**27.9647**	0.330	1.2	ug/L	196	Standard
>	Ge	72	433258.6	0.4				ug/L	473313	Standard
	As	75	34398.4	0.6	**26.1585**	0.259	1.0	ug/L	-286	Standard
	Se	82	3436.0	1.4	**25.5729**	0.460	1.8	ug/L	-33	Standard
	Se-1	77	2549.9	1.1	**24.9489**	0.181	0.7	ug/L	86	Standard
>	Ga	71	61.7	18.7				mg/L	35	Standard
	Rb	85	10758.8	2.9				ug/L	13	Standard
	Y	89	401339.6	0.9				ug/L	439493	Standard
>	Rh	103	91.7	36.3				ug/L	5	Standard
	Mo	98	6042.4	2.2	**1.7181**	0.033	1.9	ug/L	10	Standard
	Ag	107	152089.2	0.0	**25.7612**	0.176	0.7	ug/L	53	Standard
	Cd	111	48124.8	0.3	**24.5733**	0.095	0.4	mg/L	1	Standard
	Cd	114	118312.8	0.6	**23.8647**	0.180	0.8	ug/L	32	Standard
>	In	115	441599.2	0.7				ug/L	494305	Standard
	Sn	118	87.0	17.8	**0.0180**	0.014	75.5	ug/L	53	Standard
	Sb	123	59869.0	0.7	**25.2712**	0.187	0.7	ug/L	7	Standard
	Ba	135	75290.6	0.6	**45.9892**	0.573	1.2	ug/L	11	Standard
	Ce	140	100.0	45.8				ug/L	10	Standard
>	Tb	159	457957.9	0.0				ug/L	538219	Standard
	Ho	165	3.3	173.2				ug/L	8	Standard
	Tl	203	131908.7	0.1	**24.8143**	0.169	0.7	ug/L	1	Standard
	Tl	205	168985.8	2.3	**25.7450**	0.563	2.2	ug/L	3	Standard
	Pb	206	61908.9	0.6	**27.1226**	0.083	0.3	ug/L	80	Standard
	Pb	207	52749.0	1.1	**25.6571**	0.419	1.6	ug/L	73	Standard
	Pb	208	123145.1	0.3	**24.4684**	0.066	0.3	ug/L	190	Standard
	U	238	79802.3	0.6	**24.3477**	0.253	1.0	ug/L	0	Standard
>	Bi	209	245100.9	0.5				ug/L	276439	Standard

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	Na	23	58.3	4.9	**15.3088**	1.012	6.6	mg/L	2	Standard
	Mg	24	7386.8	4.1	**7.8570**	0.389	4.9	mg/L	37	Standard
	K	39	13.3	21.7	**0.4421**	0.189	42.7	mg/L	3	Standard
	Ca	43	68.3	21.1	**10.3805**	4.545	43.8	mg/L	43	Standard
	Fe	54	266.8	13.3	**0.0095**	0.020	207.4	mg/L	262	Standard
	Fe	57	148.3	5.1	**0.1717**	0.014	8.1	mg/L	65	Standard
>	**Sc-1**	45	25680.1	1.5				mg/L	26874	Standard
	Cl	35	151503.1	1.2				ug/L	141022	Standard
	Kr	83	92.0	10.5				ug/L	75	Standard
	Br	81	9633.1	9.3				ug/L	2810	Standard
	P	31	546916.8	1.2				ug/L	458976	Standard
	S	34	106585.3	0.9				ug/L	103378	Standard
	Sr	88	463.3	17.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	69.3				mg/L	0	Standard
	Dy	164	6.3	93.2				mg/L	10	Standard
	Ho-1	165	3.3	173.2				mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		91.631	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.537	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	89.337
	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	88.664
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311058403SD WG452456-09
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Method 6020 - Summary Report

Sample ID: L1311060001
Sample Date/Time: Monday, November 18, 2013 18:22:46
Number of Replicates: 3
Autosampler Position: 239
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	244387.0	1.2				ug/L	269614	Standard
	Be	9	58.3	27.6	**0.0056**	0.006	103.4	ug/L	23	Standard
	Al	27	639591.7	1.2	**3.3572**	0.064	1.9	ug/L	1170	Standard
	Sc	45	25102.5	2.9				ug/L	26874	Standard
	Ti	47	575.7	4.0	**2.4204**	0.095	3.9	ug/L	25	Standard
	V	51	24144.4	1.5	**3.5972**	0.057	1.6	ug/L	1686	Standard
	Cr	52	58913.3	2.1	**8.8290**	0.157	1.8	ug/L	6098	Standard
	Cr	53	10298.5	1.4	**8.9204**	0.177	2.0	ug/L	193	Standard
	Mn	55	23656.1	1.3	**1.8009**	0.024	1.3	ug/L	1232	Standard
	Co	59	1570.7	4.9	**0.1700**	0.008	4.5	ug/L	106	Standard
	Ni	60	3277.7	2.6	**1.1167**	0.026	2.3	ug/L	556	Standard
	Cu	65	4652.7	3.0	**1.8925**	0.063	3.3	ug/L	124	Standard
	Zn	66	15834.6	0.1	**11.9438**	0.088	0.7	ug/L	196	Standard
>	**Ge**	72	431546.9	0.7				ug/L	473313	Standard
	As	75	298.3	6.2	**0.4378**	0.015	3.3	ug/L	-286	Standard
	Se	82	0.5	297.0	**0.3045**	0.011	3.6	ug/L	-33	Standard
	Se-1	77	94.7	4.3	**0.2029**	0.044	21.9	ug/L	86	Standard
>	**Ga**	71	2708.6	4.4				mg/L	35	Standard
	Rb	85	51151.3	3.4				ug/L	13	Standard
	Y	89	401326.0	1.1				ug/L	439493	Standard
>	**Rh**	103	95.0	13.9				ug/L	5	Standard
	Mo	98	4259.8	1.3	**1.1927**	0.016	1.4	ug/L	10	Standard
	Ag	107	61.7	8.9	**-0.0046**	0.001	19.7	ug/L	53	Standard
	Cd	111	62.8	12.0	**0.0288**	0.004	13.2	mg/L	1	Standard
	Cd	114	191.7	14.5	**0.0288**	0.006	19.4	ug/L	32	Standard
>	**In**	115	446770.9	0.1				ug/L	494305	Standard
	Sn	118	122.0	8.1	**0.0467**	0.008	17.9	ug/L	53	Standard
	Sb	123	524.9	4.9	**0.2175**	0.011	4.9	ug/L	7	Standard
	Ba	135	28644.1	1.1	**17.2852**	0.189	1.1	ug/L	11	Standard
	Ce	140	4233.9	5.0				ug/L	10	Standard
>	**Tb**	159	464531.7	1.8				ug/L	538219	Standard
	Ho	165	93.3	29.5				ug/L	8	Standard
	Tl	203	30.7	27.7	**0.0036**	0.002	42.4	ug/L	1	Standard
	Tl	205	40.0	45.1	**0.0053**	0.003	49.1	ug/L	3	Standard
	Pb	206	447.3	5.5	**0.1533**	0.013	8.6	ug/L	80	Standard
	Pb	207	367.3	3.4	**0.1457**	0.004	2.8	ug/L	73	Standard
	Pb	208	871.7	2.4	**0.1341**	0.004	3.3	ug/L	190	Standard
	U	238	245.7	8.8	**0.0727**	0.007	9.1	ug/L	0	Standard
>	**Bi**	209	246571.4	1.5				ug/L	276439	Standard

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	Na	23	53.3	56.5	**14.1493**	7.979	56.4	mg/L	2	Standard
	Mg	24	3160.3	5.7	**3.4251**	0.292	8.5	mg/L	37	Standard
	K	39	45.0	50.9	**2.4822**	1.542	62.1	mg/L	3	Standard
	Ca	43	66.7	48.2	**10.4629**	10.347	98.9	mg/L	43	Standard
	Fe	54	491.6	10.9	**0.1302**	0.035	26.5	mg/L	262	Standard
	Fe	57	223.3	21.3	**0.3154**	0.078	24.6	mg/L	65	Standard
>	**Sc-1**	45	25102.5	2.9				mg/L	26874	Standard
	Cl	35	145444.1	0.6				ug/L	141022	Standard
	Kr	83	84.7	5.6				ug/L	75	Standard
	Br	81	4427.3	2.8				ug/L	2810	Standard
	P	31	473505.9	4.4				ug/L	458976	Standard
	S	34	113248.3	1.0				ug/L	103378	Standard
	Sr	88	448.3	10.6				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	0	Standard
	Dy	164	117.6	43.8				mg/L	10	Standard
	Ho-1	165	93.3	29.5				mg/L	8	Standard
	Er	166	50.0	20.0				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		90.643	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.176	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	90.384
	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	89.196
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311060002
Sample Date/Time: Monday, November 18, 2013 18:25:50
Number of Replicates: 3
Autosampler Position: 240
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	242607.2	1.6				ug/L	269614	Standard
	Be	9	45.0	40.1	**0.0007**	0.006	903.4	ug/L	23	Standard
	Al	27	9614480.2	0.7	**50.9377**	0.710	1.4	ug/L	1170	Standard
	Sc	45	24466.4	1.1				ug/L	26874	Standard
	Ti	47	317.3	9.8	**1.3215**	0.136	10.3	ug/L	25	Standard
	V	51	19218.7	1.2	**2.8950**	0.049	1.7	ug/L	1686	Standard
	Cr	52	38066.8	0.5	**5.6009**	0.015	0.3	ug/L	6098	Standard
	Cr	53	7316.8	1.1	**6.4444**	0.121	1.9	ug/L	193	Standard
	Mn	55	15339.8	0.4	**1.1476**	0.004	0.4	ug/L	1232	Standard
	Co	59	1384.4	2.7	**0.1517**	0.004	2.7	ug/L	106	Standard
	Ni	60	3203.3	0.7	**1.1164**	0.018	1.6	ug/L	556	Standard
	Cu	65	2229.8	1.4	**0.8971**	0.011	1.3	ug/L	124	Standard
	Zn	66	4383.6	1.8	**3.2404**	0.041	1.3	ug/L	196	Standard
>	**Ge**	72	421914.6	0.7				ug/L	473313	Standard
	As	75	765.0	6.9	**0.8043**	0.038	4.7	ug/L	-286	Standard
	Se	82	84.7	2.3	**0.9406**	0.019	2.0	ug/L	-33	Standard
	Se-1	77	192.7	6.0	**1.2389**	0.111	9.0	ug/L	86	Standard
>	**Ga**	71	1103.4	3.0				mg/L	35	Standard
	Rb	85	27989.2	0.6				ug/L	13	Standard
	Y	89	391050.9	2.5				ug/L	439493	Standard
>	**Rh**	103	95.0	19.0				ug/L	5	Standard
	Mo	98	3010.2	3.1	**0.8621**	0.030	3.5	ug/L	10	Standard
	Ag	107	47.3	9.5	**-0.0068**	0.001	11.1	ug/L	53	Standard
	Cd	111	36.5	6.2	**0.0161**	0.001	7.4	mg/L	1	Standard
	Cd	114	111.6	15.9	**0.0134**	0.004	26.9	ug/L	32	Standard
>	**In**	115	434687.4	0.3				ug/L	494305	Standard
	Sn	118	65.7	22.9	**0.0006**	0.013	2020.2	ug/L	53	Standard
	Sb	123	504.9	6.9	**0.2151**	0.016	7.3	ug/L	7	Standard
	Ba	135	48512.6	1.4	**30.0981**	0.438	1.5	ug/L	11	Standard
	Ce	140	2001.8	1.8				ug/L	10	Standard
>	**Tb**	159	460284.8	1.7				ug/L	538219	Standard
	Ho	165	55.0	32.8				ug/L	8	Standard
	Tl	203	72.3	11.3	**0.0118**	0.002	13.6	ug/L	1	Standard
	Tl	205	96.7	18.2	**0.0144**	0.003	18.9	ug/L	3	Standard
	Pb	206	249.3	6.4	**0.0698**	0.007	9.4	ug/L	80	Standard
	Pb	207	222.0	3.5	**0.0784**	0.004	5.2	ug/L	73	Standard
	Pb	208	480.3	3.9	**0.0593**	0.004	6.2	ug/L	190	Standard
	U	238	1386.7	1.9	**0.4304**	0.007	1.7	ug/L	0	Standard
>	**Bi**	209	239924.7	0.5				ug/L	276439	Standard

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Na	23	56.7	43.5	**15.6365**	7.113	45.5	mg/L	2	Standard
Mg	24	13577.7	0.8	**15.1845**	0.254	1.7	mg/L	37	Standard
K	39	35.0	28.6	**1.8786**	0.626	33.3	mg/L	3	Standard
Ca	43	101.7	24.3	**22.0050**	8.075	36.7	mg/L	43	Standard
Fe	54	341.1	12.3	**0.0557**	0.021	38.2	mg/L	262	Standard
Fe	57	205.0	15.2	**0.2929**	0.062	21.0	mg/L	65	Standard
> **Sc-1**	45	24466.4	1.1				mg/L	26874	Standard
Cl	35	149409.8	1.3				ug/L	141022	Standard
Kr	83	103.0	7.8				ug/L	75	Standard
Br	81	17513.5	2.8				ug/L	2810	Standard
P	31	462638.6	3.9				ug/L	458976	Standard
S	34	107367.5	1.3				ug/L	103378	Standard
Sr	88	366.7	12.2				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	40.9	35.1				mg/L	10	Standard
Ho-1	165	55.0	32.8				mg/L	8	Standard
Er	166	50.0	60.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		89.983	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		89.141	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	87.939
	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	86.791
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311060101
Sample Date/Time: Monday, November 18, 2013 18:28:55
Number of Replicates: 3
Autosampler Position: 241
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	240209.8	2.3				ug/L	269614	Standard
	Be	9	88.3	3.3	**0.0173**	0.001	3.2	ug/L	23	Standard
	Al	27	23844856.3	1.0	**127.6296**	3.226	2.5	ug/L	1170	Standard
	Sc	45	24638.4	2.5				ug/L	26874	Standard
	Ti	47	303.3	22.5	**1.2952**	0.303	23.4	ug/L	25	Standard
	V	51	5395.4	3.1	**0.7056**	0.023	3.3	ug/L	1686	Standard
	Cr	52	5220.2	0.7	**0.1954**	0.012	6.4	ug/L	6098	Standard
	Cr	53	4559.0	5.4	**4.0774**	0.256	6.3	ug/L	193	Standard
	Mn	55	1532196.6	0.4	**131.9427**	1.054	0.8	ug/L	1232	Standard
	Co	59	1028.4	4.0	**0.1122**	0.006	5.3	ug/L	106	Standard
	Ni	60	3740.8	2.7	**1.3799**	0.031	2.3	ug/L	556	Standard
	Cu	65	1354.1	3.3	**0.5373**	0.017	3.2	ug/L	124	Standard
	Zn	66	3856.2	1.0	**2.9105**	0.015	0.5	ug/L	196	Standard
>	**Ge**	72	410551.8	0.8				ug/L	473313	Standard
	As	75	12681.8	1.0	**10.3072**	0.158	1.5	ug/L	-286	Standard
	Se	82	305.7	12.8	**2.6741**	0.310	11.6	ug/L	-33	Standard
	Se-1	77	474.7	2.6	**4.2952**	0.165	3.8	ug/L	86	Standard
>	**Ga**	71	168.3	28.5				mg/L	35	Standard
	Rb	85	2355.2	2.1				ug/L	13	Standard
	Y	89	390053.8	0.8				ug/L	439493	Standard
>	**Rh**	103	118.3	6.5				ug/L	5	Standard
	Mo	98	682.2	2.2	**0.1886**	0.005	2.9	ug/L	10	Standard
	Ag	107	79.0	2.2	**-0.0010**	0.000	16.0	ug/L	53	Standard
	Cd	111	21.4	34.8	**0.0085**	0.004	46.0	mg/L	1	Standard
	Cd	114	55.9	52.7	**0.0023**	0.006	271.0	ug/L	32	Standard
>	**In**	115	424088.0	1.0				ug/L	494305	Standard
	Sn	118	91.0	6.7	**0.0247**	0.006	25.4	ug/L	53	Standard
	Sb	123	400.6	2.9	**0.1746**	0.004	2.5	ug/L	7	Standard
	Ba	135	161956.7	1.1	**103.0247**	1.127	1.1	ug/L	11	Standard
	Ce	140	2381.9	0.9				ug/L	10	Standard
>	**Tb**	159	448560.0	0.9				ug/L	538219	Standard
	Ho	165	40.0	45.1				ug/L	8	Standard
	Tl	203	68.7	14.0	**0.0117**	0.002	16.7	ug/L	1	Standard
	Tl	205	93.3	8.2	**0.0146**	0.001	8.0	ug/L	3	Standard
	Pb	206	121488.5	0.9	**57.1562**	0.105	0.2	ug/L	80	Standard
	Pb	207	101189.1	0.4	**52.8455**	0.589	1.1	ug/L	73	Standard
	Pb	208	239462.6	0.3	**51.0963**	0.254	0.5	ug/L	190	Standard
	U	238	2155.5	1.3	**0.7039**	0.012	1.7	ug/L	0	Standard
>	**Bi**	209	228424.4	0.8				ug/L	276439	Standard

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	Na	23	103.3	19.6	**28.6769**	6.104	21.3	mg/L	2	Standard
	Mg	24	76241.4	2.4	**84.8169**	1.672	2.0	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2760**	0.182	66.0	mg/L	3	Standard
	Ca	43	130.0	7.7	**30.6931**	3.151	10.3	mg/L	43	Standard
	Fe	54	1991.0	1.6	**0.9303**	0.017	1.8	mg/L	262	Standard
	Fe	57	700.0	4.3	**1.2251**	0.091	7.4	mg/L	65	Standard
>	**Sc-1**	45	24638.4	2.5				mg/L	26874	Standard
	Cl	35	140688.2	0.4				ug/L	141022	Standard
	Kr	83	105.3	8.6				ug/L	75	Standard
	Br	81	52892.2	2.8				ug/L	2810	Standard
	P	31	515306.1	1.6				ug/L	458976	Standard
	S	34	106429.2	0.7				ug/L	103378	Standard
	Sr	88	523.3	12.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	47.8	22.4				mg/L	10	Standard
	Ho-1	165	40.0	45.1				mg/L	8	Standard
	Er	166	46.7	32.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		89.094	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		86.740	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.795
|	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	82.631
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

Approved: November 19, 2013

Method 6020 - Summary Report

Sample ID: L1311076312
Sample Date/Time: Monday, November 18, 2013 18:32:00
Number of Replicates: 3
Autosampler Position: 242
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	248182.0	2.5				ug/L	269614	Standard
	Be	9	35.0	65.5	**-0.0031**	0.009	278.1	ug/L	23	Standard
	Al	27	3882201.8	1.1	**20.1056**	0.439	2.2	ug/L	1170	Standard
	Sc	45	24810.3	2.2				ug/L	26874	Standard
	Ti	47	169.3	21.5	**0.6359**	0.160	25.2	ug/L	25	Standard
	V	51	1564.6	4.2	**0.0607**	0.010	16.1	ug/L	1686	Standard
	Cr	52	4719.7	0.7	**0.0644**	0.003	4.5	ug/L	6098	Standard
	Cr	53	620.0	8.1	**0.4012**	0.042	10.4	ug/L	193	Standard
	Mn	55	119265.9	0.6	**9.5539**	0.032	0.3	ug/L	1232	Standard
	Co	59	540.7	6.1	**0.0479**	0.004	7.9	ug/L	106	Standard
	Ni	60	2041.8	2.8	**0.6124**	0.025	4.1	ug/L	556	Standard
	Cu	65	1022.0	4.2	**0.3651**	0.019	5.3	ug/L	124	Standard
	Zn	66	3814.8	1.6	**2.7014**	0.042	1.5	ug/L	196	Standard
>	Ge	72	435447.7	0.3				ug/L	473313	Standard
	As	75	24.3	132.5	**0.2302**	0.024	10.5	ug/L	-286	Standard
	Se	82	-7.7	147.9	**0.2447**	0.083	33.9	ug/L	-33	Standard
	Se-1	77	110.3	12.2	**0.3512**	0.134	38.1	ug/L	86	Standard
>	Ga	71	76.7	22.9				mg/L	35	Standard
	Rb	85	4203.9	6.1				ug/L	13	Standard
	Y	89	405980.7	0.7				ug/L	439493	Standard
>	Rh	103	45.0	48.4				ug/L	5	Standard
	Mo	98	549.6	4.5	**0.1390**	0.006	4.4	ug/L	10	Standard
	Ag	107	64.0	5.4	**-0.0044**	0.001	13.6	ug/L	53	Standard
	Cd	111	12.3	8.1	**0.0033**	0.001	15.6	mg/L	1	Standard
	Cd	114	29.9	68.9	**-0.0035**	0.004	116.0	ug/L	32	Standard
>	In	115	451296.0	0.5				ug/L	494305	Standard
	Sn	118	64.7	11.2	**-0.0023**	0.006	275.3	ug/L	53	Standard
	Sb	123	158.0	5.1	**0.0637**	0.003	4.7	ug/L	7	Standard
	Ba	135	30588.2	0.9	**18.2740**	0.144	0.8	ug/L	11	Standard
	Ce	140	1053.4	4.8				ug/L	10	Standard
>	Tb	159	468867.6	0.7				ug/L	538219	Standard
	Ho	165	41.7	61.6				ug/L	8	Standard
	Tl	203	46.3	9.0	**0.0065**	0.001	12.3	ug/L	1	Standard
	Tl	205	75.0	30.6	**0.0106**	0.003	32.4	ug/L	3	Standard
	Pb	206	200.3	8.7	**0.0453**	0.008	17.1	ug/L	80	Standard
	Pb	207	175.3	6.7	**0.0526**	0.006	10.5	ug/L	73	Standard
	Pb	208	418.0	4.7	**0.0441**	0.004	9.0	ug/L	190	Standard
	U	238	187.7	5.5	**0.0549**	0.003	5.8	ug/L	0	Standard
>	Bi	209	247111.8	0.3				ug/L	276439	Standard

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	Na	23	38.3	30.1	**10.2279**	3.042	29.7	mg/L	2	Standard
	Mg	24	6067.9	4.9	**6.6715**	0.230	3.5	mg/L	37	Standard
	K	39	10.0	50.0	**0.2551**	0.311	121.9	mg/L	3	Standard
	Ca	43	71.7	10.7	**12.1598**	2.825	23.2	mg/L	43	Standard
	Fe	54	521.0	5.8	**0.1480**	0.010	6.7	mg/L	262	Standard
	Fe	57	190.0	7.9	**0.2595**	0.034	13.1	mg/L	65	Standard
>	**Sc-1**	45	24810.3	2.2				mg/L	26874	Standard
	Cl	35	154732.8	0.6				ug/L	141022	Standard
	Kr	83	89.0	6.3				ug/L	75	Standard
	Br	81	6781.5	4.3				ug/L	2810	Standard
	P	31	448037.4	1.7				ug/L	458976	Standard
	S	34	108821.1	0.4				ug/L	103378	Standard
	Sr	88	188.3	16.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	77.6	33.5				mg/L	10	Standard
	Ho-1	165	41.7	61.6				mg/L	8	Standard
	Er	166	50.0	69.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		92.051	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		92.000	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.299
	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	89.391
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311076316
Sample Date/Time: Monday, November 18, 2013 18:35:04
Number of Replicates: 3
Autosampler Position: 243
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	243855.3	1.5				ug/L	269614	Standard
	Be	9	48.3	29.9	**0.0019**	0.005	269.0	ug/L	23	Standard
	Al	27	3686926.5	1.7	**19.4261**	0.097	0.5	ug/L	1170	Standard
	Sc	45	24618.3	1.6				ug/L	26874	Standard
	Ti	47	263.3	59.9	**1.0505**	0.689	65.6	ug/L	25	Standard
	V	51	1530.7	7.8	**0.0570**	0.018	31.7	ug/L	1686	Standard
	Cr	52	5037.2	0.2	**0.1206**	0.002	1.3	ug/L	6098	Standard
	Cr	53	455.0	5.0	**0.2601**	0.020	7.6	ug/L	193	Standard
	Mn	55	205841.2	1.0	**16.6999**	0.207	1.2	ug/L	1232	Standard
	Co	59	595.0	1.9	**0.0547**	0.001	2.1	ug/L	106	Standard
	Ni	60	1841.4	1.3	**0.5373**	0.008	1.4	ug/L	556	Standard
	Cu	65	975.7	3.2	**0.3485**	0.014	4.1	ug/L	124	Standard
	Zn	66	6711.5	1.8	**4.9360**	0.108	2.2	ug/L	196	Standard
>	Ge	72	432617.3	0.3				ug/L	473313	Standard
	As	75	-53.5	102.3	**0.1715**	0.041	24.0	ug/L	-286	Standard
	Se	82	-31.6	64.3	**0.0682**	0.149	218.4	ug/L	-33	Standard
	Se-1	77	90.7	12.8	**0.1599**	0.115	71.7	ug/L	86	Standard
>	Ga	71	75.0	17.6				mg/L	35	Standard
	Rb	85	4173.9	3.6				ug/L	13	Standard
	Y	89	396723.5	0.6				ug/L	439493	Standard
>	Rh	103	26.7	21.7				ug/L	5	Standard
	Mo	98	456.2	6.6	**0.1141**	0.008	7.4	ug/L	10	Standard
	Ag	107	53.7	11.4	**-0.0060**	0.001	17.0	ug/L	53	Standard
	Cd	111	6.4	27.1	**0.0003**	0.001	257.1	mg/L	1	Standard
	Cd	114	26.5	88.0	**-0.0042**	0.005	110.9	ug/L	32	Standard
>	In	115	446919.2	0.1				ug/L	494305	Standard
	Sn	118	70.0	18.6	**0.0027**	0.011	397.5	ug/L	53	Standard
	Sb	123	147.6	9.1	**0.0601**	0.006	9.4	ug/L	7	Standard
	Ba	135	33734.5	0.5	**20.3524**	0.080	0.4	ug/L	11	Standard
	Ce	140	1108.4	24.3				ug/L	10	Standard
>	Tb	159	463123.3	0.7				ug/L	538219	Standard
	Ho	165	33.3	8.7				ug/L	8	Standard
	Tl	203	33.0	16.0	**0.0041**	0.001	25.5	ug/L	1	Standard
	Tl	205	43.3	26.6	**0.0059**	0.002	29.7	ug/L	3	Standard
	Pb	206	211.7	5.2	**0.0508**	0.005	9.1	ug/L	80	Standard
	Pb	207	159.3	6.9	**0.0454**	0.005	11.0	ug/L	73	Standard
	Pb	208	410.0	7.3	**0.0431**	0.006	15.0	ug/L	190	Standard
	U	238	158.3	5.7	**0.0463**	0.003	5.8	ug/L	0	Standard
>	Bi	209	245604.0	0.7				ug/L	276439	Standard

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	Na	23	51.7	24.4	**14.0956**	3.519	25.0	mg/L	2	Standard
	Mg	24	6306.3	2.1	**6.9939**	0.260	3.7	mg/L	37	Standard
	K	39	16.7	34.6	**0.6937**	0.384	55.4	mg/L	3	Standard
	Ca	43	68.3	15.2	**11.2167**	2.921	26.0	mg/L	43	Standard
	Fe	54	614.0	11.5	**0.1999**	0.040	20.1	mg/L	262	Standard
	Fe	57	238.3	9.9	**0.3534**	0.048	13.5	mg/L	65	Standard
>	**Sc-1**	45	24618.3	1.6				mg/L	26874	Standard
	Cl	35	152711.1	1.1				ug/L	141022	Standard
	Kr	83	100.7	21.1				ug/L	75	Standard
	Br	81	4080.6	5.1				ug/L	2810	Standard
	P	31	448924.0	3.0				ug/L	458976	Standard
	S	34	109803.2	1.5				ug/L	103378	Standard
	Sr	88	210.0	4.8				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	34.6	83.9				mg/L	10	Standard
	Ho-1	165	33.3	8.7				mg/L	8	Standard
	Er	166	43.3	13.3				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		90.446	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		91.402	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	90.414
|	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	88.846
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311063010
Sample Date/Time: Monday, November 18, 2013 18:38:09
Number of Replicates: 3
Autosampler Position: 244
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	215567.8	1.2				ug/L	269614	Standard
	Be	9	23.3	53.9	**-0.0062**	0.005	86.3	ug/L	23	Standard
	Al	27	885635.5	1.1	**5.2744**	0.112	2.1	ug/L	1170	Standard
	Sc	45	21737.2	1.2				ug/L	26874	Standard
	Ti	47	20.0	5.0	**-0.0003**	0.005	1460.4	ug/L	25	Standard
	V	51	-926.0	50.3	**-0.3449**	0.082	23.7	ug/L	1686	Standard
	Cr	52	4364.6	3.4	**0.1021**	0.025	24.2	ug/L	6098	Standard
	Cr	53	7278.4	4.6	**7.0638**	0.310	4.4	ug/L	193	Standard
	Mn	55	46795.2	1.0	**4.1788**	0.051	1.2	ug/L	1232	Standard
	Co	59	312.7	1.6	**0.0261**	0.001	2.8	ug/L	106	Standard
	Ni	60	956.4	2.1	**0.2312**	0.009	4.1	ug/L	556	Standard
	Cu	65	499.0	5.1	**0.1757**	0.012	7.0	ug/L	124	Standard
	Zn	66	15183.9	0.4	**12.9017**	0.079	0.6	ug/L	196	Standard
>	Ge	72	383543.2	0.3				ug/L	473313	Standard
	As	75	603.4	6.6	**0.7260**	0.035	4.8	ug/L	-286	Standard
	Se	82	325.5	9.2	**3.0046**	0.243	8.1	ug/L	-33	Standard
	Se-1	77	663.0	4.5	**6.7940**	0.312	4.6	ug/L	86	Standard
>	Ga	71	43.3	24.0				mg/L	35	Standard
	Rb	85	2388.5	0.8				ug/L	13	Standard
	Y	89	349525.9	1.1				ug/L	439493	Standard
>	Rh	103	51.7	43.6				ug/L	5	Standard
	Mo	98	3268.7	1.7	**1.0347**	0.013	1.2	ug/L	10	Standard
	Ag	107	43.0	18.2	**-0.0068**	0.001	21.7	ug/L	53	Standard
	Cd	111	20.7	31.6	**0.0090**	0.004	42.3	mg/L	1	Standard
	Cd	114	103.3	4.9	**0.0139**	0.001	8.6	ug/L	32	Standard
>	In	115	394384.4	0.5				ug/L	494305	Standard
	Sn	118	64.3	5.9	**0.0052**	0.003	64.8	ug/L	53	Standard
	Sb	123	97.5	7.5	**0.0446**	0.003	7.5	ug/L	7	Standard
	Ba	135	28175.2	0.8	**19.2619**	0.070	0.4	ug/L	11	Standard
	Ce	140	38.3	32.8				ug/L	10	Standard
>	Tb	159	419406.0	1.2				ug/L	538219	Standard
	Ho	165	3.3	173.2				ug/L	8	Standard
	Tl	203	44.3	46.2	**0.0072**	0.004	59.7	ug/L	1	Standard
	Tl	205	45.0	11.1	**0.0070**	0.001	12.4	ug/L	3	Standard
	Pb	206	109.0	20.2	**0.0119**	0.011	90.8	ug/L	80	Standard
	Pb	207	83.0	5.3	**0.0134**	0.002	17.8	ug/L	73	Standard
	Pb	208	212.0	11.4	**0.0090**	0.005	59.3	ug/L	190	Standard
	U	238	439.0	5.3	**0.1488**	0.008	5.5	ug/L	0	Standard
>	Bi	209	217961.2	0.2				ug/L	276439	Standard

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Na	23	10.0	50.0	**2.7631**	1.620	58.6	mg/L	2	Standard
Mg	24	62189.0	1.3	**78.4126**	1.434	1.8	mg/L	37	Standard
K	39	10.0	50.0	**0.3450**	0.357	103.4	mg/L	3	Standard
Ca	43	40.0	12.5	**3.9700**	1.685	42.4	mg/L	43	Standard
Fe	54	114.3	37.4	**-0.0576**	0.026	45.2	mg/L	262	Standard
Fe	57	113.3	9.2	**0.1454**	0.019	13.2	mg/L	65	Standard
> **Sc-1**	45	21737.2	1.2				mg/L	26874	Standard
Cl	35	147526.9	2.0				ug/L	141022	Standard
Kr	83	89.0	3.4				ug/L	75	Standard
Br	81	63753.9	2.8				ug/L	2810	Standard
P	31	195224.7	0.9				ug/L	458976	Standard
S	34	108070.8	1.3				ug/L	103378	Standard
Sr	88	255.0	13.7				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.2	173.2				mg/L	10	Standard
Ho-1	165	3.3	173.2				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		79.954	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		81.034	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	79.786
	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	78.846
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 18:41:16
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	241787.8	2.0				ug/L	269614	Standard
	Be	9	134637.5	2.5	**50.5711**	0.903	1.8	ug/L	23	Standard
	Al	27	8602991.7	1.4	**45.7335**	0.747	1.6	ug/L	1170	Standard
	Sc	45	24531.5	1.3				ug/L	26874	Standard
	Ti	47	23837.1	1.6	**103.9312**	1.326	1.3	ug/L	25	Standard
	V	51	303283.3	1.4	**47.1605**	0.637	1.4	ug/L	1686	Standard
	Cr	52	295857.0	0.5	**46.9922**	0.339	0.7	ug/L	6098	Standard
	Cr	53	55148.5	0.8	**48.2388**	0.196	0.4	ug/L	193	Standard
	Mn	55	602498.8	2.2	**49.1332**	0.823	1.7	ug/L	1232	Standard
	Co	59	399574.9	1.0	**47.0102**	0.281	0.6	ug/L	106	Standard
	Ni	60	121277.1	0.8	**48.4496**	0.196	0.4	ug/L	556	Standard
	Cu	65	118189.5	1.0	**49.3980**	0.347	0.7	ug/L	124	Standard
	Zn	66	65979.0	0.7	**50.2531**	0.421	0.8	ug/L	196	Standard
>	Ge	72	432724.4	0.6				ug/L	473313	Standard
	As	75	65984.9	0.4	**50.0445**	0.091	0.2	ug/L	-286	Standard
	Se	82	6677.5	3.0	**49.4679**	1.219	2.5	ug/L	-33	Standard
	Se-1	77	4953.1	1.2	**49.2365**	0.341	0.7	ug/L	86	Standard
>	Ga	71	61.7	32.8				mg/L	35	Standard
	Rb	85	1040.0	7.7				ug/L	13	Standard
	Y	89	401706.1	1.4				ug/L	439493	Standard
>	Rh	103	23.3	32.7				ug/L	5	Standard
	Mo	98	365396.1	0.4	**103.2545**	0.518	0.5	ug/L	10	Standard
	Ag	107	312911.9	0.6	**52.2306**	0.295	0.6	ug/L	53	Standard
	Cd	111	99242.6	1.4	**49.9257**	0.615	1.2	mg/L	1	Standard
	Cd	114	253117.2	1.3	**50.3105**	0.813	1.6	ug/L	32	Standard
>	In	115	448241.9	0.5				ug/L	494305	Standard
	Sn	118	61082.2	0.5	**51.4168**	0.241	0.5	ug/L	53	Standard
	Sb	123	119941.0	0.5	**49.8786**	0.079	0.2	ug/L	7	Standard
	Ba	135	83750.2	1.0	**50.3967**	0.437	0.9	ug/L	11	Standard
	Ce	140	46.7	12.4				ug/L	10	Standard
>	Tb	159	461235.7	2.2				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	262484.5	0.5	**49.2220**	0.327	0.7	ug/L	1	Standard
	Tl	205	335815.9	0.8	**50.9985**	0.154	0.3	ug/L	3	Standard
	Pb	206	119527.4	1.9	**52.2331**	0.586	1.1	ug/L	80	Standard
	Pb	207	106362.7	0.5	**51.6010**	0.519	1.0	ug/L	73	Standard
	Pb	208	243432.9	0.6	**48.2516**	0.221	0.5	ug/L	190	Standard
	U	238	157981.1	1.1	**48.0451**	0.117	0.2	ug/L	0	Standard
>	Bi	209	245888.9	0.8				ug/L	276439	Standard

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	Na	23	28.3	10.2	**7.5715**	0.853	11.3	mg/L	2	Standard
	Mg	24	4614.0	3.2	**5.1253**	0.176	3.4	mg/L	37	Standard
	K	39	68.3	36.8	**4.0165**	1.590	39.6	mg/L	3	Standard
	Ca	43	50.0	20.0	**5.4970**	3.031	55.1	mg/L	43	Standard
	Fe	54	11100.3	0.9	**5.7899**	0.025	0.4	mg/L	262	Standard
	Fe	57	3102.0	0.2	**5.7803**	0.077	1.3	mg/L	65	Standard
>	**Sc-1**	45	24531.5	1.3				mg/L	26874	Standard
	Cl	35	143796.5	0.5				ug/L	141022	Standard
	Kr	83	85.7	12.6				ug/L	75	Standard
	Br	81	2793.6	13.1				ug/L	2810	Standard
	P	31	487472.7	0.2				ug/L	458976	Standard
	S	34	134297.6	0.9				ug/L	103378	Standard
	Sr	88	56.7	36.7				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	12.5	48.3				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	8	Standard
	Er	166	16.7	34.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		89.679	
	Be	9	101.142		
	Al	27	91.467		
	Sc	45			
	Ti	47	103.931		
	V	51	94.321		
	Cr	52	93.984		
	Cr	53			
	Mn	55	98.266		
	Co	59	94.020		
	Ni	60	96.899		
	Cu	65	98.796		
	Zn	66	100.506		
>	Ge	72		91.425	
	As	75	100.089		
	Se	82	98.936		
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	103.254	
	Ag	107	104.461	
	Cd	111	99.851	
	Cd	114		
>	In	115		90.681
	Sn	118	102.834	
	Sb	123	99.757	
	Ba	135	100.793	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.444	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.503	
	U	238	96.090	
>	Bi	209		88.949
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 18:44:21
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	242609.1	2.0				ug/L	269614	Standard
	Be	9	85.0	40.8	**0.0157**	0.013	80.7	ug/L	23	Standard
	Al	27	7105.2	131.2	**0.0303**	0.049	161.1	ug/L	1170	Standard
	Sc	45	24369.6	0.4				ug/L	26874	Standard
	Ti	47	17.0	41.2	**-0.0243**	0.031	125.9	ug/L	25	Standard
	V	51	953.3	7.2	**-0.0325**	0.011	32.4	ug/L	1686	Standard
	Cr	52	3338.7	1.3	**-0.1508**	0.008	5.1	ug/L	6098	Standard
	Cr	53	195.0	24.5	**0.0327**	0.042	127.9	ug/L	193	Standard
	Mn	55	992.7	13.0	**-0.0576**	0.011	18.3	ug/L	1232	Standard
	Co	59	91.3	24.6	**-0.0046**	0.003	57.8	ug/L	106	Standard
	Ni	60	372.3	11.8	**-0.0516**	0.017	33.9	ug/L	556	Standard
	Cu	65	164.0	14.8	**0.0090**	0.010	112.0	ug/L	124	Standard
	Zn	66	423.7	9.2	**0.1282**	0.030	23.0	ug/L	196	Standard
>	**Ge**	72	430710.8	0.1				ug/L	473313	Standard
	As	75	-231.4	6.3	**0.0363**	0.011	29.5	ug/L	-286	Standard
	Se	82	-41.9	13.5	**-0.0089**	0.042	476.5	ug/L	-33	Standard
	Se-1	77	78.3	11.6	**0.0390**	0.091	234.3	ug/L	86	Standard
>	**Ga**	71	18.3	31.5				mg/L	35	Standard
	Rb	85	16.7	34.6				ug/L	13	Standard
	Y	89	404420.6	1.7				ug/L	439493	Standard
>	**Rh**	103	5.0	100.0				ug/L	5	Standard
	Mo	98	79.9	46.6	**0.0072**	0.010	144.4	ug/L	10	Standard
	Ag	107	71.0	35.2	**-0.0032**	0.004	126.3	ug/L	53	Standard
	Cd	111	13.9	107.0	**0.0040**	0.007	183.7	mg/L	1	Standard
	Cd	114	39.9	126.2	**-0.0016**	0.010	606.7	ug/L	32	Standard
>	**In**	115	452296.1	0.4				ug/L	494305	Standard
	Sn	118	67.7	16.3	**0.0001**	0.009	11620.8	ug/L	53	Standard
	Sb	123	289.2	44.9	**0.1175**	0.053	45.0	ug/L	7	Standard
	Ba	135	27.3	106.8	**0.0037**	0.017	462.4	ug/L	11	Standard
	Ce	140	15.0	33.3				ug/L	10	Standard
>	**Tb**	159	464981.1	1.3				ug/L	538219	Standard
	Ho	165	3.3	86.6				ug/L	8	Standard
	Tl	203	36.3	86.9	**0.0045**	0.006	127.6	ug/L	1	Standard
	Tl	205	156.7	119.0	**0.0226**	0.028	122.4	ug/L	3	Standard
	Pb	206	91.3	23.6	**-0.0027**	0.009	338.5	ug/L	80	Standard
	Pb	207	81.3	20.9	**0.0067**	0.008	120.6	ug/L	73	Standard
	Pb	208	291.0	68.0	**0.0182**	0.038	211.0	ug/L	190	Standard
	U	238	71.7	118.9	**0.0195**	0.025	130.1	ug/L	0	Standard
>	**Bi**	209	250644.8	0.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	63.3	51.4	**0.0394**	0.037	93.0	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	20.0	43.3	**-3.9392**	2.793	70.9	mg/L	43	Standard
Fe	54	274.4	11.9	**0.0208**	0.018	86.8	mg/L	262	Standard
Fe	57	61.7	12.4	**0.0208**	0.014	69.1	mg/L	65	Standard
Sc-1	45	24369.6	0.4				mg/L	26874	Standard
Cl	35	141705.6	0.9				ug/L	141022	Standard
Kr	83	88.3	13.6				ug/L	75	Standard
Br	81	2280.2	10.4				ug/L	2810	Standard
P	31	477190.6	1.4				ug/L	458976	Standard
S	34	128724.9	3.5				ug/L	103378	Standard
Sr	88	38.3	30.1				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	-0.2	173.2				mg/L	10	Standard
Ho-1	165	3.3	86.6				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		89.984	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		90.999	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.501
	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	90.669
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: PBS 24 WG452353-02
Sample Date/Time: Monday, November 18, 2013 18:47:27
Number of Replicates: 3
Autosampler Position: 301
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	247610.2	0.4				ug/L	269614	Standard
	Be	9	38.3	52.7	**-0.0020**	0.007	366.7	ug/L	23	Standard
	Al	27	7962.1	6.2	**0.0342**	0.003	7.5	ug/L	1170	Standard
	Sc	45	24291.1	2.3				ug/L	26874	Standard
	Ti	47	18.3	17.5	**-0.0195**	0.014	71.8	ug/L	25	Standard
	V	51	985.3	5.2	**-0.0295**	0.008	26.8	ug/L	1686	Standard
	Cr	52	3604.1	2.1	**-0.1156**	0.013	11.3	ug/L	6098	Standard
	Cr	53	231.7	7.6	**0.0623**	0.016	25.6	ug/L	193	Standard
	Mn	55	1598.8	3.5	**-0.0095**	0.004	39.0	ug/L	1232	Standard
	Co	59	73.0	13.9	**-0.0069**	0.001	16.9	ug/L	106	Standard
	Ni	60	467.7	6.2	**-0.0156**	0.012	76.4	ug/L	556	Standard
	Cu	65	328.0	2.9	**0.0761**	0.003	3.9	ug/L	124	Standard
	Zn	66	2727.6	1.2	**1.8704**	0.031	1.6	ug/L	196	Standard
>	**Ge**	72	436506.4	0.8				ug/L	473313	Standard
	As	75	-231.0	16.7	**0.0391**	0.027	70.1	ug/L	-286	Standard
	Se	82	-33.0	22.8	**0.0602**	0.053	88.4	ug/L	-33	Standard
	Se-1	77	75.0	9.3	**-0.0050**	0.067	1341.9	ug/L	86	Standard
>	**Ga**	71	28.3	10.2				mg/L	35	Standard
	Rb	85	31.7	39.7				ug/L	13	Standard
	Y	89	404108.3	0.7				ug/L	439493	Standard
>	**Rh**	103	5.0	100.0				ug/L	5	Standard
	Mo	98	40.4	14.5	**-0.0039**	0.002	44.1	ug/L	10	Standard
	Ag	107	58.7	15.5	**-0.0053**	0.002	29.3	ug/L	53	Standard
	Cd	111	4.0	43.7	**-0.0009**	0.001	94.3	mg/L	1	Standard
	Cd	114	18.0	27.0	**-0.0059**	0.001	15.6	ug/L	32	Standard
>	**In**	115	454307.1	0.9				ug/L	494305	Standard
	Sn	118	74.3	7.4	**0.0054**	0.004	77.6	ug/L	53	Standard
	Sb	123	143.5	5.7	**0.0574**	0.004	6.5	ug/L	7	Standard
	Ba	135	50.7	16.1	**0.0176**	0.005	28.1	ug/L	11	Standard
	Ce	140	40.0	69.6				ug/L	10	Standard
>	**Tb**	159	469242.7	1.2				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	7.0	14.3	**-0.0009**	0.000	21.6	ug/L	1	Standard
	Tl	205	11.7	107.9	**0.0011**	0.002	178.2	ug/L	3	Standard
	Pb	206	122.3	14.5	**0.0105**	0.008	71.6	ug/L	80	Standard
	Pb	207	112.7	4.2	**0.0215**	0.002	10.2	ug/L	73	Standard
	Pb	208	268.7	4.1	**0.0138**	0.002	15.9	ug/L	190	Standard
	U	238	3.3	105.4	**-0.0009**	0.001	120.2	ug/L	0	Standard
>	**Bi**	209	250890.2	0.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	48.3	26.0	**0.0228**	0.015	66.1	mg/L	37	Standard
K	39	1.7	173.2	**-0.2748**	0.184	67.1	mg/L	3	Standard
Ca	43	10.0	50.0	**-7.1161**	1.606	22.6	mg/L	43	Standard
Fe	54	334.3	7.9	**0.0533**	0.011	20.5	mg/L	262	Standard
Fe	57	75.0	17.6	**0.0469**	0.027	57.1	mg/L	65	Standard
> **Sc-1**	45	24291.1	2.3				mg/L	26874	Standard
Cl	35	137511.9	0.4				ug/L	141022	Standard
Kr	83	85.7	7.6				ug/L	75	Standard
Br	81	2563.6	4.6				ug/L	2810	Standard
P	31	461637.6	2.2				ug/L	458976	Standard
S	34	120574.6	1.2				ug/L	103378	Standard
Sr	88	50.0	20.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.0	200.7				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.839	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.224	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.908
	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	90.758
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBS 24 WG452353-02
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Method 6020 - Summary Report

Sample ID: LCSS 24 WG452353-03
Sample Date/Time: Monday, November 18, 2013 18:50:31
Number of Replicates: 3
Autosampler Position: 302
Sample Description: 1
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	249060.6	1.4				ug/L	269614	Standard
	Be	9	71198.6	2.7	**25.9512**	0.430	1.7	ug/L	23	Standard
	Al	27	9206.1	2.9	**0.0404**	0.001	3.3	ug/L	1170	Standard
	Sc	45	25227.7	2.8				ug/L	26874	Standard
	Ti	47	23.7	23.3	**0.0025**	0.022	874.4	ug/L	25	Standard
	V	51	160749.2	0.7	**24.4901**	0.476	1.9	ug/L	1686	Standard
	Cr	52	158185.2	1.4	**24.3719**	0.245	1.0	ug/L	6098	Standard
	Cr	53	29198.1	1.4	**25.0460**	0.637	2.5	ug/L	193	Standard
	Mn	55	321284.0	1.4	**25.6927**	0.264	1.0	ug/L	1232	Standard
	Co	59	213131.3	0.9	**24.6462**	0.377	1.5	ug/L	106	Standard
	Ni	60	63905.5	0.4	**25.0032**	0.294	1.2	ug/L	556	Standard
	Cu	65	63100.8	0.7	**25.9001**	0.204	0.8	ug/L	124	Standard
	Zn	66	34531.0	0.3	**25.7630**	0.444	1.7	ug/L	196	Standard
>	Ge	72	440179.6	1.4				ug/L	473313	Standard
	As	75	33666.1	1.0	**25.2075**	0.179	0.7	ug/L	-286	Standard
	Se	82	3415.8	1.5	**25.0292**	0.321	1.3	ug/L	-33	Standard
	Se-1	77	2529.2	2.0	**24.3474**	0.824	3.4	ug/L	86	Standard
>	Ga	71	38.3	15.1				mg/L	35	Standard
	Rb	85	76.7	19.9				ug/L	13	Standard
	Y	89	413472.4	2.1				ug/L	439493	Standard
>	Rh	103	10.0	50.0				ug/L	5	Standard
	Mo	98	50.2	19.5	**-0.0014**	0.003	183.3	ug/L	10	Standard
	Ag	107	166430.1	0.9	**26.9389**	0.192	0.7	ug/L	53	Standard
	Cd	111	50591.9	1.0	**24.6859**	0.186	0.8	mg/L	1	Standard
	Cd	114	125806.4	0.8	**24.2497**	0.229	0.9	ug/L	32	Standard
>	In	115	462108.8	0.3				ug/L	494305	Standard
	Sn	118	77.0	7.9	**0.0065**	0.005	78.2	ug/L	53	Standard
	Sb	123	62238.9	0.7	**25.1051**	0.147	0.6	ug/L	7	Standard
	Ba	135	43458.6	0.9	**25.3609**	0.299	1.2	ug/L	11	Standard
	Ce	140	171.7	17.1				ug/L	10	Standard
>	Tb	159	473130.7	1.0				ug/L	538219	Standard
	Ho	165	0.0					ug/L	8	Standard
	Tl	203	139418.9	0.6	**25.1590**	0.227	0.9	ug/L	1	Standard
	Tl	205	181011.6	1.5	**26.4574**	0.629	2.4	ug/L	3	Standard
	Pb	206	65274.0	0.7	**27.4329**	0.196	0.7	ug/L	80	Standard
	Pb	207	55921.7	0.8	**26.0938**	0.443	1.7	ug/L	73	Standard
	Pb	208	129270.0	0.3	**24.6406**	0.284	1.2	ug/L	190	Standard
	U	238	80149.5	1.4	**23.4598**	0.543	2.3	ug/L	0	Standard
>	Bi	209	255511.9	1.0				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	58.3	44.0	**0.0316**	0.028	90.1	mg/L	37	Standard
K	39	6.7	114.6	**0.0300**	0.463	1542.5	mg/L	3	Standard
Ca	43	15.0	33.3	**-5.7101**	1.530	26.8	mg/L	43	Standard
Fe	54	347.6	12.0	**0.0536**	0.021	38.7	mg/L	262	Standard
Fe	57	75.0	24.0	**0.0418**	0.036	85.9	mg/L	65	Standard
> **Sc-1**	45	25227.7	2.8				mg/L	26874	Standard
Cl	35	137416.4	0.8				ug/L	141022	Standard
Kr	83	96.3	7.4				ug/L	75	Standard
Br	81	3220.3	1.9				ug/L	2810	Standard
P	31	460720.5	1.2				ug/L	458976	Standard
S	34	117729.0	0.6				ug/L	103378	Standard
Sr	88	55.0	45.5				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	19.7	53.3				mg/L	10	Standard
Ho-1	165	0.0					mg/L	8	Standard
Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		92.377	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.000	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	93.486
	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	92.430
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039802
Sample Date/Time: Monday, November 18, 2013 18:53:36
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	223339.2	1.2				ug/L	269614	Standard
	Be	9	81.7	34.8	**0.0171**	0.011	67.0	ug/L	23	Standard
	Al	27	91374.1	7.7	**0.5186**	0.036	7.0	ug/L	1170	Standard
	Sc	45	21602.1	2.6				ug/L	26874	Standard
	Ti	47	154.0	8.1	**0.6381**	0.056	8.8	ug/L	25	Standard
	V	51	3012.0	2.8	**0.3337**	0.017	5.0	ug/L	1686	Standard
	Cr	52	4996.2	0.7	**0.1916**	0.007	3.6	ug/L	6098	Standard
	Cr	53	493.3	14.8	**0.3353**	0.068	20.4	ug/L	193	Standard
	Mn	55	99372.5	1.7	**8.7741**	0.184	2.1	ug/L	1232	Standard
	Co	59	1723.8	3.2	**0.2071**	0.008	4.0	ug/L	106	Standard
	Ni	60	1072.0	5.2	**0.2701**	0.026	9.6	ug/L	556	Standard
	Cu	65	771.0	3.6	**0.2940**	0.015	5.0	ug/L	124	Standard
	Zn	66	3029.3	1.6	**2.3430**	0.045	1.9	ug/L	196	Standard
>	**Ge**	72	394579.6	0.6				ug/L	473313	Standard
	As	75	-183.1	20.1	**0.0602**	0.031	51.5	ug/L	-286	Standard
	Se	82	-33.8	32.3	**0.0278**	0.089	319.1	ug/L	-33	Standard
	Se-1	77	68.3	12.2	**0.0008**	0.089	10572.0	ug/L	86	Standard
>	**Ga**	71	265.0	11.3				mg/L	35	Standard
	Rb	85	3397.0	7.3				ug/L	13	Standard
	Y	89	369144.6	0.8				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	12.4	32.5	**-0.0114**	0.001	11.0	ug/L	10	Standard
	Ag	107	88.7	25.6	**0.0012**	0.004	346.9	ug/L	53	Standard
	Cd	111	26.0	24.0	**0.0114**	0.003	30.0	mg/L	1	Standard
	Cd	114	92.0	11.3	**0.0105**	0.002	21.5	ug/L	32	Standard
>	**In**	115	410319.4	0.2				ug/L	494305	Standard
	Sn	118	51.0	5.9	**-0.0095**	0.003	30.0	ug/L	53	Standard
	Sb	123	85.9	7.3	**0.0375**	0.003	7.5	ug/L	7	Standard
	Ba	135	3144.3	2.1	**2.0549**	0.041	2.0	ug/L	11	Standard
	Ce	140	10678.8	1.8				ug/L	10	Standard
>	**Tb**	159	417675.4	0.4				ug/L	538219	Standard
	Ho	165	173.3	24.5				ug/L	8	Standard
	Tl	203	26.3	11.6	**0.0030**	0.001	20.9	ug/L	1	Standard
	Tl	205	61.7	131.1	**0.0092**	0.013	141.6	ug/L	3	Standard
	Pb	206	963.0	1.6	**0.3986**	0.003	0.7	ug/L	80	Standard
	Pb	207	813.7	4.1	**0.3810**	0.014	3.7	ug/L	73	Standard
	Pb	208	2063.4	5.1	**0.3898**	0.025	6.4	ug/L	190	Standard
	U	238	60.0	83.7	**0.0173**	0.016	94.0	ug/L	0	Standard
>	**Bi**	209	235094.7	1.2				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0937**	0.903	963.7	mg/L	2	Standard
Mg	24	46.7	37.6	**0.0272**	0.022	80.0	mg/L	37	Standard
K	39	5.0	173.2	**-0.0238**	0.619	2603.7	mg/L	3	Standard
Ca	43	20.0	25.0	**-3.1070**	1.943	62.5	mg/L	43	Standard
Fe	54	435.6	7.0	**0.1371**	0.017	12.1	mg/L	262	Standard
Fe	57	173.3	6.0	**0.2762**	0.021	7.6	mg/L	65	Standard
> **Sc-1**	45	21602.1	2.6				mg/L	26874	Standard
Cl	35	124604.5	2.7				ug/L	141022	Standard
Kr	83	80.3	6.1				ug/L	75	Standard
Br	81	1986.8	5.9				ug/L	2810	Standard
P	31	149415.0	2.3				ug/L	458976	Standard
S	34	113387.7	1.0				ug/L	103378	Standard
Sr	88	25.0	91.7				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	249.3	35.6				mg/L	10	Standard
Ho-1	165	173.3	24.5				mg/L	8	Standard
Er	166	223.3	14.4				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		82.837	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		83.365	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.009
	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	85.044
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039803
Sample Date/Time: Monday, November 18, 2013 18:56:41
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	221409.9	2.3				ug/L	269614	Standard
	Be	9	38.3	15.1	**-0.0004**	0.002	533.3	ug/L	23	Standard
	Al	27	123170.4	2.2	**0.7084**	0.031	4.4	ug/L	1170	Standard
	Sc	45	22159.5	4.4				ug/L	26874	Standard
	Ti	47	1581.4	4.3	**7.4848**	0.268	3.6	ug/L	25	Standard
	V	51	4528.8	1.1	**0.5949**	0.005	0.9	ug/L	1686	Standard
	Cr	52	16530.7	3.7	**2.2361**	0.087	3.9	ug/L	6098	Standard
	Cr	53	2646.9	0.2	**2.4127**	0.023	1.0	ug/L	193	Standard
	Mn	55	372064.3	4.7	**33.2950**	1.294	3.9	ug/L	1232	Standard
	Co	59	2984.0	5.3	**0.3705**	0.018	5.0	ug/L	106	Standard
	Ni	60	8145.2	2.7	**3.3892**	0.085	2.5	ug/L	556	Standard
	Cu	65	57397.0	4.6	**26.3321**	1.045	4.0	ug/L	124	Standard
	Zn	66	121967.0	3.4	**102.2823**	2.752	2.7	ug/L	196	Standard
>	Ge	72	393751.0	0.9				ug/L	473313	Standard
	As	75	187.9	29.1	**0.3675**	0.044	11.9	ug/L	-286	Standard
	Se	82	-42.4	29.5	**-0.0428**	0.104	242.4	ug/L	-33	Standard
	Se-1	77	73.3	21.9	**0.0575**	0.175	303.7	ug/L	86	Standard
>	Ga	71	786.7	9.9				mg/L	35	Standard
	Rb	85	2006.8	2.9				ug/L	13	Standard
	Y	89	364738.4	1.3				ug/L	439493	Standard
>	Rh	103	15.0	33.3				ug/L	5	Standard
	Mo	98	1991.7	3.9	**0.5981**	0.026	4.4	ug/L	10	Standard
	Ag	107	5101.2	4.7	**0.9130**	0.048	5.2	ug/L	53	Standard
	Cd	111	3475.1	4.2	**1.9021**	0.090	4.7	mg/L	1	Standard
	Cd	114	9104.9	3.9	**1.9627**	0.089	4.6	ug/L	32	Standard
>	In	115	411464.5	0.6				ug/L	494305	Standard
	Sn	118	1474.4	2.4	**1.2971**	0.031	2.4	ug/L	53	Standard
	Sb	123	243.8	6.8	**0.1090**	0.008	7.5	ug/L	7	Standard
	Ba	135	26035.4	4.1	**17.0612**	0.769	4.5	ug/L	11	Standard
	Ce	140	8545.7	3.7				ug/L	10	Standard
>	Tb	159	424141.4	0.6				ug/L	538219	Standard
	Ho	165	85.0	15.6				ug/L	8	Standard
	Tl	203	18.3	69.3	**0.0015**	0.003	171.4	ug/L	1	Standard
	Tl	205	20.0	25.0	**0.0025**	0.001	31.8	ug/L	3	Standard
	Pb	206	109816.2	3.7	**50.4446**	1.458	2.9	ug/L	80	Standard
	Pb	207	93311.7	3.7	**47.5798**	1.426	3.0	ug/L	73	Standard
	Pb	208	221734.8	3.7	**46.1971**	1.426	3.1	ug/L	190	Standard
	U	238	33.0	3.0	**0.0087**	0.000	4.7	ug/L	0	Standard
>	Bi	209	233894.9	1.0				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.1200**	0.949	790.6	mg/L	2	Standard
Mg	24	63.3	22.8	**0.0464**	0.017	36.3	mg/L	37	Standard
K	39	3.3	173.2	**-0.1510**	0.399	264.1	mg/L	3	Standard
Ca	43	25.0	0.0	**-1.5453**	0.391	25.3	mg/L	43	Standard
Fe	54	3405.8	3.2	**1.8850**	0.090	4.8	mg/L	262	Standard
Fe	57	971.7	11.7	**1.9461**	0.276	14.2	mg/L	65	Standard
Sc-1	45	22159.5	4.4				mg/L	26874	Standard
Cl	35	127747.0	0.9				ug/L	141022	Standard
Kr	83	95.0	11.6				ug/L	75	Standard
Br	81	2290.2	14.5				ug/L	2810	Standard
P	31	152227.9	2.6				ug/L	458976	Standard
S	34	120527.6	1.6				ug/L	103378	Standard
Sr	88	45.0	33.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	126.7	18.2				mg/L	0	Standard
Dy	164	192.0	13.8				mg/L	10	Standard
Ho-1	165	85.0	15.6				mg/L	8	Standard
Er	166	96.7	41.8				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		82.121	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		83.190	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.241
	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	84.610
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311039804
Sample Date/Time: Monday, November 18, 2013 18:59:46
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	216416.3	0.7				ug/L	269614	Standard
	Be	9	41.7	18.3	**0.0014**	0.003	221.4	ug/L	23	Standard
	Al	27	193458.9	0.3	**1.1419**	0.010	0.9	ug/L	1170	Standard
	Sc	45	22555.1	2.9				ug/L	26874	Standard
	Ti	47	1699.4	1.0	**7.9250**	0.118	1.5	ug/L	25	Standard
	V	51	4092.3	6.2	**0.5091**	0.043	8.5	ug/L	1686	Standard
	Cr	52	34370.6	2.0	**5.3012**	0.126	2.4	ug/L	6098	Standard
	Cr	53	6276.3	6.5	**5.8158**	0.360	6.2	ug/L	193	Standard
	Mn	55	233323.2	1.9	**20.5035**	0.347	1.7	ug/L	1232	Standard
	Co	59	2377.9	3.8	**0.2873**	0.011	3.7	ug/L	106	Standard
	Ni	60	5906.5	1.4	**2.3618**	0.048	2.0	ug/L	556	Standard
	Cu	65	40679.5	0.5	**18.3553**	0.017	0.1	ug/L	124	Standard
	Zn	66	68519.2	0.4	**56.4802**	0.213	0.4	ug/L	196	Standard
>	**Ge**	72	400007.2	0.5				ug/L	473313	Standard
	As	75	157.2	12.6	**0.3404**	0.017	4.9	ug/L	-286	Standard
	Se	82	-35.2	12.7	**0.0207**	0.034	166.2	ug/L	-33	Standard
	Se-1	77	62.7	14.3	**-0.0712**	0.096	134.7	ug/L	86	Standard
>	**Ga**	71	686.7	2.8				mg/L	35	Standard
	Rb	85	2211.8	2.6				ug/L	13	Standard
	Y	89	370529.4	0.8				ug/L	439493	Standard
>	**Rh**	103	13.3	57.3				ug/L	5	Standard
	Mo	98	574.1	2.0	**0.1591**	0.004	2.4	ug/L	10	Standard
	Ag	107	5948.5	1.6	**1.0521**	0.007	0.7	ug/L	53	Standard
	Cd	111	3907.1	3.7	**2.1092**	0.081	3.8	mg/L	1	Standard
	Cd	114	9902.4	1.2	**2.1058**	0.035	1.6	ug/L	32	Standard
>	**In**	115	417189.1	0.9				ug/L	494305	Standard
	Sn	118	839.7	4.8	**0.7037**	0.029	4.2	ug/L	53	Standard
	Sb	123	170.5	5.4	**0.0747**	0.003	4.7	ug/L	7	Standard
	Ba	135	21430.8	1.1	**13.8471**	0.118	0.9	ug/L	11	Standard
	Ce	140	8090.5	4.5				ug/L	10	Standard
>	**Tb**	159	426189.4	0.6				ug/L	538219	Standard
	Ho	165	103.3	11.2				ug/L	8	Standard
	Tl	203	21.0	66.0	**0.0020**	0.003	138.6	ug/L	1	Standard
	Tl	205	11.7	137.8	**0.0012**	0.003	218.2	ug/L	3	Standard
	Pb	206	121388.4	1.6	**55.5051**	0.428	0.8	ug/L	80	Standard
	Pb	207	102205.9	1.4	**51.8761**	0.461	0.9	ug/L	73	Standard
	Pb	208	242164.2	1.2	**50.2226**	0.475	0.9	ug/L	190	Standard
	U	238	33.0	18.4	**0.0086**	0.002	23.4	ug/L	0	Standard
>	**Bi**	209	235012.0	0.9				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0974**	0.909	933.8	mg/L	2	Standard
Mg	24	48.3	21.5	**0.0271**	0.014	52.7	mg/L	37	Standard
K	39	5.0	100.0	**-0.0261**	0.353	1352.8	mg/L	3	Standard
Ca	43	18.3	56.8	**-4.0101**	3.611	90.0	mg/L	43	Standard
Fe	54	1729.6	5.4	**0.8759**	0.038	4.4	mg/L	262	Standard
Fe	57	530.0	9.8	**0.9939**	0.076	7.7	mg/L	65	Standard
> **Sc-1**	45	22555.1	2.9				mg/L	26874	Standard
Cl	35	126612.9	1.2				ug/L	141022	Standard
Kr	83	87.7	4.3				ug/L	75	Standard
Br	81	1976.8	10.7				ug/L	2810	Standard
P	31	151493.8	2.1				ug/L	458976	Standard
S	34	117283.9	1.4				ug/L	103378	Standard
Sr	88	51.7	48.7				ug/L	30	Standard
C	12	6.7	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	103.3	5.6				mg/L	0	Standard
Dy	164	139.5	14.8				mg/L	10	Standard
Ho-1	165	103.3	11.2				mg/L	8	Standard
Er	166	150.0	11.5				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		80.269	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.512	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	84.399
|	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	85.014
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039805
Sample Date/Time: Monday, November 18, 2013 19:02:50
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	223053.3	1.2				ug/L	269614	Standard
	Be	9	53.3	23.6	**0.0056**	0.005	89.0	ug/L	23	Standard
	Al	27	140414.3	1.1	**0.8022**	0.018	2.3	ug/L	1170	Standard
	Sc	45	21887.5	1.6				ug/L	26874	Standard
	Ti	47	1123.4	3.7	**5.2738**	0.220	4.2	ug/L	25	Standard
	V	51	2649.6	3.3	**0.2712**	0.014	5.1	ug/L	1686	Standard
	Cr	52	19386.1	0.5	**2.7321**	0.026	0.9	ug/L	6098	Standard
	Cr	53	3493.7	5.3	**3.2195**	0.190	5.9	ug/L	193	Standard
	Mn	55	307835.6	1.1	**27.4475**	0.368	1.3	ug/L	1232	Standard
	Co	59	2157.5	2.0	**0.2628**	0.006	2.2	ug/L	106	Standard
	Ni	60	5537.0	0.9	**2.2323**	0.024	1.1	ug/L	556	Standard
	Cu	65	81662.8	1.3	**37.3855**	0.600	1.6	ug/L	124	Standard
	Zn	66	76420.6	0.8	**63.8313**	0.750	1.2	ug/L	196	Standard
>	Ge	72	394921.6	0.4				ug/L	473313	Standard
	As	75	219.2	9.7	**0.3933**	0.018	4.5	ug/L	-286	Standard
	Se	82	-33.5	1.8	**0.0305**	0.005	17.1	ug/L	-33	Standard
	Se-1	77	63.3	4.8	**-0.0548**	0.036	65.7	ug/L	86	Standard
>	Ga	71	606.7	1.3				mg/L	35	Standard
	Rb	85	1600.1	6.5				ug/L	13	Standard
	Y	89	362428.6	0.6				ug/L	439493	Standard
>	Rh	103	23.3	86.6				ug/L	5	Standard
	Mo	98	1305.6	1.2	**0.3837**	0.007	1.9	ug/L	10	Standard
	Ag	107	1269.4	2.3	**0.2141**	0.007	3.1	ug/L	53	Standard
	Cd	111	3475.7	2.6	**1.8874**	0.054	2.9	mg/L	1	Standard
	Cd	114	8703.2	0.2	**1.8608**	0.009	0.5	ug/L	32	Standard
>	In	115	414677.3	0.6				ug/L	494305	Standard
	Sn	118	1402.7	1.5	**1.2214**	0.025	2.1	ug/L	53	Standard
	Sb	123	219.9	2.5	**0.0973**	0.002	1.9	ug/L	7	Standard
	Ba	135	20658.7	0.6	**13.4285**	0.005	0.0	ug/L	11	Standard
	Ce	140	6227.9	2.6				ug/L	10	Standard
>	Tb	159	423227.8	2.0				ug/L	538219	Standard
	Ho	165	66.7	8.7				ug/L	8	Standard
	Tl	203	10.7	35.5	**-0.0001**	0.001	1174.5	ug/L	1	Standard
	Tl	205	10.0	50.0	**0.0009**	0.001	88.3	ug/L	3	Standard
	Pb	206	102808.6	0.8	**46.6946**	0.251	0.5	ug/L	80	Standard
	Pb	207	86147.6	1.3	**43.4323**	0.493	1.1	ug/L	73	Standard
	Pb	208	206360.6	0.9	**42.5088**	0.262	0.6	ug/L	190	Standard
	U	238	21.0	37.8	**0.0048**	0.003	53.0	ug/L	0	Standard
>	Bi	209	236570.9	0.3				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	70.0	18.9	**0.0560**	0.018	32.2	mg/L	37	Standard
K	39	1.7	173.2	**-0.2624**	0.206	78.4	mg/L	3	Standard
Ca	43	13.3	21.7	**-5.5878**	1.039	18.6	mg/L	43	Standard
Fe	54	3012.2	13.9	**1.6719**	0.238	14.2	mg/L	262	Standard
Fe	57	945.0	1.9	**1.9103**	0.061	3.2	mg/L	65	Standard
> **Sc-1**	45	21887.5	1.6				mg/L	26874	Standard
Cl	35	123424.8	1.8				ug/L	141022	Standard
Kr	83	85.0	4.1				ug/L	75	Standard
Br	81	2146.8	0.7				ug/L	2810	Standard
P	31	151626.8	1.9				ug/L	458976	Standard
S	34	116099.8	1.3				ug/L	103378	Standard
Sr	88	53.3	39.0				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	60.0	66.7				mg/L	0	Standard
Dy	164	115.2	16.4				mg/L	10	Standard
Ho-1	165	66.7	8.7				mg/L	8	Standard
Er	166	100.0	36.1				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		82.731	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		83.438	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	83.891
|	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	85.578
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039806
Sample Date/Time: Monday, November 18, 2013 19:05:55
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	226766.2	1.3				ug/L	269614	Standard
	Be	9	51.7	39.1	**0.0046**	0.008	173.9	ug/L	23	Standard
	Al	27	109617.0	3.2	**0.6141**	0.012	2.0	ug/L	1170	Standard
	Sc	45	22458.3	1.7				ug/L	26874	Standard
	Ti	47	914.7	6.5	**4.2223**	0.287	6.8	ug/L	25	Standard
	V	51	4135.0	1.9	**0.5167**	0.020	3.9	ug/L	1686	Standard
	Cr	52	12766.0	3.5	**1.5351**	0.058	3.8	ug/L	6098	Standard
	Cr	53	2018.5	5.3	**1.7766**	0.078	4.4	ug/L	193	Standard
	Mn	55	208370.6	2.5	**18.3030**	0.235	1.3	ug/L	1232	Standard
	Co	59	2218.2	5.3	**0.2671**	0.013	4.9	ug/L	106	Standard
	Ni	60	3866.2	3.3	**1.4768**	0.044	3.0	ug/L	556	Standard
	Cu	65	50658.3	2.6	**22.8815**	0.382	1.7	ug/L	124	Standard
	Zn	66	47364.3	1.4	**38.9993**	0.163	0.4	ug/L	196	Standard
>	Ge	72	399819.4	1.3				ug/L	473313	Standard
	As	75	-36.2	68.2	**0.1825**	0.020	10.8	ug/L	-286	Standard
	Se	82	-49.9	7.2	**-0.0967**	0.027	28.0	ug/L	-33	Standard
	Se-1	77	61.0	6.6	**-0.0885**	0.052	58.4	ug/L	86	Standard
>	Ga	71	468.3	19.8				mg/L	35	Standard
	Rb	85	2296.8	2.6				ug/L	13	Standard
	Y	89	370196.4	0.7				ug/L	439493	Standard
>	Rh	103	15.0	33.3				ug/L	5	Standard
	Mo	98	525.6	8.0	**0.1435**	0.011	7.3	ug/L	10	Standard
	Ag	107	6851.9	2.7	**1.2080**	0.020	1.6	ug/L	53	Standard
	Cd	111	2180.2	3.4	**1.1697**	0.030	2.5	mg/L	1	Standard
	Cd	114	5564.4	4.1	**1.1731**	0.043	3.7	ug/L	32	Standard
>	In	115	419257.6	1.5				ug/L	494305	Standard
	Sn	118	683.3	2.7	**0.5592**	0.009	1.7	ug/L	53	Standard
	Sb	123	162.5	10.4	**0.0708**	0.007	10.3	ug/L	7	Standard
	Ba	135	15392.2	2.8	**9.8916**	0.167	1.7	ug/L	11	Standard
	Ce	140	10788.8	3.1				ug/L	10	Standard
>	Tb	159	431049.1	0.8				ug/L	538219	Standard
	Ho	165	108.3	30.7				ug/L	8	Standard
	Tl	203	18.0	68.3	**0.0014**	0.002	175.1	ug/L	1	Standard
	Tl	205	30.0	116.7	**0.0040**	0.005	135.8	ug/L	3	Standard
	Pb	206	64558.0	2.9	**29.2555**	0.538	1.8	ug/L	80	Standard
	Pb	207	53967.3	2.6	**27.1489**	0.297	1.1	ug/L	73	Standard
	Pb	208	129752.8	2.0	**26.6702**	0.311	1.2	ug/L	190	Standard
	U	238	33.0	18.4	**0.0085**	0.002	21.9	ug/L	0	Standard
>	Bi	209	236959.2	1.6				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	40.0	25.0	**0.0170**	0.013	74.7	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	10.0	50.0	**-6.8597**	1.760	25.7	mg/L	43	Standard
Fe	54	1616.1	6.8	**0.8138**	0.048	5.9	mg/L	262	Standard
Fe	57	543.3	13.2	**1.0271**	0.143	13.9	mg/L	65	Standard
> **Sc-1**	45	22458.3	1.7				mg/L	26874	Standard
Cl	35	122367.7	2.3				ug/L	141022	Standard
Kr	83	93.0	3.7				ug/L	75	Standard
Br	81	2150.2	3.3				ug/L	2810	Standard
P	31	156241.6	1.7				ug/L	458976	Standard
S	34	113003.3	1.9				ug/L	103378	Standard
Sr	88	48.3	41.8				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	36.7	41.7				mg/L	0	Standard
Dy	164	176.8	3.0				mg/L	10	Standard
Ho-1	165	108.3	30.7				mg/L	8	Standard
Er	166	136.7	16.9				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		84.108	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		84.472	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	84.818
	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	85.718
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311039806
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Method 6020 - Summary Report

Sample ID: L1311039807
Sample Date/Time: Monday, November 18, 2013 19:09:00
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	230767.5	0.7				ug/L	269614	Standard
	Be	9	61.7	48.9	**0.0083**	0.012	145.7	ug/L	23	Standard
	Al	27	156512.6	0.7	**0.8647**	0.011	1.3	ug/L	1170	Standard
	Sc	45	22748.7	1.0				ug/L	26874	Standard
	Ti	47	1562.4	0.7	**7.1092**	0.062	0.9	ug/L	25	Standard
	V	51	4089.8	2.3	**0.4929**	0.020	4.1	ug/L	1686	Standard
	Cr	52	19822.3	2.2	**2.6857**	0.081	3.0	ug/L	6098	Standard
	Cr	53	3383.7	6.6	**2.9997**	0.232	7.7	ug/L	193	Standard
	Mn	55	302163.7	1.6	**25.9815**	0.195	0.7	ug/L	1232	Standard
	Co	59	3817.8	4.2	**0.4595**	0.015	3.4	ug/L	106	Standard
	Ni	60	13965.4	2.5	**5.7200**	0.119	2.1	ug/L	556	Standard
	Cu	65	83536.4	2.0	**36.8889**	0.489	1.3	ug/L	124	Standard
	Zn	66	171804.1	2.9	**138.6444**	2.723	2.0	ug/L	196	Standard
>	Ge	72	409379.8	1.0				ug/L	473313	Standard
	As	75	659.7	11.3	**0.7382**	0.055	7.4	ug/L	-286	Standard
	Se	82	-46.6	13.9	**-0.0625**	0.054	86.2	ug/L	-33	Standard
	Se-1	77	72.7	15.7	**0.0207**	0.127	616.9	ug/L	86	Standard
>	Ga	71	926.7	9.7				mg/L	35	Standard
	Rb	85	3155.3	6.4				ug/L	13	Standard
	Y	89	374303.7	0.2				ug/L	439493	Standard
>	Rh	103	25.0	40.0				ug/L	5	Standard
	Mo	98	1920.2	3.4	**0.5535**	0.015	2.7	ug/L	10	Standard
	Ag	107	4963.5	1.1	**0.8537**	0.013	1.5	ug/L	53	Standard
	Cd	111	4654.3	2.8	**2.4518**	0.086	3.5	mg/L	1	Standard
	Cd	114	11774.3	3.5	**2.4435**	0.067	2.7	ug/L	32	Standard
>	In	115	427662.4	0.8				ug/L	494305	Standard
	Sn	118	1006.0	1.0	**0.8322**	0.016	2.0	ug/L	53	Standard
	Sb	123	225.4	8.7	**0.0967**	0.008	8.2	ug/L	7	Standard
	Ba	135	27737.0	1.4	**17.4853**	0.112	0.6	ug/L	11	Standard
	Ce	140	9834.9	1.0				ug/L	10	Standard
>	Tb	159	438770.4	1.8				ug/L	538219	Standard
	Ho	165	103.3	10.1				ug/L	8	Standard
	Tl	203	29.3	64.5	**0.0035**	0.004	103.5	ug/L	1	Standard
	Tl	205	25.0	52.9	**0.0032**	0.002	63.6	ug/L	3	Standard
	Pb	206	156730.7	2.0	**70.0610**	0.555	0.8	ug/L	80	Standard
	Pb	207	132969.6	1.0	**65.9822**	0.475	0.7	ug/L	73	Standard
	Pb	208	315356.0	1.5	**63.9379**	0.431	0.7	ug/L	190	Standard
	U	238	34.0	5.1	**0.0087**	0.000	4.4	ug/L	0	Standard
>	Bi	209	240435.7	1.6				ug/L	276439	Standard

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	Na	23	5.0	0.0	**1.0941**	0.015	1.3	mg/L	2	Standard
	Mg	24	66.7	24.1	**0.0484**	0.019	39.0	mg/L	37	Standard
	K	39	5.0	100.0	**-0.0318**	0.352	1105.1	mg/L	3	Standard
	Ca	43	26.7	28.6	**-1.1995**	2.698	224.9	mg/L	43	Standard
	Fe	54	5249.8	6.2	**2.8898**	0.162	5.6	mg/L	262	Standard
	Fe	57	1470.1	4.4	**2.9061**	0.118	4.1	mg/L	65	Standard
>	**Sc-1**	45	22748.7	1.0				mg/L	26874	Standard
	Cl	35	125203.3	2.3				ug/L	141022	Standard
	Kr	83	103.0	1.0				ug/L	75	Standard
	Br	81	2166.8	6.2				ug/L	2810	Standard
	P	31	160407.4	4.3				ug/L	458976	Standard
	S	34	116798.5	1.6				ug/L	103378	Standard
	Sr	88	53.3	14.3				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	116.7	35.7				mg/L	0	Standard
	Dy	164	131.9	29.2				mg/L	10	Standard
	Ho-1	165	103.3	10.1				mg/L	8	Standard
	Er	166	100.0	26.5				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		85.592	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		86.492	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	86.518
	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	86.976
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: L1311039807PS WG452574-03
Sample Date/Time: Monday, November 18, 2013 19:12:05
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	260125.9	1.4				ug/L	269614	Standard
	Be	9	144421.8	1.5	**50.4242**	0.812	1.6	ug/L	23	Standard
	Al	27	157241.8	1.1	**0.7700**	0.019	2.5	ug/L	1170	Standard
	Sc	45	26127.5	2.0				ug/L	26874	Standard
	Ti	47	1711.1	1.6	**6.8582**	0.144	2.1	ug/L	25	Standard
	V	51	329417.3	0.5	**47.7212**	0.478	1.0	ug/L	1686	Standard
	Cr	52	339654.6	0.5	**50.3045**	0.522	1.0	ug/L	6098	Standard
	Cr	53	62818.3	1.2	**51.1977**	0.854	1.7	ug/L	193	Standard
	Mn	55	952689.3	0.6	**72.4445**	0.739	1.0	ug/L	1232	Standard
	Co	59	439678.7	0.6	**48.1883**	0.069	0.1	ug/L	106	Standard
	Ni	60	145793.2	1.5	**54.2807**	0.733	1.4	ug/L	556	Standard
	Cu	65	212514.5	1.4	**82.7797**	0.796	1.0	ug/L	124	Standard
	Zn	66	215391.5	0.4	**153.2235**	0.185	0.1	ug/L	196	Standard
>	Ge	72	464523.4	0.5				ug/L	473313	Standard
	As	75	71299.8	0.3	**50.3734**	0.402	0.8	ug/L	-286	Standard
	Se	82	7126.1	0.3	**49.1844**	0.235	0.5	ug/L	-33	Standard
	Se-1	77	5286.3	1.4	**48.9488**	0.807	1.6	ug/L	86	Standard
>	Ga	71	1051.7	10.5				mg/L	35	Standard
	Rb	85	3343.7	1.7				ug/L	13	Standard
	Y	89	431895.2	1.7				ug/L	439493	Standard
>	Rh	103	36.7	20.8				ug/L	5	Standard
	Mo	98	2107.9	3.5	**0.5427**	0.017	3.1	ug/L	10	Standard
	Ag	107	351120.9	0.5	**54.8979**	0.514	0.9	ug/L	53	Standard
	Cd	111	109750.6	1.0	**51.7157**	0.528	1.0	mg/L	1	Standard
	Cd	114	271437.1	1.4	**50.5379**	1.134	2.2	ug/L	32	Standard
>	In	115	478561.5	0.8				ug/L	494305	Standard
	Sn	118	1252.1	2.7	**0.9320**	0.034	3.7	ug/L	53	Standard
	Sb	123	126806.1	0.3	**49.3945**	0.407	0.8	ug/L	7	Standard
	Ba	135	117418.2	0.2	**66.1868**	0.491	0.7	ug/L	11	Standard
	Ce	140	9299.5	2.2				ug/L	10	Standard
>	Tb	159	484823.1	0.5				ug/L	538219	Standard
	Ho	165	108.3	18.7				ug/L	8	Standard
	Tl	203	278488.6	1.2	**49.1275**	0.529	1.1	ug/L	1	Standard
	Tl	205	369264.1	0.7	**52.7550**	0.069	0.1	ug/L	3	Standard
	Pb	206	282862.6	0.2	**116.3481**	0.834	0.7	ug/L	80	Standard
	Pb	207	247034.0	0.6	**112.7785**	0.471	0.4	ug/L	73	Standard
	Pb	208	562889.4	0.1	**105.0083**	0.851	0.8	ug/L	190	Standard
	U	238	160753.6	0.6	**45.9923**	0.103	0.2	ug/L	0	Standard
>	Bi	209	261378.0	0.8				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	68.3	11.2	**0.0398**	0.007	17.9	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	30.0	16.7	**-1.3784**	1.671	121.2	mg/L	43	Standard
Fe	54	5369.5	2.4	**2.5612**	0.083	3.2	mg/L	262	Standard
Fe	57	1460.1	10.1	**2.4979**	0.217	8.7	mg/L	65	Standard
> **Sc-1**	45	26127.5	2.0				mg/L	26874	Standard
Cl	35	137624.2	0.9				ug/L	141022	Standard
Kr	83	97.3	13.0				ug/L	75	Standard
Br	81	2650.2	9.8				ug/L	2810	Standard
P	31	479198.3	1.9				ug/L	458976	Standard
S	34	119916.2	2.2				ug/L	103378	Standard
Sr	88	50.0	45.8				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	120.0	44.1				mg/L	0	Standard
Dy	164	168.5	23.1				mg/L	10	Standard
Ho-1	165	108.3	18.7				mg/L	8	Standard
Er	166	100.0	30.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		96.481	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		98.143	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	96.815
|	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	94.552
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 66 Upper, S, EEE	Zn	66	
Pb 206 Upper, S, EEE	Pb	206	
Pb 207 Upper, S, EEE	Pb	207	
Pb 208 Upper, S, EEE	Pb	208	

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Method 6020 - Summary Report

Sample ID: L1311039807SDL WG452574-04
Sample Date/Time: Monday, November 18, 2013 19:15:10
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 500
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	226028.8	1.9				ug/L	269614	Standard
	Be	9	75.0	30.6	**0.0140**	0.009	62.6	ug/L	23	Standard
	Al	27	32017.1	3.1	**0.1749**	0.003	1.8	ug/L	1170	Standard
	Sc	45	22550.1	2.8				ug/L	26874	Standard
	Ti	47	320.3	3.7	**1.4020**	0.046	3.3	ug/L	25	Standard
	V	51	1392.8	4.7	**0.0514**	0.011	21.1	ug/L	1686	Standard
	Cr	52	5940.5	3.5	**0.3367**	0.043	12.7	ug/L	6098	Standard
	Cr	53	823.4	8.1	**0.6366**	0.068	10.7	ug/L	193	Standard
	Mn	55	59555.5	1.5	**5.0909**	0.118	2.3	ug/L	1232	Standard
	Co	59	782.7	5.3	**0.0835**	0.005	6.4	ug/L	106	Standard
	Ni	60	2993.6	4.2	**1.0878**	0.056	5.1	ug/L	556	Standard
	Cu	65	16329.8	1.9	**7.2778**	0.197	2.7	ug/L	124	Standard
	Zn	66	34914.2	2.3	**28.4694**	0.866	3.0	ug/L	196	Standard
>	Ge	72	403040.4	0.8				ug/L	473313	Standard
	As	75	-5.3	593.2	**0.2076**	0.026	12.4	ug/L	-286	Standard
	Se	82	-27.4	30.5	**0.0842**	0.065	77.5	ug/L	-33	Standard
	Se-1	77	70.7	9.2	**0.0103**	0.067	652.7	ug/L	86	Standard
>	Ga	71	188.3	6.1				mg/L	35	Standard
	Rb	85	666.7	8.8				ug/L	13	Standard
	Y	89	367389.4	0.9				ug/L	439493	Standard
>	Rh	103	5.0	0.0				ug/L	5	Standard
	Mo	98	349.2	4.6	**0.0908**	0.005	5.1	ug/L	10	Standard
	Ag	107	989.7	3.7	**0.1624**	0.006	3.8	ug/L	53	Standard
	Cd	111	939.2	3.2	**0.5044**	0.017	3.4	mg/L	1	Standard
	Cd	114	2346.4	6.7	**0.4914**	0.034	6.9	ug/L	32	Standard
>	In	115	417508.4	0.3				ug/L	494305	Standard
	Sn	118	203.0	10.2	**0.1273**	0.019	15.0	ug/L	53	Standard
	Sb	123	211.7	13.4	**0.0930**	0.012	13.4	ug/L	7	Standard
	Ba	135	5417.0	2.2	**3.4881**	0.085	2.4	ug/L	11	Standard
	Ce	140	1805.1	11.4				ug/L	10	Standard
>	Tb	159	429834.3	1.5				ug/L	538219	Standard
	Ho	165	30.0	28.9				ug/L	8	Standard
	Tl	203	16.3	49.5	**0.0010**	0.002	153.3	ug/L	1	Standard
	Tl	205	16.7	45.8	**0.0019**	0.001	62.8	ug/L	3	Standard
	Pb	206	31045.1	2.4	**14.0177**	0.398	2.8	ug/L	80	Standard
	Pb	207	26357.9	1.6	**13.2162**	0.300	2.3	ug/L	73	Standard
	Pb	208	62168.5	2.8	**12.7310**	0.415	3.3	ug/L	190	Standard
	U	238	13.7	42.2	**0.0024**	0.002	75.2	ug/L	0	Standard
>	Bi	209	237493.6	0.7				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0853**	0.889	1041.1	mg/L	2	Standard
Mg	24	43.3	35.3	**0.0212**	0.020	95.0	mg/L	37	Standard
K	39	5.0	100.0	**-0.0273**	0.361	1318.4	mg/L	3	Standard
Ca	43	26.7	28.6	**-1.1423**	2.603	227.9	mg/L	43	Standard
Fe	54	935.6	8.5	**0.4171**	0.061	14.7	mg/L	262	Standard
Fe	57	288.3	16.4	**0.4992**	0.109	21.9	mg/L	65	Standard
> **Sc-1**	45	22550.1	2.8				mg/L	26874	Standard
Cl	35	122492.0	2.6				ug/L	141022	Standard
Kr	83	75.3	18.6				ug/L	75	Standard
Br	81	2053.5	6.6				ug/L	2810	Standard
P	31	149332.3	0.9				ug/L	458976	Standard
S	34	112967.9	1.1				ug/L	103378	Standard
Sr	88	30.0	28.9				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	36.7	15.7				mg/L	0	Standard
Dy	164	25.1	63.8				mg/L	10	Standard
Ho-1	165	30.0	28.9				mg/L	8	Standard
Er	166	33.3	45.8				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.834	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		85.153	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	84.464
	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	85.912
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 19:18:17
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	248635.2	0.9				ug/L	269614	Standard
	Be	9	137465.8	1.0	**50.2141**	0.851	1.7	ug/L	23	Standard
	Al	27	8753615.2	2.3	**45.2529**	1.400	3.1	ug/L	1170	Standard
	Sc	45	25281.1	1.5				ug/L	26874	Standard
	Ti	47	24716.8	0.6	**104.9317**	0.839	0.8	ug/L	25	Standard
	V	51	308919.4	0.4	**46.7702**	0.340	0.7	ug/L	1686	Standard
	Cr	52	301440.1	0.4	**46.6143**	0.682	1.5	ug/L	6098	Standard
	Cr	53	56578.8	0.5	**48.1878**	0.521	1.1	ug/L	193	Standard
	Mn	55	611213.6	0.4	**48.5337**	0.595	1.2	ug/L	1232	Standard
	Co	59	411321.7	0.3	**47.1192**	0.428	0.9	ug/L	106	Standard
	Ni	60	125910.4	0.7	**48.9774**	0.192	0.4	ug/L	556	Standard
	Cu	65	122864.2	1.3	**49.9972**	0.133	0.3	ug/L	124	Standard
	Zn	66	66651.0	1.3	**49.4211**	0.315	0.6	ug/L	196	Standard
>	Ge	72	444448.9	1.0				ug/L	473313	Standard
	As	75	67641.1	1.4	**49.9482**	0.588	1.2	ug/L	-286	Standard
	Se	82	6827.2	0.8	**49.2493**	0.114	0.2	ug/L	-33	Standard
	Se-1	77	5064.2	0.9	**49.0104**	0.079	0.2	ug/L	86	Standard
>	Ga	71	56.7	18.4				mg/L	35	Standard
	Rb	85	995.0	11.9				ug/L	13	Standard
	Y	89	408782.1	1.8				ug/L	439493	Standard
>	Rh	103	23.3	32.7				ug/L	5	Standard
	Mo	98	375126.7	1.5	**103.1553**	1.026	1.0	ug/L	10	Standard
	Ag	107	320823.8	0.5	**52.1147**	0.373	0.7	ug/L	53	Standard
	Cd	111	101049.6	0.1	**49.4721**	0.281	0.6	mg/L	1	Standard
	Cd	114	256813.1	0.9	**49.6751**	0.653	1.3	ug/L	32	Standard
>	In	115	460601.1	0.5				ug/L	494305	Standard
	Sn	118	61301.4	1.3	**50.2144**	0.549	1.1	ug/L	53	Standard
	Sb	123	120990.2	0.4	**48.9661**	0.437	0.9	ug/L	7	Standard
	Ba	135	84593.2	1.0	**49.5381**	0.438	0.9	ug/L	11	Standard
	Ce	140	56.7	5.1				ug/L	10	Standard
>	Tb	159	467194.7	1.5				ug/L	538219	Standard
	Ho	165	5.0	100.0				ug/L	8	Standard
	Tl	203	263537.5	0.5	**48.9696**	0.353	0.7	ug/L	1	Standard
	Tl	205	339859.5	0.7	**51.1442**	0.459	0.9	ug/L	3	Standard
	Pb	206	121030.5	0.1	**52.4130**	0.105	0.2	ug/L	80	Standard
	Pb	207	108705.9	0.5	**52.2569**	0.344	0.7	ug/L	73	Standard
	Pb	208	244901.2	0.6	**48.1006**	0.198	0.4	ug/L	190	Standard
	U	238	156159.6	0.5	**47.0602**	0.121	0.3	ug/L	0	Standard
>	Bi	209	248143.1	0.2				ug/L	276439	Standard

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	Na	23	23.3	32.7	**5.9669**	2.095	35.1	mg/L	2	Standard
	Mg	24	4612.4	3.1	**4.9721**	0.227	4.6	mg/L	37	Standard
	K	39	70.0	24.7	**3.9944**	1.048	26.2	mg/L	3	Standard
	Ca	43	31.7	63.8	**-0.6192**	6.114	987.4	mg/L	43	Standard
	Fe	54	11574.1	4.0	**5.8619**	0.313	5.3	mg/L	262	Standard
	Fe	57	3098.7	1.4	**5.5995**	0.055	1.0	mg/L	65	Standard
>	**Sc-1**	45	25281.1	1.5				mg/L	26874	Standard
	Cl	35	141167.3	0.3				ug/L	141022	Standard
	Kr	83	90.3	9.2				ug/L	75	Standard
	Br	81	2426.9	4.0				ug/L	2810	Standard
	P	31	470673.2	1.5				ug/L	458976	Standard
	S	34	128262.3	0.7				ug/L	103378	Standard
	Sr	88	51.7	81.2				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	0	Standard
	Dy	164	2.9	202.3				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	8	Standard
	Er	166	10.0					mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		92.219	
	Be	9	100.428		
	Al	27	90.506		
	Sc	45			
	Ti	47	104.932		
	V	51	93.540		
	Cr	52	93.229		
	Cr	53			
	Mn	55	97.067		
	Co	59	94.238		
	Ni	60	97.955		
	Cu	65	99.994		
	Zn	66	98.842		
>	Ge	72		93.902	
	As	75	99.896		
	Se	82	98.499		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	103.155	
|	Ag	107	104.229	
|	Cd	111	98.944	
|	Cd	114		
|>	In	115		93.181
|	Sn	118	100.429	
|	Sb	123	97.932	
⌊	Ba	135	99.076	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	97.939	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	96.201	
|	U	238	94.120	
⌊>	Bi	209		89.764
⌈	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 19:21:21
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	245701.2	0.7				ug/L	269614	Standard
	Be	9	51.7	14.8	**0.0030**	0.003	96.6	ug/L	23	Standard
	Al	27	993.4	10.1	**-0.0019**	0.001	28.7	ug/L	1170	Standard
	Sc	45	24177.6	1.4				ug/L	26874	Standard
	Ti	47	10.0	26.5	**-0.0557**	0.011	20.3	ug/L	25	Standard
	V	51	986.3	7.9	**-0.0300**	0.012	39.3	ug/L	1686	Standard
	Cr	52	3472.4	3.0	**-0.1389**	0.017	12.6	ug/L	6098	Standard
	Cr	53	116.7	20.3	**-0.0383**	0.020	51.2	ug/L	193	Standard
	Mn	55	964.7	5.9	**-0.0613**	0.004	6.7	ug/L	1232	Standard
	Co	59	111.0	30.8	**-0.0025**	0.004	160.5	ug/L	106	Standard
	Ni	60	340.7	2.1	**-0.0667**	0.003	4.5	ug/L	556	Standard
	Cu	65	102.7	10.4	**-0.0175**	0.005	26.8	ug/L	124	Standard
	Zn	66	355.3	3.0	**0.0710**	0.006	8.3	ug/L	196	Standard
>	**Ge**	72	438299.2	1.0				ug/L	473313	Standard
	As	75	-255.7	2.9	**0.0212**	0.007	32.8	ug/L	-286	Standard
	Se	82	-49.1	14.7	**-0.0562**	0.054	96.9	ug/L	-33	Standard
	Se-1	77	75.0	3.5	**-0.0080**	0.020	251.4	ug/L	86	Standard
>	**Ga**	71	15.0	33.3				mg/L	35	Standard
	Rb	85	13.3	78.1				ug/L	13	Standard
	Y	89	398027.4	1.2				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	83.6	40.7	**0.0083**	0.010	116.6	ug/L	10	Standard
	Ag	107	87.0	35.7	**-0.0005**	0.005	1069.8	ug/L	53	Standard
	Cd	111	13.5	117.4	**0.0039**	0.008	204.7	mg/L	1	Standard
	Cd	114	49.9	128.9	**0.0005**	0.013	2646.1	ug/L	32	Standard
>	**In**	115	450616.2	1.1				ug/L	494305	Standard
	Sn	118	66.7	5.3	**-0.0005**	0.003	483.6	ug/L	53	Standard
	Sb	123	270.3	24.2	**0.1102**	0.026	23.7	ug/L	7	Standard
	Ba	135	22.7	55.2	**0.0011**	0.008	693.7	ug/L	11	Standard
	Ce	140	13.3	57.3				ug/L	10	Standard
>	**Tb**	159	466910.0	1.9				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	45.0	82.6	**0.0061**	0.007	111.3	ug/L	1	Standard
	Tl	205	16.7	62.4	**0.0018**	0.002	86.3	ug/L	3	Standard
	Pb	206	117.3	30.1	**0.0083**	0.015	180.9	ug/L	80	Standard
	Pb	207	98.3	19.1	**0.0146**	0.009	60.5	ug/L	73	Standard
	Pb	208	215.0	0.9	**0.0033**	0.000	8.5	ug/L	190	Standard
	U	238	7.3	92.8	**0.0003**	0.002	640.9	ug/L	0	Standard
>	**Bi**	209	251374.8	0.3				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	33.3	22.9	**0.0059**	0.008	143.6	mg/L	37	Standard
K	39	1.7	173.2	**-0.2706**	0.191	70.8	mg/L	3	Standard
Ca	43	8.3	34.6	**-7.6531**	0.903	11.8	mg/L	43	Standard
Fe	54	347.8	12.2	**0.0616**	0.022	36.4	mg/L	262	Standard
Fe	57	111.7	17.0	**0.1179**	0.036	30.5	mg/L	65	Standard
> **Sc-1**	45	24177.6	1.4				mg/L	26874	Standard
Cl	35	136948.9	1.5				ug/L	141022	Standard
Kr	83	95.7	7.0				ug/L	75	Standard
Br	81	2230.2	2.5				ug/L	2810	Standard
P	31	450147.9	2.3				ug/L	458976	Standard
S	34	119521.3	1.9				ug/L	103378	Standard
Sr	88	48.3	31.6				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	3.2	186.4				mg/L	10	Standard
Ho-1	165	6.7	43.3				mg/L	8	Standard
Er	166	3.3	173.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		91.131	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.602	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	91.161
	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	90.933
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039808
Sample Date/Time: Monday, November 18, 2013 19:24:28
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	226277.4	1.7				ug/L	269614	Standard
	Be	9	68.3	29.6	**0.0113**	0.008	67.6	ug/L	23	Standard
	Al	27	108374.6	1.2	**0.6085**	0.007	1.1	ug/L	1170	Standard
	Sc	45	22004.3	2.0				ug/L	26874	Standard
	Ti	47	1012.7	3.7	**4.7190**	0.191	4.0	ug/L	25	Standard
	V	51	3219.4	2.6	**0.3657**	0.013	3.5	ug/L	1686	Standard
	Cr	52	10587.4	1.7	**1.1684**	0.020	1.7	ug/L	6098	Standard
	Cr	53	1630.1	8.1	**1.4188**	0.114	8.0	ug/L	193	Standard
	Mn	55	137884.4	2.1	**12.1514**	0.161	1.3	ug/L	1232	Standard
	Co	59	2354.8	2.8	**0.2867**	0.006	2.3	ug/L	106	Standard
	Ni	60	4946.1	2.6	**1.9610**	0.050	2.6	ug/L	556	Standard
	Cu	65	36082.9	2.1	**16.3971**	0.231	1.4	ug/L	124	Standard
	Zn	66	44360.5	1.2	**36.7730**	0.138	0.4	ug/L	196	Standard
>	Ge	72	397005.6	0.8				ug/L	473313	Standard
	As	75	3.2	1231.7	**0.2147**	0.032	15.1	ug/L	-286	Standard
	Se	82	-38.4	34.3	**-0.0067**	0.104	1546.1	ug/L	-33	Standard
	Se-1	77	70.3	8.7	**0.0181**	0.061	333.8	ug/L	86	Standard
>	Ga	71	560.0	12.0				mg/L	35	Standard
	Rb	85	2783.6	0.7				ug/L	13	Standard
	Y	89	366153.4	1.0				ug/L	439493	Standard
>	Rh	103	8.3	91.7				ug/L	5	Standard
	Mo	98	444.2	1.1	**0.1208**	0.002	1.9	ug/L	10	Standard
	Ag	107	2184.8	4.8	**0.3801**	0.016	4.3	ug/L	53	Standard
	Cd	111	1550.2	5.3	**0.8418**	0.040	4.8	mg/L	1	Standard
	Cd	114	3888.8	4.4	**0.8280**	0.034	4.1	ug/L	32	Standard
>	In	115	413767.8	0.6				ug/L	494305	Standard
	Sn	118	312.0	6.4	**0.2284**	0.018	8.0	ug/L	53	Standard
	Sb	123	209.6	4.3	**0.0929**	0.004	4.5	ug/L	7	Standard
	Ba	135	14076.5	1.3	**9.1659**	0.069	0.8	ug/L	11	Standard
	Ce	140	10263.5	2.5				ug/L	10	Standard
>	Tb	159	428205.1	0.8				ug/L	538219	Standard
	Ho	165	106.7	9.8				ug/L	8	Standard
	Tl	203	20.7	35.0	**0.0019**	0.001	74.4	ug/L	1	Standard
	Tl	205	15.0	0.0	**0.0017**	0.000	1.0	ug/L	3	Standard
	Pb	206	52412.5	0.8	**23.7410**	0.120	0.5	ug/L	80	Standard
	Pb	207	43900.9	1.4	**22.0763**	0.222	1.0	ug/L	73	Standard
	Pb	208	104587.3	1.7	**21.4866**	0.422	2.0	ug/L	190	Standard
	U	238	32.3	4.7	**0.0083**	0.000	5.9	ug/L	0	Standard
>	Bi	209	237009.4	0.7				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0848**	0.888	1047.0	mg/L	2	Standard
Mg	24	45.0	29.4	**0.0244**	0.017	71.5	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	15.0	66.7	**-5.0186**	3.591	71.6	mg/L	43	Standard
Fe	54	2144.7	7.1	**1.1478**	0.087	7.6	mg/L	262	Standard
Fe	57	641.7	5.8	**1.2592**	0.093	7.4	mg/L	65	Standard
> **Sc-1**	45	22004.3	2.0				mg/L	26874	Standard
Cl	35	119158.1	1.8				ug/L	141022	Standard
Kr	83	89.3	17.9				ug/L	75	Standard
Br	81	2050.1	2.5				ug/L	2810	Standard
P	31	150369.3	1.8				ug/L	458976	Standard
S	34	111013.7	2.2				ug/L	103378	Standard
Sr	88	25.0	40.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	30.0	57.7				mg/L	0	Standard
Dy	164	134.6	14.6				mg/L	10	Standard
Ho-1	165	106.7	9.8				mg/L	8	Standard
Er	166	113.3	41.7				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.926	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		83.878	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.707
	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	85.737
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311039808
Report Date/Time: Monday, November 18, 2013 19:26:41
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Method 6020 - Summary Report

Sample ID: L1311039809
Sample Date/Time: Monday, November 18, 2013 19:27:33
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	224529.8	0.6				ug/L	269614	Standard
	Be	9	60.0	22.0	**0.0082**	0.005	64.8	ug/L	23	Standard
	Al	27	83305.1	1.1	**0.4698**	0.008	1.7	ug/L	1170	Standard
	Sc	45	22338.1	0.2				ug/L	26874	Standard
	Ti	47	767.4	2.2	**3.4656**	0.091	2.6	ug/L	25	Standard
	V	51	2632.8	11.0	**0.2556**	0.051	19.8	ug/L	1686	Standard
	Cr	52	35347.9	1.7	**5.3720**	0.132	2.5	ug/L	6098	Standard
	Cr	53	6456.4	5.4	**5.8893**	0.346	5.9	ug/L	193	Standard
	Mn	55	111089.5	1.0	**9.5303**	0.117	1.2	ug/L	1232	Standard
	Co	59	1753.8	1.6	**0.2043**	0.004	2.2	ug/L	106	Standard
	Ni	60	3012.6	1.9	**1.0845**	0.016	1.5	ug/L	556	Standard
	Cu	65	23820.7	1.2	**10.5492**	0.157	1.5	ug/L	124	Standard
	Zn	66	42287.6	1.5	**34.2169**	0.633	1.8	ug/L	196	Standard
>	**Ge**	72	406596.2	0.7				ug/L	473313	Standard
	As	75	23.6	75.0	**0.2309**	0.014	6.2	ug/L	-286	Standard
	Se	82	-45.2	18.0	**-0.0529**	0.062	116.9	ug/L	-33	Standard
	Se-1	77	76.7	2.7	**0.0683**	0.025	36.9	ug/L	86	Standard
>	**Ga**	71	470.0	18.7				mg/L	35	Standard
	Rb	85	2290.2	4.3				ug/L	13	Standard
	Y	89	372856.1	1.6				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	296.2	4.7	**0.0738**	0.004	5.3	ug/L	10	Standard
	Ag	107	1891.5	2.1	**0.3209**	0.006	1.9	ug/L	53	Standard
	Cd	111	1193.3	4.8	**0.6357**	0.032	5.1	mg/L	1	Standard
	Cd	114	2923.9	1.0	**0.6088**	0.008	1.3	ug/L	32	Standard
>	**In**	115	421437.2	0.3				ug/L	494305	Standard
	Sn	118	238.0	5.9	**0.1569**	0.012	7.6	ug/L	53	Standard
	Sb	123	138.8	7.0	**0.0599**	0.004	7.4	ug/L	7	Standard
	Ba	135	9277.8	0.7	**5.9272**	0.063	1.1	ug/L	11	Standard
	Ce	140	6508.1	3.1				ug/L	10	Standard
>	**Tb**	159	431231.2	1.2				ug/L	538219	Standard
	Ho	165	80.0	21.7				ug/L	8	Standard
	Tl	203	19.0	48.2	**0.0015**	0.002	117.0	ug/L	1	Standard
	Tl	205	20.0	43.3	**0.0024**	0.001	55.2	ug/L	3	Standard
	Pb	206	54399.5	0.9	**24.4331**	0.107	0.4	ug/L	80	Standard
	Pb	207	45891.7	0.9	**22.8853**	0.397	1.7	ug/L	73	Standard
	Pb	208	109180.1	1.4	**22.2423**	0.456	2.1	ug/L	190	Standard
	U	238	23.7	36.4	**0.0055**	0.003	47.4	ug/L	0	Standard
>	**Bi**	209	239041.0	1.0				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	33.3	22.9	**0.0090**	0.009	104.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2630**	0.205	77.9	mg/L	3	Standard
Ca	43	10.0	50.0	**-6.8476**	1.734	25.3	mg/L	43	Standard
Fe	54	1431.2	12.8	**0.7114**	0.109	15.3	mg/L	262	Standard
Fe	57	428.3	5.3	**0.7944**	0.048	6.1	mg/L	65	Standard
> **Sc-1**	45	22338.1	0.2				mg/L	26874	Standard
Cl	35	122773.6	2.6				ug/L	141022	Standard
Kr	83	85.3	13.5				ug/L	75	Standard
Br	81	1963.5	2.1				ug/L	2810	Standard
P	31	152041.2	3.1				ug/L	458976	Standard
S	34	111062.4	2.5				ug/L	103378	Standard
Sr	88	35.0	51.5				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	16.7	34.6				mg/L	0	Standard
Dy	164	126.8	20.9				mg/L	10	Standard
Ho-1	165	80.0	21.7				mg/L	8	Standard
Er	166	66.7	45.8				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.278	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		85.904	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.258
|	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	86.471
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311039810
Sample Date/Time: Monday, November 18, 2013 19:30:38
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	226940.6	1.8				ug/L	269614	Standard
	Be	9	41.7	30.2	**0.0006**	0.005	852.7	ug/L	23	Standard
	Al	27	149694.2	0.6	**0.8408**	0.012	1.4	ug/L	1170	Standard
	Sc	45	22904.0	0.4				ug/L	26874	Standard
	Ti	47	1154.4	4.2	**5.3050**	0.191	3.6	ug/L	25	Standard
	V	51	3905.1	1.6	**0.4720**	0.014	3.0	ug/L	1686	Standard
	Cr	52	43430.2	0.7	**6.8176**	0.067	1.0	ug/L	6098	Standard
	Cr	53	7823.7	0.7	**7.2236**	0.059	0.8	ug/L	193	Standard
	Mn	55	67045.7	0.8	**5.7432**	0.044	0.8	ug/L	1232	Standard
	Co	59	1557.4	2.6	**0.1812**	0.004	2.5	ug/L	106	Standard
	Ni	60	1609.8	0.8	**0.4912**	0.010	2.0	ug/L	556	Standard
	Cu	65	3747.8	1.1	**1.6226**	0.020	1.2	ug/L	124	Standard
	Zn	66	6877.9	1.5	**5.4449**	0.112	2.1	ug/L	196	Standard
>	**Ge**	72	403370.6	0.7				ug/L	473313	Standard
	As	75	-126.5	40.9	**0.1095**	0.042	37.9	ug/L	-286	Standard
	Se	82	-43.2	28.2	**-0.0406**	0.096	235.6	ug/L	-33	Standard
	Se-1	77	66.0	6.6	**-0.0404**	0.052	128.1	ug/L	86	Standard
>	**Ga**	71	450.0	20.8				mg/L	35	Standard
	Rb	85	7368.5	2.9				ug/L	13	Standard
	Y	89	378579.8	0.8				ug/L	439493	Standard
>	**Rh**	103	6.7	43.3				ug/L	5	Standard
	Mo	98	56.9	6.4	**0.0018**	0.001	57.6	ug/L	10	Standard
	Ag	107	188.3	5.5	**0.0183**	0.002	12.1	ug/L	53	Standard
	Cd	111	118.9	12.4	**0.0604**	0.007	12.3	mg/L	1	Standard
	Cd	114	291.8	25.0	**0.0520**	0.016	30.8	ug/L	32	Standard
>	**In**	115	423792.0	1.4				ug/L	494305	Standard
	Sn	118	58.3	8.6	**-0.0044**	0.004	89.8	ug/L	53	Standard
	Sb	123	84.9	14.8	**0.0358**	0.006	15.6	ug/L	7	Standard
	Ba	135	5562.0	2.0	**3.5285**	0.064	1.8	ug/L	11	Standard
	Ce	140	12753.7	1.7				ug/L	10	Standard
>	**Tb**	159	425609.0	1.4				ug/L	538219	Standard
	Ho	165	161.7	14.6				ug/L	8	Standard
	Tl	203	23.0	24.2	**0.0023**	0.001	46.3	ug/L	1	Standard
	Tl	205	43.3	29.0	**0.0062**	0.002	32.3	ug/L	3	Standard
	Pb	206	6011.9	2.6	**2.6932**	0.072	2.7	ug/L	80	Standard
	Pb	207	4980.5	1.3	**2.4827**	0.032	1.3	ug/L	73	Standard
	Pb	208	11740.8	1.4	**2.3842**	0.035	1.5	ug/L	190	Standard
	U	238	56.7	9.7	**0.0161**	0.002	10.9	ug/L	0	Standard
>	**Bi**	209	236392.1	0.0				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0766**	0.873	1140.4	mg/L	2	Standard
Mg	24	53.3	28.6	**0.0319**	0.018	56.5	mg/L	37	Standard
K	39	1.7	173.2	**-0.2666**	0.198	74.4	mg/L	3	Standard
Ca	43	21.7	35.3	**-2.9802**	2.556	85.8	mg/L	43	Standard
Fe	54	782.4	10.7	**0.3201**	0.046	14.4	mg/L	262	Standard
Fe	57	335.0	13.7	**0.5833**	0.096	16.4	mg/L	65	Standard
> **Sc-1**	45	22904.0	0.4				mg/L	26874	Standard
Cl	35	123412.8	2.7				ug/L	141022	Standard
Kr	83	93.7	7.9				ug/L	75	Standard
Br	81	2150.2	9.8				ug/L	2810	Standard
P	31	151830.4	1.3				ug/L	458976	Standard
S	34	110310.2	1.7				ug/L	103378	Standard
Sr	88	58.3	4.9				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	232.5	16.0				mg/L	10	Standard
Ho-1	165	161.7	14.6				mg/L	8	Standard
Er	166	156.7	24.2				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		84.172	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		85.223	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	85.735
	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	85.513
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045201
Sample Date/Time: Monday, November 18, 2013 19:33:43
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 100
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	226922.4	2.5				ug/L	269614	Standard
	Be	9	85.0	62.0	**0.0181**	0.021	117.2	ug/L	23	Standard
	Al	27	79326.0	6.3	**0.4423**	0.028	6.3	ug/L	1170	Standard
	Sc	45	22201.3	0.4				ug/L	26874	Standard
	Ti	47	921.7	2.3	**4.2657**	0.141	3.3	ug/L	25	Standard
	V	51	3819.3	2.7	**0.4648**	0.021	4.5	ug/L	1686	Standard
	Cr	52	5100.2	1.9	**0.2003**	0.019	9.3	ug/L	6098	Standard
	Cr	53	496.7	15.7	**0.3331**	0.070	21.0	ug/L	193	Standard
	Mn	55	84762.1	0.2	**7.3814**	0.084	1.1	ug/L	1232	Standard
	Co	59	1124.4	0.4	**0.1282**	0.001	0.6	ug/L	106	Standard
	Ni	60	1187.4	6.9	**0.3152**	0.038	12.0	ug/L	556	Standard
	Cu	65	2887.6	1.7	**1.2510**	0.028	2.3	ug/L	124	Standard
	Zn	66	5209.9	2.4	**4.1246**	0.121	2.9	ug/L	196	Standard
>	**Ge**	72	398898.7	0.9				ug/L	473313	Standard
	As	75	-199.7	8.3	**0.0484**	0.013	25.9	ug/L	-286	Standard
	Se	82	-42.9	19.8	**-0.0416**	0.069	165.0	ug/L	-33	Standard
	Se-1	77	71.3	2.1	**0.0259**	0.023	89.2	ug/L	86	Standard
>	**Ga**	71	336.7	9.0				mg/L	35	Standard
	Rb	85	3325.4	1.4				ug/L	13	Standard
	Y	89	372712.7	1.7				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	48.2	15.8	**-0.0005**	0.002	477.4	ug/L	10	Standard
	Ag	107	334.0	6.2	**0.0453**	0.004	7.9	ug/L	53	Standard
	Cd	111	123.6	10.6	**0.0643**	0.007	11.0	mg/L	1	Standard
	Cd	114	337.0	8.1	**0.0629**	0.006	9.6	ug/L	32	Standard
>	**In**	115	414836.3	0.5				ug/L	494305	Standard
	Sn	118	51.0	16.0	**-0.0100**	0.008	76.2	ug/L	53	Standard
	Sb	123	80.0	6.3	**0.0344**	0.002	6.8	ug/L	7	Standard
	Ba	135	5227.9	0.3	**3.3876**	0.020	0.6	ug/L	11	Standard
	Ce	140	9182.8	1.7				ug/L	10	Standard
>	**Tb**	159	427136.8	1.9				ug/L	538219	Standard
	Ho	165	111.7	17.0				ug/L	8	Standard
	Tl	203	30.0	66.6	**0.0038**	0.004	103.8	ug/L	1	Standard
	Tl	205	26.7	28.6	**0.0036**	0.001	33.7	ug/L	3	Standard
	Pb	206	3684.1	0.7	**1.6581**	0.021	1.3	ug/L	80	Standard
	Pb	207	3104.0	2.0	**1.5576**	0.040	2.5	ug/L	73	Standard
	Pb	208	7426.0	2.8	**1.5158**	0.052	3.4	ug/L	190	Standard
	U	238	54.3	68.9	**0.0156**	0.012	77.7	ug/L	0	Standard
>	**Bi**	209	233077.4	0.5				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	41.7	56.7	**0.0196**	0.029	149.4	mg/L	37	Standard
K	39	5.0	100.0	**-0.0240**	0.358	1489.5	mg/L	3	Standard
Ca	43	16.7	17.3	**-4.4908**	1.007	22.4	mg/L	43	Standard
Fe	54	590.8	2.1	**0.2214**	0.007	3.1	mg/L	262	Standard
Fe	57	235.0	14.0	**0.3953**	0.070	17.8	mg/L	65	Standard
> **Sc-1**	45	22201.3	0.4				mg/L	26874	Standard
Cl	35	122084.0	1.7				ug/L	141022	Standard
Kr	83	88.7	8.5				ug/L	75	Standard
Br	81	2186.8	8.3				ug/L	2810	Standard
P	31	148475.6	0.4				ug/L	458976	Standard
S	34	111372.8	0.1				ug/L	103378	Standard
Sr	88	36.7	56.8				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	182.2	29.0				mg/L	10	Standard
Ho-1	165	111.7	17.0				mg/L	8	Standard
Er	166	163.3	31.4				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		84.166	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		84.278	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	83.923
|	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	84.314
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045202
Sample Date/Time: Monday, November 18, 2013 19:36:47
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	218220.5	1.6				ug/L	269614	Standard
	Be	9	43.3	58.1	**0.0021**	0.011	520.3	ug/L	23	Standard
	Al	27	77986.9	0.4	**0.4523**	0.009	2.0	ug/L	1170	Standard
	Sc	45	22888.9	1.2				ug/L	26874	Standard
	Ti	47	549.7	4.3	**2.4790**	0.119	4.8	ug/L	25	Standard
	V	51	3209.9	1.9	**0.3564**	0.013	3.6	ug/L	1686	Standard
	Cr	52	7292.4	0.4	**0.5714**	0.004	0.7	ug/L	6098	Standard
	Cr	53	931.7	6.3	**0.7389**	0.054	7.3	ug/L	193	Standard
	Mn	55	67433.7	0.4	**5.7867**	0.045	0.8	ug/L	1232	Standard
	Co	59	933.0	6.5	**0.1026**	0.008	7.4	ug/L	106	Standard
	Ni	60	1139.0	1.5	**0.2894**	0.010	3.5	ug/L	556	Standard
	Cu	65	5611.7	0.8	**2.4632**	0.014	0.6	ug/L	124	Standard
	Zn	66	7146.4	1.1	**5.6739**	0.044	0.8	ug/L	196	Standard
>	**Ge**	72	402736.7	0.5				ug/L	473313	Standard
	As	75	-194.1	7.0	**0.0543**	0.012	21.8	ug/L	-286	Standard
	Se	82	-40.5	22.7	**-0.0197**	0.074	375.3	ug/L	-33	Standard
	Se-1	77	63.0	4.2	**-0.0722**	0.025	34.6	ug/L	86	Standard
>	**Ga**	71	256.7	6.8				mg/L	35	Standard
	Rb	85	2861.9	5.2				ug/L	13	Standard
	Y	89	369348.4	1.7				ug/L	439493	Standard
>	**Rh**	103	8.3	91.7				ug/L	5	Standard
	Mo	98	42.2	7.2	**-0.0025**	0.001	37.8	ug/L	10	Standard
	Ag	107	264.7	3.2	**0.0320**	0.001	3.7	ug/L	53	Standard
	Cd	111	150.6	8.7	**0.0777**	0.008	10.0	mg/L	1	Standard
	Cd	114	397.1	13.4	**0.0743**	0.010	13.9	ug/L	32	Standard
>	**In**	115	421863.4	1.0				ug/L	494305	Standard
	Sn	118	48.0	25.3	**-0.0134**	0.011	81.9	ug/L	53	Standard
	Sb	123	71.6	14.0	**0.0301**	0.004	14.5	ug/L	7	Standard
	Ba	135	4671.4	0.9	**2.9753**	0.051	1.7	ug/L	11	Standard
	Ce	140	8567.4	2.6				ug/L	10	Standard
>	**Tb**	159	422932.0	1.2				ug/L	538219	Standard
	Ho	165	93.3	11.2				ug/L	8	Standard
	Tl	203	15.3	26.4	**0.0008**	0.001	92.7	ug/L	1	Standard
	Tl	205	20.0	0.0	**0.0025**	0.000	0.2	ug/L	3	Standard
	Pb	206	6181.9	1.0	**2.7670**	0.026	0.9	ug/L	80	Standard
	Pb	207	5163.5	1.0	**2.5719**	0.021	0.8	ug/L	73	Standard
	Pb	208	12387.3	0.9	**2.5144**	0.023	0.9	ug/L	190	Standard
	U	238	27.7	14.6	**0.0069**	0.001	18.7	ug/L	0	Standard
>	**Bi**	209	236685.7	0.2				ug/L	276439	Standard

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	Na	23	1.7	173.2	**0.0814**	0.882	1083.4	mg/L	2	Standard
	Mg	24	38.3	37.7	**0.0141**	0.017	124.1	mg/L	37	Standard
	K	39	5.0	100.0	**-0.0382**	0.341	893.3	mg/L	3	Standard
	Ca	43	28.3	27.0	**-0.7144**	2.527	353.8	mg/L	43	Standard
	Fe	54	560.4	3.5	**0.1937**	0.015	7.5	mg/L	262	Standard
	Fe	57	208.3	14.5	**0.3258**	0.056	17.2	mg/L	65	Standard
>	**Sc-1**	45	22888.9	1.2				mg/L	26874	Standard
	Cl	35	122572.0	2.2				ug/L	141022	Standard
	Kr	83	83.7	12.1				ug/L	75	Standard
	Br	81	1956.8	5.9				ug/L	2810	Standard
	P	31	148255.4	2.5				ug/L	458976	Standard
	S	34	108916.9	2.1				ug/L	103378	Standard
	Sr	88	35.0	65.5				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	34.6				mg/L	0	Standard
	Dy	164	98.4	31.0				mg/L	10	Standard
	Ho-1	165	93.3	11.2				mg/L	8	Standard
	Er	166	103.3	5.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		80.938	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.089	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.345
|	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	85.619
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045203
Sample Date/Time: Monday, November 18, 2013 19:39:52
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	224679.0	1.8				ug/L	269614	Standard
	Be	9	36.7	31.5	**-0.0012**	0.005	376.2	ug/L	23	Standard
	Al	27	103190.2	0.9	**0.5834**	0.014	2.4	ug/L	1170	Standard
	Sc	45	21979.3	2.5				ug/L	26874	Standard
	Ti	47	955.0	2.1	**4.4007**	0.066	1.5	ug/L	25	Standard
	V	51	4347.9	2.8	**0.5508**	0.026	4.8	ug/L	1686	Standard
	Cr	52	12370.7	2.8	**1.4609**	0.052	3.6	ug/L	6098	Standard
	Cr	53	1918.5	5.5	**1.6783**	0.115	6.8	ug/L	193	Standard
	Mn	55	196734.3	1.7	**17.2302**	0.174	1.0	ug/L	1232	Standard
	Co	59	2407.9	3.7	**0.2905**	0.009	3.0	ug/L	106	Standard
	Ni	60	4638.7	0.9	**1.8074**	0.021	1.2	ug/L	556	Standard
	Cu	65	37694.8	1.3	**16.9689**	0.085	0.5	ug/L	124	Standard
	Zn	66	54650.1	1.0	**44.9148**	0.121	0.3	ug/L	196	Standard
>	Ge	72	400826.2	0.8				ug/L	473313	Standard
	As	75	81.5	33.5	**0.2782**	0.022	7.8	ug/L	-286	Standard
	Se	82	-45.9	16.3	**-0.0640**	0.061	95.8	ug/L	-33	Standard
	Se-1	77	65.0	13.8	**-0.0471**	0.097	205.1	ug/L	86	Standard
>	Ga	71	443.3	7.5				mg/L	35	Standard
	Rb	85	2660.2	3.3				ug/L	13	Standard
	Y	89	366069.6	0.7				ug/L	439493	Standard
>	Rh	103	13.3	57.3				ug/L	5	Standard
	Mo	98	531.8	5.4	**0.1455**	0.010	7.1	ug/L	10	Standard
	Ag	107	2704.6	0.6	**0.4677**	0.005	1.0	ug/L	53	Standard
	Cd	111	1725.8	6.7	**0.9248**	0.056	6.0	mg/L	1	Standard
	Cd	114	4431.9	3.3	**0.9324**	0.040	4.3	ug/L	32	Standard
>	In	115	419407.6	1.2				ug/L	494305	Standard
	Sn	118	328.0	5.0	**0.2390**	0.013	5.4	ug/L	53	Standard
	Sb	123	133.0	11.3	**0.0576**	0.007	12.7	ug/L	7	Standard
	Ba	135	17749.4	1.8	**11.4048**	0.073	0.6	ug/L	11	Standard
	Ce	140	6409.7	2.1				ug/L	10	Standard
>	Tb	159	427433.6	0.4				ug/L	538219	Standard
	Ho	165	85.0	17.6				ug/L	8	Standard
	Tl	203	9.7	26.0	**-0.0003**	0.000	181.6	ug/L	1	Standard
	Tl	205	8.3	91.7	**0.0006**	0.001	192.0	ug/L	3	Standard
	Pb	206	46410.0	1.3	**21.0848**	0.237	1.1	ug/L	80	Standard
	Pb	207	39071.7	1.8	**19.7073**	0.281	1.4	ug/L	73	Standard
	Pb	208	92418.8	0.7	**19.0430**	0.187	1.0	ug/L	190	Standard
	U	238	18.7	22.3	**0.0040**	0.001	32.2	ug/L	0	Standard
>	Bi	209	236259.6	1.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.1086**	0.929	855.1	mg/L	2	Standard
Mg	24	65.0	7.7	**0.0493**	0.008	15.7	mg/L	37	Standard
K	39	3.3	86.6	**-0.1437**	0.206	143.2	mg/L	3	Standard
Ca	43	13.3	43.3	**-5.6411**	1.900	33.7	mg/L	43	Standard
Fe	54	2844.4	5.6	**1.5673**	0.128	8.2	mg/L	262	Standard
Fe	57	786.7	8.6	**1.5656**	0.116	7.4	mg/L	65	Standard
> **Sc-1**	45	21979.3	2.5				mg/L	26874	Standard
Cl	35	120694.2	1.4				ug/L	141022	Standard
Kr	83	89.3	9.1				ug/L	75	Standard
Br	81	1770.1	11.3				ug/L	2810	Standard
P	31	145697.2	0.7				ug/L	458976	Standard
S	34	109613.5	1.4				ug/L	103378	Standard
Sr	88	45.0	29.4				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	0	Standard
Dy	164	117.6	8.1				mg/L	10	Standard
Ho-1	165	85.0	17.6				mg/L	8	Standard
Er	166	50.0	40.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.333	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.685	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	84.848
|	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	85.465
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045204
Sample Date/Time: Monday, November 18, 2013 19:42:57
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	229133.3	1.8				ug/L	269614	Standard
	Be	9	66.7	30.3	**0.0104**	0.008	80.7	ug/L	23	Standard
	Al	27	134545.0	2.7	**0.7479**	0.029	3.9	ug/L	1170	Standard
	Sc	45	21959.2	2.2				ug/L	26874	Standard
	Ti	47	1036.0	1.7	**4.6883**	0.058	1.2	ug/L	25	Standard
	V	51	4082.0	2.3	**0.4926**	0.015	3.0	ug/L	1686	Standard
	Cr	52	67850.6	1.2	**10.8864**	0.096	0.9	ug/L	6098	Standard
	Cr	53	12862.1	5.3	**11.8053**	0.575	4.9	ug/L	193	Standard
	Mn	55	115134.5	1.5	**9.8302**	0.110	1.1	ug/L	1232	Standard
	Co	59	2209.8	6.0	**0.2600**	0.016	6.0	ug/L	106	Standard
	Ni	60	5540.3	2.8	**2.1514**	0.054	2.5	ug/L	556	Standard
	Cu	65	42184.7	2.3	**18.6297**	0.369	2.0	ug/L	124	Standard
	Zn	66	58657.0	0.2	**47.2900**	0.172	0.4	ug/L	196	Standard
>	Ge	72	408704.4	0.5				ug/L	473313	Standard
	As	75	17.0	281.4	**0.2256**	0.038	17.0	ug/L	-286	Standard
	Se	82	-47.6	25.3	**-0.0701**	0.092	131.7	ug/L	-33	Standard
	Se-1	77	67.3	5.6	**-0.0359**	0.037	103.7	ug/L	86	Standard
>	Ga	71	463.3	17.9				mg/L	35	Standard
	Rb	85	3713.8	4.4				ug/L	13	Standard
	Y	89	369120.6	0.7				ug/L	439493	Standard
>	Rh	103	20.0	50.0				ug/L	5	Standard
	Mo	98	1007.2	11.2	**0.2866**	0.031	10.9	ug/L	10	Standard
	Ag	107	2428.5	6.8	**0.4150**	0.026	6.3	ug/L	53	Standard
	Cd	111	2050.2	2.2	**1.0912**	0.021	1.9	mg/L	1	Standard
	Cd	114	5180.0	4.4	**1.0829**	0.047	4.4	ug/L	32	Standard
>	In	115	422563.8	1.0				ug/L	494305	Standard
	Sn	118	344.0	11.0	**0.2509**	0.031	12.4	ug/L	53	Standard
	Sb	123	194.2	23.2	**0.0841**	0.019	22.7	ug/L	7	Standard
	Ba	135	16742.9	1.5	**10.6773**	0.098	0.9	ug/L	11	Standard
	Ce	140	7160.0	3.9				ug/L	10	Standard
>	Tb	159	433807.8	0.7				ug/L	538219	Standard
	Ho	165	95.0	24.1				ug/L	8	Standard
	Tl	203	38.0	91.5	**0.0052**	0.007	128.3	ug/L	1	Standard
	Tl	205	81.7	120.2	**0.0121**	0.015	126.6	ug/L	3	Standard
	Pb	206	183336.2	2.0	**82.9958**	1.432	1.7	ug/L	80	Standard
	Pb	207	143049.5	0.8	**71.8792**	0.672	0.9	ug/L	73	Standard
	Pb	208	351554.8	0.9	**72.1795**	0.316	0.4	ug/L	190	Standard
	U	238	51.0	97.0	**0.0141**	0.015	109.3	ug/L	0	Standard
>	Bi	209	237442.8	0.8				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	43.3	33.3	**0.0220**	0.017	77.4	mg/L	37	Standard
K	39	1.7	173.2	**-0.2620**	0.206	78.8	mg/L	3	Standard
Ca	43	23.3	32.7	**-2.0978**	2.581	123.0	mg/L	43	Standard
Fe	54	2299.4	4.5	**1.2439**	0.092	7.4	mg/L	262	Standard
Fe	57	671.7	2.8	**1.3253**	0.055	4.1	mg/L	65	Standard
> **Sc-1**	45	21959.2	2.2				mg/L	26874	Standard
Cl	35	120311.2	1.6				ug/L	141022	Standard
Kr	83	100.0	8.2				ug/L	75	Standard
Br	81	1893.5	9.9				ug/L	2810	Standard
P	31	155134.9	5.2				ug/L	458976	Standard
S	34	109217.4	2.3				ug/L	103378	Standard
Sr	88	58.3	17.8				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	0	Standard
Dy	164	99.5	15.7				mg/L	10	Standard
Ho-1	165	95.0	24.1				mg/L	8	Standard
Er	166	80.0	25.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		84.986	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		86.350	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	85.486
|	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	85.893
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311045204
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Method 6020 - Summary Report

Sample ID: L1311045205
Sample Date/Time: Monday, November 18, 2013 19:46:02
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	229077.9	2.7				ug/L	269614	Standard
	Be	9	38.3	19.9	**-0.0008**	0.003	414.5	ug/L	23	Standard
	Al	27	75764.1	2.9	**0.4180**	0.008	1.9	ug/L	1170	Standard
	Sc	45	22127.8	2.5				ug/L	26874	Standard
	Ti	47	604.0	4.4	**2.7183**	0.122	4.5	ug/L	25	Standard
	V	51	3240.1	7.1	**0.3584**	0.037	10.4	ug/L	1686	Standard
	Cr	52	7282.8	1.6	**0.5629**	0.016	2.8	ug/L	6098	Standard
	Cr	53	976.7	4.1	**0.7764**	0.034	4.4	ug/L	193	Standard
	Mn	55	65354.7	0.8	**5.5731**	0.061	1.1	ug/L	1232	Standard
	Co	59	1023.4	2.2	**0.1133**	0.002	2.1	ug/L	106	Standard
	Ni	60	1245.7	0.7	**0.3324**	0.003	0.8	ug/L	556	Standard
	Cu	65	6750.8	1.2	**2.9591**	0.034	1.2	ug/L	124	Standard
	Zn	66	8479.0	1.1	**6.7315**	0.081	1.2	ug/L	196	Standard
>	**Ge**	72	404911.2	0.4				ug/L	473313	Standard
	As	75	-187.1	9.5	**0.0609**	0.015	24.4	ug/L	-286	Standard
	Se	82	-41.9	16.6	**-0.0288**	0.056	194.2	ug/L	-33	Standard
	Se-1	77	64.0	7.8	**-0.0651**	0.051	78.5	ug/L	86	Standard
>	**Ga**	71	300.0	5.0				mg/L	35	Standard
	Rb	85	2376.9	7.9				ug/L	13	Standard
	Y	89	375391.0	1.8				ug/L	439493	Standard
>	**Rh**	103	8.3	91.7				ug/L	5	Standard
	Mo	98	45.9	27.7	**-0.0014**	0.004	264.1	ug/L	10	Standard
	Ag	107	307.7	3.3	**0.0396**	0.002	4.5	ug/L	53	Standard
	Cd	111	167.9	3.9	**0.0868**	0.004	4.1	mg/L	1	Standard
	Cd	114	654.8	6.2	**0.1288**	0.009	6.6	ug/L	32	Standard
>	**In**	115	422130.9	0.0				ug/L	494305	Standard
	Sn	118	2741.2	0.6	**2.3965**	0.015	0.6	ug/L	53	Standard
	Sb	123	68.1	11.6	**0.0286**	0.003	12.2	ug/L	7	Standard
	Ba	135	5469.0	0.5	**3.4829**	0.018	0.5	ug/L	11	Standard
	Ce	140	7291.8	2.3				ug/L	10	Standard
>	**Tb**	159	430084.1	1.1				ug/L	538219	Standard
	Ho	165	66.7	8.7				ug/L	8	Standard
	Tl	203	12.0	8.3	**0.0002**	0.000	101.9	ug/L	1	Standard
	Tl	205	16.7	17.3	**0.0019**	0.000	23.1	ug/L	3	Standard
	Pb	206	7291.8	2.7	**3.2628**	0.091	2.8	ug/L	80	Standard
	Pb	207	6060.5	0.8	**3.0164**	0.036	1.2	ug/L	73	Standard
	Pb	208	14450.0	1.1	**2.9318**	0.042	1.4	ug/L	190	Standard
	U	238	27.0	22.2	**0.0067**	0.002	29.1	ug/L	0	Standard
>	**Bi**	209	237304.9	0.5				ug/L	276439	Standard

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	Na	23	1.7	173.2	**0.0928**	0.901	971.7	mg/L	2	Standard
	Mg	24	36.7	41.7	**0.0139**	0.020	144.1	mg/L	37	Standard
	K	39	1.7	173.2	**-0.2623**	0.206	78.5	mg/L	3	Standard
	Ca	43	25.0	40.0	**-1.5064**	3.690	244.9	mg/L	43	Standard
	Fe	54	578.8	13.1	**0.2164**	0.053	24.7	mg/L	262	Standard
	Fe	57	261.7	11.2	**0.4541**	0.076	16.7	mg/L	65	Standard
>	**Sc-1**	45	22127.8	2.5				mg/L	26874	Standard
	Cl	35	119124.5	1.7				ug/L	141022	Standard
	Kr	83	90.0	3.3				ug/L	75	Standard
	Br	81	2053.5	2.0				ug/L	2810	Standard
	P	31	149598.3	1.3				ug/L	458976	Standard
	S	34	107228.1	0.3				ug/L	103378	Standard
	Sr	88	48.3	51.0				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	20.0	86.6				mg/L	0	Standard
	Dy	164	149.0	30.7				mg/L	10	Standard
	Ho-1	165	66.7	8.7				mg/L	8	Standard
	Er	166	90.0	40.1				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		84.965	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.548	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	85.399
	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	85.843
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045206 WG452353-01
Sample Date/Time: Monday, November 18, 2013 19:49:06
Number of Replicates: 3
Autosampler Position: 319
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	222775.9	1.1				ug/L	269614	Standard
	Be	9	43.3	33.3	**0.0016**	0.006	364.7	ug/L	23	Standard
	Al	27	104979.1	1.1	**0.5986**	0.012	2.1	ug/L	1170	Standard
	Sc	45	21970.9	2.6				ug/L	26874	Standard
	Ti	47	1321.1	2.1	**6.0906**	0.136	2.2	ug/L	25	Standard
	V	51	4363.6	2.2	**0.5493**	0.018	3.3	ug/L	1686	Standard
	Cr	52	11880.3	0.9	**1.3640**	0.012	0.9	ug/L	6098	Standard
	Cr	53	1823.4	3.0	**1.5781**	0.056	3.6	ug/L	193	Standard
	Mn	55	78304.5	0.7	**6.7357**	0.021	0.3	ug/L	1232	Standard
	Co	59	1620.8	6.4	**0.1894**	0.012	6.5	ug/L	106	Standard
	Ni	60	3111.0	2.0	**1.1381**	0.026	2.3	ug/L	556	Standard
	Cu	65	12700.7	1.5	**5.6456**	0.085	1.5	ug/L	124	Standard
	Zn	66	33521.0	0.3	**27.3183**	0.103	0.4	ug/L	196	Standard
>	**Ge**	72	403091.3	0.4				ug/L	473313	Standard
	As	75	-49.9	123.8	**0.1714**	0.050	29.3	ug/L	-286	Standard
	Se	82	-33.0	55.3	**0.0400**	0.144	361.0	ug/L	-33	Standard
	Se-1	77	73.7	13.6	**0.0430**	0.110	255.0	ug/L	86	Standard
>	**Ga**	71	438.3	3.7				mg/L	35	Standard
	Rb	85	2695.2	1.1				ug/L	13	Standard
	Y	89	365670.1	0.8				ug/L	439493	Standard
>	**Rh**	103	15.0	33.3				ug/L	5	Standard
	Mo	98	178.6	5.9	**0.0396**	0.003	8.2	ug/L	10	Standard
	Ag	107	4358.6	1.3	**0.7753**	0.010	1.3	ug/L	53	Standard
	Cd	111	888.5	7.5	**0.4825**	0.036	7.5	mg/L	1	Standard
	Cd	114	2370.8	3.9	**0.5024**	0.020	3.9	ug/L	32	Standard
>	**In**	115	412742.2	0.0				ug/L	494305	Standard
	Sn	118	100.7	10.6	**0.0357**	0.010	27.5	ug/L	53	Standard
	Sb	123	96.2	11.4	**0.0420**	0.005	11.9	ug/L	7	Standard
	Ba	135	15200.3	0.6	**9.9235**	0.052	0.5	ug/L	11	Standard
	Ce	140	9204.5	0.7				ug/L	10	Standard
>	**Tb**	159	424975.8	2.0				ug/L	538219	Standard
	Ho	165	100.0	26.5				ug/L	8	Standard
	Tl	203	12.7	38.9	**0.0004**	0.001	248.6	ug/L	1	Standard
	Tl	205	16.7	45.8	**0.0020**	0.001	62.7	ug/L	3	Standard
	Pb	206	21507.9	0.9	**10.0198**	0.173	1.7	ug/L	80	Standard
	Pb	207	18107.8	1.1	**9.3689**	0.102	1.1	ug/L	73	Standard
	Pb	208	42951.3	0.6	**9.0748**	0.151	1.7	ug/L	190	Standard
	U	238	30.0	8.8	**0.0079**	0.001	12.2	ug/L	0	Standard
>	**Bi**	209	229915.1	1.2				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	51.7	24.4	**0.0327**	0.016	49.8	mg/L	37	Standard
K	39	1.7	173.2	**-0.2610**	0.208	79.7	mg/L	3	Standard
Ca	43	11.7	49.5	**-6.2267**	1.978	31.8	mg/L	43	Standard
Fe	54	972.6	8.0	**0.4519**	0.034	7.6	mg/L	262	Standard
Fe	57	330.0	14.6	**0.6033**	0.118	19.6	mg/L	65	Standard
> **Sc-1**	45	21970.9	2.6				mg/L	26874	Standard
Cl	35	118538.6	1.2				ug/L	141022	Standard
Kr	83	81.7	21.1				ug/L	75	Standard
Br	81	1976.8	8.7				ug/L	2810	Standard
P	31	150415.0	2.8				ug/L	458976	Standard
S	34	105138.6	2.1				ug/L	103378	Standard
Sr	88	40.0	25.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	106.7	67.8				mg/L	0	Standard
Dy	164	159.5	41.6				mg/L	10	Standard
Ho-1	165	100.0	26.5				mg/L	8	Standard
Er	166	80.0	25.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		82.628	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		85.164	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.499
	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	83.170
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045207S WG452353-04
Sample Date/Time: Monday, November 18, 2013 19:52:11
Number of Replicates: 3
Autosampler Position: 320
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	224942.5	3.9				ug/L	269614	Standard
	Be	9	788.4	2.4	**0.3027**	0.016	5.4	ug/L	23	Standard
	Al	27	84686.1	2.2	**0.4774**	0.026	5.4	ug/L	1170	Standard
	Sc	45	22206.3	1.2				ug/L	26874	Standard
	Ti	47	601.3	3.7	**2.7324**	0.092	3.4	ug/L	25	Standard
	V	51	5240.0	1.0	**0.7005**	0.013	1.8	ug/L	1686	Standard
	Cr	52	10694.8	0.5	**1.1682**	0.010	0.8	ug/L	6098	Standard
	Cr	53	1596.8	0.7	**1.3721**	0.015	1.1	ug/L	193	Standard
	Mn	55	83665.4	1.8	**7.2428**	0.100	1.4	ug/L	1232	Standard
	Co	59	3500.1	2.8	**0.4291**	0.015	3.4	ug/L	106	Standard
	Ni	60	3540.7	1.9	**1.3309**	0.035	2.6	ug/L	556	Standard
	Cu	65	14506.6	1.0	**6.4897**	0.092	1.4	ug/L	124	Standard
	Zn	66	32210.2	0.4	**26.3748**	0.212	0.8	ug/L	196	Standard
>	Ge	72	401088.2	0.5				ug/L	473313	Standard
	As	75	213.6	4.9	**0.3860**	0.009	2.4	ug/L	-286	Standard
	Se	82	-13.8	74.5	**0.1911**	0.081	42.6	ug/L	-33	Standard
	Se-1	77	91.3	12.0	**0.2392**	0.119	49.8	ug/L	86	Standard
>	Ga	71	410.0	5.3				mg/L	35	Standard
	Rb	85	2265.2	6.4				ug/L	13	Standard
	Y	89	365981.2	1.4				ug/L	439493	Standard
>	Rh	103	8.3	124.9				ug/L	5	Standard
	Mo	98	170.8	9.9	**0.0371**	0.005	13.8	ug/L	10	Standard
	Ag	107	5584.0	1.2	**0.9950**	0.018	1.8	ug/L	53	Standard
	Cd	111	1365.2	1.1	**0.7411**	0.013	1.7	mg/L	1	Standard
	Cd	114	3485.7	4.6	**0.7412**	0.038	5.1	ug/L	32	Standard
>	In	115	413824.4	0.6				ug/L	494305	Standard
	Sn	118	111.7	10.8	**0.0455**	0.011	23.3	ug/L	53	Standard
	Sb	123	127.9	11.0	**0.0561**	0.007	11.7	ug/L	7	Standard
	Ba	135	14491.6	0.7	**9.4359**	0.120	1.3	ug/L	11	Standard
	Ce	140	10378.6	3.7				ug/L	10	Standard
>	Tb	159	422748.2	0.5				ug/L	538219	Standard
	Ho	165	115.0	31.4				ug/L	8	Standard
	Tl	203	1241.7	0.8	**0.2427**	0.003	1.4	ug/L	1	Standard
	Tl	205	1671.8	6.1	**0.2662**	0.013	5.0	ug/L	3	Standard
	Pb	206	20051.6	0.1	**9.1810**	0.119	1.3	ug/L	80	Standard
	Pb	207	16992.9	0.3	**8.6424**	0.096	1.1	ug/L	73	Standard
	Pb	208	40171.8	0.7	**8.3423**	0.160	1.9	ug/L	190	Standard
	U	238	729.0	3.5	**0.2313**	0.009	3.8	ug/L	0	Standard
>	Bi	209	233840.5	1.3				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0938**	0.903	962.7	mg/L	2	Standard
Mg	24	46.7	24.7	**0.0258**	0.015	57.4	mg/L	37	Standard
K	39	6.7	86.6	**0.0969**	0.414	427.2	mg/L	3	Standard
Ca	43	15.0	33.3	**-5.0879**	1.687	33.2	mg/L	43	Standard
Fe	54	715.3	8.8	**0.2945**	0.034	11.7	mg/L	262	Standard
Fe	57	243.3	5.2	**0.4127**	0.031	7.5	mg/L	65	Standard
> **Sc-1**	45	22206.3	1.2				mg/L	26874	Standard
Cl	35	119971.2	1.6				ug/L	141022	Standard
Kr	83	87.0	6.4				ug/L	75	Standard
Br	81	2020.1	3.9				ug/L	2810	Standard
P	31	143432.5	1.4				ug/L	458976	Standard
S	34	105668.9	0.2				ug/L	103378	Standard
Sr	88	80.0	16.5				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	100.0	26.5				mg/L	0	Standard
Dy	164	178.2	23.4				mg/L	10	Standard
Ho-1	165	115.0	31.4				mg/L	8	Standard
Er	166	106.7	39.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.431	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.741	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.718
	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	84.590
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311045207S WG452353-04
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 19:55:18
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	250901.3	2.6				ug/L	269614	Standard
	Be	9	138898.8	0.5	**50.2941**	1.107	2.2	ug/L	23	Standard
	Al	27	8819062.1	0.9	**45.1865**	0.843	1.9	ug/L	1170	Standard
	Sc	45	25306.1	0.5				ug/L	26874	Standard
	Ti	47	24739.8	0.5	**104.7903**	1.229	1.2	ug/L	25	Standard
	V	51	310127.2	1.2	**46.8425**	0.127	0.3	ug/L	1686	Standard
	Cr	52	305214.3	0.8	**47.0924**	0.189	0.4	ug/L	6098	Standard
	Cr	53	56933.5	1.6	**48.3782**	0.876	1.8	ug/L	193	Standard
	Mn	55	616166.1	1.1	**48.8108**	0.126	0.3	ug/L	1232	Standard
	Co	59	410797.5	0.5	**46.9495**	0.268	0.6	ug/L	106	Standard
	Ni	60	124875.2	1.1	**48.4597**	0.214	0.4	ug/L	556	Standard
	Cu	65	121639.7	1.1	**49.3856**	0.355	0.7	ug/L	124	Standard
	Zn	66	66859.9	1.0	**49.4632**	0.343	0.7	ug/L	196	Standard
>	Ge	72	445473.6	1.0				ug/L	473313	Standard
	As	75	68343.0	0.9	**50.3481**	0.089	0.2	ug/L	-286	Standard
	Se	82	6973.1	0.8	**50.1801**	0.189	0.4	ug/L	-33	Standard
	Se-1	77	5029.8	0.3	**48.5613**	0.429	0.9	ug/L	86	Standard
>	Ga	71	50.0	34.6				mg/L	35	Standard
	Rb	85	1053.4	2.4				ug/L	13	Standard
	Y	89	405347.9	1.4				ug/L	439493	Standard
>	Rh	103	31.7	9.1				ug/L	5	Standard
	Mo	98	379270.3	0.6	**104.6854**	0.708	0.7	ug/L	10	Standard
	Ag	107	322958.2	0.9	**52.6543**	0.275	0.5	ug/L	53	Standard
	Cd	111	101465.5	0.3	**49.8596**	0.341	0.7	mg/L	1	Standard
	Cd	114	260209.5	1.4	**50.5193**	0.907	1.8	ug/L	32	Standard
>	In	115	458903.0	0.5				ug/L	494305	Standard
	Sn	118	62173.6	1.0	**51.1200**	0.615	1.2	ug/L	53	Standard
	Sb	123	121208.9	0.3	**49.2355**	0.309	0.6	ug/L	7	Standard
	Ba	135	84743.7	0.5	**49.8101**	0.206	0.4	ug/L	11	Standard
	Ce	140	45.0	44.4				ug/L	10	Standard
>	Tb	159	467537.3	0.3				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	266550.7	1.1	**50.0561**	0.484	1.0	ug/L	1	Standard
	Tl	205	348534.7	2.5	**53.0066**	1.223	2.3	ug/L	3	Standard
	Pb	206	120588.1	2.0	**52.7767**	0.985	1.9	ug/L	80	Standard
	Pb	207	108931.2	1.5	**52.9227**	0.747	1.4	ug/L	73	Standard
	Pb	208	242823.1	0.5	**48.2006**	0.161	0.3	ug/L	190	Standard
	U	238	155202.2	0.9	**47.2696**	0.302	0.6	ug/L	0	Standard
>	Bi	209	245527.7	0.2				ug/L	276439	Standard

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	Na	23	16.7	17.3	**4.1294**	0.766	18.5	mg/L	2	Standard
	Mg	24	4732.4	0.8	**5.0951**	0.018	0.4	mg/L	37	Standard
	K	39	81.7	14.1	**4.7252**	0.733	15.5	mg/L	3	Standard
	Ca	43	35.0	37.8	**0.4297**	4.093	952.6	mg/L	43	Standard
	Fe	54	11270.3	1.4	**5.6967**	0.105	1.8	mg/L	262	Standard
	Fe	57	3270.4	2.8	**5.9089**	0.163	2.8	mg/L	65	Standard
>	**Sc-1**	45	25306.1	0.5				mg/L	26874	Standard
	Cl	35	140939.8	0.8				ug/L	141022	Standard
	Kr	83	95.3	5.4				ug/L	75	Standard
	Br	81	2493.5	1.5				ug/L	2810	Standard
	P	31	453645.4	1.6				ug/L	458976	Standard
	S	34	124517.9	1.0				ug/L	103378	Standard
	Sr	88	31.7	32.9				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	0	Standard
	Dy	164	6.3	99.7				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	8	Standard
	Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.059	
	Be	9	100.588		
	Al	27	90.373		
	Sc	45			
	Ti	47	104.790		
	V	51	93.685		
	Cr	52	94.185		
	Cr	53			
	Mn	55	97.622		
	Co	59	93.899		
	Ni	60	96.919		
	Cu	65	98.771		
	Zn	66	98.926		
>	Ge	72		94.118	
	As	75	100.696		
	Se	82	100.360		
	Se-1	77			
>	Ga	71			
	Rb	85			

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⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	104.685	
|	Ag	107	105.309	
|	Cd	111	99.719	
|	Cd	114		
|>	In	115		92.838
|	Sn	118	102.240	
|	Sb	123	98.471	
⌊	Ba	135	99.620	
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203	100.112	
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208	96.401	
|	U	238	94.539	
⌊>	Bi	209		88.818
⌈	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 19:58:23
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	255057.1	3.3				ug/L	269614	Standard
	Be	9	48.3	11.9	**0.0012**	0.002	208.5	ug/L	23	Standard
	Al	27	1025.0	24.1	**-0.0020**	0.001	54.5	ug/L	1170	Standard
	Sc	45	24633.3	1.8				ug/L	26874	Standard
	Ti	47	16.0	18.8	**-0.0299**	0.013	44.8	ug/L	25	Standard
	V	51	964.6	7.5	**-0.0335**	0.012	34.5	ug/L	1686	Standard
	Cr	52	3457.1	2.5	**-0.1420**	0.015	10.4	ug/L	6098	Standard
	Cr	53	140.0	12.9	**-0.0181**	0.016	86.3	ug/L	193	Standard
	Mn	55	906.7	2.7	**-0.0660**	0.002	3.4	ug/L	1232	Standard
	Co	59	83.0	22.9	**-0.0057**	0.002	38.9	ug/L	106	Standard
	Ni	60	345.0	6.5	**-0.0652**	0.008	12.6	ug/L	556	Standard
	Cu	65	100.0	14.8	**-0.0187**	0.006	30.6	ug/L	124	Standard
	Zn	66	353.0	5.1	**0.0689**	0.012	17.4	ug/L	196	Standard
>	**Ge**	72	438793.5	0.9				ug/L	473313	Standard
	As	75	-270.6	13.8	**0.0103**	0.029	280.0	ug/L	-286	Standard
	Se	82	-41.6	21.2	**-0.0013**	0.066	5101.2	ug/L	-33	Standard
	Se-1	77	72.0	9.6	**-0.0390**	0.062	159.3	ug/L	86	Standard
>	**Ga**	71	26.7	10.8				mg/L	35	Standard
	Rb	85	15.0	33.3				ug/L	13	Standard
	Y	89	405311.8	1.2				ug/L	439493	Standard
>	**Rh**	103	1.7	173.2				ug/L	5	Standard
	Mo	98	63.5	23.7	**0.0024**	0.004	161.8	ug/L	10	Standard
	Ag	107	78.3	5.3	**-0.0021**	0.000	22.6	ug/L	53	Standard
	Cd	111	6.6	70.1	**0.0004**	0.002	613.0	mg/L	1	Standard
	Cd	114	23.3	41.3	**-0.0049**	0.002	37.0	ug/L	32	Standard
>	**In**	115	456317.4	1.6				ug/L	494305	Standard
	Sn	118	62.0	21.8	**-0.0052**	0.010	202.0	ug/L	53	Standard
	Sb	123	250.5	31.6	**0.1005**	0.031	30.4	ug/L	7	Standard
	Ba	135	9.7	15.8	**-0.0068**	0.001	14.5	ug/L	11	Standard
	Ce	140	10.0	50.0				ug/L	10	Standard
>	**Tb**	159	464767.5	0.8				ug/L	538219	Standard
	Ho	165	1.7	173.2				ug/L	8	Standard
	Tl	203	15.3	66.6	**0.0007**	0.002	281.3	ug/L	1	Standard
	Tl	205	18.3	15.7	**0.0020**	0.000	22.3	ug/L	3	Standard
	Pb	206	99.3	11.1	**0.0005**	0.004	863.1	ug/L	80	Standard
	Pb	207	71.0	10.6	**0.0016**	0.004	239.3	ug/L	73	Standard
	Pb	208	190.7	6.8	**-0.0015**	0.002	159.1	ug/L	190	Standard
	U	238	10.0	95.4	**0.0011**	0.003	256.5	ug/L	0	Standard
>	**Bi**	209	251853.1	1.1				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	31.7	39.7	**0.0034**	0.014	413.2	mg/L	37	Standard
K	39	1.7	173.2	**-0.2751**	0.184	66.8	mg/L	3	Standard
Ca	43	20.0	25.0	**-4.0306**	1.483	36.8	mg/L	43	Standard
Fe	54	287.4	10.7	**0.0262**	0.017	64.2	mg/L	262	Standard
Fe	57	66.7	24.1	**0.0294**	0.033	111.8	mg/L	65	Standard
Sc-1	45	24633.3	1.8				mg/L	26874	Standard
Cl	35	136499.2	3.2				ug/L	141022	Standard
Kr	83	93.3	7.3				ug/L	75	Standard
Br	81	2233.5	6.8				ug/L	2810	Standard
P	31	448393.2	2.8				ug/L	458976	Standard
S	34	116796.9	2.3				ug/L	103378	Standard
Sr	88	48.3	46.6				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	6.3	93.2				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	8	Standard
Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		94.601	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		92.707	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.315
	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	91.106
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1311045208SD WG452353-05
Sample Date/Time: Monday, November 18, 2013 20:01:29
Number of Replicates: 3
Autosampler Position: 321
Sample Description: 100
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	219889.8	2.5				ug/L	269614	Standard
	Be	9	735.0	3.8	**0.2878**	0.015	5.3	ug/L	23	Standard
	Al	27	109353.2	1.2	**0.6325**	0.024	3.8	ug/L	1170	Standard
	Sc	45	21822.4	2.2				ug/L	26874	Standard
	Ti	47	1552.1	4.6	**7.1990**	0.325	4.5	ug/L	25	Standard
	V	51	6026.3	2.1	**0.8316**	0.025	3.0	ug/L	1686	Standard
	Cr	52	14349.1	1.2	**1.8002**	0.028	1.5	ug/L	6098	Standard
	Cr	53	2300.2	0.7	**2.0350**	0.030	1.5	ug/L	193	Standard
	Mn	55	92527.7	0.6	**8.0139**	0.014	0.2	ug/L	1232	Standard
	Co	59	3554.4	2.0	**0.4353**	0.006	1.3	ug/L	106	Standard
	Ni	60	4174.2	2.1	**1.6027**	0.047	3.0	ug/L	556	Standard
	Cu	65	14880.6	1.7	**6.6488**	0.077	1.2	ug/L	124	Standard
	Zn	66	37451.6	1.2	**30.6559**	0.313	1.0	ug/L	196	Standard
>	Ge	72	401637.2	0.7				ug/L	473313	Standard
	As	75	311.1	17.3	**0.4648**	0.042	9.1	ug/L	-286	Standard
	Se	82	4.6	194.9	**0.3369**	0.070	20.8	ug/L	-33	Standard
	Se-1	77	91.3	8.2	**0.2383**	0.088	37.1	ug/L	86	Standard
>	Ga	71	561.7	11.3				mg/L	35	Standard
	Rb	85	2713.6	4.7				ug/L	13	Standard
	Y	89	366762.6	0.5				ug/L	439493	Standard
>	Rh	103	15.0	0.0				ug/L	5	Standard
	Mo	98	283.8	4.3	**0.0712**	0.003	4.6	ug/L	10	Standard
	Ag	107	3837.8	1.5	**0.6756**	0.016	2.3	ug/L	53	Standard
	Cd	111	1610.4	3.8	**0.8701**	0.034	3.9	mg/L	1	Standard
	Cd	114	3934.3	2.4	**0.8332**	0.014	1.7	ug/L	32	Standard
>	In	115	415995.2	0.8				ug/L	494305	Standard
	Sn	118	106.3	12.2	**0.0401**	0.011	28.5	ug/L	53	Standard
	Sb	123	121.9	3.6	**0.0531**	0.002	3.7	ug/L	7	Standard
	Ba	135	17240.8	1.3	**11.1700**	0.204	1.8	ug/L	11	Standard
	Ce	140	9666.4	2.2				ug/L	10	Standard
>	Tb	159	427476.9	1.2				ug/L	538219	Standard
	Ho	165	131.7	7.9				ug/L	8	Standard
	Tl	203	1245.1	1.9	**0.2429**	0.006	2.5	ug/L	1	Standard
	Tl	205	1691.8	6.7	**0.2688**	0.017	6.1	ug/L	3	Standard
	Pb	206	26345.6	1.8	**12.0490**	0.154	1.3	ug/L	80	Standard
	Pb	207	22163.2	0.3	**11.2575**	0.094	0.8	ug/L	73	Standard
	Pb	208	53075.0	0.5	**11.0096**	0.071	0.6	ug/L	190	Standard
	U	238	750.4	2.9	**0.2376**	0.005	2.3	ug/L	0	Standard
>	Bi	209	234328.5	0.6				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	56.7	36.7	**0.0397**	0.028	70.3	mg/L	37	Standard
K	39	0.0		**-0.3812**	0.000	0.0	mg/L	3	Standard
Ca	43	11.7	65.5	**-6.2084**	2.617	42.2	mg/L	43	Standard
Fe	54	927.4	6.8	**0.4299**	0.050	11.7	mg/L	262	Standard
Fe	57	281.7	10.2	**0.5033**	0.063	12.4	mg/L	65	Standard
> **Sc-1**	45	21822.4	2.2				mg/L	26874	Standard
Cl	35	117032.4	2.3				ug/L	141022	Standard
Kr	83	77.3	19.8				ug/L	75	Standard
Br	81	1910.1	13.5				ug/L	2810	Standard
P	31	145127.0	2.5				ug/L	458976	Standard
S	34	105761.2	0.4				ug/L	103378	Standard
Sr	88	46.7	27.0				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	100.0	36.1				mg/L	0	Standard
Dy	164	222.0	13.7				mg/L	10	Standard
Ho-1	165	131.7	7.9				mg/L	8	Standard
Er	166	96.7	23.9				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		81.557	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.857	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	84.158
|	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	84.767
⌈	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1311045208SD WG452353-05
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Method 6020 - Summary Report

Sample ID: L1311045209
Sample Date/Time: Monday, November 18, 2013 20:04:34
Number of Replicates: 3
Autosampler Position: 322
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	225404.3	0.3				ug/L	269614	Standard
	Be	9	63.3	31.9	**0.0094**	0.008	85.6	ug/L	23	Standard
	Al	27	61262.0	2.9	**0.3422**	0.011	3.1	ug/L	1170	Standard
	Sc	45	22411.6	3.1				ug/L	26874	Standard
	Ti	47	672.3	0.2	**3.0650**	0.038	1.2	ug/L	25	Standard
	V	51	3373.5	4.7	**0.3856**	0.021	5.5	ug/L	1686	Standard
	Cr	52	8250.9	1.0	**0.7423**	0.022	3.0	ug/L	6098	Standard
	Cr	53	1118.4	7.9	**0.9182**	0.075	8.1	ug/L	193	Standard
	Mn	55	75932.8	1.0	**6.5566**	0.096	1.5	ug/L	1232	Standard
	Co	59	1522.7	3.8	**0.1779**	0.009	5.2	ug/L	106	Standard
	Ni	60	2263.2	2.2	**0.7771**	0.013	1.7	ug/L	556	Standard
	Cu	65	14637.1	1.8	**6.5435**	0.063	1.0	ug/L	124	Standard
	Zn	66	35062.5	0.9	**28.7085**	0.332	1.2	ug/L	196	Standard
>	Ge	72	401367.7	1.0				ug/L	473313	Standard
	As	75	-148.7	47.3	**0.0910**	0.057	62.5	ug/L	-286	Standard
	Se	82	-46.1	32.9	**-0.0647**	0.119	184.5	ug/L	-33	Standard
	Se-1	77	65.7	4.4	**-0.0407**	0.031	76.1	ug/L	86	Standard
>	Ga	71	461.7	5.0				mg/L	35	Standard
	Rb	85	1876.8	3.4				ug/L	13	Standard
	Y	89	364421.4	1.8				ug/L	439493	Standard
>	Rh	103	6.7	43.3				ug/L	5	Standard
	Mo	98	210.5	26.2	**0.0489**	0.017	33.8	ug/L	10	Standard
	Ag	107	4512.3	2.1	**0.7974**	0.018	2.3	ug/L	53	Standard
	Cd	111	897.1	4.7	**0.4838**	0.025	5.2	mg/L	1	Standard
	Cd	114	2147.6	5.1	**0.4507**	0.020	4.4	ug/L	32	Standard
>	In	115	415745.4	1.0				ug/L	494305	Standard
	Sn	118	96.0	17.8	**0.0308**	0.015	49.1	ug/L	53	Standard
	Sb	123	122.6	13.9	**0.0535**	0.008	14.7	ug/L	7	Standard
	Ba	135	12121.5	1.2	**7.8537**	0.050	0.6	ug/L	11	Standard
	Ce	140	6974.9	2.4				ug/L	10	Standard
>	Tb	159	420806.0	1.5				ug/L	538219	Standard
	Ho	165	70.0	25.8				ug/L	8	Standard
	Tl	203	40.7	128.5	**0.0059**	0.010	175.5	ug/L	1	Standard
	Tl	205	18.3	56.8	**0.0022**	0.002	74.4	ug/L	3	Standard
	Pb	206	19245.2	1.7	**8.8000**	0.135	1.5	ug/L	80	Standard
	Pb	207	16247.7	1.4	**8.2526**	0.098	1.2	ug/L	73	Standard
	Pb	208	37999.5	1.1	**7.8796**	0.054	0.7	ug/L	190	Standard
	U	238	31.7	14.9	**0.0082**	0.001	17.3	ug/L	0	Standard
>	Bi	209	234085.5	0.9				ug/L	276439	Standard

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Na	23	3.3	173.2	**0.5678**	1.724	303.7	mg/L	2	Standard
Mg	24	43.3	43.7	**0.0207**	0.021	102.6	mg/L	37	Standard
K	39	5.0	100.0	**-0.0262**	0.362	1380.0	mg/L	3	Standard
Ca	43	13.3	21.7	**-5.7125**	0.922	16.1	mg/L	43	Standard
Fe	54	895.7	6.0	**0.3958**	0.020	5.0	mg/L	262	Standard
Fe	57	335.0	5.4	**0.5990**	0.056	9.3	mg/L	65	Standard
> **Sc-1**	45	22411.6	3.1				mg/L	26874	Standard
Cl	35	117411.9	0.8				ug/L	141022	Standard
Kr	83	95.0	18.5				ug/L	75	Standard
Br	81	2083.5	6.0				ug/L	2810	Standard
P	31	144514.6	2.8				ug/L	458976	Standard
S	34	104809.6	0.8				ug/L	103378	Standard
Sr	88	48.3	15.8				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	70.0	28.6				mg/L	0	Standard
Dy	164	110.9	42.8				mg/L	10	Standard
Ho-1	165	70.0	25.8				mg/L	8	Standard
Er	166	50.0	34.6				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		83.602	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.800	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	84.107
	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	84.679
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045211
Sample Date/Time: Monday, November 18, 2013 20:07:39
Number of Replicates: 3
Autosampler Position: 323
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	223242.7	0.8				ug/L	269614	Standard
	Be	9	50.0	36.1	**0.0043**	0.007	172.1	ug/L	23	Standard
	Al	27	78730.7	1.3	**0.4462**	0.005	1.2	ug/L	1170	Standard
	Sc	45	22186.2	1.3				ug/L	26874	Standard
	Ti	47	409.7	4.3	**1.8435**	0.111	6.0	ug/L	25	Standard
	V	51	3363.8	4.1	**0.3882**	0.026	6.7	ug/L	1686	Standard
	Cr	52	5455.0	1.5	**0.2633**	0.028	10.6	ug/L	6098	Standard
	Cr	53	545.0	10.8	**0.3803**	0.062	16.2	ug/L	193	Standard
	Mn	55	79037.3	2.0	**6.8790**	0.094	1.4	ug/L	1232	Standard
	Co	59	1313.1	9.2	**0.1526**	0.018	11.6	ug/L	106	Standard
	Ni	60	1494.1	4.4	**0.4494**	0.035	7.8	ug/L	556	Standard
	Cu	65	4994.8	1.8	**2.2094**	0.009	0.4	ug/L	124	Standard
	Zn	66	14384.2	1.1	**11.7446**	0.048	0.4	ug/L	196	Standard
>	Ge	72	398555.9	1.4				ug/L	473313	Standard
	As	75	-157.9	11.7	**0.0823**	0.017	20.9	ug/L	-286	Standard
	Se	82	-39.5	11.8	**-0.0153**	0.039	253.1	ug/L	-33	Standard
	Se-1	77	66.0	9.2	**-0.0313**	0.077	247.6	ug/L	86	Standard
>	Ga	71	286.7	2.7				mg/L	35	Standard
	Rb	85	2385.2	6.5				ug/L	13	Standard
	Y	89	370872.6	0.6				ug/L	439493	Standard
>	Rh	103	3.3	86.6				ug/L	5	Standard
	Mo	98	177.2	76.4	**0.0389**	0.042	107.2	ug/L	10	Standard
	Ag	107	1931.8	6.8	**0.3334**	0.023	7.0	ug/L	53	Standard
	Cd	111	462.9	1.7	**0.2486**	0.004	1.8	mg/L	1	Standard
	Cd	114	1164.6	3.2	**0.2406**	0.007	3.1	ug/L	32	Standard
>	In	115	415043.9	1.5				ug/L	494305	Standard
	Sn	118	79.7	6.9	**0.0161**	0.004	24.4	ug/L	53	Standard
	Sb	123	122.6	39.3	**0.0536**	0.022	40.8	ug/L	7	Standard
	Ba	135	7288.1	1.7	**4.7250**	0.019	0.4	ug/L	11	Standard
	Ce	140	8220.6	2.5				ug/L	10	Standard
>	Tb	159	418085.4	1.4				ug/L	538219	Standard
	Ho	165	101.7	34.5				ug/L	8	Standard
	Tl	203	43.0	116.8	**0.0065**	0.010	157.1	ug/L	1	Standard
	Tl	205	145.0	127.7	**0.0228**	0.030	132.7	ug/L	3	Standard
	Pb	206	7287.4	1.6	**3.3142**	0.040	1.2	ug/L	80	Standard
	Pb	207	6196.6	2.2	**3.1354**	0.076	2.4	ug/L	73	Standard
	Pb	208	14661.4	1.2	**3.0242**	0.054	1.8	ug/L	190	Standard
	U	238	60.0	73.7	**0.0175**	0.015	83.3	ug/L	0	Standard
>	Bi	209	233535.0	1.6				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0936**	0.903	964.7	mg/L	2	Standard
Mg	24	26.7	47.2	**0.0009**	0.015	1627.3	mg/L	37	Standard
K	39	1.7	173.2	**-0.2609**	0.208	79.9	mg/L	3	Standard
Ca	43	30.0	16.7	**0.2011**	1.890	939.6	mg/L	43	Standard
Fe	54	530.9	16.0	**0.1869**	0.054	29.0	mg/L	262	Standard
Fe	57	200.0	8.7	**0.3222**	0.036	11.2	mg/L	65	Standard
> **Sc-1**	45	22186.2	1.3				mg/L	26874	Standard
Cl	35	119121.5	3.6				ug/L	141022	Standard
Kr	83	88.0	1.1				ug/L	75	Standard
Br	81	2066.8	7.9				ug/L	2810	Standard
P	31	145702.2	0.4				ug/L	458976	Standard
S	34	107048.6	2.0				ug/L	103378	Standard
Sr	88	43.3	35.3				ug/L	30	Standard
C	12	0.0					mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	43.3	48.0				mg/L	0	Standard
Dy	164	140.3	29.1				mg/L	10	Standard
Ho-1	165	101.7	34.5				mg/L	8	Standard
Er	166	63.3	32.9				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		82.801	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		84.206	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	83.965
	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	84.480
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1311045212
Sample Date/Time: Monday, November 18, 2013 20:10:44
Number of Replicates: 3
Autosampler Position: 324
Sample Description: 100
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	221920.2	1.2				ug/L	269614	Standard
	Be	9	40.0	50.0	**0.0004**	0.008	2257.0	ug/L	23	Standard
	Al	27	87228.7	0.6	**0.4982**	0.009	1.7	ug/L	1170	Standard
	Sc	45	22611.9	2.8				ug/L	26874	Standard
	Ti	47	683.0	2.3	**3.1031**	0.108	3.5	ug/L	25	Standard
	V	51	2877.8	14.0	**0.3002**	0.065	21.8	ug/L	1686	Standard
	Cr	52	48734.3	1.0	**7.7435**	0.090	1.2	ug/L	6098	Standard
	Cr	53	9142.8	1.7	**8.4733**	0.080	0.9	ug/L	193	Standard
	Mn	55	154085.2	0.4	**13.3943**	0.143	1.1	ug/L	1232	Standard
	Co	59	1699.1	3.6	**0.1993**	0.006	2.8	ug/L	106	Standard
	Ni	60	10644.7	1.4	**4.3840**	0.034	0.8	ug/L	556	Standard
	Cu	65	45391.9	0.6	**20.3389**	0.158	0.8	ug/L	124	Standard
	Zn	66	45263.5	0.6	**36.9705**	0.277	0.7	ug/L	196	Standard
>	Ge	72	402969.0	1.3				ug/L	473313	Standard
	As	75	-56.0	11.0	**0.1665**	0.004	2.7	ug/L	-286	Standard
	Se	82	-36.4	20.1	**0.0133**	0.058	431.6	ug/L	-33	Standard
	Se-1	77	73.3	10.6	**0.0397**	0.085	213.6	ug/L	86	Standard
>	Ga	71	363.3	7.1				mg/L	35	Standard
	Rb	85	1901.8	1.9				ug/L	13	Standard
	Y	89	367999.4	1.6				ug/L	439493	Standard
>	Rh	103	18.3	56.8				ug/L	5	Standard
	Mo	98	376.1	3.8	**0.0982**	0.004	4.2	ug/L	10	Standard
	Ag	107	3967.9	2.4	**0.6915**	0.016	2.3	ug/L	53	Standard
	Cd	111	6625.9	1.2	**3.5522**	0.052	1.5	mg/L	1	Standard
	Cd	114	16448.4	2.0	**3.4775**	0.057	1.6	ug/L	32	Standard
>	In	115	420312.7	0.3				ug/L	494305	Standard
	Sn	118	205.0	5.1	**0.1278**	0.009	7.0	ug/L	53	Standard
	Sb	123	115.5	10.8	**0.0497**	0.006	11.1	ug/L	7	Standard
	Ba	135	10822.2	0.9	**6.9344**	0.081	1.2	ug/L	11	Standard
	Ce	140	6821.5	4.9				ug/L	10	Standard
>	Tb	159	434327.3	0.6				ug/L	538219	Standard
	Ho	165	73.3	25.8				ug/L	8	Standard
	Tl	203	9.0	22.2	**-0.0004**	0.000	106.3	ug/L	1	Standard
	Tl	205	16.7	17.3	**0.0019**	0.000	22.9	ug/L	3	Standard
	Pb	206	81560.3	1.5	**37.1193**	0.613	1.7	ug/L	80	Standard
	Pb	207	66276.0	0.7	**33.4814**	0.169	0.5	ug/L	73	Standard
	Pb	208	158884.8	0.6	**32.7940**	0.189	0.6	ug/L	190	Standard
	U	238	25.3	26.3	**0.0062**	0.002	35.0	ug/L	0	Standard
>	Bi	209	236046.9	0.8				ug/L	276439	Standard

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Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
Mg	24	40.0	21.7	**0.0167**	0.011	66.9	mg/L	37	Standard
K	39	1.7	173.2	**-0.2630**	0.205	77.8	mg/L	3	Standard
Ca	43	15.0	57.7	**-5.1126**	3.072	60.1	mg/L	43	Standard
Fe	54	1494.4	8.2	**0.7392**	0.093	12.5	mg/L	262	Standard
Fe	57	476.7	3.7	**0.8834**	0.045	5.1	mg/L	65	Standard
> **Sc-1**	45	22611.9	2.8				mg/L	26874	Standard
Cl	35	122584.0	1.8				ug/L	141022	Standard
Kr	83	88.0	2.0				ug/L	75	Standard
Br	81	2276.8	7.2				ug/L	2810	Standard
P	31	148508.6	7.4				ug/L	458976	Standard
S	34	108843.0	2.5				ug/L	103378	Standard
Sr	88	60.0	8.3				ug/L	30	Standard
C	12	3.3	173.2				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	20.0	50.0				mg/L	0	Standard
Dy	164	89.8	17.6				mg/L	10	Standard
Ho-1	165	73.3	25.8				mg/L	8	Standard
Er	166	73.3	15.7				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		82.310	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		85.138	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	85.031
	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	85.388
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, November 18, 2013 20:13:49
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	244929.9	2.8				ug/L	269614	Standard
	Be	9	137257.3	1.0	**50.9194**	1.517	3.0	ug/L	23	Standard
	Al	27	8821376.8	1.6	**46.2985**	0.762	1.6	ug/L	1170	Standard
	Sc	45	25341.2	1.5				ug/L	26874	Standard
	Ti	47	24937.2	2.2	**105.4018**	1.866	1.8	ug/L	25	Standard
	V	51	309612.1	1.0	**46.6708**	0.423	0.9	ug/L	1686	Standard
	Cr	52	303602.1	0.9	**46.7431**	0.129	0.3	ug/L	6098	Standard
	Cr	53	57311.5	1.9	**48.5968**	0.638	1.3	ug/L	193	Standard
	Mn	55	610664.3	0.9	**48.2767**	0.354	0.7	ug/L	1232	Standard
	Co	59	409466.9	1.2	**46.7055**	0.861	1.8	ug/L	106	Standard
	Ni	60	126827.3	0.7	**49.1214**	0.288	0.6	ug/L	556	Standard
	Cu	65	123683.4	0.5	**50.1152**	0.191	0.4	ug/L	124	Standard
	Zn	66	67314.2	0.4	**49.7006**	0.345	0.7	ug/L	196	Standard
>	Ge	72	446377.2	0.9				ug/L	473313	Standard
	As	75	68536.0	1.0	**50.3882**	0.321	0.6	ug/L	-286	Standard
	Se	82	6919.3	0.1	**49.6972**	0.442	0.9	ug/L	-33	Standard
	Se-1	77	5060.2	2.0	**48.7546**	0.820	1.7	ug/L	86	Standard
>	Ga	71	46.7	16.4				mg/L	35	Standard
	Rb	85	1060.0	7.9				ug/L	13	Standard
	Y	89	401359.7	2.1				ug/L	439493	Standard
>	Rh	103	25.0	52.9				ug/L	5	Standard
	Mo	98	380640.1	0.5	**104.8827**	0.974	0.9	ug/L	10	Standard
	Ag	107	326644.1	1.1	**53.1641**	0.653	1.2	ug/L	53	Standard
	Cd	111	101468.7	0.9	**49.7753**	0.641	1.3	mg/L	1	Standard
	Cd	114	261437.0	0.3	**50.6674**	0.267	0.5	ug/L	32	Standard
>	In	115	459701.9	0.5				ug/L	494305	Standard
	Sn	118	62233.6	3.3	**51.0784**	1.632	3.2	ug/L	53	Standard
	Sb	123	122567.8	0.3	**49.7008**	0.268	0.5	ug/L	7	Standard
	Ba	135	85622.3	1.2	**50.2414**	0.818	1.6	ug/L	11	Standard
	Ce	140	48.3	33.3				ug/L	10	Standard
>	Tb	159	471877.1	0.2				ug/L	538219	Standard
	Ho	165	6.7	43.3				ug/L	8	Standard
	Tl	203	266840.6	0.8	**49.6193**	0.396	0.8	ug/L	1	Standard
	Tl	205	345768.1	1.5	**52.0699**	0.696	1.3	ug/L	3	Standard
	Pb	206	121937.7	0.9	**52.8440**	0.272	0.5	ug/L	80	Standard
	Pb	207	109846.1	0.1	**52.8439**	0.167	0.3	ug/L	73	Standard
	Pb	208	245452.0	0.4	**48.2444**	0.175	0.4	ug/L	190	Standard
	U	238	157210.4	0.5	**47.4115**	0.054	0.1	ug/L	0	Standard
>	Bi	209	247962.2	0.4				ug/L	276439	Standard

Sample ID: QC Std 6
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	Na	23	15.0	33.3	**3.6594**	1.308	35.8	mg/L	2	Standard
	Mg	24	4574.0	3.8	**4.9155**	0.111	2.2	mg/L	37	Standard
	K	39	76.7	10.0	**4.4010**	0.403	9.2	mg/L	3	Standard
	Ca	43	36.7	39.4	**0.9674**	4.560	471.4	mg/L	43	Standard
	Fe	54	11587.1	2.8	**5.8515**	0.119	2.0	mg/L	262	Standard
	Fe	57	3297.0	1.3	**5.9508**	0.136	2.3	mg/L	65	Standard
>	**Sc-1**	45	25341.2	1.5				mg/L	26874	Standard
	Cl	35	137277.8	1.1				ug/L	141022	Standard
	Kr	83	104.0	1.7				ug/L	75	Standard
	Br	81	2410.2	8.4				ug/L	2810	Standard
	P	31	466482.7	2.9				ug/L	458976	Standard
	S	34	123153.5	0.9				ug/L	103378	Standard
	Sr	88	60.0	54.6				ug/L	30	Standard
	C	12	0.0					mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	6.3	186.3				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	8	Standard
	Er	166	6.7	86.6				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		90.845	
	Be	9	101.839		
	Al	27	92.597		
	Sc	45			
	Ti	47	105.402		
	V	51	93.342		
	Cr	52	93.486		
	Cr	53			
	Mn	55	96.553		
	Co	59	93.411		
	Ni	60	98.243		
	Cu	65	100.230		
	Zn	66	99.401		
>	Ge	72		94.309	
	As	75	100.776		
	Se	82	99.394		
	Se-1	77			
>	Ga	71			
	Rb	85			

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	Y	89		
>	Rh	103		
	Mo	98	104.883	
	Ag	107	106.328	
	Cd	111	99.551	
	Cd	114		
>	In	115		93.000
	Sn	118	102.157	
	Sb	123	99.402	
	Ba	135	100.483	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.239	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.489	
	U	238	94.823	
>	Bi	209		89.699
	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		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, November 18, 2013 20:16:54
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	250988.0	4.6				ug/L	269614	Standard
	Be	9	41.7	18.3	**-0.0009**	0.003	361.3	ug/L	23	Standard
	Al	27	896.7	10.7	**-0.0025**	0.000	12.1	ug/L	1170	Standard
	Sc	45	24728.5	0.9				ug/L	26874	Standard
	Ti	47	12.3	18.7	**-0.0459**	0.010	21.6	ug/L	25	Standard
	V	51	979.3	3.8	**-0.0319**	0.005	16.4	ug/L	1686	Standard
	Cr	52	3416.4	1.9	**-0.1508**	0.009	6.1	ug/L	6098	Standard
	Cr	53	113.3	9.2	**-0.0416**	0.009	20.5	ug/L	193	Standard
	Mn	55	938.7	2.0	**-0.0638**	0.001	1.6	ug/L	1232	Standard
	Co	59	82.0	11.6	**-0.0059**	0.001	19.6	ug/L	106	Standard
	Ni	60	331.7	6.4	**-0.0710**	0.008	10.9	ug/L	556	Standard
	Cu	65	102.3	7.5	**-0.0179**	0.003	16.1	ug/L	124	Standard
	Zn	66	333.0	8.7	**0.0529**	0.023	42.6	ug/L	196	Standard
>	**Ge**	72	440657.2	0.6				ug/L	473313	Standard
	As	75	-266.7	4.0	**0.0141**	0.007	47.3	ug/L	-286	Standard
	Se	82	-48.4	14.2	**-0.0491**	0.048	96.9	ug/L	-33	Standard
	Se-1	77	68.7	19.6	**-0.0751**	0.129	172.2	ug/L	86	Standard
>	**Ga**	71	21.7	66.6				mg/L	35	Standard
	Rb	85	13.3	57.3				ug/L	13	Standard
	Y	89	407852.6	1.8				ug/L	439493	Standard
>	**Rh**	103	0.0					ug/L	5	Standard
	Mo	98	58.1	31.1	**0.0009**	0.005	582.4	ug/L	10	Standard
	Ag	107	57.7	32.5	**-0.0056**	0.003	54.9	ug/L	53	Standard
	Cd	111	3.6	43.1	**-0.0011**	0.001	68.0	mg/L	1	Standard
	Cd	114	10.1	160.3	**-0.0075**	0.003	42.1	ug/L	32	Standard
>	**In**	115	458064.9	0.1				ug/L	494305	Standard
	Sn	118	58.7	10.8	**-0.0080**	0.005	64.8	ug/L	53	Standard
	Sb	123	272.9	28.2	**0.1096**	0.031	28.6	ug/L	7	Standard
	Ba	135	10.0	10.0	**-0.0066**	0.001	8.9	ug/L	11	Standard
	Ce	140	13.3	21.7				ug/L	10	Standard
>	**Tb**	159	467056.5	1.0				ug/L	538219	Standard
	Ho	165	0.0					ug/L	8	Standard
	Tl	203	12.3	46.1	**0.0001**	0.001	818.6	ug/L	1	Standard
	Tl	205	23.3	32.7	**0.0028**	0.001	40.4	ug/L	3	Standard
	Pb	206	98.3	5.2	**0.0003**	0.002	743.4	ug/L	80	Standard
	Pb	207	73.7	5.5	**0.0030**	0.003	85.0	ug/L	73	Standard
	Pb	208	179.7	13.1	**-0.0035**	0.004	121.3	ug/L	190	Standard
	U	238	5.0	40.0	**-0.0004**	0.001	153.6	ug/L	0	Standard
>	**Bi**	209	250849.6	1.8				ug/L	276439	Standard

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Na	23	1.7	173.2	**0.0346**	0.801	2313.8	mg/L	2	Standard
Mg	24	30.0	76.4	**0.0013**	0.025	1939.6	mg/L	37	Standard
K	39	3.3	86.6	**-0.1681**	0.185	109.8	mg/L	3	Standard
Ca	43	5.0	100.0	**-8.7476**	1.574	18.0	mg/L	43	Standard
Fe	54	302.9	20.7	**0.0335**	0.032	94.5	mg/L	262	Standard
Fe	57	73.3	15.7	**0.0411**	0.022	52.5	mg/L	65	Standard
> **Sc-1**	45	24728.5	0.9				mg/L	26874	Standard
Cl	35	132341.5	0.9				ug/L	141022	Standard
Kr	83	97.0	10.7				ug/L	75	Standard
Br	81	2103.5	6.6				ug/L	2810	Standard
P	31	431121.5	4.3				ug/L	458976	Standard
S	34	114565.0	2.1				ug/L	103378	Standard
Sr	88	60.0	38.2				ug/L	30	Standard
C	12	6.7	86.6				mg/L	3	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	0	Standard
Dy	164	-0.5	100.0				mg/L	10	Standard
Ho-1	165	0.0					mg/L	8	Standard
Er	166	10.0	100.0				mg/L	10	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
> Li	6		93.091	
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
> Ge	72		93.101	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			

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	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	92.668
	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	90.743
	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	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, November 18, 2013 20:20:00
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: SLP user
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	252251.4	2.1				ug/L	269614	Standard
	Be	9	565.0	5.4	**0.1873**	0.008	4.1	ug/L	23	Standard
	Al	27	1055.0	20.5	**-0.0018**	0.001	56.3	ug/L	1170	Standard
	Sc	45	25429.7	5.1				ug/L	26874	Standard
	Ti	47	14.3	16.1	**-0.0381**	0.010	25.5	ug/L	25	Standard
	V	51	3372.6	1.9	**0.3288**	0.012	3.5	ug/L	1686	Standard
	Cr	52	8343.3	1.2	**0.6132**	0.010	1.6	ug/L	6098	Standard
	Cr	53	1041.7	7.3	**0.7476**	0.067	9.0	ug/L	193	Standard
	Mn	55	7177.0	2.4	**0.4304**	0.013	3.0	ug/L	1232	Standard
	Co	59	3373.0	3.2	**0.3698**	0.013	3.5	ug/L	106	Standard
	Ni	60	4280.6	2.6	**1.4646**	0.045	3.1	ug/L	556	Standard
	Cu	65	2011.5	2.7	**0.7568**	0.020	2.7	ug/L	124	Standard
	Zn	66	9558.7	1.4	**6.8945**	0.090	1.3	ug/L	196	Standard
>	**Ge**	72	445972.3	0.4				ug/L	473313	Standard
	As	75	218.4	22.2	**0.3720**	0.036	9.7	ug/L	-286	Standard
	Se	82	-4.1	267.0	**0.2717**	0.078	28.7	ug/L	-33	Standard
	Se-1	77	108.7	5.4	**0.3088**	0.053	17.2	ug/L	86	Standard
>	**Ga**	71	15.0	33.3				mg/L	35	Standard
	Rb	85	13.3	108.3				ug/L	13	Standard
	Y	89	412223.5	1.7				ug/L	439493	Standard
>	**Rh**	103	3.3	86.6				ug/L	5	Standard
	Mo	98	41.7	54.0	**-0.0038**	0.006	158.9	ug/L	10	Standard
	Ag	107	2613.2	2.1	**0.4105**	0.009	2.3	ug/L	53	Standard
	Cd	111	467.0	1.1	**0.2262**	0.005	2.2	mg/L	1	Standard
	Cd	114	1126.9	9.5	**0.2089**	0.019	9.1	ug/L	32	Standard
>	**In**	115	459673.4	1.6				ug/L	494305	Standard
	Sn	118	56.0	9.3	**-0.0104**	0.004	34.5	ug/L	53	Standard
	Sb	123	1024.6	5.9	**0.4138**	0.018	4.4	ug/L	7	Standard
	Ba	135	1249.4	3.4	**0.7209**	0.025	3.5	ug/L	11	Standard
	Ce	140	5.0	100.0				ug/L	10	Standard
>	**Tb**	159	474341.8	1.6				ug/L	538219	Standard
	Ho	165	8.3	69.3				ug/L	8	Standard
	Tl	203	419.3	10.2	**0.0747**	0.007	9.8	ug/L	1	Standard
	Tl	205	553.3	4.5	**0.0815**	0.003	4.0	ug/L	3	Standard
	Pb	206	608.3	2.8	**0.2183**	0.007	3.0	ug/L	80	Standard
	Pb	207	493.3	6.7	**0.2021**	0.015	7.4	ug/L	73	Standard
	Pb	208	1173.7	3.1	**0.1893**	0.005	2.7	ug/L	190	Standard
	U	238	1277.4	1.3	**0.3781**	0.003	0.9	ug/L	0	Standard
>	**Bi**	209	251409.1	0.8				ug/L	276439	Standard

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	Na	23	0.0		**-0.4277**	0.000	0.0	mg/L	2	Standard
	Mg	24	26.7	60.3	**-0.0027**	0.019	690.0	mg/L	37	Standard
	K	39	3.3	86.6	**-0.1746**	0.180	102.8	mg/L	3	Standard
	Ca	43	15.0	33.3	**-5.6823**	1.749	30.8	mg/L	43	Standard
	Fe	54	295.5	9.3	**0.0253**	0.009	37.4	mg/L	262	Standard
	Fe	57	88.3	18.2	**0.0659**	0.037	55.8	mg/L	65	Standard
>	**Sc-1**	45	25429.7	5.1				mg/L	26874	Standard
	Cl	35	132442.3	0.1				ug/L	141022	Standard
	Kr	83	97.7	8.0				ug/L	75	Standard
	Br	81	2366.9	10.5				ug/L	2810	Standard
	P	31	443500.6	2.0				ug/L	458976	Standard
	S	34	110414.2	1.3				ug/L	103378	Standard
	Sr	88	35.0	28.6				ug/L	30	Standard
	C	12	3.3	173.2				mg/L	3	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	0	Standard
	Dy	164	6.3	186.4				mg/L	10	Standard
	Ho-1	165	8.3	69.3				mg/L	8	Standard
	Er	166	6.7	173.2				mg/L	10	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		93.560	
	Be	9	93.671		
	Al	27			
	Sc	45			
	Ti	47			
	V	51	82.210		
	Cr	52	76.655		
	Cr	53			
	Mn	55	86.075		
	Co	59	92.456		
	Ni	60	91.538		
	Cu	65	94.599		
	Zn	66	110.311		
>	Ge	72		94.224	
	As	75	93.005		
	Se	82	67.937		
	Se-1	77			
>	Ga	71			
	Rb	85			

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Y	89			
> Rh	103			
Mo	98			
Ag	107	102.632		
Cd	111	94.267		
Cd	114			
> In	115		92.994	
Sn	118			
Sb	123	103.456		
Ba	135	96.115		
Ce	140			
> Tb	159			
Ho	165			
Tl	203	93.420		
Tl	205			
Pb	206			
Pb	207			
Pb	208	94.642		
U	238	94.525		
> Bi	209		90.946	
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			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Se	82	

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2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 30-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:47
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	M7.111113.114727
Sample Tag:	01	**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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 16-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:49
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	M7.111113.114957
Sample Tag:	01	**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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	MPL 26-1113-1	**Prep Method:**	7470A	**Prep Date:**	11/08/2013 10:30
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	11/11/2013 11:00
Workgroup #:	WG452152	**Analyst:**	PDM	**Run Date:**	11/11/2013 11:52
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	M7.111113.115228
Sample Tag:	01	**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

Certificate of Analysis

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer / CETAC M-7600 Quick Trace 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): BLG
Date: 11/7/13
Filter Lot #: 8285629, SPLP - 9198629
Microbac SOP: TCLP 01 Rev #: 10

Analyst / Date		Analyst / Date	
BLG 11/7/13		BLG 11/8/13	
Time On	Temp On °C	Time Off	Temp Off °C
1500	23	0715	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
617	11-341-1	me, 827, 8081	1311	F1940	S	100	6	2	100.08	2000	6
621	2	↓ ↓ ↓	↓	↓	↓	↓	6	2	100.02	↓	6
D	11-286-1	me, ph	1311	F1939	↓	↓	6	2	100.05	↓	6
↓	2	↓ ↓	1312	SF2-263	↓	↓	N/A	N/A	100.06	↓	6
↓	3	↓ ↓	1311	F1940	↓	↓	6	2	100.08	↓	6
↓	4	↓ ↓	1312	SF2-263	↓	↓	N/A	N/A	100.00	↓	6
↓	5	↓ ↓	1311	F2318	↓	↓	11	6	50.07*	1000	6
↓	6	↓ ↓	1312	SF2-263	↓	↓	N/A	N/A	100.03	2000	11
N/A	11-334-1	me	1311	Filter	LW	<0.5	N/A	N/A	N/A	N/A	7
↓	11-335-1	827, 8081, 8151	1311	Filter	O	↓	↓	↓	↓	↓	N/A
D	11-359-1	OG, TS, COD, NH3	D3987	DIH2O	S	100	↓	↓	80.07	1600	5
G9	2	me(SPK), 827, 8081, 8151	1311	F1940	↓	↓	5	2	100.07	2000	5
N/A	FBLK 1	me, 827, 8081, 8151	1311	F1940	W	N/A	N/A	N/A	N/A	N/A	N/A
↓	FBLK 2	me	1311	F2318	↓	↓	↓	↓	↓	↓	↓
↓	SPLP BLNK	me	1312	SF2-263	↓	↓	↓	↓	↓	↓	↓
↓	FBLK	OG, TS, COD, NH3	D3987	DIH2O	↓	↓	↓	↓	↓	↓	↓

BLG 11/8/13

*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: * Reduced volume, TSR notified by. Filtered Sx found in document control #1335. BLG

Peer Review By: [signature]

TCLP Non-Volatile

Analyst(s): BLG
Date: 11/6/13
Filter Lot #: 8285629
Microbac SOP: TCLP 01 Rev #: 10

Analyst / Date		Analyst / Date	
BLG 11/6/13		BLG 11/7/13	
Time On	Temp On °C	Time Off	Temp Off °C
1445	23	0710	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
G2	11-250-1	me(SPA), 827	1311	F2318	S	100	11	10	50.06	1000	5
N/A	FBLK 2	me, 827	1311	F2318	W	N/A	N/A	N/A	N/A	N/A	N/A

BLG 11/7/13

*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: * Red. volume due to matrix. TSR notified by

Peer Review By: Cheryl A. Flowers 11/07/13

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG452024
Analyst: ERP
Spike Analyst: ERP
Method: 7470A
Run Date: 11/08/2013 10:30
Hotblock Start Temp: 94.8 @ 09:40
Hotblock End Temp: 95 @ 11:40
Instrument: HB6

SOP: ME404 Revison 15
Spike Solution: STD61244
Spike Witness: VC
HNO3 Lot #: COA16631
Digestion Tubes Lot #: COA16971
KMnO4 1:1 Lot #: RGT28547
H2SO4 Lot #: COA16973
K2S2O8 1:1 Lot #: RGT28479
HG H2O STDS 2PPM Lot #: STD61250
HG H2O STDS 10PPM Lot #: STD61252

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG452024-03	BLANK	1	40 mL	40 mL		
2	WG451936-01	FBLK1	17	4 mL	40 mL		
3	WG451804-01	FBLK2	17	4 mL	40 mL		
4	WG451936-02	FBLK2	17	4 mL	40 mL		
5	WG452024-04	LCS	1	40 mL	40 mL	4 mL	
6	L13110236-01	SAMP	1	40 mL	40 mL		11/12/13
7	L13110236-02	SAMP	1	40 mL	40 mL		11/12/13
8	L13110250-01	SAMP	17	4 mL	40 mL		11/15/13
9	L13110318-02	SAMP	1	40 mL	40 mL		11/13/13
10	L13110337-01	SAMP	1	40 mL	40 mL		11/15/13
11	L13110337-02	SAMP	1	40 mL	40 mL		11/15/13
12	L13110337-03	SAMP	1	40 mL	40 mL		11/15/13
13	L13110341-01	SAMP	17	4 mL	40 mL		11/11/13
14	L13110341-02	SAMP	17	4 mL	40 mL		11/11/13
15	WG452024-01	REF	17	4 mL	40 mL		
16	L13110359-02	SAMP	17	4 mL	40 mL		11/14/13
17	L13110368-01	SAMP	1	40 mL	40 mL		11/18/13
18	WG452024-02	REF	1	40 mL	40 mL		
19	L13110368-03	RS01	1	40 mL	40 mL		11/18/13
20	L13110368-04	SAMP	1	40 mL	40 mL		11/18/13
21	L13110368-05	SAMP	1	40 mL	40 mL		11/18/13
22	WG452024-06	MS	1	40 mL	40 mL	4 mL	
23	L13110368-06	MS01	1	40 mL	40 mL	4 mL	11/18/13
24	WG452024-07	MSD	1	40 mL	40 mL	4 mL	
25	L13110368-07	SD01	1	40 mL	40 mL	4 mL	11/18/13
26	WG452024-05	MS	1	40 mL	40 mL		

Analyst: Erin Potter

Reviewer: Vicki Collins

* All calibration and check standards are prepared and digested with sample batch following the procedures in section 7.0 of SOP ME404/ME405.

HB_DIG - Modified 07/26/2012
PDF ID: 3191797
Report generated: 11/08/2013 12:53

Microbac Laboratories Inc.

Instrument Run Log

Instrument: CVAA1 Dataset: 111113B.CSV
Analyst1: PDM Analyst2: N/A
Method: 7470 SOP: ME404 Rev: 15
Maintenance Log ID: 48119

Calibration Std: STD61252 ICV Std: STD61246 Post Spike: STD61252
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV: Tuning Sol :
Stannous : RGT27563 Hydroxylamine : RGT27561

Workgroups: 452152

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	M7.111113.104730	WG452256-01	Calibration Point		1		11/11/13 10:47
2	M7.111113.105001	WG452256-02	Calibration Point		1		11/11/13 10:50
3	M7.111113.105233	WG452256-03	Calibration Point		1		11/11/13 10:52
4	M7.111113.105506	WG452256-04	Calibration Point		1		11/11/13 10:55
5	M7.111113.105739	WG452256-05	Calibration Point		1		11/11/13 10:57
6	M7.111113.110012	WG452256-06	Calibration Point		1		11/11/13 11:00
7	M7.111113.110246	WG452256-07	Initial Calibration Verification		1		11/11/13 11:02
8	M7.111113.110517	WG452256-08	Initial Calib Blank		1		11/11/13 11:05
9	M7.111113.110750	WG452256-09	CCV		1		11/11/13 11:07
10	M7.111113.111021	WG452256-10	CCB		1		11/11/13 11:10
11	M7.111113.111252	WG452024-03	Method/Prep Blank	40/40	1		11/11/13 11:12
12	M7.111113.111657	WG452024-04	Laboratory Control S	40/40	1		11/11/13 11:16
13	M7.111113.111928	WG451804-01	Fluid Blank 2		1		11/11/13 11:19
14	M7.111113.112200	WG451936-01	Fluid Blank 1		1		11/11/13 11:22
15	M7.111113.112432	WG451936-02	Fluid Blank 2		1		11/11/13 11:24
16	M7.111113.112704	L13110236-01	REAMER-DORSEY-PD-W1	40/40	1		11/11/13 11:27
17	M7.111113.112937	WG452152-01	Post Digestion Spike		1	L13110236-01	11/11/13 11:29
18	M7.111113.113210	L13110236-02	REAMER-DORSEY-PD-W1	40/40	1		11/11/13 11:32
19	M7.111113.113443	L13110250-01	FILTER CAKE	4/40	1		11/11/13 11:34
20	M7.111113.113716	WG452152-02	Post Digestion Spike		1	L13110250-01	11/11/13 11:37
21	M7.111113.113949	WG452256-11	CCV		1		11/11/13 11:39
22	M7.111113.114219	WG452256-12	CCB		1		11/11/13 11:42
23	M7.111113.114453	L13110318-02	POWDP10-131104	40/40	1		11/11/13 11:44
24	M7.111113.114727	L13110337-01	MPL 30-1113-1	40/40	1		11/11/13 11:47
25	M7.111113.114957	L13110337-02	MPL 16-1113-1	40/40	1		11/11/13 11:49
26	M7.111113.115228	L13110337-03	MPL 26-1113-1	40/40	1		11/11/13 11:52
27	M7.111113.115459	L13110341-01	SWMV26-SP020	4/40	1		11/11/13 11:54
28	M7.111113.115730	L13110341-02	SWMV26-SP021	4/40	1		11/11/13 11:57
29	M7.111113.120001	WG452024-01	Reference Sample	4/40	1	L13110359-02	11/11/13 12:00
30	M7.111113.120233	WG452024-05	Matrix Spike	40/40	1	L13110359-02	11/11/13 12:02
31	M7.111113.120505	L13110368-01	POWDP09-131105	40/40	1		11/11/13 12:05
32	M7.111113.120737	WG452024-02	Reference Sample	40/40	1	L13110368-03	11/11/13 12:07
33	M7.111113.121010	WG452256-13	CCV		1		11/11/13 12:10
34	M7.111113.121241	WG452256-14	CCB		1		11/11/13 12:12

Page: 1 Approved: November 11, 2013

Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: CVAA1 Dataset: 111113B.CSV
Analyst1: PDM Analyst2: N/A
Method: 7470 SOP: ME404 Rev: 15
Maintenance Log ID: 48119

Calibration Std: STD61252 ICV Std: STD61246 Post Spike: STD61252
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV: Tuning Sol :
Stannous : RGT27563 Hydroxylamine : RGT27561

Workgroups: 452152

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	M7.111113.121514	L13110368-04	POWMW20-131105	40/40	1		11/11/13 12:15
36	M7.111113.121747	L13110368-05	DUP-01-131105	40/40	1		11/11/13 12:17
37	M7.111113.122020	L13110368-06	POWMW19-131105	40/40	1	WG452024-06	11/11/13 12:20
38	M7.111113.122254	L13110368-07	POWMW19-131105	40/40	1	WG452024-07	11/11/13 12:22
39	M7.111113.122526	WG452256-15	CCV		1		11/11/13 12:25
40	M7.111113.122757	WG452256-16	CCB		1		11/11/13 12:27

Comments

Seq.	Rerun	Dil.	Reason	Analytes
30			Edited due to typographical error. PDM	

Page: 2 Approved: November 11, 2013

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 11-NOV-2013
Analyst: PDM
Analyst: NA
Method: 7470/245.1
Instrument: CVAA1
Curve Workgroup: 452256
Runlog ID: 57001
Analytical Workgroups: 452152

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	0318,0337,0359,0368
Client Forms	X
Level X	
Level 3	
Level 4	0318,0337,0359,0368
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	PDM
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
11-NOV-2013
Pierce Morris

Secondary Reviewer:
11-NOV-2013
Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-11-2013 14:25:40

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A

AAB#: WG452152

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3	28		11/11/13	6.1	28	
MPL 16-1113-1	02	11/05/13					11/08/2013	2.9	28		11/11/13	6	28	
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	28		11/11/13	5.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3195372
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: M7.111113.111252
Prep Date: 11/08/13 10:30
Analyzed Date: 11/11/13 11:12
Analyst: PDM

Work Group: WG452152
Blank Sample ID: WG452024-03
Instrument ID: CVAA1
Method: 7470A

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG452024-04	M7.111113.111657	11/11/13 11:16	01
MPL 30-1113-1	L13110337-01	M7.111113.114727	11/11/13 11:47	01
MPL 16-1113-1	L13110337-02	M7.111113.114957	11/11/13 11:49	01
MPL 26-1113-1	L13110337-03	M7.111113.115228	11/11/13 11:52	01

Report Name: BLANK_SUMMARY
PDF File ID: 3195373
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 10:30 Sample ID: WG452024-03
Instrument ID: CVAA1 Run Date: 11/11/13 11:12 Prep Method: 7470A
File ID: M7.111113.111252 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG452152 Matrix: Water Units: mg/L
Contract #: Cal ID: CVAA1-11-NOV-13

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: 3195374
11-NOV-2013 13:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/11/2013 Sample ID: WG452024-04
Instrument ID: CVAA1 Run Time: 11:16 Prep Method: 7470A
File ID: M7.111113.111657 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG452152 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD61244 Cal ID: CVAA1-11-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00403	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 3195375
Report generated: 11/11/2013 13:46

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

Loginnum: L13110337 Cal ID: CVAA1- Worknum: WG452152
Instrument ID: CVAA1 Contract #: Method: 7470A
Parent ID: WG452024-02 File ID: M7.111113.120737 Dil: 1 Matrix: WATER
Sample ID: WG452024-06 MS File ID: M7.111113.122020 Dil: 1 Units: mg/L
Sample ID: WG452024-07 MSD File ID: M7.111113.122254 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00400	0.00374	93.5	0.00400	0.00379	94.8	1.35	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: 3213474
Report generated 11/19/2013 19:57

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L13110337 **Worknum:** WG452152
Instrument ID: CVAA1 **Method:** 7470A
Post Spike ID: WG452152-01 **File ID:** M7.111113.112937 **Dil:** 1 **Units:** ug/L
Sample ID: L13110236-01 **File ID:** M7.111113.112704 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	1.00		0	U	1	100.3	85 - 115	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 3195371
Report generated: 11/11/2013 13:46

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13110337
Analytical Method: 7470A
ICAL Worknum: WG452256

Workgroup (AAB#): WG452152
Instrument ID: CVAA1
Initial Calibration Date: 11/11/2013 11:00

Analyte	WG452256-01		WG452256-02		WG452256-03		WG452256-04		WG452256-05		WG452256-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	27.33	0.200	1731	1.00	9293	2.00	18970	5.00	46860	10.0	91090

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: 3195376
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13110337
Analytical Method: 7470A
ICAL Worknum: WG452256

Workgroup (AAB#): WG452152
Instrument ID: CVAA1
Initial Calibration Date: 11/11/2013 11:00

Analyte	R	Q
Mercury	1.000	

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

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 3195376
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L13110337
Instrument ID: CVAA1
File ID: M7.111113.110517
Workgroup (AAB#): WG452152
Matrix: WATER

Run Date: 11/11/2013
Run Time: 11:05
Analyst: PDM
Cal ID: CVAA1 - 11-NOV-13

Sample ID: WG452256-08
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: 3195378
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-10
Instrument ID: CVAA1
Run Time: 11:10
Method: 7470A
File ID: M7.111113.111021
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3195380
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-12
Instrument ID: CVAA1
Run Time: 11:42
Method: 7470A
File ID: M7.111113.114219
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3195380
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-14
Instrument ID: CVAA1
Run Time: 12:12
Method: 7470A
File ID: M7.111113.121241
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3195380
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-16
Instrument ID: CVAA1
Run Time: 12:27
Method: 7470A
File ID: M7.111113.122757
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3195380
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)

(Alternate Source)

Login Number: L13110337 Run Date: 11/11/2013 Sample ID: WG452256-07

Instrument ID: CVAA1 Run Time: 11:02 Method: 7470A

File ID: M7.111113.110246 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG452152 Cal ID: CVAA1 - 11-NOV-13

QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	1.96	98.2	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008

PDF File ID: 3195377

Report generated 11/11/2013 13:46

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-09
Instrument ID: CVAA1
Run Time: 11:07
Method: 7470A
File ID: M7.111113.110750
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00203	mg/L	102	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3195379
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-11
Instrument ID: CVAA1
Run Time: 11:39
Method: 7470A
File ID: M7.111113.113949
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00206	mg/L	103	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3195379
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/11/2013
Sample ID: WG452256-13
Instrument ID: CVAA1
Run Time: 12:10
Method: 7470A
File ID: M7.111113.121010
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG452152
Cal ID: CVAA1 - 11-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00209	mg/L	104	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3195379
Report generated 11/11/2013 13:46

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Instrument ID: CVAA1
File ID: M7.111113.122526
Workgroup (AAB#): WG452152
Matrix: WATER

Run Date: 11/11/2013
Run Time: 12:25
Analyst: PDM
Cal ID: CVAA1 - 11-NOV-13

Sample ID: WG452256-15
Method: 7470A
QC Key: DOD4

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00211	mg/L	106	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 3195379
Report generated 11/11/2013 13:46

2.1.3.3 Raw Data

PDM

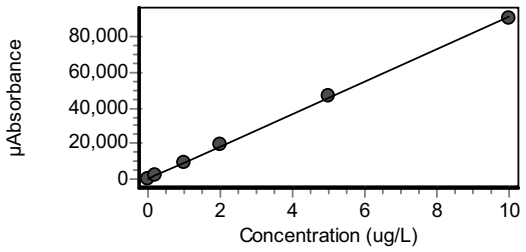
Report Generated By CETAC QuickTrace
Analyst: Mercury Analyzer
Worksheet file: C:\Program Files\QuickTrace\Worksheets\111113B.wsz
Date Started: 11/11/2013 10:44:42 AM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Standard #0					STD	11/11/13 10:47:30 am	0.0000	27	17.85		1.00
Replicates	31.6	25.9	30.7	21.1							
Standard #1 (0.2 ug/L)					STD	11/11/13 10:50:01 am	0.2000	1731	2.97		1.00
Replicates	1679.5	1709.1	1734.7	1800.1							
Standard #2 (1.0 ug/L)					STD	11/11/13 10:52:33 am	1.0000	9293	0.52		1.00
Replicates	9242.8	9270.5	9302.2	9355.0							
Standard #3 (2.0 ug/L)					STD	11/11/13 10:55:06 am	2.0000	18975	0.22		1.00
Replicates	18968.7	18947.2	18947.2	19035.7							
Standard #4 (5.0 ug/L)					STD	11/11/13 10:57:39 am	5.0000	46861	0.17		1.00
Replicates	46832.1	46823.4	46811.6	46978.3							
Standard #5 (10.0 ug/L)					STD	11/11/13 11:00:12 am	10.0000	91092	0.47		1.00
Replicates	90607.3	90931.0	91227.5	91601.6							

Calibration

Equation: A = 300.093 + 9130.665C
R2: 0.99976
SEE: 614.4216
Flags:



ICV					ICV	11/11/13 11:02:46 am	1.9630	18228	0.12		1.00
Replicates	18224.0	18236.8	18198.2	18251.3							
% Recovery	98.17										

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Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
ICB					ICB	11/11/13 11:05:17 am	-0.0336	-6	337.85		1.00
	Replicates	-12.6	14.4	-33.8	6.5						
CCV					CCV	11/11/13 11:07:50 am	2.0300	18836	0.20		1.00
	Replicates	18798.7	18817.3	18839.9	18886.8						
	% Recovery	101.50									
CCB					CCB	11/11/13 11:10:21 am	-0.0302	25	83.31		1.00
	Replicates	26.1	4.0	52.5	16.3						
WG452024-03					MB	11/11/13 11:12:52 am	-0.0251	71	33.33		1.00
	Replicates	71.4	62.1	46.5	102.3						
WG452024-04					LCS	11/11/13 11:16:57 am	4.0300	37095	0.18		1.00
	Replicates	37091.2	37051.3	37047.3	37191.6						
	% Recovery	100.75									
WG451804-01					UNK	11/11/13 11:19:28 am	-0.0352	-21	96.73		1.00
	Replicates	-0.7	-23.1	-48.1	-12.0						
WG451936-01					UNK	11/11/13 11:22:00 am	-0.0323	5	163.37		1.00
	Replicates	12.6	8.1	4.9	-6.1						
WG451936-02					UNK	11/11/13 11:24:32 am	-0.0316	12	102.50		1.00
	Replicates	20.7	22.5	5.0	-1.8						
L1311023601					UNK	11/11/13 11:27:04 am	-0.0311	16	102.51		1.00
	Replicates	23.0	-7.8	30.2	19.4						
WG452152-01					SPK	11/11/13 11:29:37 am	1.0030	9462	0.19		1.00
	Replicates	9450.0	9480.7	9443.3	9475.3						
	% Recovery	103.46									
L1311023602					UNK	11/11/13 11:32:10 am	-0.0266	57	19.59		1.00
	Replicates	48.9	48.5	72.4	58.4						
L1311025001					UNK	11/11/13 11:34:43 am	-0.0305	22	84.35		1.00
	Replicates	3.4	38.9	36.9	8.7						

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Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
WG452152-02					SPK	11/11/13 11:37:16 am	0.9980	9412	0.14		1.00
Replicates	9430.4	9399.4	9410.4	9409.5							
% Recovery	102.85										
CCV					CCV	11/11/13 11:39:49 am	2.0590	19098	0.28		1.00
Replicates	19060.1	19081.0	19074.5	19175.5							
% Recovery	102.94										
CCB					CCB	11/11/13 11:42:19 am	-0.0334	-5	254.51		1.00
Replicates	11.2	-20.0	-1.0	-11.3							
L1311031802					UNK	11/11/13 11:44:53 am	-0.0243	79	13.57		1.00
Replicates	76.0	91.7	80.9	66.0							
L1311033701					UNK	11/11/13 11:47:27 am	-0.0288	38	19.89		1.00
Replicates	39.1	31.4	47.4	32.1							
L1311033702					UNK	11/11/13 11:49:57 am	0.0227	507	3.92		1.00
Replicates	505.7	493.8	535.7	493.3							
L1311033703					UNK	11/11/13 11:52:28 am	-0.0310	17	79.18		1.00
Replicates	19.0	-2.2	28.7	21.3							
L1311034101					UNK	11/11/13 11:54:59 am	-0.0348	-17	126.40		1.00
Replicates	0.0	-44.5	0.9	-25.8							
L1311034102					UNK	11/11/13 11:57:30 am	-0.0336	-7	162.42		1.00
Replicates	-11.9	6.0	-2.0	-19.9							
L1311035902					UNK	11/11/13 12:00:01 pm	-0.0328	1	405.98		1.00
Replicates	-2.6	-14.9	11.6	9.4							
~~WG4520204-05~~ WG452024-05					MSK	11/11/13 12:02:33 pm	4.1060	37792	0.21		1.00
Replicates	37757.2	37770.9	37734.7	37907.1							
% Recovery	103.47										
L1311036801					UNK	11/11/13 12:05:05 pm	-0.0267	56	16.65		1.00
Replicates	48.6	70.0	54.3	52.5							

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Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
L1311036803					UNK	11/11/13 12:07:37 pm	-0.0273	51	14.22		1.00
Replicates	56.0	50.0	41.4	57.4							
CCV					CCV	11/11/13 12:10:10 pm	2.0870	19357	0.29		1.00
Replicates	19334.4	19300.7	19357.4	19433.5							
% Recovery	104.35										
CCB					CCB	11/11/13 12:12:41 pm	-0.0308	18	32.81		1.00
Replicates	12.5	18.4	26.8	16.1							
L1311036804					UNK	11/11/13 12:15:14 pm	-0.0277	48	36.88		1.00
Replicates	72.6	42.4	31.5	44.0							
L1311036805					UNK	11/11/13 12:17:47 pm	-0.0297	29	35.98		1.00
Replicates	23.7	35.1	17.4	40.4							
WG452024-06					MSK	11/11/13 12:20:20 pm	3.7410	34461	0.25		1.00
Replicates	34385.4	34414.2	34463.7	34578.7							
% Recovery	94.27										
WG452024-07					MSDUP	11/11/13 12:22:54 pm	3.7920	34922	0.19		1.00
Replicates	34857.5	34889.1	34932.1	35007.6							
% Recovery	95.54	RPD 1.34									
CCV					CCV	11/11/13 12:25:26 pm	2.1140	19603	0.18		1.00
Replicates	19569.7	19591.8	19596.6	19653.8							
% Recovery	105.70										
CCB					CCB	11/11/13 12:27:57 pm	-0.0320	8	130.88		1.00
Replicates	19.3	7.2	9.6	-5.3							

Approved: 11/11/2013 13:59

Pierce Morris

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L13110337
Department: General Chromatography
Analyst: Jeremy Kinney

METHOD

Analysis EPA300.0/SW846 9056

HOLDING TIMES

Sample Analysis: Hold times for NO2 and NO3 are 48 hours and the hold times for F, Cl, Br, and SO4 are 28 days. The hold time forms calculate the hold time based on 48 hours. All samples were analyzed in hold.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

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

SAMPLES

Samples: All acceptance criteria were met.

MANUAL INTEGRATION: No manual integration was 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: 74237
Approved By: Mike Cochran

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 30-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:03
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	I1_110813-11
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	77.4	J	0.200	0.100
Fluoride	16984-48-8	0.204		0.200	0.100
Sulfate	14808-79-8	131	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 30-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 17:34
Collect Date:	11/05/2013 10:05	**Dilution:**	5	**File ID:**	I1_110813-30
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	63.8		1.00	0.500
Fluoride	16984-48-8		U	1.00	0.500
Sulfate	14808-79-8	109		5.00	2.50

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 16-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:21
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	I1_110813-12
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	52.2	J	0.200	0.100
Fluoride	16984-48-8	0.233		0.200	0.100
Sulfate	14808-79-8	80.4		1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 16-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 17:52
Collect Date:	11/05/2013 12:15	**Dilution:**	5	**File ID:**	I1_110813-31
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	42.7		1.00	0.500
Fluoride	16984-48-8		U	1.00	0.500
Sulfate	14808-79-8	69.8		5.00	2.50

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

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 26-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 12:38
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	I1_110813-13
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	210	J	0.200	0.100
Fluoride	16984-48-8	0.216		0.200	0.100
Sulfate	14808-79-8	658	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL 26-1113-1	**Prep Method:**	300.0	**Prep Date:**	11/08/2013 09:47
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	11/06/2013 10:26
Workgroup #:	WG452040	**Analyst:**	JBK	**Run Date:**	11/08/2013 18:09
Collect Date:	11/05/2013 14:14	**Dilution:**	10	**File ID:**	I1_110813-32
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	161		2.00	1.00
Fluoride	16984-48-8		U	2.00	1.00
Sulfate	14808-79-8	517		10.0	5.00

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

Certificate of Analysis

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: IC1 Dataset: 110613 ICAL IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: 48076 Syringe Filter Lot#: 00166429
Eluent ID#: RGT28571

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM

Workgroups: WG450536 (ICAL) WG451714 (LOD/LOQ)

Internal STD: NA Surrogate STD: NA Calibration STD STD60856

CCV STD: STD60856 LCS STD: STD60857 MS/MSD STD: NA

Comments: WG450536 300/9056 ICAL
Q4 2013 WATER LOD/LOQ Verification

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I1_110613-01	WG450536-01 STD \#6	1	1		11/06/13 08:59
2	I1_110613-02	WG450536-02 STD \#5	1	1		11/06/13 09:17
3	I1_110613-03	WG450536-03 STD \#4	1	1		11/06/13 09:34
4	I1_110613-04	WG450536-04 STD \#3	1	1		11/06/13 09:51
5	I1_110613-05	WG450536-05 STD \#2	1	1		11/06/13 10:09
6	I1_110613-06	WG450536-06 STD \#1	1	1		11/06/13 10:26
7	I1_110613-07	WG450536-07 ALT STD	1	1		11/06/13 11:07
8	I1_110613-08	L13100001-01 LOD (F,CL,BR,SO4)	1	1		11/06/13 11:24
9	I1_110613-09	L13100003-01 LOQ (F,CL,BR,SO4)	1	1		11/06/13 11:42
10	I1_110613-10	L13100001-01 LOD (NO2,NO3)	1	1		11/06/13 11:59
11	I1_110613-11	L13100003-01 LOQ (NO2,NO3)	1	1		11/06/13 12:16
12	I1_110613-12	LEVEL 4 (CCV/LCS)	1	1		11/06/13 12:34
13	I1_110613-13	LEVEL 6 (LCR)	1	1		11/06/13 12:51
14	I1_110613-14	WG451714-01 BLANK	1	1		11/06/13 13:09
15	I1_110613-15	END	1	1		11/06/13 13:26

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 08-NOV-13

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 110813 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: 48112 Syringe Filter Lot#: 00169000
Eluent ID#: RGT28591
Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG452040
Internal STD: NA Surrogate STD: NA Calibration STD STD60856 (11/6/13)
CCV STD: STD60856 LCS STD: STD60857 MS/MSD STD: STD60856

Comments: L13101868-02, L13110333-06, L13110380-01 were analyzed at dilutions only due to the concentrations of one or more target analytes being near or greater than the ICAL.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I1_110813-01	ELUENT	1	1		11/08/13 09:09
2	I1_110813-02	DI WATER	1	1		11/08/13 09:27
3	I1_110813-03	WG452140-01 ANION CCV	1	1		11/08/13 09:44
4	I1_110813-04	WG452140-02 ANION CCB	1	1		11/08/13 10:01
5	I1_110813-05	WG452040-01 ANION BLANK	1	1		11/08/13 10:19
6	I1_110813-06	WG452040-02 ANION LCS	1	1		11/08/13 10:36
7	I1_110813-07	L13101868-02 1/2 (F,CL,SO4)	1	2		11/08/13 10:54
8	I1_110813-08	L13101868-03 F,SO4	1	1		11/08/13 11:11
9	I1_110813-09	L13101868-04 (F,CL,SO4)	1	1		11/08/13 11:29
10	I1_110813-10	L13101868-05 (F,CL,SO4)	1	1		11/08/13 11:46
11	I1_110813-11	L13110337-01 (F,CL,SO4)	1	1		11/08/13 12:03
12	I1_110813-12	L13110337-02 (F,CL,SO4)	1	1		11/08/13 12:21
13	I1_110813-13	L13110337-03 (F,CL,SO4)	1	1		11/08/13 12:38
14	I1_110813-14	L13110333-02 (SO4)	1	1		11/08/13 12:56
15	I1_110813-15	WG452140-03 ANION CCV	1	1		11/08/13 13:13
16	I1_110813-16	WG452140-04 ANION CCB	1	1		11/08/13 13:30
17	I1_110813-17	L13110333-03 RS (SO4)	1	1		11/08/13 13:48
18	I1_110813-18	WG452040-04 DUP 333-03	1	1		11/08/13 14:05
19	I1_110813-19	L13110333-04 MS	1	1		11/08/13 14:23
20	I1_110813-20	L13110333-05 SD	1	1		11/08/13 14:40
21	I1_110813-21	L13110333-06 1/10 (SO4)	1	10		11/08/13 14:58
22	I1_110813-22	L13110333-07 (SO4)	1	1		11/08/13 15:15
23	I1_110813-23	L13110333-08 (SO4)	1	1		11/08/13 15:32
24	I1_110813-24	L13110371-01 1/100 (F)	1	100		11/08/13 15:50
25	I1_110813-25	L13110380-01 1/20 (CL)	1	20		11/08/13 16:07
26	I1_110813-26	L13110383-01 (CL,BR,SO4)	1	1		11/08/13 16:25
27	I1_110813-27	WG452140-05 ANION CCV	1	1		11/08/13 16:42
28	I1_110813-28	WG452140-06 ANION CCB	1	1		11/08/13 16:59
29	I1_110813-29	L13110383-02 (CL,BR,SO4)	1	1		11/08/13 17:17
30	I1_110813-30	L13110337-01 1/5 RR CL,SO4	1	5		11/08/13 17:34
31	I1_110813-31	L13110337-02 1/5 RR CL	1	5		11/08/13 17:52
32	I1_110813-32	L13110337-03 1/10 RR CL,SO4	1	10		11/08/13 18:09
33	I1_110813-33	L13110510-04 (ALL)	1	1		11/08/13 18:26

Page: 1 Approved: 11-NOV-13

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 110813 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 14

Maintenance Log ID: 48112 Syringe Filter Lot#: 00169000
Eluent ID#: RGT28591
Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG452040
Internal STD: NA Surrogate STD: NA STD60856 (11/6/13)
CCV STD: STD60856 LCS STD: STD60857 STD60856

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I1_110813-34	L13110510-04 1/5	1	5		11/08/13 18:44
35	I1_110813-35	L13110510-03 (ALL)	1	1		11/08/13 19:01
36	I1_110813-36	L13110510-03 1/5	1	5		11/08/13 19:19
37	I1_110813-37	COLUMN RINSE	1	1		11/08/13 19:36
38	I1_110813-38	L13110477-01 (BR,SO4)	2	1		11/08/13 19:53
39	I1_110813-39	WG452140-07 ANION CCV	1	1		11/08/13 20:11
40	I1_110813-40	WG452140-08 ANION CCB	1	1		11/08/13 20:28
41	I1_110813-41	END	1	1		11/08/13 20:46

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X	5	Over Calibration Range	Cl SO4
	L13110337-01 (F,CL,SO4): DL this sequence.			
12	X	5	Over Calibration Range	Cl
	L13110337-02 (F,CL,SO4): DL this sequence.			
13	X	10	Over Calibration Range	Cl SO4
	L13110337-03 (F,CL,SO4): DL this sequence.			
24				
	L13110371-01 1/100 (F): Sample matrix consists of 3 distinct phases (two separate organic layers atop brine water). The bottom layer was target for analysis. Dilution due to extremely high Cl concentration.			
33				
	L13110510-04 (ALL): Received "out of hold" for NO2 and NO3.			
35				
	L13110510-03 (ALL): Received "out of hold" for NO2 and NO3.			

Page: 2 Approved: 11-NOV-13

Microbac Laboratories Inc.

Data Checklist

Date: 06-NOV-2013
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 56920
Analytical Workgroups: WG450536 (ICAL) WG451714 (LOD/LOQ)

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	WG450536
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	NA
% D/% Drift	NA
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
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	NA
Reruns	NA
Manual Integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	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:
06-NOV-2013

Secondary Reviewer:
08-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-08-2013 15:40:54

Microbac Laboratories Inc.

Data Checklist

Date: 08-NOV-2013
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 56990
Analytical Workgroups: WG452040 (10-1868, 11-333, 337, 371, 380, 383, 477, 510)

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	NA
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	NA
Reruns	NA
Manual Integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	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:
11-NOV-2013

Secondary Reviewer:
11-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-11-2013 10:16:02

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG452040

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3	2	*	11/08/13	3.3	2	*
MPL 30-1113-1	01	11/05/13					11/08/2013	3	2	*	11/08/13	3.1	2	*
MPL 16-1113-1	02	11/05/13					11/08/2013	2.9	2	*	11/08/13	3	2	*
MPL 16-1113-1	02	11/05/13					11/08/2013	2.9	2	*	11/08/13	3.2	2	*
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	2	*	11/08/13	3.2	2	*
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	2	*	11/08/13	2.9	2	*

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3193589
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: I1_110813-05
Prep Date: 11/08/13 09:47
Analyzed Date: 11/08/13 10:19
Analyst: JBK

Work Group: WG452040
Blank Sample ID: WG452040-01
Instrument ID: IC1
Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG452040-02	I1_110813-06	11/08/13 10:36	01
MPL 30-1113-1	L13110337-01	I1_110813-11	11/08/13 12:03	01
MPL 16-1113-1	L13110337-02	I1_110813-12	11/08/13 12:21	01
MPL 26-1113-1	L13110337-03	I1_110813-13	11/08/13 12:38	01
DUP	WG452040-04	I1_110813-18	11/08/13 14:05	01
MPL 30-1113-1	L13110337-01	I1_110813-30	11/08/13 17:34	DL01
MPL 16-1113-1	L13110337-02	I1_110813-31	11/08/13 17:52	DL01
MPL 26-1113-1	L13110337-03	I1_110813-32	11/08/13 18:09	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3193590
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 09:47 Sample ID: WG452040-01
Instrument ID: IC1 Run Date: 11/08/13 10:19 Prep Method: 300.0
File ID: I1 110813-05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG452040 Matrix: Water Units: mg/L
Contract #: Cal ID: IC1-06-NOV-13

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: 3193591
11-NOV-2013 11:57

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/08/2013 Sample ID: WG452040-02
Instrument ID: IC1 Run Time: 10:36 Prep Method: 300.0
File ID: I1 110813-06 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG452040 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60856 Cal ID: IC1-06-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	8.00	7.86	98.3	90 - 110	
Fluoride	8.00	8.04	100	90 - 110	
Sulfate	40.0	39.8	99.4	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 3193592
Report generated: 11/11/2013 11:57

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L13110337
Analytical Method: 300.0
ICAL Workgroup: WG450536

Instrument ID: IC1
Initial Calibration Date: 06-NOV-13 10:26
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		5.674	7.25	0.99900	
Fluoride		3.960	8.13	1.00000	
Sulfate		7.597	10.2	0.99900	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 3193593
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L13110337

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 06-NOV-13 10:26

Column ID: F

Analyte	WG450536-01			WG450536-02			WG450536-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	4.80400000	4.996	12.0	2.19100000	5.477	8.00	1.39700000	5.727
Fluoride	24.0	6.64400000	3.612	12.0	3.26400000	3.676	8.00	2.11900000	3.775
Sulfate	120	18.5710000	6.462	60.0	8.42900000	7.118	40.0	5.34100000	7.489

INT_CAL - Modified 03/06/2008
PDF File ID: 3193593
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L13110337

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 06-NOV-13 10:26

Column ID: F

Analyte	WG450536-04			WG450536-05			WG450536-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	4.00	0.682000000	5.865	1.00	0.169000000	5.917	0.200	0.0330000000	6.061
Fluoride	4.00	0.992000000	4.032	1.00	0.237000000	4.219	0.200	0.0450000000	4.444
Sulfate	20.0	2.56800000	7.788	5.00	0.606000000	8.251	1.00	0.118000000	8.475

INT_CAL - Modified 03/06/2008
PDF File ID: 3193593
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L13110337 Run Date: 11/06/2013 Sample ID: WG450536-07
Instrument ID: IC1 Run Time: 11:07 Method: 300.0
File ID: I1 110613-07 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG450536 Cal ID: IC1 - 06-NOV-13

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	7.82	mg/L	5.71	2.30	10	
Fluoride		8.00	8.17	mg/L	3.76	2.10	10	
Sulfate		40.0	39.6	mg/L	7.46	1.00	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3193594
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-02
Instrument ID: IC1
Run Time: 10:01
Method: 300.0
File ID: I1_110813-04
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3193596
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-04
Instrument ID: IC1
Run Time: 13:30
Method: 300.0
File ID: I1_110813-16
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3193596
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-06
Instrument ID: IC1
Run Time: 16:59
Method: 300.0
File ID: I1_110813-28
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3193596
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-08
Instrument ID: IC1
Run Time: 20:28
Method: 300.0
File ID: I1_110813-40
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER
QAPP: DOD4_NOFLAG

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: 3193596
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-01
Instrument ID: IC1
Run Time: 09:44
Method: 300.0
File ID: I1 110813-03
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.86	mg/L	5.68	1.73	10	
Fluoride		8.00	8.03	mg/L	3.82	0.400	10	
Sulfate		40.0	39.9	mg/L	7.40	0.163	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193595
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-03
Instrument ID: IC1
Run Time: 13:13
Method: 300.0
File ID: I1 110813-15
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.89	mg/L	5.66	1.38	10	
Fluoride		8.00	8.01	mg/L	3.84	0.0625	10	
Sulfate		40.0	40.3	mg/L	7.34	0.655	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193595
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-05
Instrument ID: IC1
Run Time: 16:42
Method: 300.0
File ID: I1 110813-27
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.93	mg/L	5.63	0.938	10	
Fluoride		8.00	8.08	mg/L	3.80	1.04	10	
Sulfate		40.0	40.4	mg/L	7.31	1.03	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3193595
Report generated 11/11/2013 11:57

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L13110337
Run Date: 11/08/2013
Sample ID: WG452140-07
Instrument ID: IC1
Run Time: 20:11
Method: 300.0
File ID: I1 110813-39
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG452040
Cal ID: IC1 - 06-NOV-13
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	7.92	mg/L	5.63	1.00	10	
Fluoride		8.00	8.02	mg/L	3.83	0.288	10	
Sulfate		40.0	40.4	mg/L	7.32	0.988	10	

* Exceeds %D Criteria

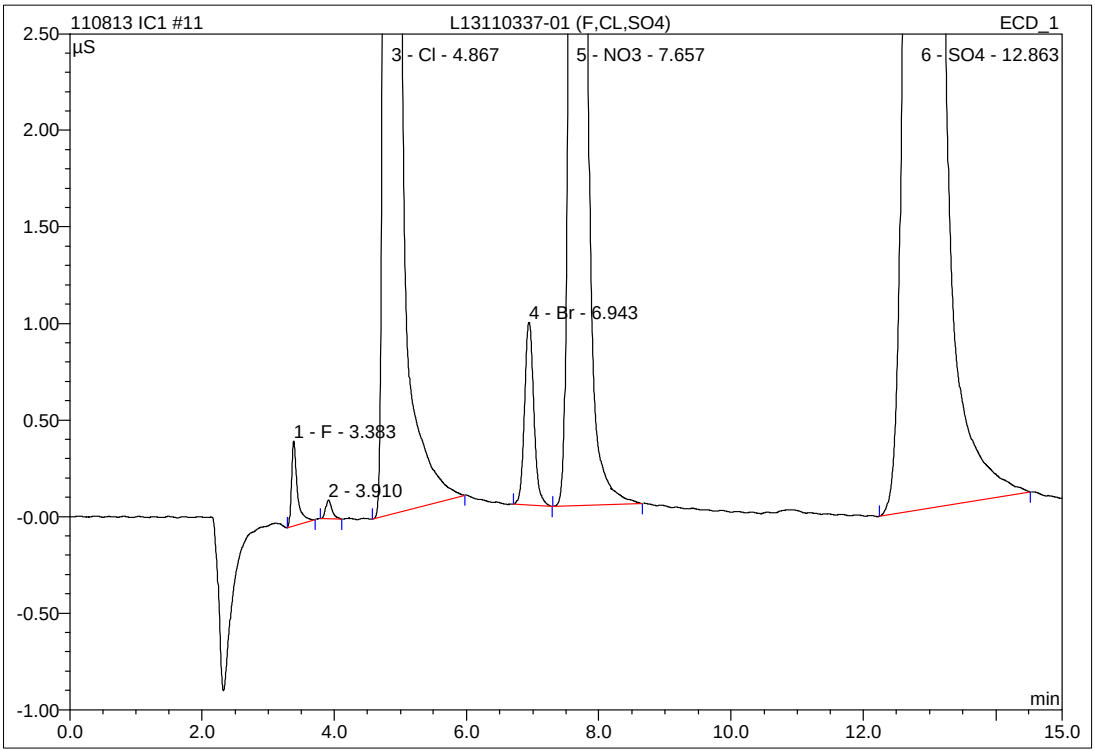
CCV - Modified 03/05/2008
PDF File ID: 3193595
Report generated 11/11/2013 11:57

2.2.1.3 Sample Data

11 L13110337-01 (F,CL,SO4)

1,1 JBK

Sample Name:	**L13110337-01 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 12:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	0.439	0.045	0.13	0.204	BMB
2	3.91	n.a.	0.097	0.011	0.03	n.a.	BMB
3	4.87	Cl	109.248	13.915	38.82	77.449	BMB
4	6.94	Br	0.946	0.154	0.43	2.145	BMB
5	7.66	NO3	21.897	3.945	11.00	8.928	BMB
6	12.86	SO4	57.798	17.778	49.59	131.044	BMB
Total:			190.424	35.849	100.00	219.770	

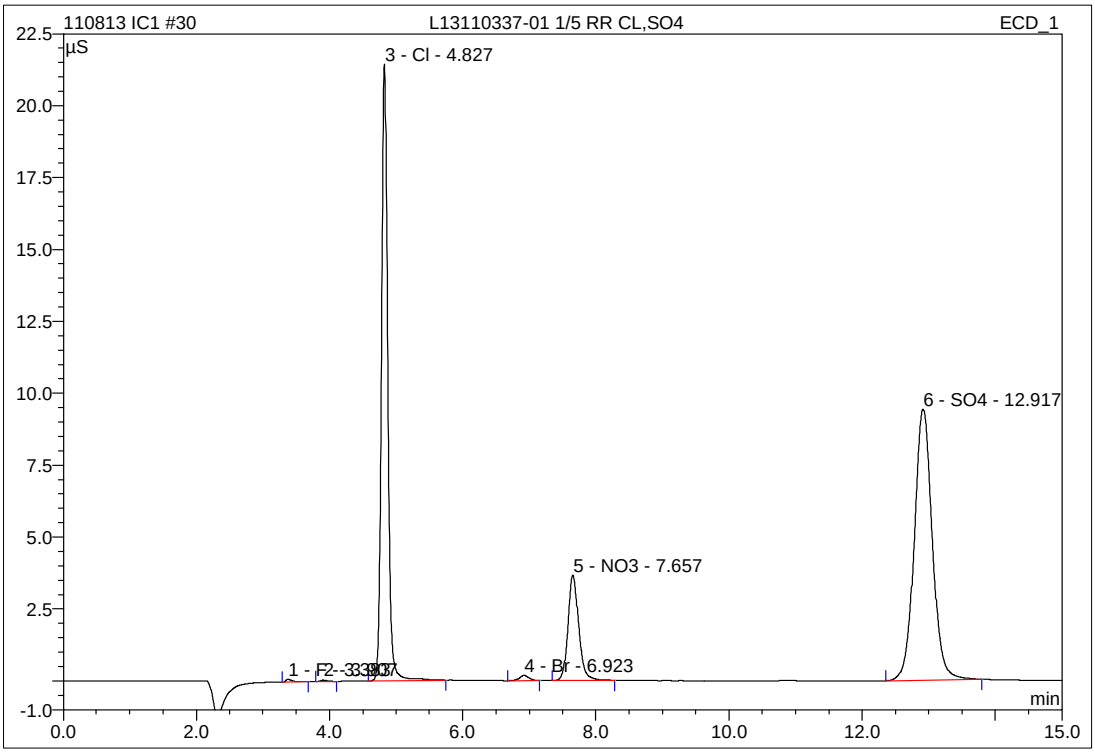
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

30 L13110337-01 1/5 RR CL,SO4

1,5 JBK

Sample Name:	**L13110337-01 1/5 RR CL,SO4**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 17:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	0.098	0.011	0.18	0.071	BMB
2	3.91	n.a.	0.045	0.005	0.08	n.a.	BMB
3	4.83	Cl	21.440	2.290	38.31	12.761	BMB
4	6.92	Br	0.183	0.030	0.50	0.417	BMB
5	7.66	NO3	3.673	0.689	11.52	1.577	BMB
6	12.92	SO4	9.418	2.954	49.41	21.896	BMB
Total:			34.857	5.978	100.00	36.723	

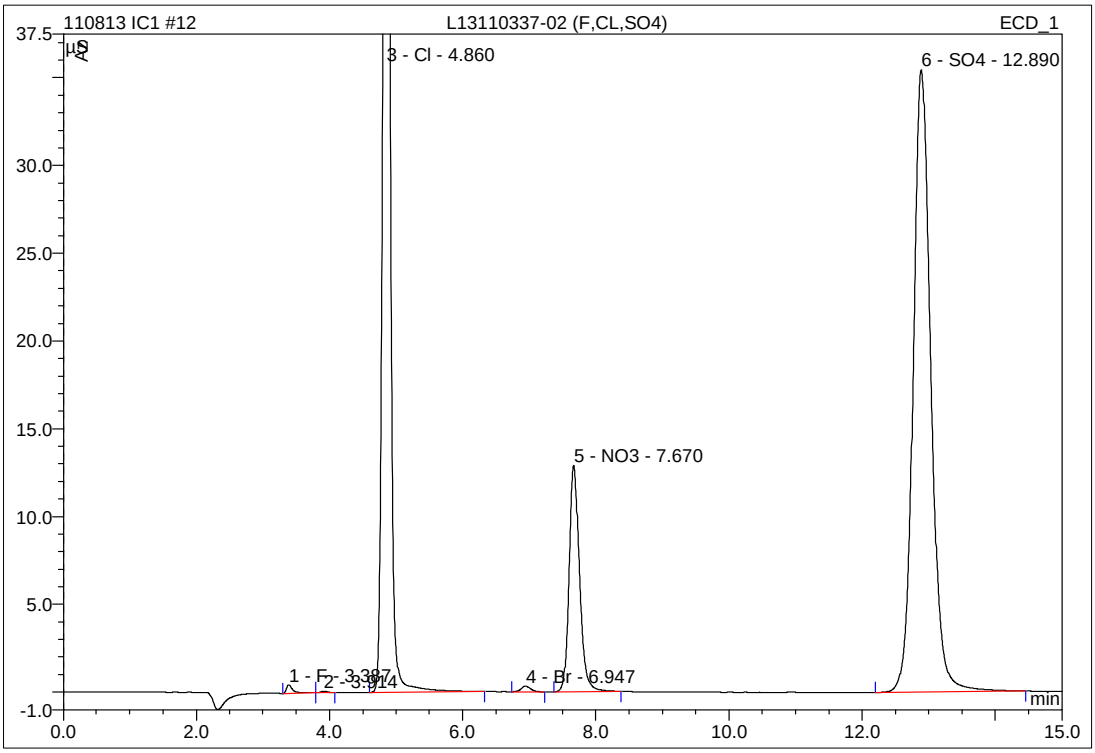
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

12 L13110337-02 (F,CL,SO4)

1,1 JBK

Sample Name:	**L13110337-02 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 12:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

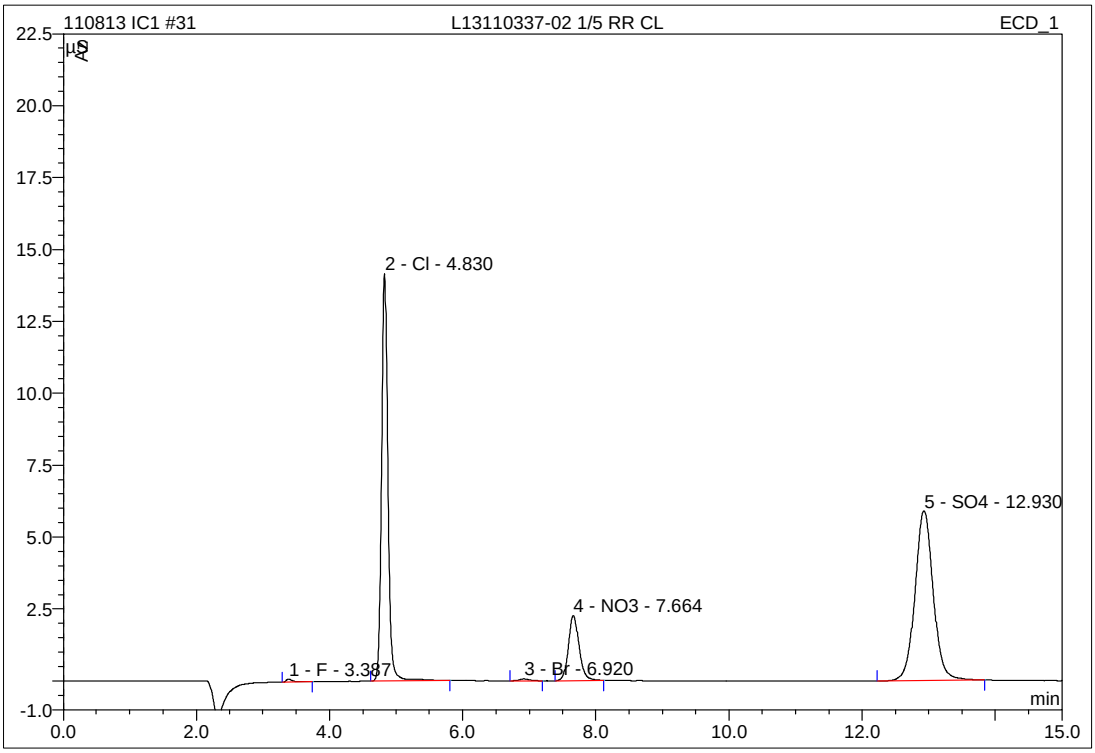


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	0.491	0.053	0.23	0.233	BMB
2	3.91	n.a.	0.077	0.009	0.04	n.a.	bMB
3	4.86	Cl	80.308	9.385	41.26	52.243	BMB
4	6.95	Br	0.330	0.054	0.24	0.758	BMB
5	7.67	NO3	12.881	2.345	10.31	5.317	BMB
6	12.89	SO4	35.450	10.900	47.92	80.402	BMB
Total:			129.538	22.746	100.00	138.953	

31 L13110337-02 1/5 RR CL

1,5 JBK

Sample Name:	**L13110337-02 1/5 RR CL**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 17:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	0.106	0.013	0.33	0.078	BMB
2	4.83	Cl	14.153	1.532	39.74	8.547	BMB
3	6.92	Br	0.067	0.012	0.30	0.164	BMB
4	7.66	NO3	2.265	0.423	10.97	0.978	BMB
5	12.93	SO4	5.893	1.877	48.67	13.966	BMB
Total:			22.483	3.856	100.00	23.732	

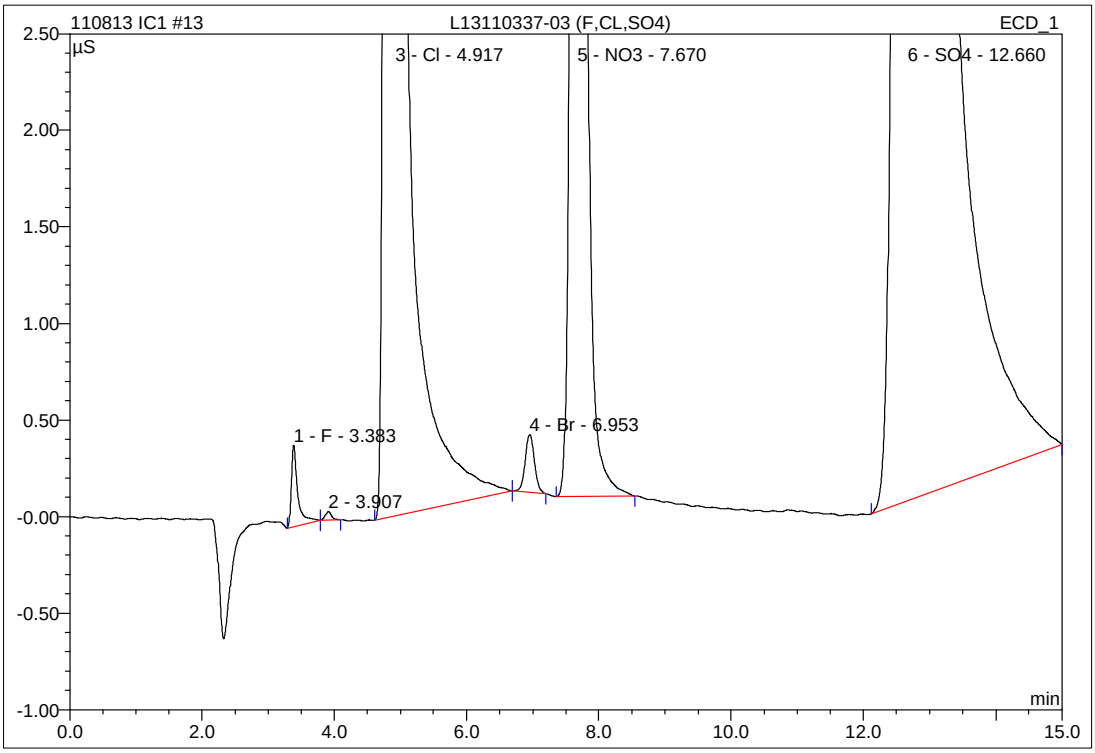
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

13 L13110337-03 (F,CL,SO4)

1,1 JBK

Sample Name:	**L13110337-03 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 12:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	0.422	0.049	0.04	0.216	BMB
2	3.91	n.a.	0.044	0.005	0.00	n.a.	BMB
3	4.92	Cl	274.702	37.666	28.86	209.603	BMB
4	6.95	Br	0.298	0.049	0.04	0.680	bMB
5	7.67	NO3	18.596	3.361	2.58	7.611	BMB
6	12.66	SO4	251.646	89.403	68.49	658.384	BMB
Total:			545.707	130.532	100.00	876.494	

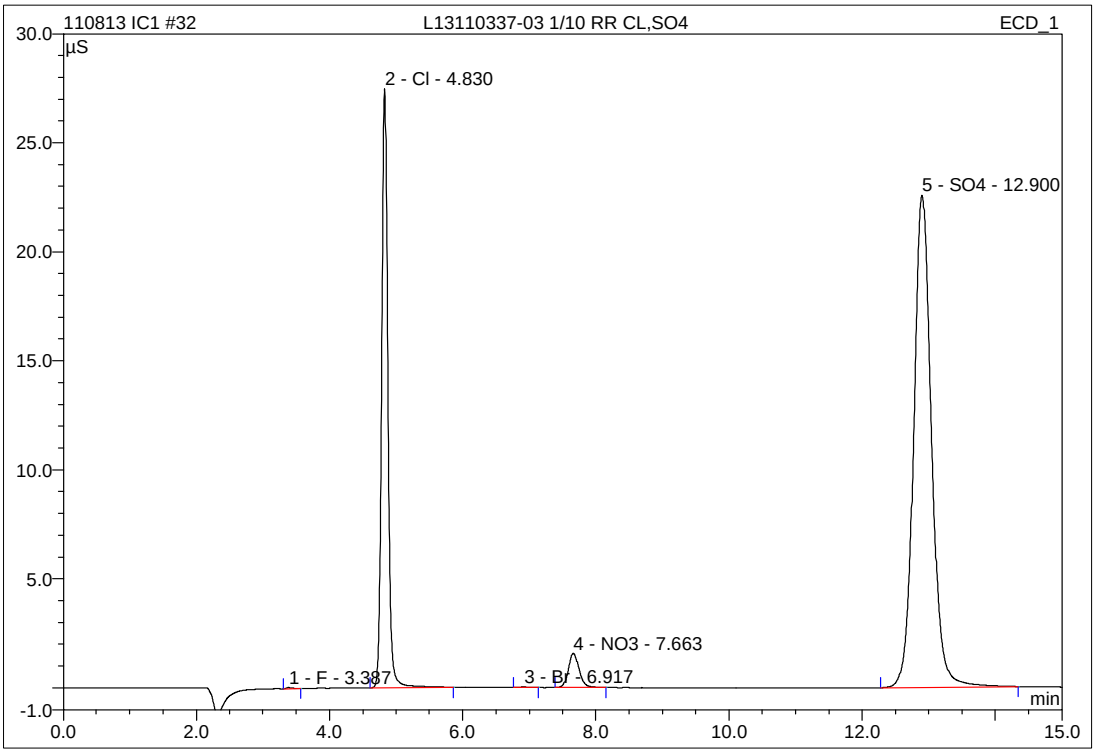
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

32 L13110337-03 1/10 RR CL,SO4

1,10 JBK

Sample Name:	**L13110337-03 1/10 RR CL,SO4**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 18:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	0.050	0.005	0.05	0.049	BMB
2	4.83	Cl	27.459	2.896	28.38	16.134	BMB
3	6.92	Br	0.028	0.005	0.05	0.067	BMB
4	7.66	NO3	1.573	0.296	2.90	0.691	BMB
5	12.90	SO4	22.583	7.003	68.63	51.712	BMB
Total:			51.693	10.205	100.00	68.652	

IC/Integration

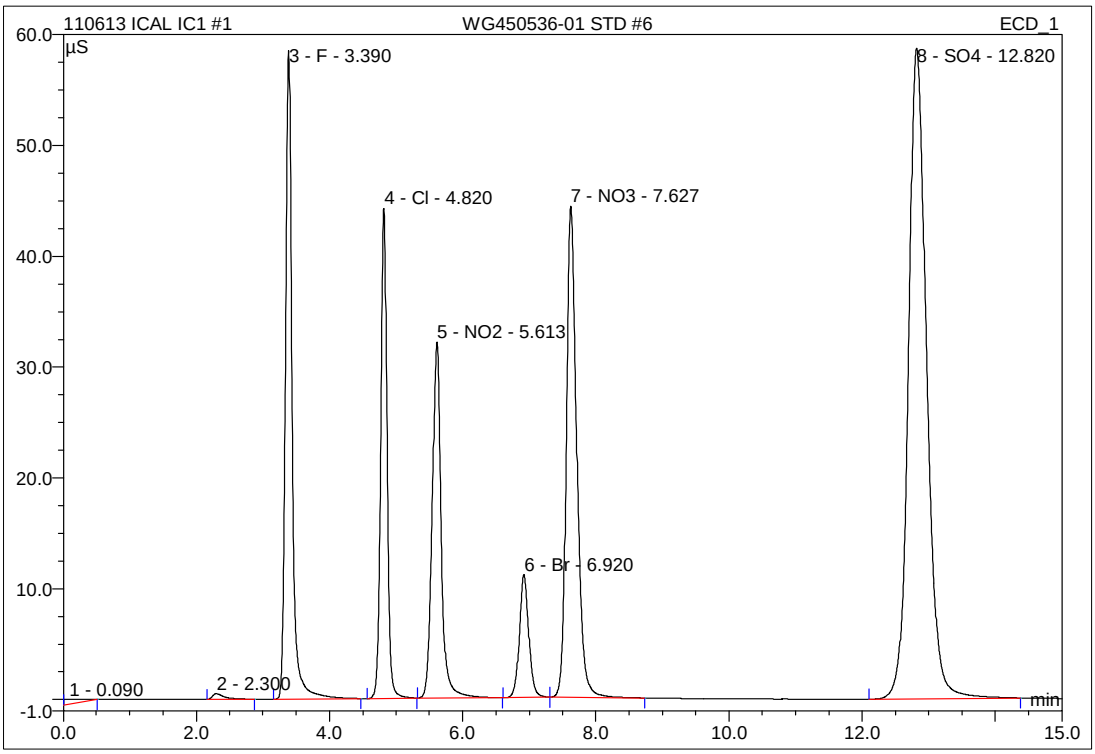
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2.2.1.4 Standards Data

1 WG450536-01 STD #6

1,1 JBK STD60856

Sample Name:	**WG450536-01 STD #6**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 8:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.09	n.a.	0.431	0.132	0.29	n.a.	BMB
2	2.30	n.a.	0.527	0.110	0.24	n.a.	BMB
3	3.39	F	58.509	6.644	14.68	25.442	BMB
4	4.82	Cl	44.229	4.804	10.62	26.751	BMB
5	5.61	NO2	32.141	5.066	11.19	15.551	BMB
6	6.92	Br	11.090	1.809	4.00	25.227	BMb
7	7.63	NO3	44.330	8.117	17.94	18.347	bMB
8	12.82	SO4	58.721	18.571	41.04	136.882	BMB
Total:			249.979	45.254	100.00	248.200	

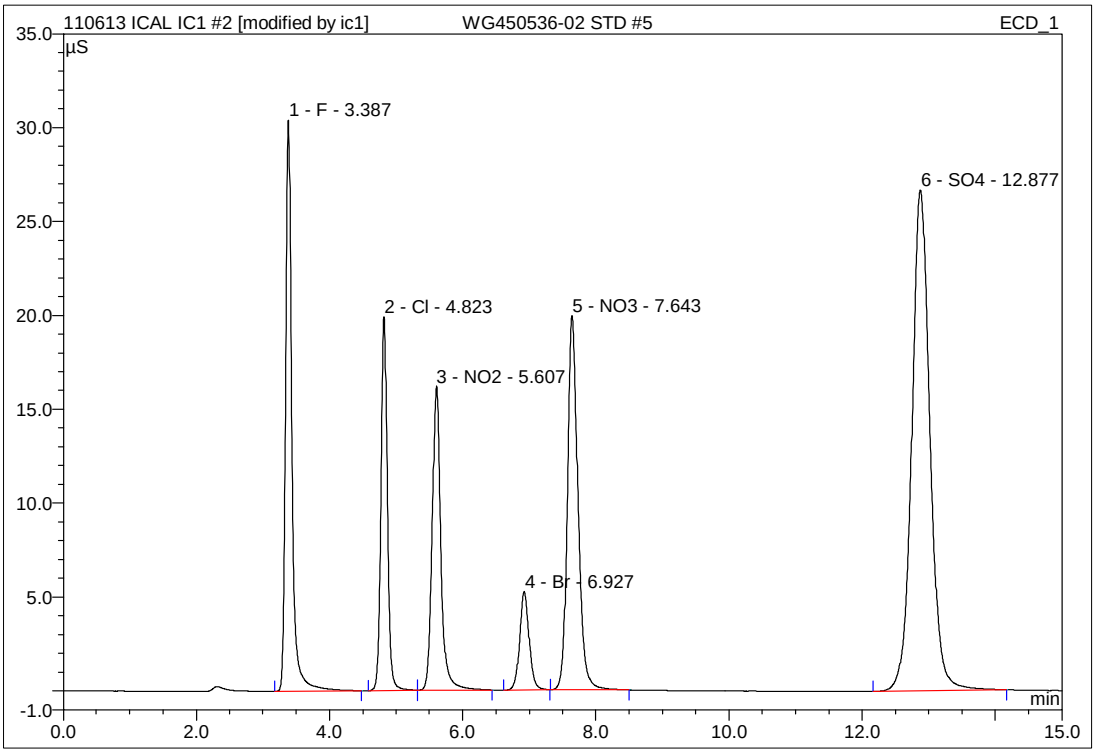
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2 WG450536-02 STD #5

1,1 JBK STD60856

Sample Name:	**WG450536-02 STD #5**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	30.428	3.264	15.63	12.514	BMB*
2	4.82	Cl	19.929	2.191	10.49	12.214	BMB
3	5.61	NO2	16.200	2.454	11.75	7.542	BMB
4	6.93	Br	5.239	0.867	4.15	12.094	BMB
5	7.64	NO3	19.921	3.678	17.61	8.325	BMB
6	12.88	SO4	26.681	8.429	40.36	62.207	BMB
Total:			118.398	20.883	100.00	114.896	

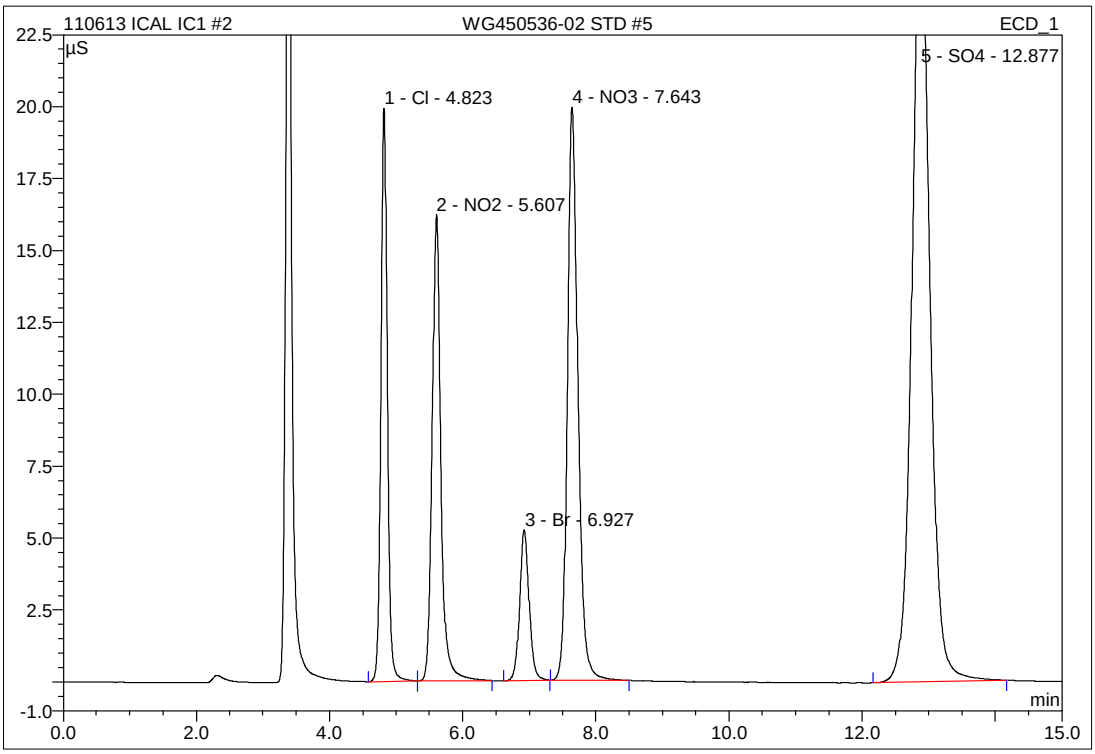
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2 WG450536-02 STD #5

1,1 JBK STD60856

Sample Name:	**WG450536-02 STD #5**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



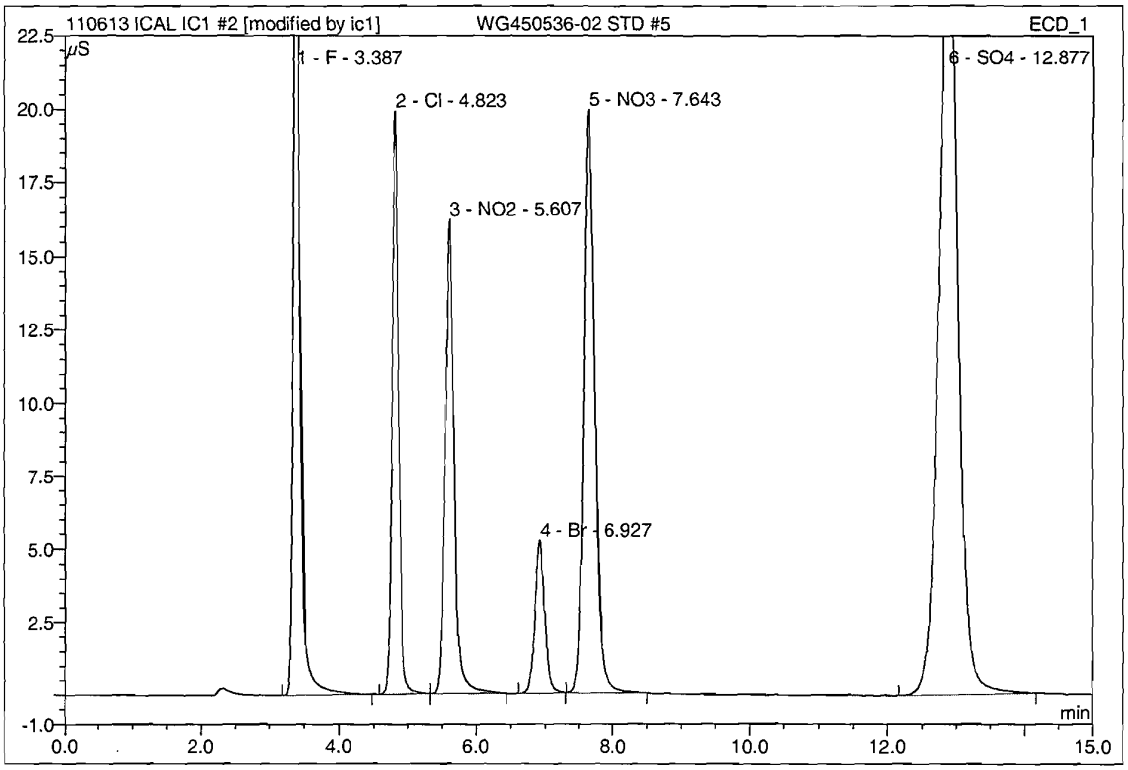
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	4.82	Cl	19.929	2.191	12.44	12.214	BMB
2	5.61	NO2	16.200	2.454	13.93	7.542	BMB
3	6.93	Br	5.239	0.867	4.92	12.094	BMB
4	7.64	NO3	19.921	3.678	20.87	8.325	BMB
5	12.88	SO4	26.681	8.429	47.84	62.207	BMB
Total:			87.970	17.619	100.00	102.381	

2 WG450536-02 STD #5

1,1 JBK STD60856

#753019

Sample Name:	**WG450536-02 STD #5**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	30.428	3.264	15.63	12.514	BMB*
2	4.82	Cl	19.929	2.191	10.49	12.214	BMB
3	5.61	NO2	16.200	2.454	11.75	7.542	BMB
4	6.93	Br	5.239	0.867	4.15	12.094	BMB
5	7.64	NO3	19.921	3.678	17.61	8.325	BMB
6	12.88	SO4	26.681	8.429	40.36	62.207	BMB
Total:			118.398	20.883	100.00	114.896	

JBK #1
11/11/13
11/11/13

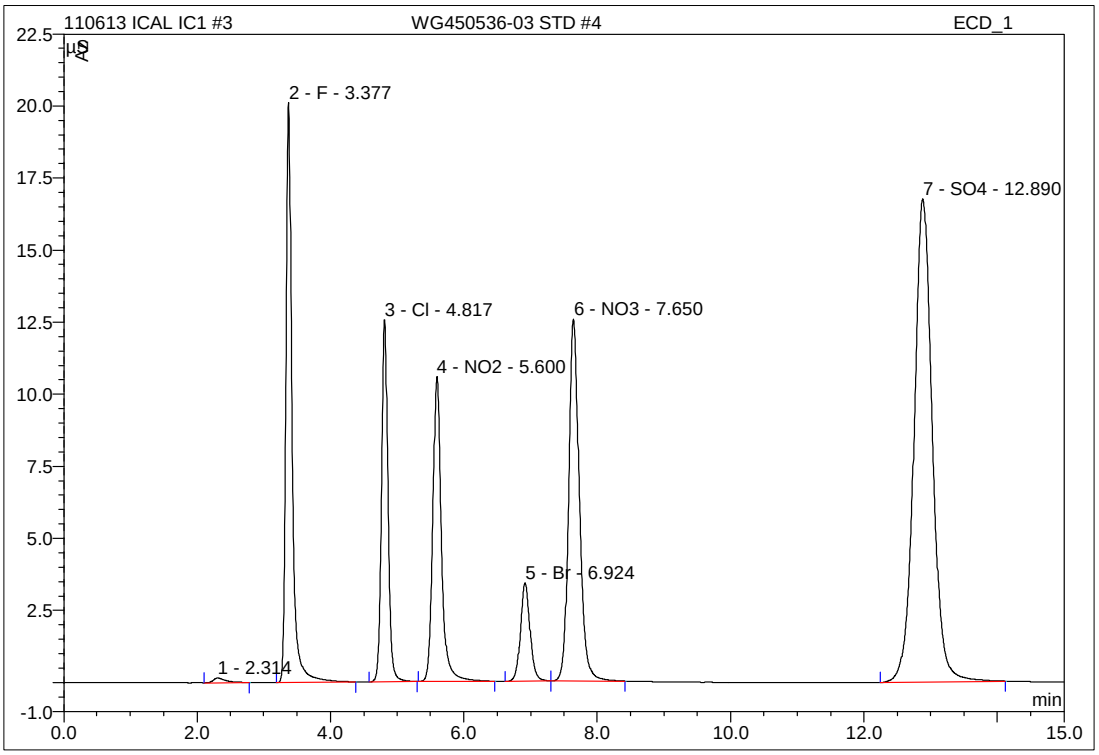
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG450536-03 STD #4

1,1 JBK STD60856

Sample Name:	**WG450536-03 STD #4**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.31	n.a.	0.162	0.036	0.27	n.a.	BMB
2	3.38	F	20.121	2.119	15.83	8.136	BMB
3	4.82	Cl	12.573	1.397	10.43	7.794	BMB
4	5.60	NO2	10.582	1.591	11.88	4.896	BMB
5	6.92	Br	3.413	0.568	4.25	7.930	BMB
6	7.65	NO3	12.548	2.339	17.46	5.302	BMB
7	12.89	SO4	16.761	5.341	39.89	39.473	BMB
Total:			76.160	13.391	100.00	73.532	

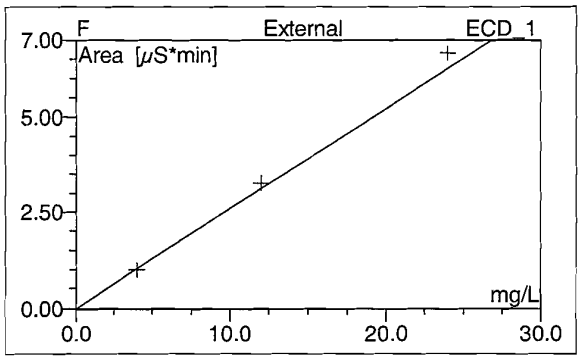
IC/Integration

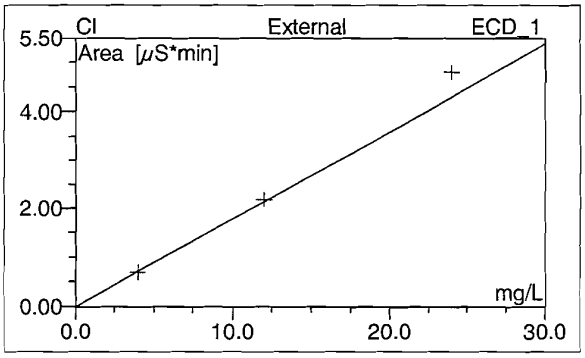
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

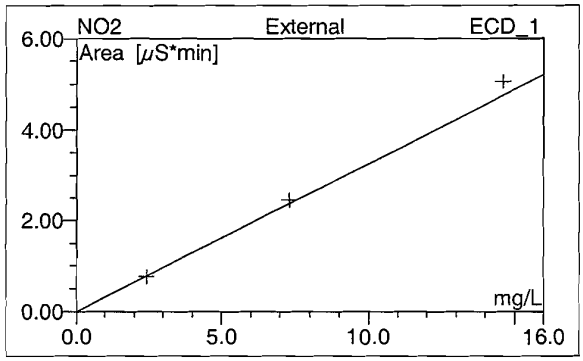
3 WG450536-03 STD #4

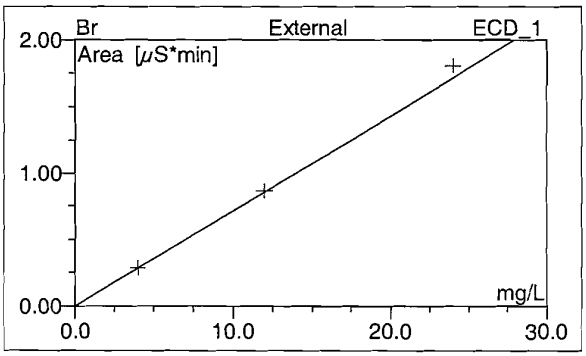
1,1 JBK STD60856

Sample Name:	**WG450536-03 STD #4**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**







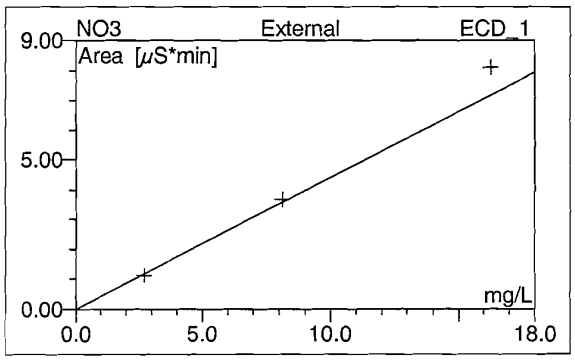


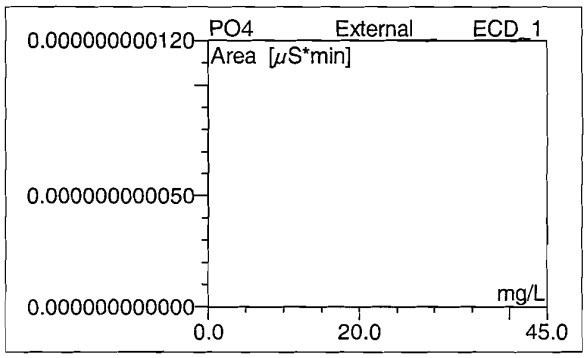
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.31	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.38	F	YYLOff	3	99.9997	-0.0079	0.2615	0.0000
3	4.82	Cl	YYLOff	3	99.8983	-0.0037	0.1797	0.0000
4	5.60	NO2	YYLOff	3	99.9953	-0.0063	0.3262	0.0000
5	6.92	Br	YYLOff	3	99.9728	-0.0002	0.0717	0.0000
6	7.65	NO3	YYLOff	3	99.8870	-0.0100	0.4430	0.0000
7	12.89	SO4	YYLOff	3	99.8991	-0.0203	0.1358	0.0000
Average:					99.9420	-0.0081	0.2363	0.0000

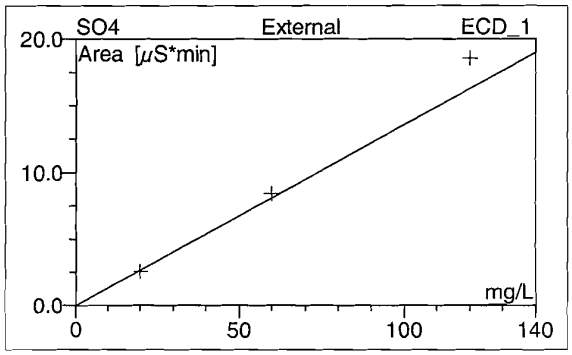
3 WG450536-03 STD #4

1,1 JBK STD60856

Sample Name:	**WG450536-03 STD #4**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**





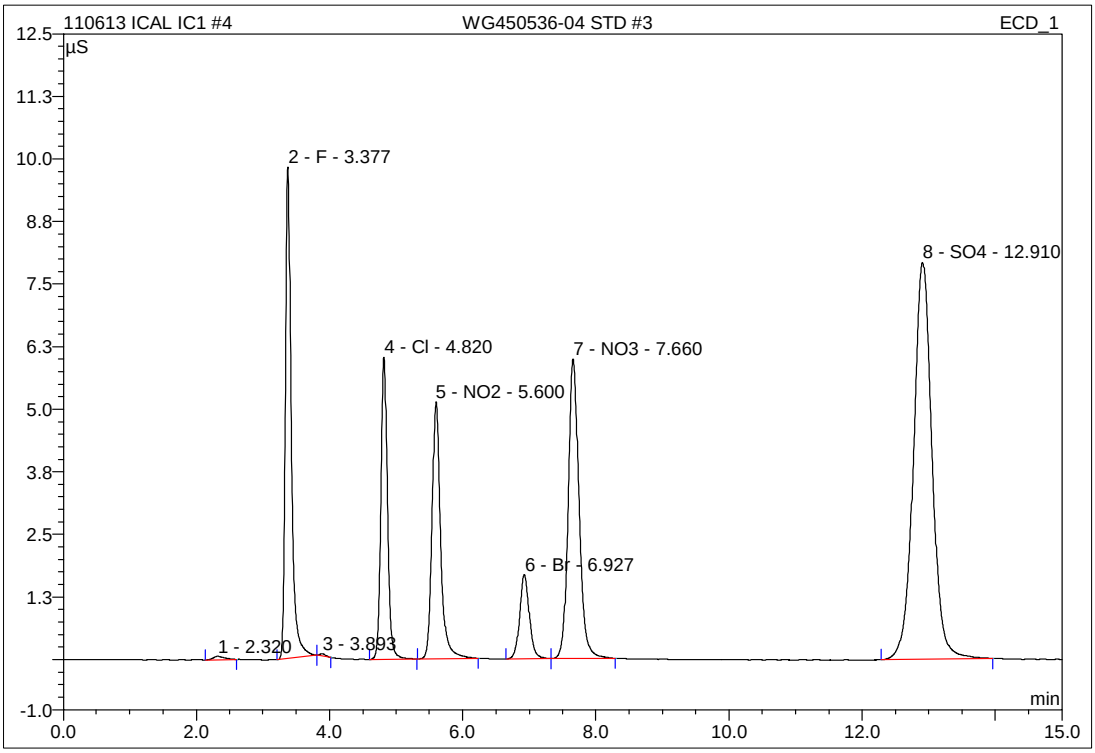


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.31	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.38	F	YYLOff	3	99.9997	-0.0079	0.2615	0.0000
3	4.82	Cl	YYLOff	3	99.8983	-0.0037	0.1797	0.0000
4	5.60	NO2	YYLOff	3	99.9953	-0.0063	0.3262	0.0000
5	6.92	Br	YYLOff	3	99.9728	-0.0002	0.0717	0.0000
6	7.65	NO3	YYLOff	3	99.8870	-0.0100	0.4430	0.0000
7	12.89	SO4	YYLOff	3	99.8991	-0.0203	0.1358	0.0000
Average:					99.9420	-0.0081	0.2363	0.0000

4 WG450536-04 STD #3

1,1 JBK STD60856

Sample Name:	**WG450536-04 STD #3**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 9:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.32	n.a.	0.067	0.013	0.20	n.a.	BMB
2	3.38	F	9.819	0.992	15.39	3.825	BMb
3	3.89	n.a.	0.050	0.005	0.07	n.a.	bMB
4	4.82	Cl	6.037	0.682	10.59	3.818	BMB
5	5.60	NO2	5.131	0.766	11.89	2.368	BMB
6	6.93	Br	1.688	0.285	4.42	3.973	BMB
7	7.66	NO3	5.989	1.134	17.59	2.582	BMB
8	12.91	SO4	7.924	2.568	39.85	19.058	BMB
Total:			36.705	6.445	100.00	35.624	

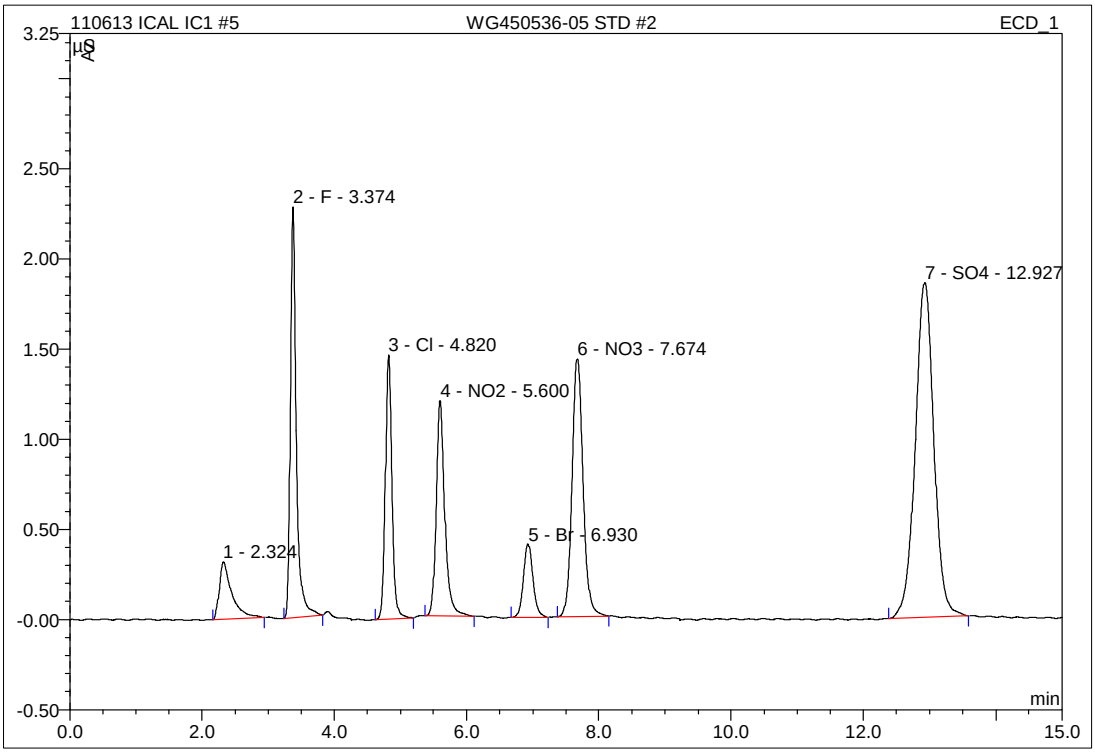
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 WG450536-05 STD #2

1,1 JBK STD60856

Sample Name:	**WG450536-05 STD #2**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 10:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.32	n.a.	0.319	0.071	4.41	n.a.	BMB
2	3.37	F	2.278	0.237	14.76	0.936	BMB
3	4.82	Cl	1.466	0.169	10.54	0.962	BMB
4	5.60	NO2	1.196	0.180	11.18	0.570	BMB
5	6.93	Br	0.407	0.068	4.26	0.956	BMB
6	7.67	NO3	1.430	0.275	17.11	0.643	BMB
7	12.93	SO4	1.857	0.606	37.74	4.612	BMB
Total:			8.952	1.606	100.00	8.680	

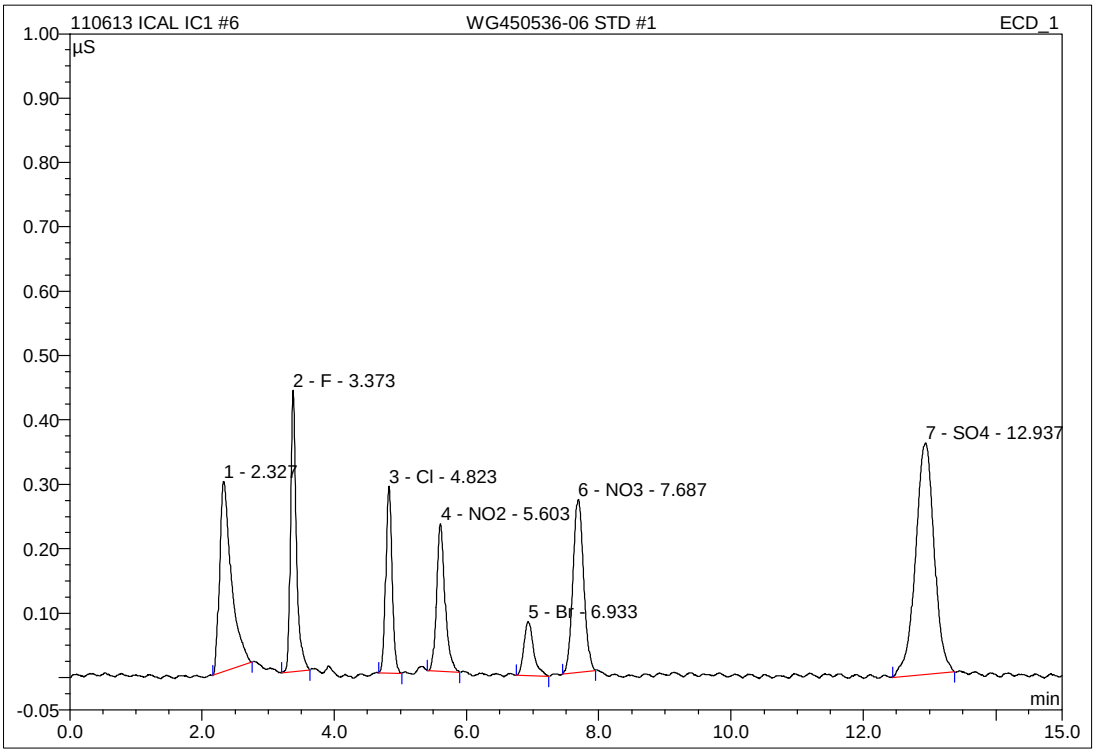
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG450536-06 STD #1

1,1 JBK STD60856

Sample Name:	**WG450536-06 STD #1**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 10:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.33	n.a.	0.296	0.062	17.32	n.a.	BMB
2	3.37	F	0.438	0.045	12.67	0.202	BMB
3	4.82	Cl	0.291	0.033	9.15	0.202	BMB
4	5.60	NO2	0.229	0.034	9.53	0.123	BMB
5	6.93	Br	0.084	0.014	4.01	0.202	BMB
6	7.69	NO3	0.269	0.051	14.23	0.137	BMB
7	12.94	SO4	0.360	0.118	33.08	1.016	BMB
Total:			1.966	0.356	100.00	1.882	

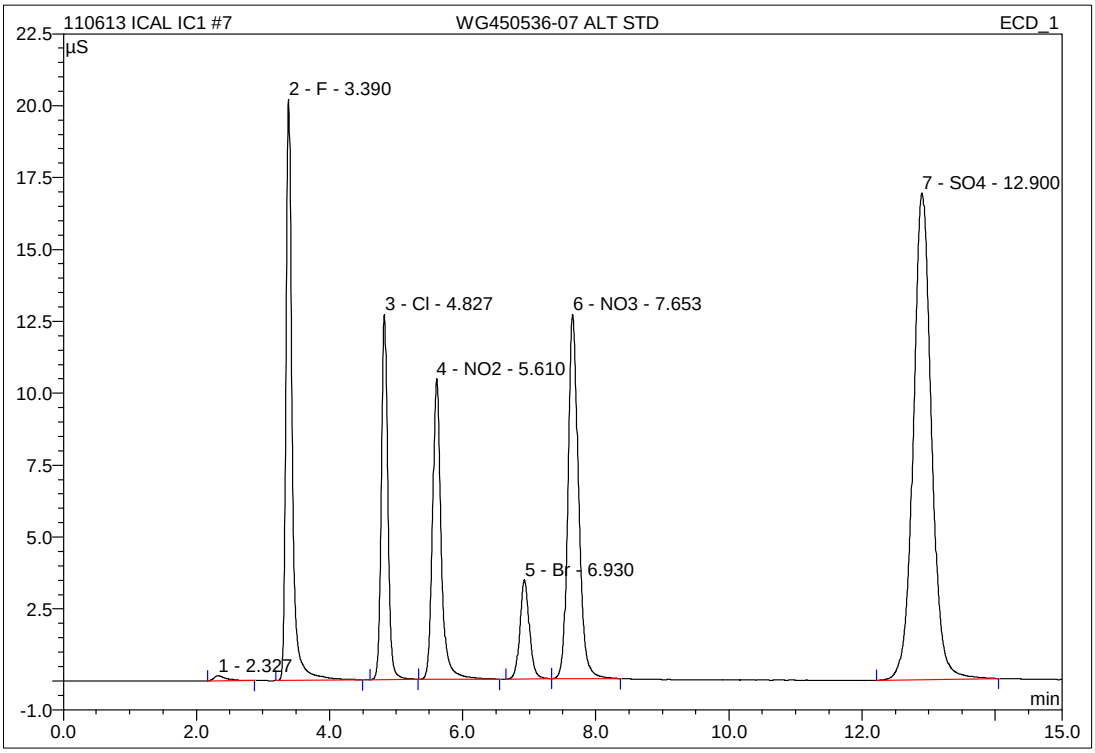
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG450536-07 ALT STD

1,1 JBK STD60857

Sample Name:	**WG450536-07 ALT STD**	*Injection Volume:*	**20.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 11:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.33	n.a.	0.171	0.038	0.28	n.a.	BMB
2	3.39	F	20.200	2.127	15.86	8.165	BMB
3	4.83	Cl	12.689	1.401	10.45	7.817	BMB
4	5.61	NO2	10.450	1.577	11.76	4.853	BMB
5	6.93	Br	3.435	0.567	4.23	7.912	BMB
6	7.65	NO3	12.659	2.341	17.46	5.308	BMB
7	12.90	SO4	16.913	5.360	39.97	39.614	BMB
Total:			76.517	13.411	100.00	73.669	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG450536-07 ALT STD

1,1 JBK STD60857

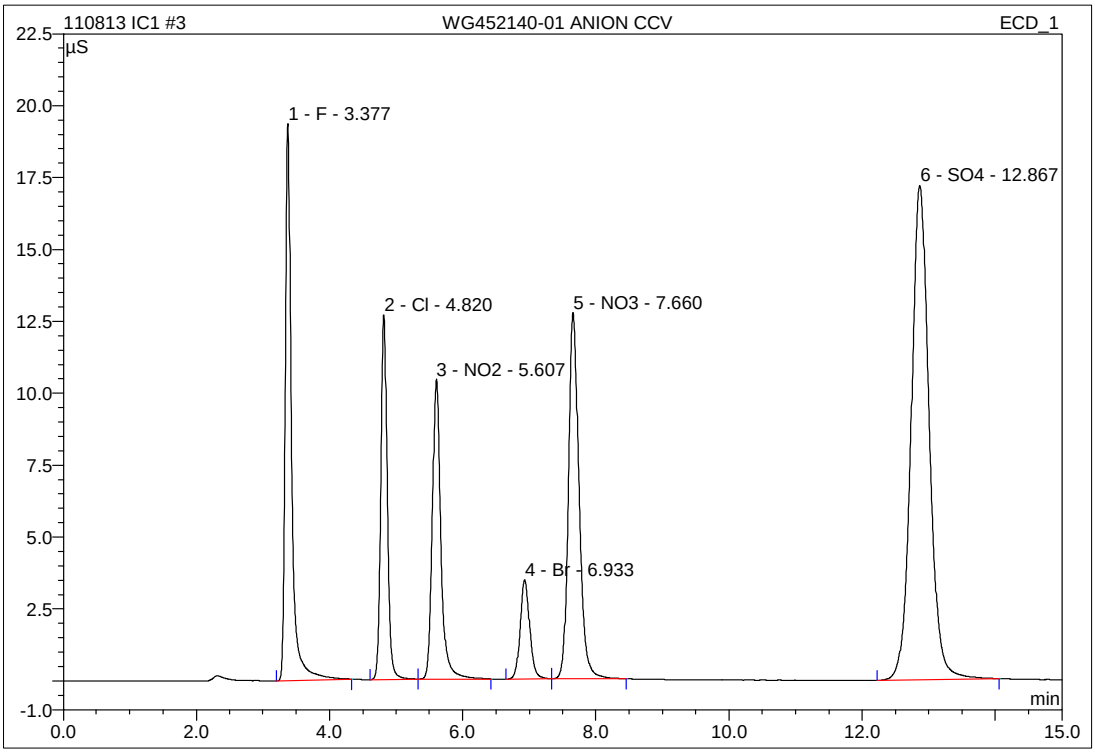
Sample Name:	**WG450536-07 ALT STD**	*Injection Volume:*	**20.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/6/2013 11:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG450536-07 ALT S	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.1653	2.07	PASS
Cl	8.00	7.8171	-2.29	PASS
NO2-N	4.8714	4.8526	-0.38	PASS
Br	8.00	7.9119	-1.10	PASS
NO3-N	5.4216	5.3082	-2.09	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	39.6139	-0.97	PASS

3 WG452140-01 ANION CCV

1,1 JBK STD60856 _____ psi @ _____

Sample Name:	**WG452140-01 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 9:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	19.359	2.092	15.62	8.032	BMB
2	4.82	Cl	12.686	1.409	10.52	7.862	BMB
3	5.61	NO2	10.426	1.556	11.62	4.791	BMB
4	6.93	Br	3.454	0.572	4.27	7.986	BMB
5	7.66	NO3	12.723	2.360	17.62	5.351	bMB
6	12.87	SO4	17.186	5.404	40.34	39.935	BMB
Total:			75.834	13.394	100.00	73.957	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG452140-01 ANION CCV

1,1 JBK STD60856 _____ psi @ _____

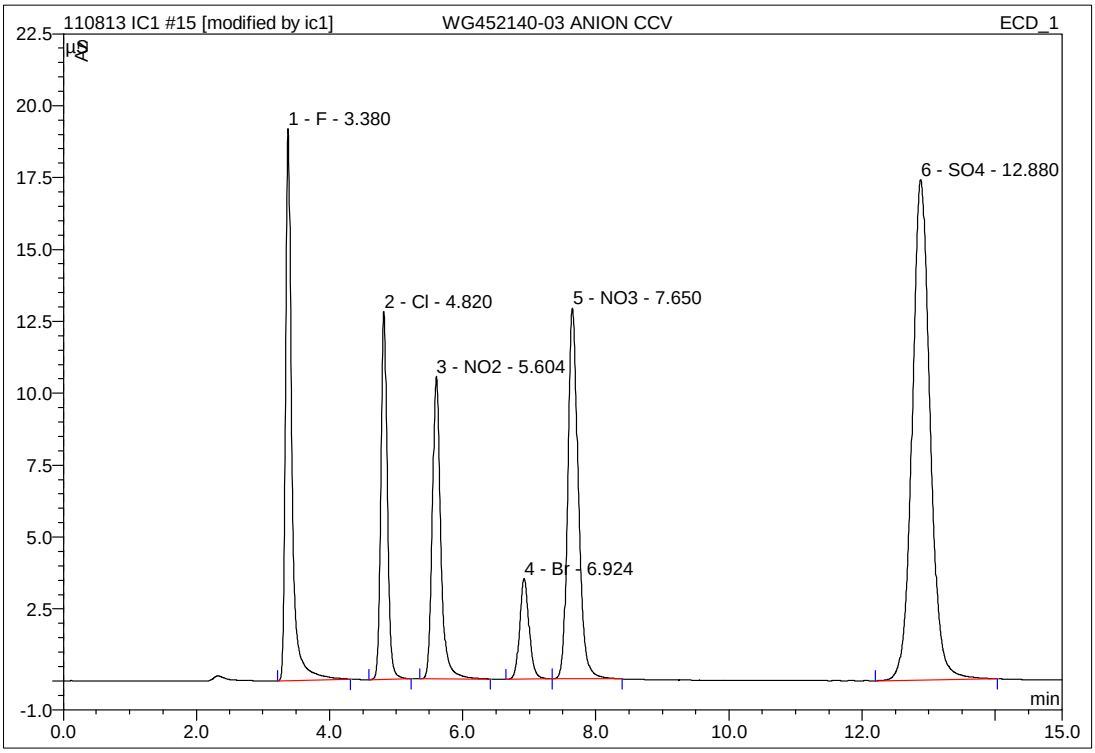
Sample Name:	**WG452140-01 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 9:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG452140-01 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.0323	0.40	PASS
Cl	8.00	7.8616	-1.73	PASS
NO2-N	4.8714	4.7905	-1.66	PASS
Br	8.00	7.9860	-0.17	PASS
NO3-N	5.4216	5.3511	-1.30	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	39.9351	-0.16	PASS

15 WG452140-03 ANION CCV

1,1 JBK STD60856

Sample Name:	**WG452140-03 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 13:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	19.183	2.085	15.50	8.005	BMB*
2	4.82	Cl	12.795	1.414	10.51	7.890	BMB
3	5.60	NO2	10.515	1.553	11.54	4.780	BMB
4	6.92	Br	3.500	0.576	4.28	8.032	BMB
5	7.65	NO3	12.902	2.378	17.67	5.390	BMB
6	12.88	SO4	17.407	5.448	40.50	40.262	BMB
Total:			76.302	13.454	100.00	74.358	

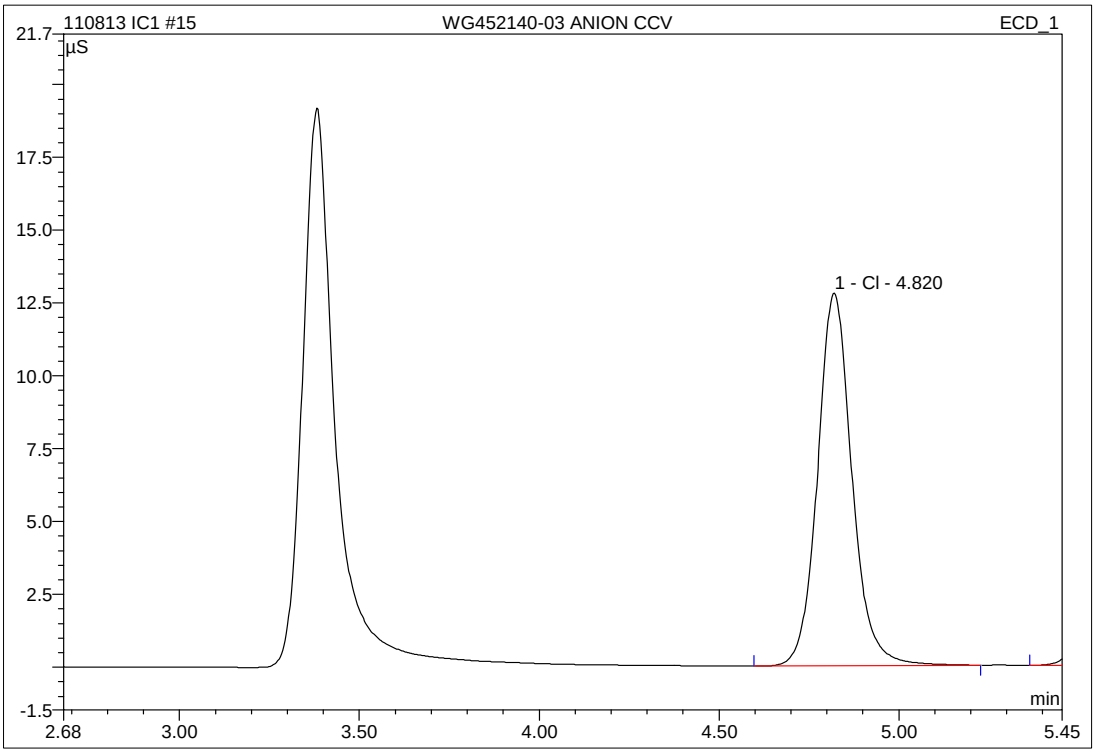
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG452140-03 ANION CCV

1,1 JBK STD60856

Sample Name:	**WG452140-03 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 13:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	4.82	Cl	12.795	1.414	12.44	7.890	BMB
2	5.60	NO2	10.515	1.553	13.66	4.780	BMB
3	6.92	Br	3.500	0.576	5.06	8.032	BMB
4	7.65	NO3	12.902	2.378	20.91	5.390	BMB
5	12.88	SO4	17.407	5.448	47.92	40.262	BMB
Total:			57.119	11.369	100.00	66.354	

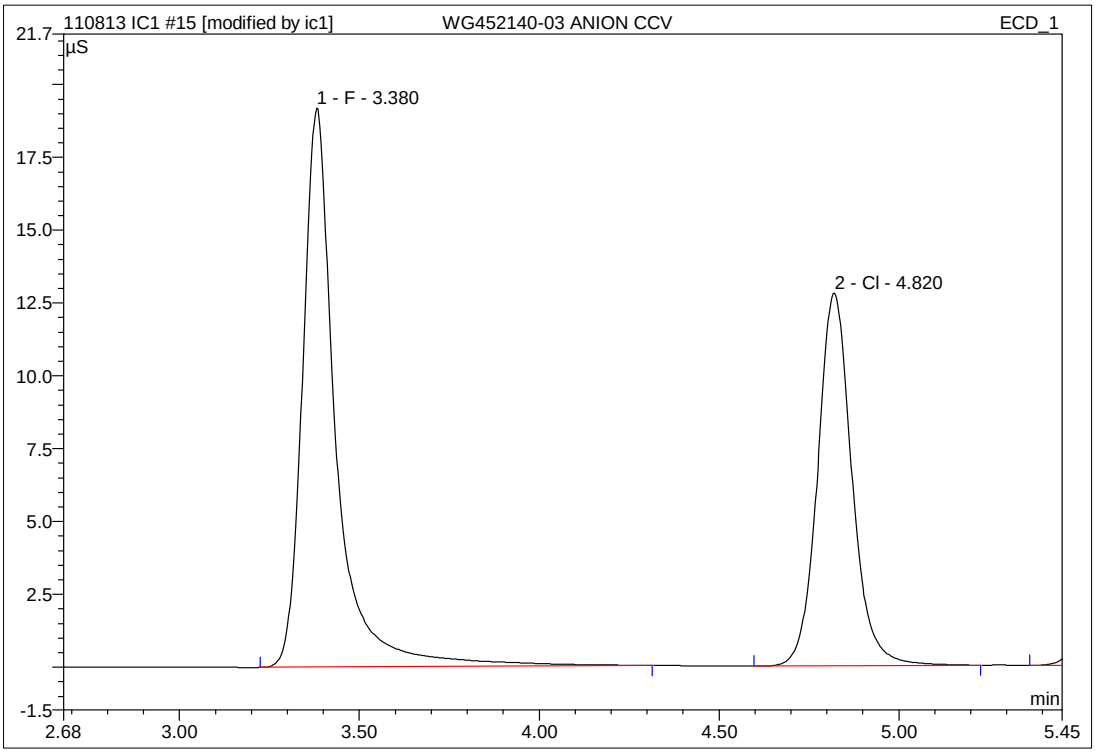
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG452140-03 ANION CCV

1,1 JBK STD60856

Sample Name:	**WG452140-03 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 13:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.38	F	19.183	2.085	15.50	8.005	BMB*
2	4.82	Cl	12.795	1.414	10.51	7.890	BMB
3	5.60	NO2	10.515	1.553	11.54	4.780	BMB
4	6.92	Br	3.500	0.576	4.28	8.032	BMB
5	7.65	NO3	12.902	2.378	17.67	5.390	BMB
6	12.88	SO4	17.407	5.448	40.50	40.262	BMB
Total:			76.302	13.454	100.00	74.358	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

Analyst: 11/11/2013 08:32 Supervisor: 11/11/2013 10:17

#1 - Data system fails to select correct peak

15 WG452140-03 ANION CCV

1,1 JBK STD60856

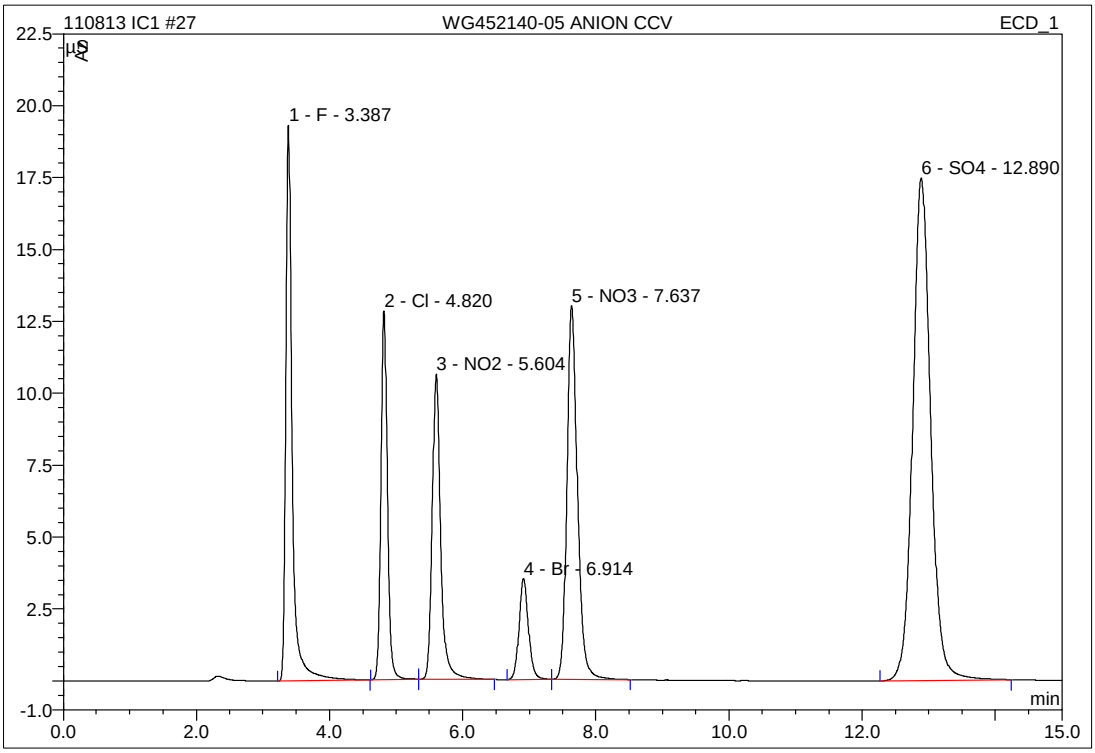
Sample Name:	**WG452140-03 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 13:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG452140-03 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.0047	0.06	PASS
Cl	8.00	7.8897	-1.38	PASS
NO2-N	4.8714	4.7799	-1.88	PASS
Br	8.00	8.0320	0.40	PASS
NO3-N	5.4216	5.3903	-0.58	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	40.2619	0.65	PASS

27 WG452140-05 ANION CCV

1,1 JBK STD60856

Sample Name:	**WG452140-05 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 16:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.39	F	19.314	2.106	15.57	8.083	BMB
2	4.82	Cl	12.822	1.421	10.51	7.925	BMB
3	5.60	NO2	10.605	1.558	11.53	4.797	bMB
4	6.91	Br	3.519	0.578	4.27	8.063	BMB
5	7.64	NO3	12.998	2.390	17.68	5.418	BMB
6	12.89	SO4	17.480	5.469	40.45	40.413	BMB
Total:			76.737	13.521	100.00	74.699	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

27 WG452140-05 ANION CCV

1,1 JBK STD60856

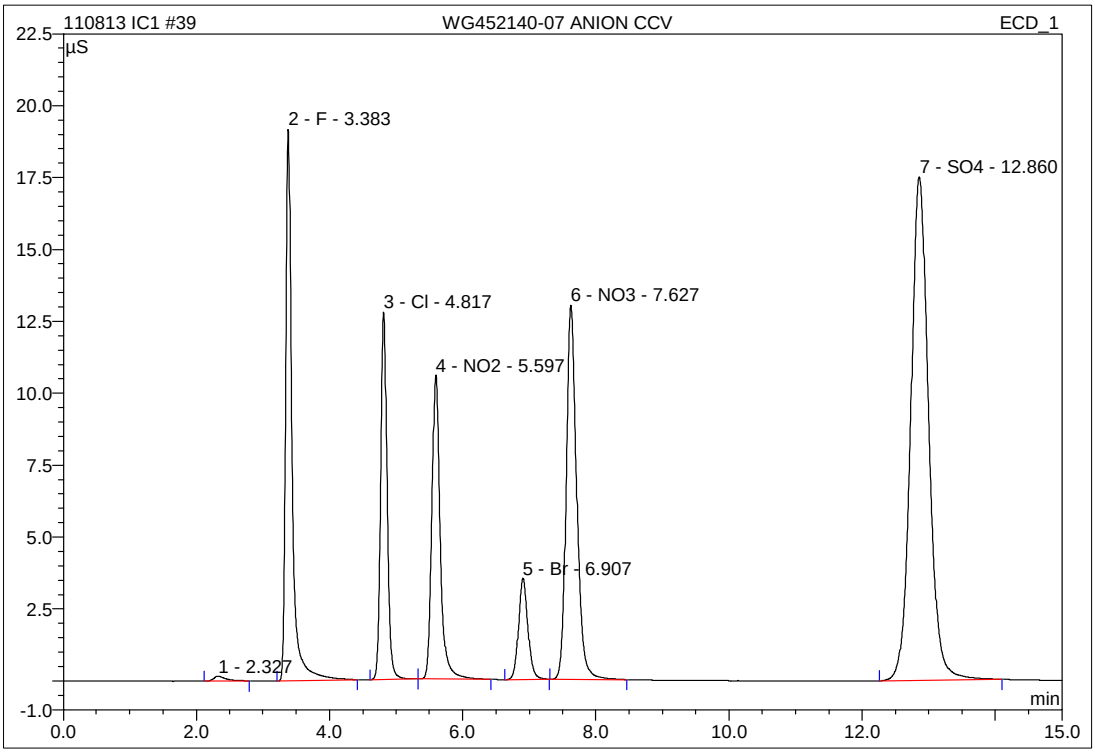
Sample Name:	**WG452140-05 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 16:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG452140-05 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.0833	1.04	PASS
Cl	8.00	7.9246	-0.94	PASS
NO2-N	4.8714	4.7969	-1.53	PASS
Br	8.00	8.0632	0.79	PASS
NO3-N	5.4216	5.4183	-0.06	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	40.4129	1.03	PASS

39 WG452140-07 ANION CCV

1,1 JBK STD60856

Sample Name:	**WG452140-07 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 20:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.33	n.a.	0.172	0.038	0.28	n.a.	BMB
2	3.38	F	19.181	2.090	15.45	8.023	BMB
3	4.82	Cl	12.789	1.420	10.50	7.920	BMB
4	5.60	NO2	10.559	1.543	11.40	4.749	bMB
5	6.91	Br	3.523	0.580	4.29	8.088	BMB
6	7.63	NO3	13.020	2.391	17.68	5.421	BMB
7	12.86	SO4	17.515	5.466	40.41	40.395	BMB
Total:			76.759	13.527	100.00	74.596	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

39 WG452140-07 ANION CCV

1,1 JBK STD60856

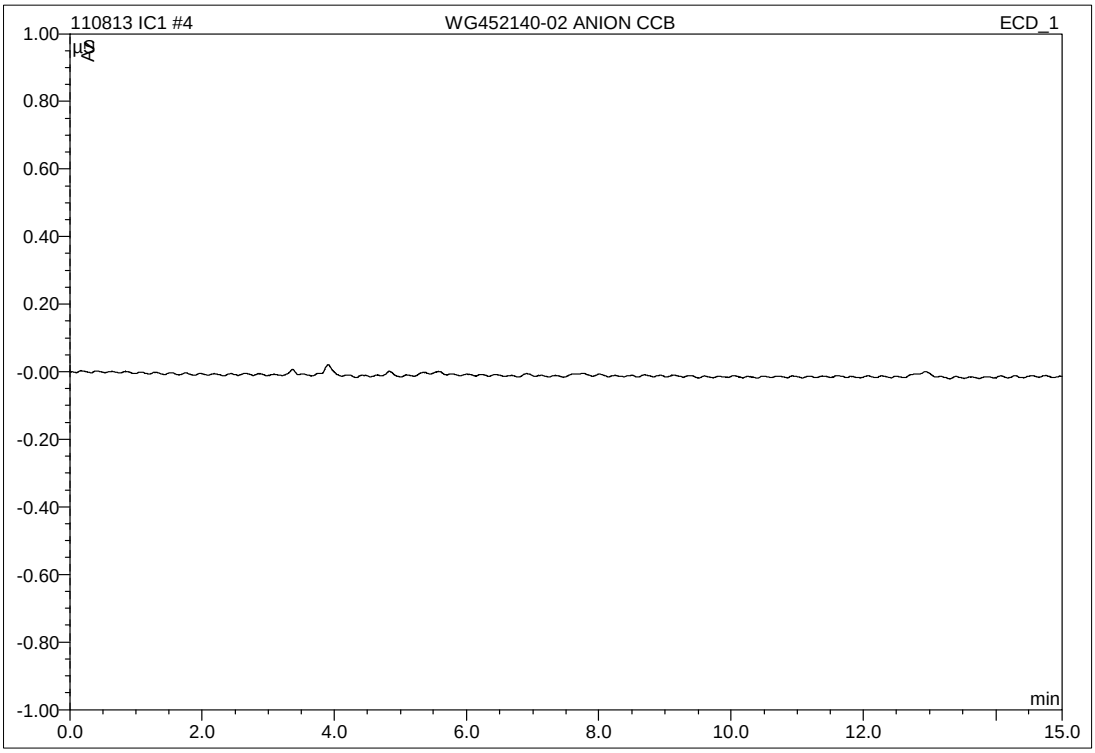
Sample Name:	**WG452140-07 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 20:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG452140-07 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.0228	0.29	PASS
Cl	8.00	7.9205	-0.99	PASS
NO2-N	4.8714	4.7489	-2.51	PASS
Br	8.00	8.0878	1.10	PASS
NO3-N	5.4216	5.4211	-0.01	PASS
PO4-P	13.0456	n.a.	#VALUE!	#VALUE!
SO4	40	40.3947	0.99	PASS

4 WG452140-02 ANION CCB

1,1 JBK

Sample Name:	**WG452140-02 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 10:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

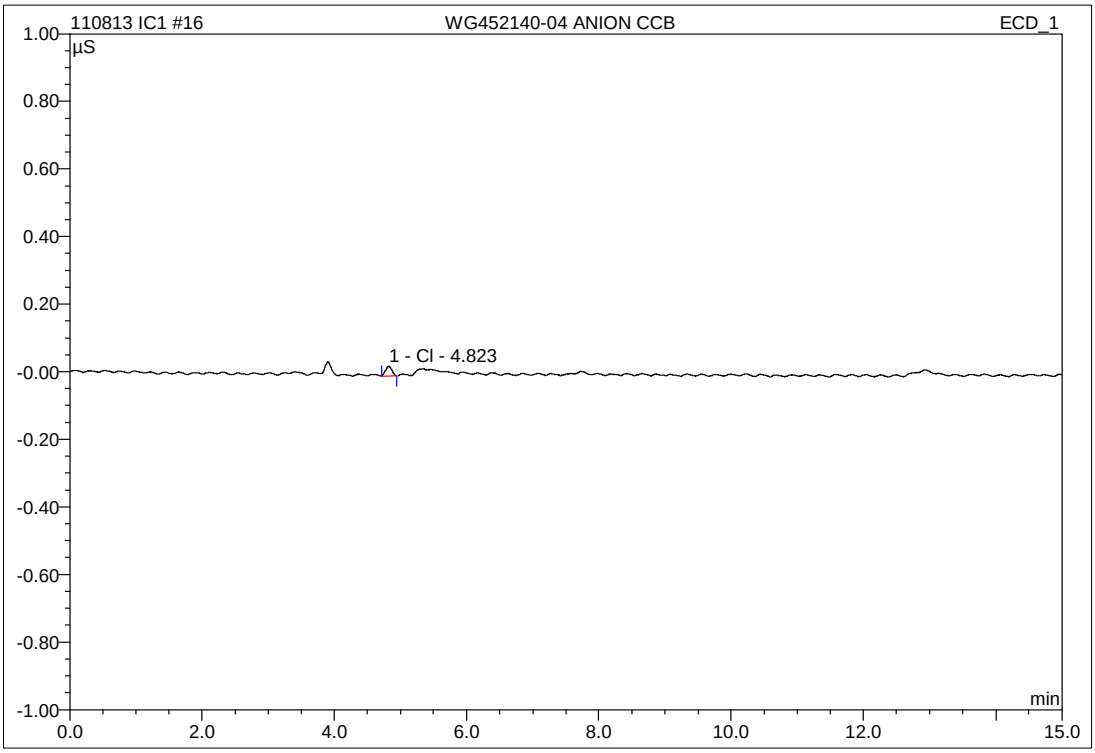


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

16 WG452140-04 ANION CCB

1,1 JBK

Sample Name:	**WG452140-04 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 13:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	4.82	Cl	0.029	0.003	100.00	0.038	BMB
Total:			0.029	0.003	100.00	0.038	

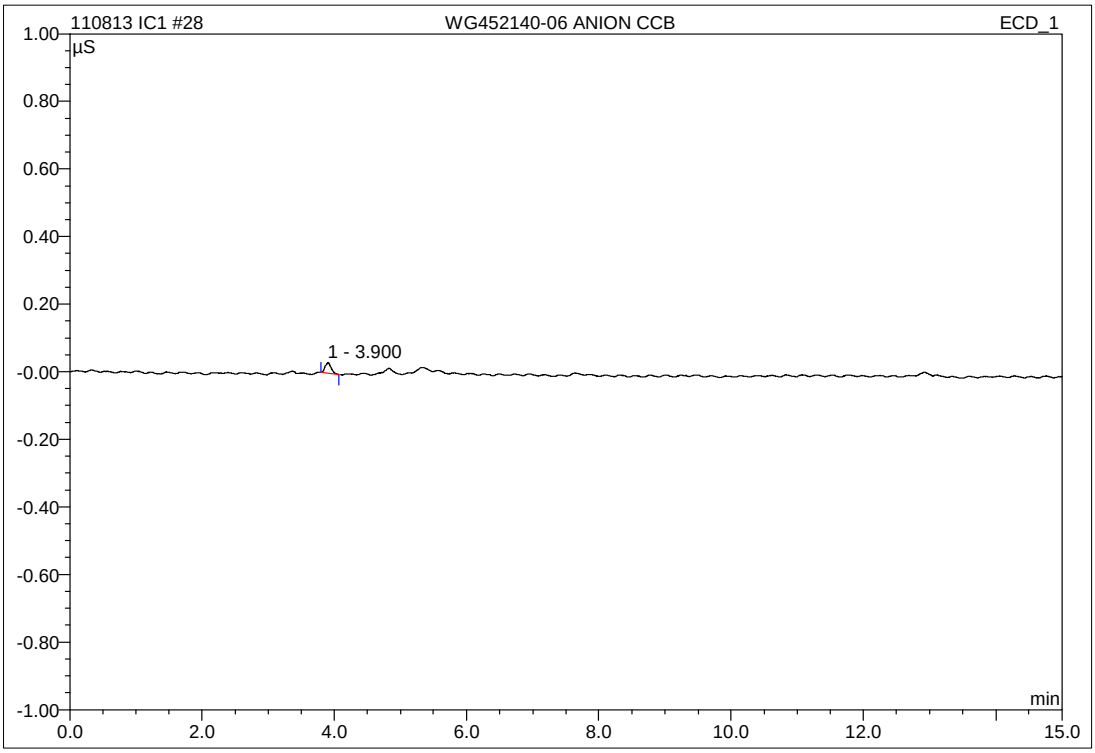
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

28 WG452140-06 ANION CCB

1,1 JBK

Sample Name:	**WG452140-06 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 16:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.90	n.a.	0.031	0.003	100.00	n.a.	BMB
Total:			0.031	0.003	100.00	0.000	

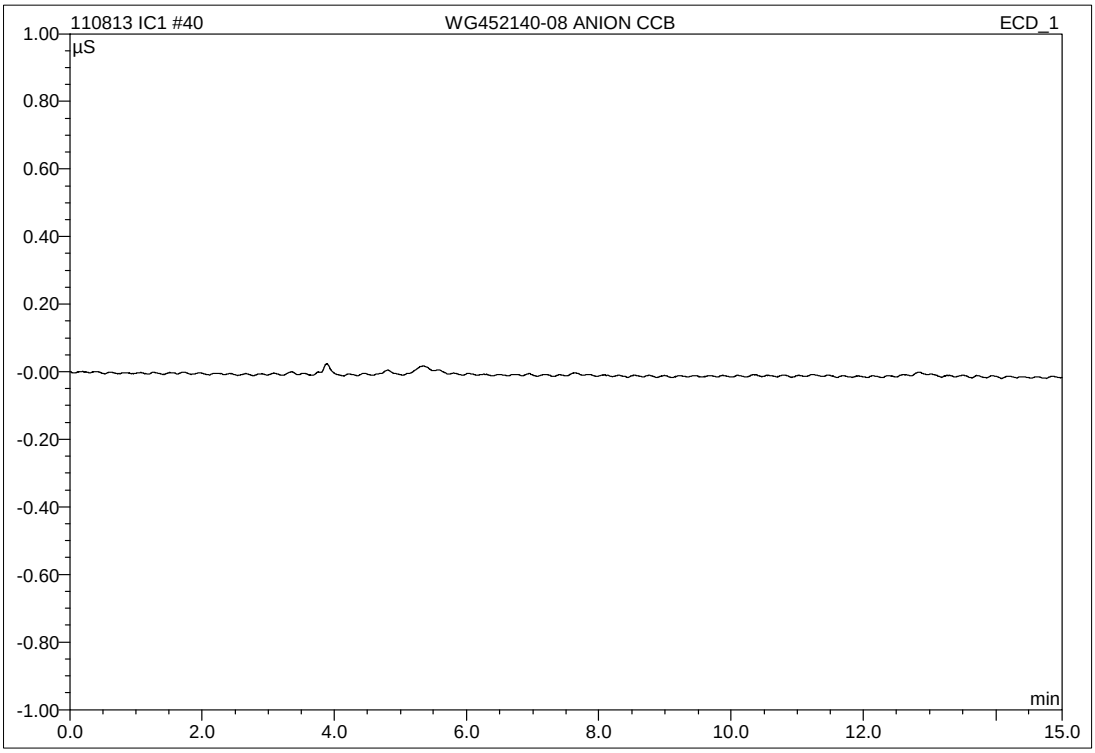
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

40 WG452140-08 ANION CCB

1,1 JBK

Sample Name:	**WG452140-08 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 20:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*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

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	6/5/2013	6/5/2013	6/6/2013
File #	WG432976-05	WG432976-07	WG433275-01
Time	16:16	18:25	16:50

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.41	3.40	3.41	0.017
Cl	4.87	4.87	4.88	0.017
NO2-N	5.67	5.66	5.67	0.017
Br	7.01	6.99	7.02	0.046
NO3-N	7.76	7.74	7.77	0.046
SO4	13.35	13.35	13.35	0.000

Instrument ID: IC2

IC Column: AG14A-SC/AS14A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	6/6/2013	6/6/2013	6/7/2013
File #	WG433163-01	WG433163-05	WG433448-01
Time	12:58	18:54	12:23

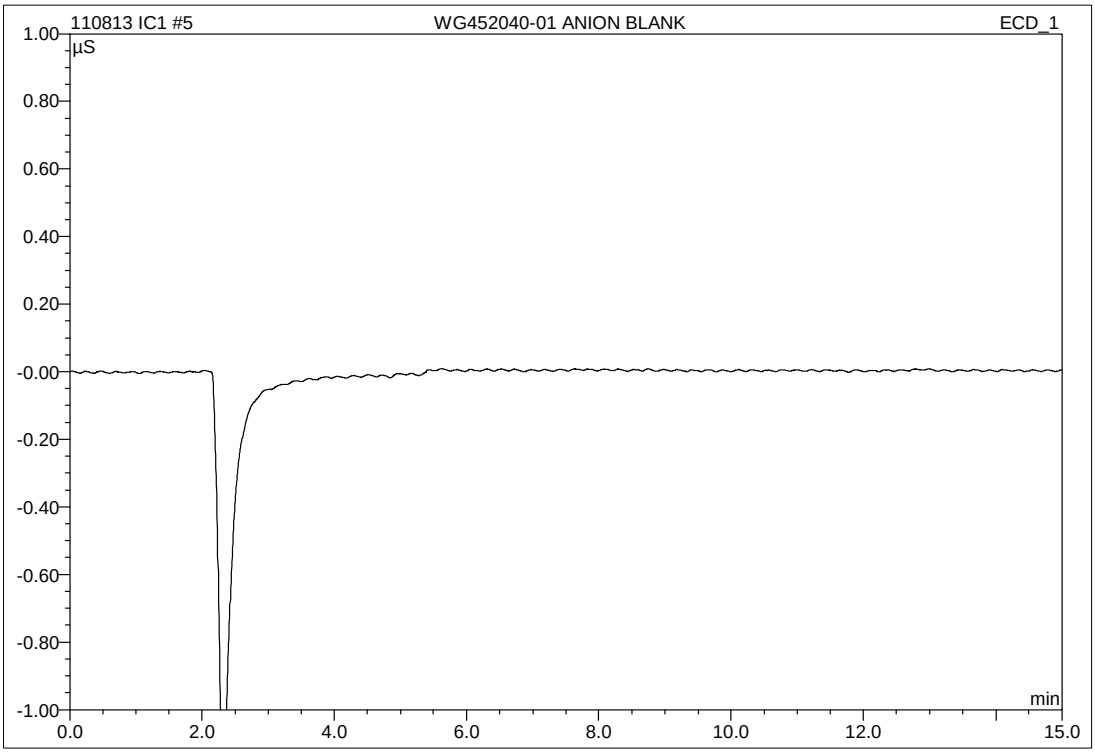
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.31	3.30	3.31	0.017
Cl	4.90	4.89	4.92	0.046
NO2-N	5.79	5.78	5.83	0.079
Br	7.34	7.31	7.43	0.187
NO3-N	8.21	8.18	8.32	0.221
SO4	13.74	13.74	13.67	0.121

2.2.1.5 Raw QC Data

5 WG452040-01 ANION BLANK

1,1 JBK

Sample Name:	**WG452040-01 ANION BLANK**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 10:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*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	

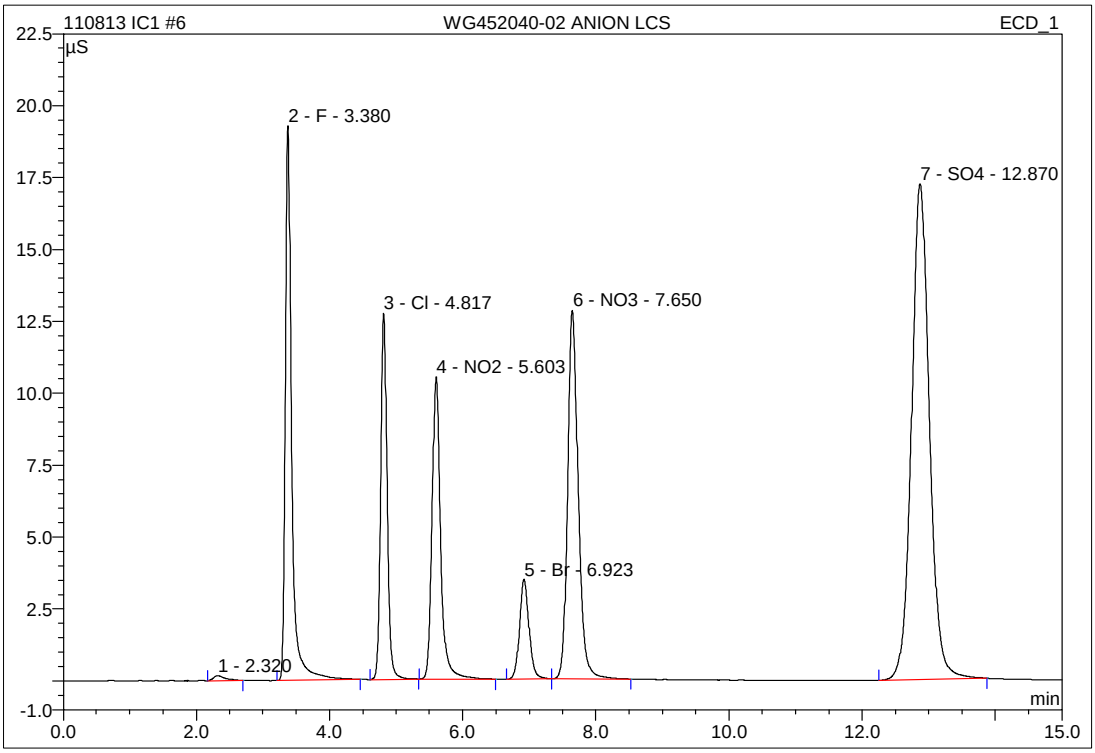
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 WG452040-02 ANION LCS

1,1 JBK

Sample Name:	**WG452040-02 ANION LCS**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/8/2013 10:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.32	n.a.	0.169	0.034	0.25	n.a.	BMB
2	3.38	F	19.287	2.093	15.58	8.036	BMB
3	4.82	Cl	12.729	1.409	10.49	7.861	BMB
4	5.60	NO2	10.500	1.566	11.66	4.821	BMB
5	6.92	Br	3.470	0.575	4.28	8.015	BMB
6	7.65	NO3	12.809	2.373	17.67	5.380	BMB
7	12.87	SO4	17.234	5.382	40.07	39.775	BMB
Total:			76.198	13.433	100.00	73.889	

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: L13110337
Department: Conventionals
Analyst:

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.

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Narrative ID: 74615
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 30-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:22
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	OS13111513392801
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.48		0.000	0.000
Temperature At Determination (C)		18.5		0.000	0.000

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 16-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:26
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	OS13111513402601
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.24		0.000	0.000
Temperature At Determination (C)		17.5		0.000	0.000

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL 26-1113-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG451764	**Analyst:**	DCM	**Run Date:**	11/06/2013 17:28
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	OS13111513403401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.12		0.000	0.000
Temperature At Determination (C)		17.6		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: 06-NOV-2013
Analyst: DCM
Analyst: NA
Method: PH
Instrument: ORION 4-STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451764

Calibration/Linearity	11-06-2013
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	DCM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
07-NOV-2013

Secondary Reviewer:
15-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-15-2013 15:16:01

2.2.2.3 Raw Data

WORKGROUP: WG451764

pH
(pH2)

B,C) SW846 9045D
A) SM 4500-H(+)-B
A) EPA 150.1
A) SW846 9040C
SOP K1501, Rev 14

Instrument
- [x] Orion 4-Star
- [ ] Orion 710A #1
- [ ] Orion 710A #2

Sample	Calibration Buffers	Time of Calibration	A Water Misc. Liquid	B 50% Slurry of Solid	C 50% Water Org. Liq. Mix	Time Analyzed	Temp (°C)
LCS 6: std 59686	4,7,10	1715	6.02			1719	20.1
11-337-01			7.48			1722	18.5
02			8.24			1726	17.5
03			7.12			1728	17.6
DUP: 11-337-01			7.50			1724	18.3
LCS 9: std 59687			8.94			1730	19.8

Analyst: David Marchle Date: 11/6/13 1715

DCN#98671

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

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: 74613
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	99.6		20.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	99.6		20.0	10.0

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 30-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:17
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	S2131108002.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	85.6		20.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 16-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	S2131108002.018
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	85.6		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	70.4		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	70.4		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM2
Client ID:	MPL 26-1113-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	11/08/2013 12:12
Workgroup #:	WG452001	**Analyst:**	BAF	**Run Date:**	11/08/2013 12:18
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	S2131108002.019
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	20.0	10.0
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

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: 08-NOV-2013
Analyst: BAF
Analyst: NA
Method: ALK
Instrument: SC2
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452001

Calibration/Linearity	11-8-2013
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	BAF
Secondary Reviewer	SAV
Comments	

Primary Reviewer:
08-NOV-2013
Brice Fenton

Secondary Reviewer:
14-NOV-2013
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-14-2013 16:41:03

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG452001

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3.1	14		11/08/13	3.1	14	
MPL 16-1113-1	02	11/05/13					11/08/2013	3	14		11/08/13	3	14	
MPL 26-1113-1	03	11/05/13					11/08/2013	2.9	14		11/08/13	2.9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3204716
Report generated 11/14/2013 16:39

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: S2131108002.012
Prep Date: 11/08/13 12:14
Analyzed Date: 11/08/13 12:14
Analyst: BAF

Work Group: WG452001
Blank Sample ID: WG452001-01
Instrument ID: SMARTCHEM2
Method: 310.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG452001-02	S2131108002.013	11/08/13 12:14	01
LCS2	WG452001-03	S2131108002.014	11/08/13 12:15	01
MPL 30-1113-1	L13110337-01	S2131108002.017	11/08/13 12:17	01
MPL 30-1113-1	L13110337-01	S2131108002.017	11/08/13 12:17	01
MPL 30-1113-1	L13110337-01	S2131108002.017	11/08/13 12:17	01
MPL 16-1113-1	L13110337-02	S2131108002.018	11/08/13 12:18	01
MPL 16-1113-1	L13110337-02	S2131108002.018	11/08/13 12:18	01
MPL 16-1113-1	L13110337-02	S2131108002.018	11/08/13 12:18	01
MPL 26-1113-1	L13110337-03	S2131108002.019	11/08/13 12:18	01
MPL 26-1113-1	L13110337-03	S2131108002.019	11/08/13 12:18	01
MPL 26-1113-1	L13110337-03	S2131108002.019	11/08/13 12:18	01
DUP	WG452001-05	S2131108002.026	11/08/13 12:22	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3204717
Report generated 11/14/2013 16:39

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 12:14 Sample ID: WG452001-01
Instrument ID: SMARTCHEM2 Run Date: 11/08/13 12:14 Prep Method: 310.2
File ID: S2131108002.012 Analyst: BAF Method: 310.2
Workgroup (AAB#): WG452001 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-08-NOV-13

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: 3204718
14-NOV-2013 16:39

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: BAF Prep Method: 310.2
Instrument ID: SMARTCHEM2 Matrix: Water Method: 310.2
Workgroup (AAB#): WG452001 Units: mg/L
QC Key: DOD4 Lot #: STD61146

Sample ID: WG452001-02 LCS File ID: S2131108002.013 Run Date: 11/08/2013 12:14
Sample ID: WG452001-03 LCS2 File ID: S2131108002.014 Run Date: 11/08/2013 12:15

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	200	193	96.7	200	197	98.5	1.82	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3204719
Report generated: 11/14/2013 16:39

2.2.3.3 Raw Data

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG452001

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9

Syringe filter lot # _____

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

1) **Workgroup** _____
   Plan # 20131108002
2) **Workgroup** _____
   Plan # _____
3) **Workgroup** _____
   Plan # _____

Instrument: SC1 [ ] SC2 [x]

Analyte		1	2	3
ALK		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 250			
1-2	Blk			
1-3	LCS 200			
1-4	LCSDUP			
1-5	11-383-01			
1-6	02			
1-7	11-337-01			+BC
1-8	02			↓
1-9	03			↓
1-10	11-363-01			+BC
1-11	03	1/2		↓
1-12	05	1/2		↓
1-13	07	1/2		↓
1-14	DUP ↓	1/2		
1-15				
1-16	Blk			
1-17				
1-18				
1-19				
1-20				
1-21				
1-22				
2-1				
2-2				
2-3				

Analyte		1	2	3
Position				
2-4				
2-5				
2-6				
2-7				
2-8				
2-9				
2-10				
2-11				
2-12				
2-13				
2-14				
2-15				
2-16				
2-17				
2-18				
2-19				
2-20				
2-21				
2-22				
2-23				
2-24				
2-25				
2-26				
3-1				
3-2				

NOTES:
* Run NO2 std on NO3 runs
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#98728

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG452001

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-CI E-2000
	Nitrate-Nitrite	EPA 353.2/SM 4500-NO3 F-2000
✓	Alkalinity	EPA 310.2
	Sulfate	EPA 375.4/SM 426C (15th)/ SM4500-504 E-1997

	Ammonia	EPA 350.1/SM 4500-NH3 B-1997
	TKN	EPA 351.2
	Phos	EPA 365.4

Analyte	ALK		Reagents
SOP & Revision	K3102 REV. 15		RGT28595
Curve Stock (SC made)	Std 59625		RGT28597
NO2 STD			RGT27389
ICV	Std 61145		
CCV	Std 60881		
LCS	Std 61146		
MS	QNS Dilution		

Comments: 337 + 363's pH ≤ 8.3.

Analyst: Brie Fenton

Date: 11/8/13

DCN#98728

MICROBAC (OVD)

SMARTCHEM200 INST2 (VER3.1.14)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK -Unit [mg/L] - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.0	0.6137	0.00		12:03:08 PM
DIL-1	RBL	0.0	0.6147	0.00		12:03:26 PM
DIL-1	RBL	0.0	0.6040	0.00		12:07:20 PM
DIL-1	Std-1	0.0	-0.0103	0.00		12:07:38 PM
SR5-1	Std-2	10.0	-0.0233	0.00		12:08:32 PM
SR5-2	Std-3	20.0	-0.0332	0.00		12:08:50 PM
SR5-3	Std-4	50.0	-0.0695	0.00		12:09:44 PM
SR5-4	Std-5	100.0	-0.1359	0.00		12:10:02 PM
SR5-5	Std-6	200.0	-0.2746	0.00		12:10:56 PM
SR5-6	Std-7	250.0	-0.3508	0.00		12:11:14 PM
SR5-7	Std-8	300.0	-0.4103	0.00		12:12:08 PM
ST-3	1CCV (150 mg/L)	147.5	-0.2021	98.30		12:12:26 PM
ST-2	2CCB (0 mg/L)	5.6	-0.0155	0.00		12:13:20 PM
1	ICV	247.0	-0.3396	0.00		12:13:38 PM
2	WG452001-01 BLK	4.9	-0.0146	0.00		12:14:32 PM
3	WG452001-02 LCS	193.4	-0.2649	0.00		12:14:50 PM
4	WG452001-03 LCSDUP	197.0	-0.2698	0.00		12:15:44 PM
5	L13110383-01	279.7	-0.3862	0.00		12:16:02 PM
6	L13110383-02	213.7	-0.2929	0.00		12:16:56 PM
7	L13110337-01	99.6	-0.1380	0.00		12:17:14 PM
8	L13110337-02	85.6	-0.1195	0.00		12:18:08 PM
9	L13110337-03	70.4	-0.0994	0.00		12:18:26 PM
10	L13110363-01	268.8	-0.3706	0.00		12:19:20 PM
ST-3	1CCV (150 mg/L)	156.5	-0.2143	104.31		12:19:38 PM
ST-2	2CCB (0 mg/L)	15.7	-0.0284	0.00		12:20:32 PM
11	L13110363-03 (2)	208.5	-0.2858	0.00		12:20:50 PM
12	L13110363-05 (2)	211.3	-0.2896	0.00		12:21:44 PM
13	L13110363-07 (2)	232.6	-0.3194	0.00		12:22:02 PM
14	WG452001-05 DUP (2)	238.7	-0.3280	0.00		12:22:56 PM
15	ID 15	22.3	-0.0369	0.00		12:23:14 PM
16	ID 16 Blk	17.1	-0.0303	0.00		12:24:08 PM
ST-3	1CCV (150 mg/L)	157.9	-0.2163	105.29		12:24:26 PM

Report Date :11/08/2013 **Run Date :11/8/2013** **Operator : WESTCO** **Plan # :20131108002**

Plan Description : ALK-A2-BAF/11/8/2013

MICROBAC (OVD)
SMARTCHEM200 INST2 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK -Unit [mg/L] - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-2	2CCB (0 mg/L)	20.5	-0.0346	0.00		12:25:21 PM
11-[1/2]	L13110363-03	259.3	-0.1781	0.00		12:33:01 PM
12-[1/2]	L13110363-05	252.6	-0.1736	0.00		12:34:13 PM
13-[1/2]	L13110363-07	273.9	-0.1879	0.00		12:35:25 PM
14-[1/2]	WG452001-05 DUP	291.1	-0.1995	0.00		12:36:37 PM
ST-3	1CCV (150 mg/L)	165.0	-0.2259	109.99		12:36:37 PM
ST-2	2CCB (0 mg/L)	29.6	-0.0464	0.00		12:37:31 PM

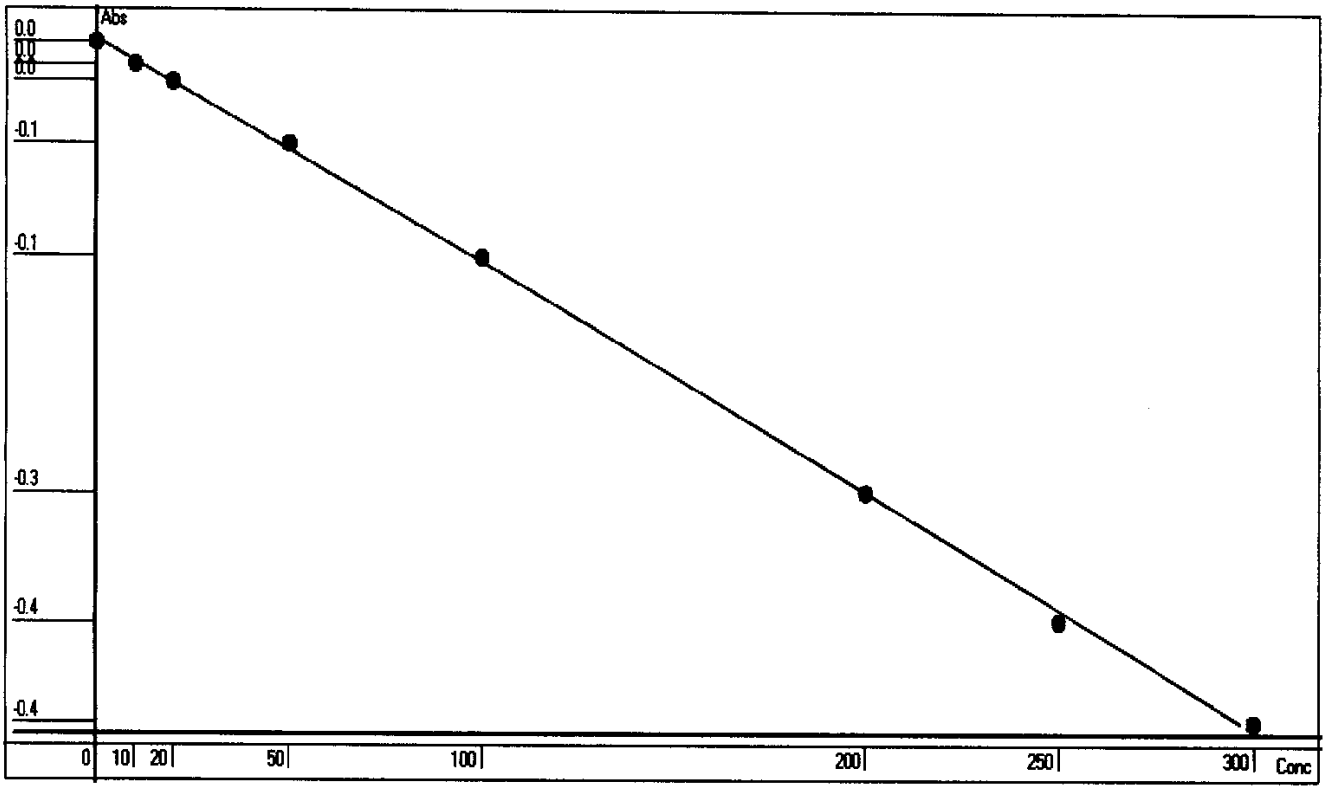
Report Date :11/08/2013 **Run Date :11/8/2013** **Operator : WESTCO** **Plan # :20131108002**

Plan Description : ALK-A2-BAF/11/8/2013

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20131108002 Description : [ALK-A2-BAF/11/8/2013] Unit



Point	OD	Conc	Recalc Conc	% Error
1	-0.0103	0	1.5484	154.84
2	-0.0233	10	11.6985	16.99
3	-0.0332	20	19.4028	-2.99
4	-0.0695	50	47.4639	-5.07
5	-0.1359	100	98.0284	-1.97
6	-0.2746	200	200.4600	0.23
7	-0.3508	250	254.8981	1.96
8	-0.4103	300	296.5000	-1.17

Conc= -112.1492*Abso^2 -784.5491*Abso -6.5206 R^2=0.9995

RBL
0.6142
0

Report Date 11/8/2013 Run Date 11/8/2013

2.2.4 Cyanide Data

2.2.4.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst:

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.

Sample #	Analyte	Date	Result	Lower	Upper	Type
WG452812-02	Cyanide	2013-11-14 15:45:03	1.00	90	110	Recovery

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: 74619

Approved By: Deanna Hesson

Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:20
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141530-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.298		0.0100	0.00500

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141545-04
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.298	U	0.0100	0.00500
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311141550-04
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0220		0.0100	0.00500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:20
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141530-08
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.134		0.0100	0.00500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141545-05
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.133	U	0.0100	0.00500

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

Certificate of Analysis

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311141550-05
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0154		0.0100	0.00500

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452580	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:30
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141530-09
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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-CN-C,G-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G-1999	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452812	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:45
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141545-06
Sample Tag:	DL02	**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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	11/14/2013 11:30
Workgroup #:	WG452581	**Analyst:**	DCM	**Run Date:**	11/14/2013 15:50
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311141550-06
Sample Tag:	DL01	**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: 14-NOV-2013
Analyst: DCM
Analyst: NA
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452580

Calibration/Linearity	11/14/2013
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	DCM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
15-NOV-2013

Secondary Reviewer:
17-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-17-2013 15:20:22

Microbac Laboratories Inc.

Data Checklist

Date: 14-NOV-2013
Analyst: DCM
Analyst: NA
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452581

Calibration/Linearity	11/14/2013
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	DCM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
15-NOV-2013

Secondary Reviewer:
17-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-17-2013 15:20:21

Microbac Laboratories Inc.

Data Checklist

Date: 14-NOV-2013
Analyst: DCM
Analyst: NA
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452812

Calibration/Linearity	11/14/2013
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	DCM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
15-NOV-2013

Secondary Reviewer:
17-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-17-2013 15:20:20

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C

AAB#: WG452580

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/14/2013	9.2	14		11/14/13	9.2	14	
MPL 16-1113-1	02	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	
MPL 26-1113-1	03	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3207808
Report generated 11/17/2013 15:15

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G-19 AAB#: WG452812

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/14/2013	9.2	14		11/14/13	9.2	14	
MPL 16-1113-1	02	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	
MPL 26-1113-1	03	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3207778
Report generated 11/17/2013 15:13

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I

AAB#: WG452581

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/14/2013	9.2	14		11/14/13	9.2	14	
MPL 16-1113-1	02	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	
MPL 26-1113-1	03	11/05/13					11/14/2013	9.1	14		11/14/13	9.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3207782
Report generated 11/17/2013 15:13

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: 1V.1311141530-03
Prep Date: 11/14/13 15:30
Analyzed Date: 11/14/13 15:30
Analyst: DCM

Work Group: WG452580
Blank Sample ID: WG452580-01
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	WG452580-02	1V.1311141530-04	11/14/13 15:30	
LCS	WG452580-03	1V.1311141530-05	11/14/13 15:30	
MPL 30-1113-1	L13110337-01	1V.1311141530-07	11/14/13 15:30	
MPL 16-1113-1	L13110337-02	1V.1311141530-08	11/14/13 15:30	
MPL 26-1113-1	L13110337-03	1V.1311141530-09	11/14/13 15:30	
DUP	WG452580-08	1V.1311141530-25	11/14/13 15:30	

Report Name: BLANK_SUMMARY
PDF File ID: 3207809
Report generated 11/17/2013 15:15

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: 1V.1311141545-02
Prep Date: 11/14/13 15:45
Analyzed Date: 11/14/13 15:45
Analyst: DCM

Work Group: WG452812
Blank Sample ID: WG452812-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G-19

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG452812-02	1V.1311141545-03	11/14/13 15:45	
MPL 30-1113-1	L13110337-01	1V.1311141545-04	11/14/13 15:45	DL02
MPL 16-1113-1	L13110337-02	1V.1311141545-05	11/14/13 15:45	DL02
MPL 26-1113-1	L13110337-03	1V.1311141545-06	11/14/13 15:45	DL02
DUP	WG452812-07	1V.1311141545-13	11/14/13 15:45	DL02

Report Name: BLANK_SUMMARY
PDF File ID: 3207779
Report generated 11/17/2013 15:13

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: 1V.1311141550-02
Prep Date: 11/14/13 15:50
Analyzed Date: 11/14/13 15:50
Analyst: DCM

Work Group: WG452581
Blank Sample ID: WG452581-01
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	WG452581-03	1V.1311141550-03	11/14/13 15:50	
MPL 30-1113-1	L13110337-01	1V.1311141550-04	11/14/13 15:50	DL01
MPL 16-1113-1	L13110337-02	1V.1311141550-05	11/14/13 15:50	DL01
MPL 26-1113-1	L13110337-03	1V.1311141550-06	11/14/13 15:50	DL01
DUP	WG452581-08	1V.1311141550-15	11/14/13 15:50	

Report Name: BLANK_SUMMARY
PDF File ID: 3207783
Report generated 11/17/2013 15:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/14/13 15:30 Sample ID: WG452580-01
Instrument ID: UV-120-1V Run Date: 11/14/13 15:30 Prep Method: 9014-9010C
File ID: 1V.1311141530-03 Analyst: DCM Method: 9014-9010C
Workgroup (AAB#): WG452580 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 14-NOV-13

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: 3207810
17-NOV-2013 15:15

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/14/13 15:45 Sample ID: WG452812-01
Instrument ID: UV-120-1V Run Date: 11/14/13 15:45 Prep Method: SM4500-CN-C,G-1
File ID: 1V.1311141545-02 Analyst: DCM Method: SM4500-CN-C,G-1
Workgroup (AAB#): WG452812 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 14-NOV-13

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: 3207780
17-NOV-2013 15:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/14/13 15:50 Sample ID: WG452581-01
Instrument ID: UV-120-1V Run Date: 11/14/13 15:50 Prep Method: SM4500-CN-I
File ID: 1V.1311141550-02 Analyst: DCM Method: SM4500-CN-I
Workgroup (AAB#): WG452581 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 14-NOV-13

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: 3207784
17-NOV-2013 15:14

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/14/2013 Sample ID: WG452580-02
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1311141530-04 Analyst: DCM Method: 9014-9010C
Workgroup (AAB#): WG452580 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60204 Cal ID: UV-120-14-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.194	96.8	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 3207811
Report generated: 11/17/2013 15:15

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/14/2013 Sample ID: WG452580-03
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1311141530-05 Analyst: DCM Method: 9014-9010C
Workgroup (AAB#): WG452580 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60204 Cal ID: UV-120-14-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0376	94.1	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 3207811
Report generated: 11/17/2013 15:15

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/14/2013 Sample ID: WG452812-02
Instrument ID: UV-120-1V Run Time: 15:45 Prep Method: SM4500-CN-C,G-1
File ID: 1V.1311141545-03 Analyst: DCM Method: SM4500-CN-C,G-1
Workgroup (AAB#): WG452812 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60204 Cal ID: UV-120-14-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.0400	0.000277	0.692	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 3207781
Report generated: 11/17/2013 15:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/14/2013 Sample ID: WG452581-03
Instrument ID: UV-120-1V Run Time: 15:50 Prep Method: SM4500-CN-I
File ID: 1V.1311141550-03 Analyst: DCM Method: SM4500-CN-I
Workgroup (AAB#): WG452581 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD60204 Cal ID: UV-120-14-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0382	95.4	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 3207785
Report generated: 11/17/2013 15:14

2.2.4.3 Raw Data

WG 452777

Curves

Parameter: CN - Low

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: std 60203

Concentration: 1016 mg/L

Recipe for preparation of curve standards found in:
SOP: K3354 Revision: 14 Page: 15

Second Source Stock: std 60204 (concentration: 1000mg/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
std 5 0.0508	50	5cm	578	0.380
std 6 0.04064				0.310
std 7 0.03048				0.233
std 8 0.02032				0.159
std 9 0.01016				0.075
std 10 0.00508				0.038
std 11 0.00				0.000
2nd source 0.04				0.304

Analyst: David Merckle
Christy Pappe

Date/Time: 11/14/13 1130

DCN#98859

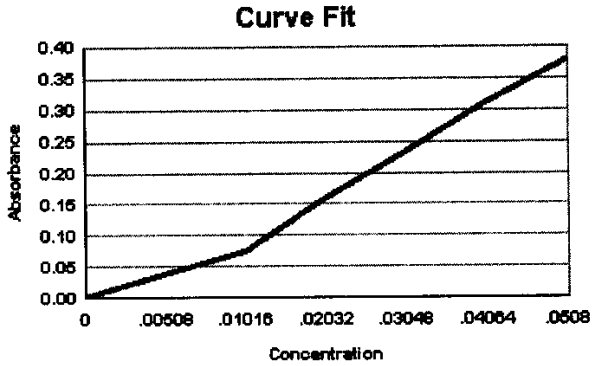
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG452777
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: DCM
Initial Calibration Date: 11/14/2013

Analyte: CYANIDE
Number of Points: 7
Slope: 7.54784
Y-Intercept: 0.000909556
Coef. Of Correlation (R^2): 0.999514
Coef. Of Correlation (R): 0.999757

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	0.000909556
0.00508	0.0380	0.0000258	0.000193	0.0392526
0.0102	0.0750	0.000103	0.000762	0.0775956
0.0203	0.159	0.000413	0.00323	0.154282
0.0305	0.233	0.000929	0.00710	0.230968
0.0406	0.310	0.00165	0.0126	0.307654
0.0508	0.380	0.00258	0.0193	0.384340



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 11/14/2013 12:08

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG452777
File ID: 1V.1311141130-08
CCV ID: WG452777-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 11:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13 11:30:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0402	7.60	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 11/14/2013 12:08

[redacted]

WG 452775

Curves

Parameter: CN - High

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std 60203

Concentration: 1016 mg/L

Recipe for preparation of curve standards found in:
SOP: K3354 Revision: 14 Page: 15

Second Source Stock: Std 60204 (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
Std 1 0.4064	50	1 cm	578	0.615
Std 2 0.3048				0.461
Std 3 0.2032				0.295
Std 4 0.1016				0.144
Std 6 0.04064				0.063
Std 8 0.02032				0.033
Std 11 0.00				0.000
2nd Source 0.2				0.294

Analyst: David Merckle
Dorothy Rupp

Date/Time: 11/14/13 6:20

DCN#98858

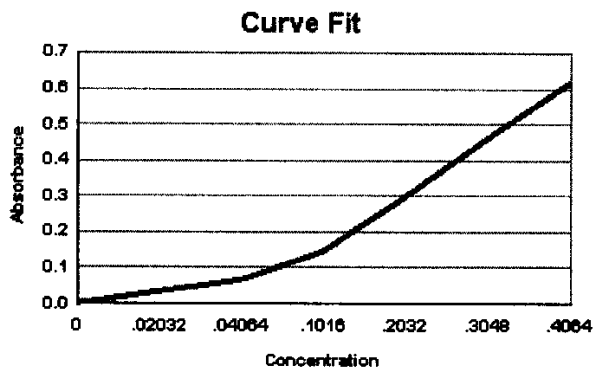
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG452775
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: DCM
Initial Calibration Date: 11/14/2013

Analyte: CYANIDE
Number of Points: 7
Slope: 1.50907
Y-Intercept: -0.00203029
Coef. Of Correlation (R^2): 0.999381
Coef. Of Correlation (R): 0.999691

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	-0.00203029
0.0203	0.0330	0.000413	0.000671	0.0286341
0.0406	0.0630	0.00165	0.00256	0.0592985
0.102	0.144	0.0103	0.0146	0.151292
0.203	0.295	0.0413	0.0599	0.304613
0.305	0.461	0.0929	0.141	0.457935
0.406	0.615	0.165	0.250	0.611257



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 11/14/2013 12:04

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG452775
File ID: 1V.1311141120-08
CCV ID: WG452775-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 11:20
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13 11:20:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.196	1.47	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 11/14/2013 12:03

[redacted]

WORKGROUP: WG452581

Cyanide
(cyanide3)

- [ ] Total method 9010B/9014
  SM4500 CN C,E
  EPA 335.2
- [ ] CN – Ameanable (same as total methods)
- [x] WD method SM4500 CN I

SOP: K3354 Rev 14
Spec: UV-120-IV
Instrument: Easy-Dist
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: WG 452777
11/14/13

CCV: Std 60203
True Value: 1016 mg/L
Daily Dilution: 5(1000)/250 = 20
10(20)/100 = 2
10(2)/100 = 0.2

LCS: Std 60204
True Value: 1000 mg/L
Daily Dilution: 5(1000)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
1(2)/50 = 0.04

Spike: Std 60204
True Value: 1000 mg/L
Daily Dilution: 1(2)/50 = 0.04

Distillation Reagents

RGT 28119
RGT 28115
RGT 28447
RGT 28647
RGT 28561

Colorimetric Reagents

RGT 28657
RGT 28659
RGT 28599

DCN#98828

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): ppm						
CCV(low): 0.02032 ppm	50	✓	No		5	0.147
Blank	50	✓	No		5	0.005
LCS: ppm						
LCS: 0.04 ppm	50	✓	No		5	~~0.289~~ 0.289
11-537-01		✓				0.167
02		✓				0.117
03		✓				0.000
11-466-01		✓				0.198
02		✓				0.309
03		✓				0.081
11-502-01		✓				0.083
11-584-01		✓				0.000
MS 02		✓				0.292
MSD 03		✓				0.283
11-680-02		✓				0.009
distilled ccv 0.2032	50	✓	No		1	0.280
distilled ccv 0.02032	50	✓	No		5	0.143
Duplicate: 11-680-02	50	✓	No		5	0.009
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)						
CCV low: (0.02032 ppm)	50	✓	No		5	0.149

dcm 11/14/13

Analyst: [illegible] Date/Time (on) 11/13/13 1350
(off) 1520
(color) 11/14/13 1550

DCN#98828

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG452581
Analyte: CYANIDE

Analyst: DCM
Date: 11/14/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG452581-01	50	50	0.00500	7.548	0.0009096	0.00054194	0.00054194	1	mg/L
WG452581-03	50	50	0.289	7.548	0.0009096	0.038169	0.038169	1	mg/L
L13110337-01	50	50	0.167	7.548	0.0009096	0.022005	0.022005	1	mg/L
L13110337-02	50	50	0.117	7.548	0.0009096	0.015381	0.015381	1	mg/L
L13110337-03	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
L13110465-01	50	50	0.198	7.548	0.0009096	0.026112	0.026112	1	mg/L
L13110465-02	50	50	0.309	7.548	0.0009096	0.040818	0.040818	1	mg/L
L13110465-03	50	50	0.0810	7.548	0.0009096	0.010611	0.010611	1	mg/L
L13110502-01	50	50	0.0830	7.548	0.0009096	0.010876	10.876	1	ug/L
L13110584-01	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
WG452581-04	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
L13110584-02	50	50	0.292	7.548	0.0009096	0.038566	0.038566	1	mg/L
WG452581-05	50	50	0.292	7.548	0.0009096	0.038566	0.038566	1	mg/L
L13110584-03	50	50	0.283	7.548	0.0009096	0.037374	0.037374	1	mg/L
WG452581-06	50	50	0.283	7.548	0.0009096	0.037374	0.037374	1	mg/L
L13110690-02	50	50	0.00900	7.548	0.0009096	0.0010719	ND	1	mg/L
WG452581-07	50	50	0.00900	7.548	0.0009096	0.0010719	0.0010719	1	mg/L
WG452581-08	50	50	0.00900	7.548	0.0009096	0.0010719	0.0010719	1	mg/L

[redacted]

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 11/15/2013 11:42

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452997
File ID: 1V.1311141550-01
CCV ID: WG452997-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:50
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0194	7.23	4.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 11:39

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452997
File ID: 1V.1311141550-16
CCV ID: WG452997-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:50
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0196	7.33	3.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 11:39

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG452997
File ID: 1V.1311141550-17
CCV ID: WG452997-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:50
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.203	0.187	1.38	7.9	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 11/15/2013 11:45

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG452997
File ID: 1V.1311141550-18
CCV ID: WG452997-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:50
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0188	7.04	7.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 11/15/2013 11:45

[redacted]

WORKGROUP: WG452580

Cyanide
(cyanide3)

☑ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2

☐ CN – Ameanable (same as total methods)

☐ WD method SM4500 CN I

SOP: K3354 Rev 14
Spec: UV-120-IV
Instrument: Easy-Dist
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: WG452777 / WG452775 11/14/13

CCV: Std 60203

True Value: 1016 mg/L

Daily Dilution: 5(1000)/250 = 20
10(20)/100 = 2
10(2)/100 = ~~0.02~~ 0.2

LCS: Std 60204

True Value: 1000 mg/L

Daily Dilution: 5(1000)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
1(2)/50 = 0.04

Spike: Std 60204

True Value: 1000 mg/L

Daily Dilution: 1(2)/50 = 0.04

Distillation Reagents

RGT 28264
RGT 28477
RGT 28561
COA 17124

Colorimetric Reagents

RGT 28657
RGT 28659
RGT 28599

DCN#98827

WORKGROUP: WG452580

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.2032 ppm	50	✓	No		1	0.295
CCV(low): 0.02032 ppm	50	✓			5	0.159
Blank	50	✓			5	0.003
LCS: 0.2 ppm	50	✓			1	0.290
LCS: 0.04 ppm	50	✓			5	0.285
11-701-01	50	✓			5	0.026
11-337-01	50	✓			1	0.448
02	50	✓			1	0.200
03	50	✓			5	0.004
11-379-01	50	✓			1	0.186
04	50	✓			5	0.348
11-432-02	50	✓			5	0.013
11-584-01	50	✓			5	0.026
MS 02	50	✓			5	0.273
MSD 03	50	✓			5	0.283
11-502-01	50	✓			5	0.082
11-692-02	50	✓			5	0.011
11-704-01	50	✓			5	0.132
02	50	✓			5	0.145
03	50	✓			5	0.047
04	50	✓			5	0.131
11-465-01	50	✓			1	0.460
02	50	✓			1	0.561
03	50	✓			1	0.109
	50					
Duplicate: 11-701-01	50	✓			5	0.025
MS: (ppm)						
MSD: (ppm)						
CCV high: (0.2032 ppm)	50	✓			1	0.298
CCV low: (0.02032 ppm)	50	✓			5	0.158

Analyst: David Merckle Dmitry Pupp Date/Time (on) 11/13/13 1015

(off) 1245

(color) 11/14/13 1530

distilled CCV 0.2	0.280
distilled CCV 0.02	0.143

Page 2 of 2

DCN#98827

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG452580 **Analyst:** DCM
Analyte: CYANIDE **Date:** 11/14/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG452580-01	50	50	0.00300	7.548	0.0009096	0.00027696	0.00027696	1	mg/L
WG452580-02	50	50	0.290	1.509	-0.002030	0.19352	0.19352	1	mg/L
WG452580-03	50	50	0.285	7.548	0.0009096	0.037639	0.037639	1	mg/L
L13110701-01	50	50	0.0260	7.548	0.0009096	0.0033242	ND	1	mg/L
WG452580-07	50	50	0.0260	7.548	0.0009096	0.0033242	0.0033242	1	mg/L
L13110337-01	50	50	0.448	1.509	-0.002030	0.29822	0.29822	1	mg/L
L13110337-02	50	50	0.200	1.509	-0.002030	0.13388	0.13388	1	mg/L
L13110337-03	50	50	0.00400	7.548	0.0009096	0.00040945	ND	1	mg/L
L13110579-01	50	50	0.186	1.509	-0.002030	0.12460	0.12460	1	mg/L
L13110579-04	50	50	0.348	7.548	0.0009096	0.045985	0.045985	1	mg/L
L13110432-02	50	50	0.0130	7.548	0.0009096	0.0016018	ND	1	mg/L
L13110584-01	50	50	0.0260	7.548	0.0009096	0.0033242	ND	1	mg/L
WG452580-04	50	50	0.0260	7.548	0.0009096	0.0033242	0.0033242	1	mg/L
L13110584-02	50	50	0.273	7.548	0.0009096	0.036049	0.036049	1	mg/L
WG452580-05	50	50	0.273	7.548	0.0009096	0.036049	0.036049	1	mg/L
L13110584-03	50	50	0.283	7.548	0.0009096	0.037374	0.037374	1	mg/L
WG452580-06	50	50	0.283	7.548	0.0009096	0.037374	0.037374	1	mg/L
L13110502-01	50	50	0.0820	7.548	0.0009096	0.010744	10.744	1	ug/L
L13110692-02	50	50	0.0110	7.548	0.0009096	0.0013369	ND	1	mg/L
L13110704-01	50	50	0.132	7.548	0.0009096	0.017368	0.017368	1	mg/L
L13110704-02	50	50	0.145	7.548	0.0009096	0.019090	0.019090	1	mg/L
L13110704-03	50	50	0.0470	7.548	0.0009096	0.0061064	ND	1	mg/L
L13110704-04	50	50	0.131	7.548	0.0009096	0.017235	0.017235	1	mg/L
L13110465-01	50	50	0.460	1.509	-0.002030	0.30617	0.30617	1	mg/L
L13110465-02	50	50	0.561	1.509	-0.002030	0.37310	0.37310	1	mg/L
L13110465-03	50	50	0.109	1.509	-0.002030	0.073575	0.073575	1	mg/L
WG452580-08	50	50	0.0250	7.548	0.0009096	0.0031917	0.0031917	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated **11/15/2013 11:15**

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-01
CCV ID: WG452980-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.203	0.197	1.45	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 10:34

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-02
CCV ID: WG452980-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0209	7.82	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 10:34

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-26
CCV ID: WG452980-03
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.203	0.199	1.47	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 10:34

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-27
CCV ID: WG452980-04
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0208	7.78	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 10:34

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-29
CCV ID: WG452980-06
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0188	7.04	7.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 11/15/2013 11:22

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG452980
File ID: 1V.1311141530-28
CCV ID: WG452980-05
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:30
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.203	0.187	1.38	7.9	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 11/15/2013 11:22

[redacted]

WORKGROUP: WG452812

Cyanide
(cyanide3)

- [ ] Total method 9010B/9014
  SM4500 CN C,E
  EPA 335.2
- [x] CN – Ameanable (same as total methods)
- [ ] WD method SM4500 CN I

SOP: K3354 Rev 14
Spec: UV-120-IV
Instrument: Easy-Dist
Matrix: Liquid (mg/L) Soil (mg/kg)

Curve ID: WG 452777 11/14/13

CCV: std 60203
True Value: 1016 mg/L

Daily Dilution:
5(1000)/250 = 20
10(20)/100 = 2
10(2)/100 = 0.2

LCS: std 60204
True Value: 1000 mg/L

Daily Dilution:
5(1000)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
1(2)/50 = 0.04

Spike: std 60204
True Value: 1000 mg/L

Daily Dilution:
1(2)/50 = 0.04

Distillation Reagents

RGT 28264
RGT 28477
RGT 28561
COA 17124

Colorimetric Reagents

RGT 28657
RGT 28659
RGT 28599

DCN#98864

WORKGROUP: WG452812

Cyanide
(cyanide3)

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): ppm						
CCV(low): 0.0203 ppm	50	✓	No		5	0.148
Blank	50	✓	No		5	0.000
LCS: ppm						
LCS: 0.04 ppm	50	✓	No		5	0.003
11-337-01	50	✓				0.000
02		✓				0.004
03		✓				0.005
11-465-01		✓				0.000
02		✓				0.010
03		✓				0.000
11-584-01		✓				0.000
MS 02		✓				0.000
MSD 03		✓				0.000
distilled ccv 0.2032	50	✓	No		5 1	0.280
distilled ccv 0.02032	50	✓	No		5	0.143
Duplicate: 11-465-01	50	✓	No		5	0.009
MS: (ppm)						
MSD: (ppm)						
CCV high: (ppm)						
CCV low: (0.02032 ppm)	50	✓	No		5	0.149

dcm 11/14/13

Analyst: David Merckle / Christy Pauza

Date/Time (on) 11/14/13 0950
(off) 1120
(color) 1545

Page 2 of 2

DCN#98864

Cyanide, Amenable to Chlorination (mg/L)
CN (Total) - CN (Treated) = CN-A

SAMPLE	11/6/2013 CN (Total)	11/8/2013 CN (Treated)	CN-A
WG452812-01	0	0	0
WG452812-02	0.037639	0.00027696	0.037362
L13110337-01	0.29822	0	0.29822
L13110337-02	0.13388	0.00040945	0.133471
L13110337-03	0.00040945	0.0054194	-0.00501
L13110465-01	0.30617	0	0.30617
L13110465-02	0.3731	0.0012044	0.371896
L13110465-03	0.073575	0	0.073575
L13110584-01	0.0033242	0	0.003324
L13110584-02	0.036049	0	0.036049
L13110584-03	0.037374	0	0.037374
WG452812-05	0.30617	0	0.30617

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.
SAMPLE REPORT

Treated

Workgroup: WG452812
Analyte: CYANIDE

Analyst: DCM
Date: 11/14/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG452812-01	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
WG452812-02	50	50	0.00300	7.548	0.0009096	0.00027696	0.00027696	1	mg/L
L13110337-01	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
L13110337-02	50	50	0.00400	7.548	0.0009096	0.00040945	ND	1	mg/L
L13110337-03	50	50	0.00500	7.548	0.0009096	0.00054194	ND	1	mg/L
L13110465-01	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
WG452812-06	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
L13110465-02	50	50	0.0100	7.548	0.0009096	0.0012044	ND	1	mg/L
L13110465-03	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
L13110584-01	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
WG452812-03	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
L13110584-02	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
WG452812-04	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
L13110584-03	50	50	0	7.548	0.0009096	-0.00012051	ND	1	mg/L
WG452812-05	50	50	0	7.548	0.0009096	-0.00012051	-0.00012051	1	mg/L
WG452812-07	50	50	0.00900	7.548	0.0009096	0.0010719	0.0010719	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 11/15/2013 11:54

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG453001
File ID: 1V.1311141545-01
CCV ID: WG453001-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:45
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0195	7.28	3.9	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 11:52

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG453001
File ID: 1V.1311141545-14
CCV ID: WG453001-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 11/14/2013
Run Time: 15:45
Analyst: DCM
Cal ID: UV-120 - 14-NOV-13

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0203	0.0196	7.33	3.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/15/2013 11:52

[redacted]

2.2.5 Conductivity Data

2.2.5.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: Deanna Hesson

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: 74614
Approved By: Deanna Hesson

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: 07-NOV-2013
Analyst: DIH
Analyst: NA
Method: PH/COND/ALK
Instrument: TIAMO
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451826

Calibration/Linearity	11/7/13
Second Source Check	X
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
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: Dianna Ibsson

Secondary Reviewer: 17-NOV-2013
Dianna Ibsson

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-17-2013 14:18:35

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 AAB#: WG451875

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/07/2013	2.4	28		11/07/13	2.4	28	
MPL 16-1113-1	02	11/05/13					11/07/2013	2.3	28		11/07/13	2.3	28	
MPL 26-1113-1	03	11/05/13					11/07/2013	2.2	28		11/07/13	2.2	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3201608
Report generated 11/14/2013 07:45

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: TI.110713.1753CO
Prep Date: 11/07/13 17:53
Analyzed Date: 11/07/13 17:53
Analyst: DIH

Work Group: WG451875
Blank Sample ID: WG451875-01
Instrument ID: TIAMO1
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451875-02	TI.110713.1755CO	11/07/13 17:55	01
MPL 30-1113-1	L13110337-01	TI.110713.2002CO	11/07/13 20:02	01
MPL 16-1113-1	L13110337-02	TI.110713.2004CO	11/07/13 20:04	01
MPL 26-1113-1	L13110337-03	TI.110713.2006CO	11/07/13 20:06	01
DUP	WG451875-05	TI.110713.2008CO	11/07/13 20:08	01
LCS2	WG451875-03	TI.110713.2010CO	11/07/13 20:10	01

Report Name: BLANK_SUMMARY
PDF File ID: 3201609
Report generated 11/14/2013 07:45

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/07/13 17:53 Sample ID: WG451875-01
Instrument ID: TIAMO1 Run Date: 11/07/13 17:53 Prep Method: 120.1
File ID: TI.110713.1753CO Analyst: DIH Method: 120.1
Workgroup (AAB#): WG451875 Matrix: Water Units: umhos/cm
Contract #: Cal ID: TIAMO1 -

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Conductivity	10.0	50.0	12.7	1	J

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: 3201610
14-NOV-2013 07:45

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: DIH Prep Method: 120.1
Instrument ID: TIAMO1 Matrix: Water Method: 120.1
Workgroup (AAB#): WG451875 Units: umhos/cm
QC Key: DOD4 Lot #: STD58687

Sample ID: WG451875-02 LCS File ID: TI.110713.1755CO Run Date: 11/07/2013 17:55
Sample ID: WG451875-03 LCS2 File ID: TI.110713.2010CO Run Date: 11/07/2013 20:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1330	94.3	1410	1270	90.2	4.48	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3201611
Report generated: 11/14/2013 07:45

2.2.5.3 Raw Data

Metrohm Tiamo (tiamo1)

Instrument: Tiamo

pH:

EPA 150.1 / SM 4500-H(+)-B / SW846 9040C

LCS 6: std59686 Calibration: 11/7/13

LCS 9: std59687

WG: 451826
451828
451876
451949

NOTE: • An LCS is analyzed every 20 samples

• Alternate levels

Cond:

EPA 120.1 / SM 2510B

LCS: std 60276 Daily Dil: 20/200 (0.1M) = 1412 umhos/cm WG: 451875
451894~~7~~

Cell Constant: 0.777

NOTE: • LCS/LCSDUP required each work group

• End run with LCS

ALK:

EPA 310.1 / SM 2320B

LCS: std 60183 Daily Dil: 10/250 (2500) = 100 mg/L WG: ~~451826~~ dm 11/7/13
*451874
~~451947~~

Titrant T: 1286-13-01 N: 0.1 N H_2SO_4

NOTE: • LCS/LCSDUP required each work group

Analyst: Deam Hasson Date: 11/7/13 File: 11072013PAC

DCN#98686

Metrohm Tiamo (tiamo1)

	Sample ID	Dilution	pH	Cond	ALK	Acid
1	pH 6		✓			
2	11-287-01		✓			
3	11-292-01		✓			
4	11-295-02		✓			
5	06		✓			
6	11-301-01		✓			
7	04		✓			
8	11-307-01		✓			
9	03		✓			
10	05		✓			
11	07		✓			
12	11-279-01		✓			
13	03		✓			
14	05		✓			
15	07		✓			
16	09		✓			
17	14		✓			
18	16		✓			
19	18		✓			
20	20		✓			
21	22		✓			
22	DUP 22		✓			
23	pH 9		✓			
24	11-279-24		✓			
25	26		✓			
26	28		✓			
27	BIK			✓		
28	LCS1412			✓		
29	BIK				✓	
30	LCS 1010				✓	
31	LCSDUP				✓	
32	11-344-01		✓	✓	✓	
33	03		✓	✓	✓	
34	06		✓	✓	✓	
35	08		✓	✓	✓	
36	10		✓	✓	✓	
37	11-349-01		✓	✓	✓	
38	349 03		✓	✓	✓	
39	11-350-01		✓	✓	✓	
40	03		✓	✓	✓	
41	DUP 03		✓		✓	
42	11-346-01		✓	✓		
43	03		✓	✓		
44	05		✓	✓		
45	07		✓	✓		
46	10		✓	✓		
47	11-349-05		✓	✓		
48	11-360-05		✓	✓		
49	08		✓	✓		

	Sample ID	Dilution	pH	Cond	ALK	Acid
50	pH 6		✓			
51	11-337-01			✓		
52	02			✓		
53	03			✓		
54	DUP 03			✓		
55	~~11-353-02~~		NO	✓	LCSDUP	
56	11-355-03		✓			
57	06		✓			
58	11-356-01		✓			
59	05		✓			
60	07		✓			
61	09		✓			
62	12		✓			
63	11-357-01		✓			
64	11-358-01		✓			
65	05		✓			
66	11-347-01		✓			
67	03		✓			
68	05		✓			
69	11-348-06		✓			
70	08		✓			
71	DUP 08		✓			
72	~~LCSDUP~~		✓	NO	11-353-02 #72	
73	~~11-372-01~~ BIK			✓	NO	
74	~~11-374-01~~ LCSDUP			✓		
75	11-372-01		✓		✓	
76	11-374-01		✓	✓	✓	
77	02		✓	✓	✓	
78	11-379-03		✓	✓	✓	
79	~~BIK~~ pH 9		✓		NO	
80	~~LCS~~ 11-379-04		✓	✓	✓	
81	~~LCSDUP~~ 05		✓	✓	✓	
82	~~11~~ 06		✓	✓	✓	
83	07		✓	✓	✓	
84	11-381-01		✓		✓	
85	02		✓		✓	
86	11-382-01		✓		✓	
87	11-373-01		✓	✓		
88	11-375-01		✓	✓		
89	04		✓	✓		
90	11-377-01		✓	✓		
91	05		✓	✓		
92	~~11-383-01~~ 83-01			✓		
93	~~02~~ -02			✓		
94	DUP 02			✓		
95	DUPLCS			✓		
96	11-377-03		✓			
97	pH 6		✓			
98						

~~#72 Good~~ ~~LCSDUP~~ 1412

Analyst: JLM Date: 11/7

DCN#98686

Sample ID: PH 6 — 2013-11-07 15:59:57 UTC-5

sample pH	6.032	pH
Res25	20.47	°C

Sample ID: L13110287-01 — 2013-11-07 16:05:28 UTC-5

sample pH	7.796	pH
Res25	20.13	°C

Sample ID: L13110292-01 — 2013-11-07 16:09:40 UTC-5

sample pH	9.061	pH
Res25	20.02	°C

Sample ID: L13110295-02 — 2013-11-07 16:13:53 UTC-5

sample pH	8.594	pH
Res25	19.96	°C

Sample ID: L13110295-06 — 2013-11-07 16:18:07 UTC-5

sample pH	8.161	pH
Res25	19.83	°C

Sample ID: L13110301-01 — 2013-11-07 16:22:22 UTC-5

sample pH	3.677	pH
Res25	19.79	°C

Sample ID: L13110301-04 — 2013-11-07 16:26:38 UTC-5

sample pH	7.184	pH
Res25	19.99	°C

Sample ID: L13110307-01 — 2013-11-07 16:30:55 UTC-5

sample pH	8.256	pH
Res25	20.06	°C

Sample ID: L13110307-03 — 2013-11-07 16:35:12 UTC-5

sample pH	2.910	pH
Res25	20.17	°C

Sample ID: L13110307-05 — 2013-11-07 16:39:31 UTC-5

sample pH	7.613	pH
Res25	20.21	°C

Sample ID: L13110307-07 — 2013-11-07 16:43:51 UTC-5

sample pH	2.796	pH
Res25	20.19	°C

Sample ID: L13110279-01 — 2013-11-07 16:48:11 UTC-5

sample pH	6.550	pH
Res25	20.11	°C

Sample ID: L13110279-03 — 2013-11-07 16:52:33 UTC-5

sample pH . . . . . 8.584 pH
Res25 . . . . . 20.06 °C

Sample ID: L13110279-05 2013-11-07 16:56:55 UTC-5
sample pH . . . . . 8.071 pH
Res25 . . . . . 20.10 °C

Sample ID: L13110279-07 2013-11-07 17:01:19 UTC-5
sample pH . . . . . 7.974 pH
Res25 . . . . . 20.07 °C

Sample ID: L13110279-09 2013-11-07 17:05:44 UTC-5
sample pH . . . . . 8.628 pH
Res25 . . . . . 20.01 °C

Sample ID: L13110279-14 2013-11-07 17:10:08 UTC-5
sample pH . . . . . 8.457 pH
Res25 . . . . . 19.98 °C

Sample ID: L13110279-16 2013-11-07 17:14:32 UTC-5
sample pH . . . . . 7.997 pH
Res25 . . . . . 19.68 °C

Sample ID: L13110279-18 2013-11-07 17:18:54 UTC-5
sample pH . . . . . 8.097 pH
Res25 . . . . . 19.36 °C

Sample ID: L13110279-20 2013-11-07 17:23:15 UTC-5
sample pH . . . . . 7.876 pH
Res25 . . . . . 19.28 °C

Sample ID: L13110279-22 2013-11-07 17:27:35 UTC-5
sample pH . . . . . 7.969 pH
Res25 . . . . . 19.28 °C

Sample ID: WG451826-01 2013-11-07 17:31:54 UTC-5
sample pH . . . . . 7.972 pH
Res25 . . . . . 19.51 °C

Sample ID: PH 9 2013-11-07 17:36:13 UTC-5
sample pH . . . . . 9.022 pH
Res25 . . . . . 19.93 °C

Sample ID: L13110279-24 2013-11-07 17:40:29 UTC-5
sample pH . . . . . 8.599 pH
Res25 . . . . . 20.10 °C

Sample ID: L13110279-26 2013-11-07 17:44:46 UTC-5
sample pH . . . . . 8.104 pH

Res25 . . . . . 20.12 °C

Sample ID: L13110279-28 2013-11-07 17:49:01 UTC-5

sample pH . . . . . 7.989 pH
Res25 . . . . . 20.09 °C

Sample ID: WG451875-01 2013-11-07 17:53:18 UTC-5

sample Conduntivity . . . . . 12.700 µS/cm

Sample ID: WG451875-02 2013-11-07 17:55:12 UTC-5

sample Conduntivity . . . . . 1331.600 µS/cm

Sample ID: WG451874-01 2013-11-07 17:57:08 UTC-5

Alkal mg/L CaCO3 . . . . . 8.60 mg/L

Sample ID: WG451874-02 2013-11-07 18:01:46 UTC-5

Alkal mg/L CaCO3 . . . . . 101.99 mg/L

Sample ID: WG451874-03 2013-11-07 18:06:37 UTC-5

Alkal mg/L CaCO3 . . . . . 101.40 mg/L

Sample ID: L13110344-01 2013-11-07 18:11:39 UTC-5

Alkal mg/L CaCO3 . . . . . 109.55 mg/L
sample Conduntivity . . . . . 648.600 µS/cm
sample pH . . . . . 8.140 pH

Sample ID: L13110344-03 2013-11-07 18:18:16 UTC-5

Alkal mg/L CaCO3 . . . . . 82.00 mg/L
sample Conduntivity . . . . . 530.800 µS/cm
sample pH . . . . . 8.043 pH

Sample ID: L13110344-06 2013-11-07 18:24:41 UTC-5

Alkal mg/L CaCO3 . . . . . 49.99 mg/L
sample Conduntivity . . . . . 434.600 µS/cm
sample pH . . . . . 7.508 pH

Sample ID: L13110344-08 2013-11-07 18:30:56 UTC-5

Alkal mg/L CaCO3 . . . . . 142.38 mg/L
sample Conduntivity . . . . . 635.000 µS/cm
sample pH . . . . . 7.113 pH

Sample ID: L13110344-10 2013-11-07 18:37:50 UTC-5

Alkal mg/L CaCO3 . . . . . 10.60 mg/L
sample Conduntivity . . . . . 121.700 µS/cm
sample pH . . . . . 5.753 pH

Sample ID: L13110349-01 2013-11-07 18:43:46 UTC-5

Alkal mg/L CaCO3 . . . . . 84.40 mg/L
sample Conduntivity . . . . . 355.400 µS/cm

sample pH . . . . . 7.890 pH

Sample ID: L13110349-03 2013-11-07 18:50:16 UTC-5

Alkal mg/L CaCO3 . . . . . 84.40 mg/L
sample Conduntivity . . . . . 346.100 µS/cm
sample pH . . . . . 7.983 pH

Sample ID: L13110350-01 2013-11-07 18:56:48 UTC-5

Alkal mg/L CaCO3 . . . . . 52.33 mg/L
sample Conduntivity . . . . . 316.400 µS/cm
sample pH . . . . . 7.287 pH

Sample ID: L13110350-03 2013-11-07 19:03:12 UTC-5

Alkal mg/L CaCO3 . . . . . 9.80 mg/L
sample Conduntivity . . . . . 131.800 µS/cm
sample pH . . . . . 5.779 pH

Sample ID: WG451874-05 2013-11-07 19:09:07 UTC-5

sample pH . . . . . 5.789 pH
Alkal mg/L CaCO3 . . . . . 10.00 mg/L

Sample ID: L13110346-01 2013-11-07 19:13:57 UTC-5

sample Conduntivity . . . . . 423.700 µS/cm
sample pH . . . . . 7.309 pH

Sample ID: L13110346-03 2013-11-07 19:19:18 UTC-5

sample Conduntivity . . . . . 604.700 µS/cm
sample pH . . . . . 8.007 pH

Sample ID: L13110346-05 2013-11-07 19:24:47 UTC-5

sample Conduntivity . . . . . 540.900 µS/cm
sample pH . . . . . 8.122 pH

Sample ID: L13110346-07 2013-11-07 19:30:17 UTC-5

sample Conduntivity . . . . . 472.100 µS/cm
sample pH . . . . . 8.111 pH

Sample ID: L13110346-10 2013-11-07 19:35:48 UTC-5

sample Conduntivity . . . . . 401.200 µS/cm
sample pH . . . . . 7.696 pH

Sample ID: L13110349-05 2013-11-07 19:41:20 UTC-5

sample Conduntivity . . . . . 722.400 µS/cm
sample pH . . . . . 8.247 pH

Sample ID: L13110360-05 2013-11-07 19:46:54 UTC-5

sample Conduntivity . . . . . 1047.900 µS/cm
sample pH . . . . . 8.265 pH

2013-11-07 19:52:27 UTC-5

Sample ID: L13110360-08

sample Conduntivity . . . . . 1061.900 µS/cm
sample pH . . . . . 8.772 pH

Sample ID: PH 6 2013-11-07 19:57:58 UTC-5

sample pH . . . . . 6.034 pH
Res25 . . . . . 19.20 °C

Sample ID: L13110337-01 2013-11-07 20:02:28 UTC-5

sample Conduntivity . . . . . 547.400 µS/cm

Sample ID: L13110337-02 2013-11-07 20:04:30 UTC-5

sample Conduntivity . . . . . 437.400 µS/cm

Sample ID: L13110337-03 2013-11-07 20:06:36 UTC-5

sample Conduntivity . . . . . 831.800 µS/cm

Sample ID: WG451875-05 2013-11-07 20:08:40 UTC-5

sample Conduntivity . . . . . 843.900 µS/cm

Sample ID: WG451875-03 2013-11-07 20:10:43 UTC-5

sample Conduntivity . . . . . 1273.300 µS/cm

Sample ID: L13110355-03 2013-11-07 20:12:43 UTC-5

sample pH . . . . . 6.998 pH
Res25 . . . . . 19.41 °C

Sample ID: L13110355-06 2013-11-07 20:17:02 UTC-5

sample pH . . . . . 7.812 pH
Res25 . . . . . 19.31 °C

Sample ID: L13110356-01 2013-11-07 20:21:16 UTC-5

sample pH . . . . . 7.993 pH
Res25 . . . . . 19.30 °C

Sample ID: L13110356-05 2013-11-07 20:25:29 UTC-5

sample pH . . . . . 8.100 pH
Res25 . . . . . 19.28 °C

Sample ID: L13110356-07 2013-11-07 20:29:41 UTC-5

sample pH . . . . . 8.015 pH
Res25 . . . . . 19.31 °C

Sample ID: L13110356-09 2013-11-07 20:33:52 UTC-5

sample pH . . . . . 8.099 pH
Res25 . . . . . 19.32 °C

Sample ID: L13110356-12 2013-11-07 20:38:01 UTC-5

sample pH . . . . . 7.332 pH

Res25 . . . . . 19.34 °C

Sample ID: L13110357-01 2013-11-07 20:42:10 UTC-5

sample pH . . . . . 7.236 pH
Res25 . . . . . 19.36 °C

Sample ID: L13110358-01 2013-11-07 20:46:16 UTC-5

sample pH . . . . . 7.594 pH
Res25 . . . . . 19.43 °C

Sample ID: L13110358-05 2013-11-07 20:50:24 UTC-5

sample pH . . . . . 8.664 pH
Res25 . . . . . 19.40 °C

Sample ID: L13110347-01 2013-11-07 20:54:32 UTC-5

sample pH . . . . . 7.718 pH
Res25 . . . . . 19.46 °C

Sample ID: L13110347-03 2013-11-07 20:58:41 UTC-5

sample pH . . . . . 7.592 pH
Res25 . . . . . 19.51 °C

Sample ID: L13110347-05 2013-11-07 21:02:52 UTC-5

sample pH . . . . . 7.437 pH
Res25 . . . . . 19.48 °C

Sample ID: L13110348-06 2013-11-07 21:07:05 UTC-5

sample pH . . . . . 8.101 pH
Res25 . . . . . 19.48 °C

Sample ID: L13110348-08 2013-11-07 21:11:19 UTC-5

sample pH . . . . . 8.121 pH
Res25 . . . . . 19.48 °C

Sample ID: WG451876-02 2013-11-07 21:15:35 UTC-5

sample pH . . . . . 8.131 pH
Res25 . . . . . 19.45 °C

Sample ID: L13110353-02 2013-11-07 21:19:53 UTC-5

sample pH . . . . . 7.675 pH
Res25 . . . . . 19.37 °C

Sample ID: WG451947-01 2013-11-07 21:24:14 UTC-5

sample Conduntivity . . . . . 16.100 µS/cm

Sample ID: WG451947-02 2013-11-07 21:26:16 UTC-5

sample Conduntivity . . . . . 1287.700 µS/cm

Sample ID: L13110372-01 2013-11-07 21:28:24 UTC-5

sample pH . . . . . 8.238 pH

Alkal mg/L CaCO3 . . . . . 185.20 mg/L

Sample ID: L13110374-01 2013-11-07 21:34:40 UTC-5

Alkal mg/L CaCO3 . . . . . 208.00 mg/L
sample Conduntivity . . . . . 1881.900 µS/cm
sample pH . . . . . 7.987 pH

Sample ID: L13110374-02 2013-11-07 21:42:14 UTC-5

Alkal mg/L CaCO3 . . . . . 171.20 mg/L
sample Conduntivity . . . . . 1965.700 µS/cm
sample pH . . . . . 7.900 pH

Sample ID: L13110379-03 2013-11-07 21:49:36 UTC-5

Alkal mg/L CaCO3 . . . . . 805.90 mg/L
sample Conduntivity . . . . . 3598.200 µS/cm
sample pH . . . . . 7.641 pH

Sample ID: PH 9 2013-11-07 21:59:47 UTC-5

sample pH . . . . . 9.024 pH
Res25 . . . . . 19.01 °C

Sample ID: L13110379-04 2013-11-07 22:04:08 UTC-5

Alkal mg/L CaCO3 . . . . . 409.80 mg/L
sample Conduntivity . . . . . 1431.500 µS/cm
sample pH . . . . . 7.211 pH

Sample ID: L13110379-05 2013-11-07 22:12:22 UTC-5

Alkal mg/L CaCO3 . . . . . 270.16 mg/L
sample Conduntivity . . . . . 2416.600 µS/cm
sample pH . . . . . 7.777 pH

Sample ID: L13110379-06 2013-11-07 22:20:04 UTC-5

Alkal mg/L CaCO3 . . . . . 1158.80 mg/L
sample Conduntivity . . . . . 2864.500 µS/cm
sample pH . . . . . 7.843 pH

Sample ID: L13110379-07 2013-11-07 22:31:50 UTC-5

Alkal mg/L CaCO3 . . . . . 242.80 mg/L
sample Conduntivity . . . . . 720.800 µS/cm
sample pH . . . . . 7.660 pH

Sample ID: L13110381-01 2013-11-07 22:39:14 UTC-5

sample pH . . . . . 7.652 pH
Alkal mg/L CaCO3 . . . . . 137.40 mg/L

Sample ID: L13110381-02 2013-11-07 22:44:56 UTC-5

sample pH . . . . . 7.808 pH
Alkal mg/L CaCO3 . . . . . 118.60 mg/L

Sample ID: L13110382-01 — 2013-11-07 22:50:32 UTC-5

sample pH	7.825	pH
Alkal mg/L CaCO3	222.40	mg/L

Sample ID: L13110373-01 — 2013-11-07 22:56:38 UTC-5

sample Conduntivity	1188.200	µS/cm
sample pH	7.732	pH

Sample ID: L13110375-02 — 2013-11-07 23:01:50 UTC-5

sample Conduntivity	525.000	µS/cm
sample pH	8.487	pH

Sample ID: L13110375-04 — 2013-11-07 23:07:10 UTC-5

sample Conduntivity	512.900	µS/cm
sample pH	8.542	pH

Sample ID: L13110377-01 — 2013-11-07 23:12:33 UTC-5

sample Conduntivity	483.000	µS/cm
sample pH	8.033	pH

Sample ID: L13110377-05 — 2013-11-07 23:17:57 UTC-5

sample Conduntivity	895.900	µS/cm
sample pH	8.178	pH

Sample ID: L13110383-01 — 2013-11-07 23:23:24 UTC-5

sample Conduntivity	544.700	µS/cm

Sample ID: L13110383-02 — 2013-11-07 23:25:30 UTC-5

sample Conduntivity	405.900	µS/cm

Sample ID: WG451947-05 — 2013-11-07 23:27:37 UTC-5

sample Conduntivity	403.300	µS/cm

Sample ID: WG451947-03 — 2013-11-07 23:29:39 UTC-5

sample Conduntivity	1289.400	µS/cm

Sample ID: L13110377-03 — 2013-11-07 23:31:38 UTC-5

sample pH	7.883	pH
Res25	19.02	°C

Sample ID: PH 6 — 2013-11-07 23:35:55 UTC-5

sample pH	6.055	pH
Res25	18.96	°C

2.2.6 Ammonia Data

2.2.6.1 Summary Data

Login Number: L13110337
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: 74616
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 30-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:47
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	SC131112001.042
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.172		0.100	0.0500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 16-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:47
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	SC131112001.043
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.139		0.100	0.0500

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL 26-1113-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	11/12/2013 10:15
Workgroup #:	WG452355	**Analyst:**	DIH	**Run Date:**	11/12/2013 10:50
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	SC131112001.046
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.185		0.100	0.0500

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: 12-NOV-2013
Analyst:
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452344 WG452355 WG452371

Calibration/Linearity	11/12/2013
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	DCM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
13-NOV-2013

Secondary Reviewer:
14-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-14-2013 09:45:33

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 AAB#: WG452355

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/12/2013	7	28		11/12/13	7	28	
MPL 16-1113-1	02	11/05/13					11/12/2013	6.9	28		11/12/13	6.9	28	
MPL 26-1113-1	03	11/05/13					11/12/2013	6.9	28		11/12/13	6.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3200146
Report generated 11/13/2013 11:51

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: SC131112001.063
Prep Date: 11/12/13 11:05
Analyzed Date: 11/12/13 11:05
Analyst: DIH

Work Group: WG452355
Blank Sample ID: WG452355-01
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	WG452355-02	SC131112001.041	11/12/13 10:45	01
MPL 30-1113-1	L13110337-01	SC131112001.042	11/12/13 10:47	01
MPL 16-1113-1	L13110337-02	SC131112001.043	11/12/13 10:47	01
MPL 26-1113-1	L13110337-03	SC131112001.046	11/12/13 10:50	01
DUP	WG452355-04	SC131112001.051	11/12/13 10:54	01

Report Name: BLANK_SUMMARY
PDF File ID: 3200147
Report generated 11/13/2013 11:51

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/12/13 11:05 Sample ID: WG452355-01
Instrument ID: SMARTCHEM Run Date: 11/12/13 11:05 Prep Method: 350.1
File ID: SC131112001.063 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG452355 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-12-NOV-13

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: 3200148
13-NOV-2013 11:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Run Date: 11/12/2013 Sample ID: WG452355-02
Instrument ID: SMARTCHEM Run Time: 10:45 Prep Method: 350.1
File ID: SC131112001.041 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG452355 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD59167 Cal ID: SMARTC-12-NOV-13

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	1.90	94.8	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 3200149
Report generated: 11/13/2013 11:51

2.2.6.3 Raw Data

SMARTCHEM RUN LOG

(smartchem2, smartchem3)

WORKGROUP: WG452344

452355

452371 AA

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9

Syringe filter lot # _____

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

1) **Workgroup** _____
Plan # 20131112001
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Instrument: SC1 [x] SC2 [ ]

	Analyte	1	2	3
		NH3		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV			
1-2	Blk			
1-3	LCS			
1-4	11-331-01	5ml/50X	1/20	
1-5	11-271-01			
1-6	11-331-02	5ml/50X	1/20	
1-7	03	5ml/50X	1/20	
1-8	06	5ml/50X	1/20	
1-9	11-294-03	03		
1-10	11-385-01	Auto 1/2		
1-11	11-391-03			
1-12	11-393-01	Auto 1/2		
1-13	11-404-01			
1-14	11-405-01	Auto 1/2		
1-15	11-406-01			
1-16	11-406-03			
1-17	11-270-01			
1-18	11-302-04			
1-19	05			
1-20	06			
1-21	07			
1-22	11-388-01			
2-1	11-369-01	1/20		
2-2	DUP 11-270-01			
2-3	MS ↓			

	Position	Analyte	1	2	3
	2-4	MS 11-271-01			
	2-5	Blk			
	2-6	LCS			
	2-7	11-337-01			
	2-8	02			
	2-9	03			
	2-10	11-359-01			
	2-11	11-390-01			
	2-12	02			
	2-13	03			
4	2-14	DUP 11-337-01			
6	2-15	MS 11-337-02			
	2-16	Blk			
	2-17	LCS			
	2-18	LCSDUP			
	2-19	11-383-01			
	2-20	02			
	2-21	DUP ↓			
	2-22	MS			
	2-23	Blk			
	2-24	Blk			
	2-25				
	2-26				
	3-1				
	3-2				

NOTES:
* Run NO2 std on NO3 runs
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#98783

SMARTCHEM RUN LOG
(smartchem2, smartchem3)

WORKGROUP: WG452344

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-2000
	Nitrate-Nitrite	EPA 353.2/SM 4500-NO3 F-2000
	Alkalinity	EPA 310.2
	Sulfate	EPA 375.4/SM 426C (15th)/ SM4500-504 E-1997

✓	Ammonia	EPA 350.1/SM 4500-NH3 B-1997
	TKN	EPA 351.2
	Phos	EPA 365.4

Analyte	NH3	AA	Reagents
SOP & Revision	K 3501 R19		RGT 28451
Curve Stock (SC made)	std 61226		RGT 28589
NO2 STD			RGT 28431
ICV	Std 60981		
CCV	Std 61225		
LCS dcm 11/12/13	~~Std 60982~~	Std 60982	
MS	see Distill Log Dilution	std 59167 0.1/10 (100) = 1	

Comments:

Analyst: David Merckle

Date: 11/12/13

DCN#98783

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: std 59167 10(100)/100 = 10.0 SPIKE: std 59167

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 28276
RGT 28475

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK	50	X	✓	
LCS( )	50	X	✓	
11-0270-01	50	X	✓	
11-0271-03	50	X	✓	
11-0294-01	50	X	✓	
11-0302-04	50	X	✓	
-05	50	X	✓	
-06	50	X	✓	
-07	50	X	✓	
11-0331-01	5	X	✓	
-02	5	X	✓	
-03	5	X	✓	
-06	5	X	✓	
11-~~0369-01~~ 0388-01	50	X	✓	
11-0369-01	50	X	✓	Outfall G-05 Comp.
11-0385-01	50	✓	✓	~~Outfall G-05 Comp~~ 11/8/13
11-0391-03	50	X	✓	
11-0393-01	50	X	✓	Wawa #8300
11-0404-01	50	X	✓	Duke Farms
11-0405-01	50	X	✓	Wawa #909
11-0406-01	50	X	✓	
-03	50	X	✓	
DUP 11-270-01	50	X	✓	
MS 11-270-01	50	X	✓	
MS 11-271-03	50	X	✓	

Analyst: Ethan Todd Date/Time: 11/8/13 0800

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: Std 59167 10(100)/100 = 10.0 SPIKE: Std 59167 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 28276 RGT 28475

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK	50	X	✓	
LCS( )	50	X	✓	
11-0337-01	50	X	✓	
-02	50	X	✓	
-03	50	X	✓	
~~11-0388-01~~ 359-01	50	X	✓	
11-0390-01	50	X	✓	
-02	50	X	✓	
-03	50	X	✓	
DUP 11-0337-01	50		✓	
MS 11-0337-02	50		✓	

Analyst: Ethan Todd Date/Time: 11/8/13

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

MICROBAC (OVD)
SMARTCHEM200 INST1 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 -Unit [mg/L] - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0401	0.00		10:07:40 AM
DIL-1	RBL	0.000	0.0396	0.00		10:07:57 AM
DIL-1	RBL	0.000	0.0389	0.00		10:09:28 AM
DIL-1	Std-1	0.000	-0.0006	0.00	INV	10:09:46 AM
SR5-1	Std-2	0.030	0.0065	0.00		10:11:16 AM
SR5-2	Std-3	0.094	0.0270	0.00		10:11:34 AM
SR5-3	Std-4	0.600	0.1759	0.00		10:13:04 AM
SR5-4	Std-5	1.050	0.3126	0.00		10:13:22 AM
SR5-5	Std-6	2.100	0.6306	0.00		10:14:52 AM
ST-1	Std-7	3.000	0.9093	0.00		10:15:10 AM
ST-3	1CCV (1.5 mg/L)	1.477	0.4444	98.44		10:16:40 AM
ST-2	2CCB (0 mg/L)	0.009	-0.0005	0.00	INV	10:16:58 AM
1	ICV	1.466	0.4411	0.00		10:18:28 AM
2	WG452344-01 BLK	X 0.153	0.0431	0.00		10:18:46 AM
3	WG452344-02 LCS	1.905	0.5743	0.00		10:20:16 AM
4	L13110331-01 (200)	2.242	0.6764	0.00		10:20:34 AM
5	L13110271-01	1.059	0.3178	0.00		10:22:04 AM
6	L13110331-02 (200)	1.875	0.5652	0.00		10:22:22 AM
7	L13110331-03 (200)	2.000	0.6030	0.00		10:23:52 AM
8	L13110331-06 (200)	0.115	0.0318	0.00		10:24:10 AM
9	L13110294-~~03~~ 03	0.269	0.0783	0.00		10:25:40 AM
10	L13110385-01	X 11.756	3.5598	0.00	EPL,><,LH	10:25:58 AM
ST-3	1CCV (1.5 mg/L)	1.477	0.4446	98.49		10:27:28 AM
ST-2	2CCB (0 mg/L)	0.013	0.0006	0.00		10:27:46 AM
11	L13110391-03	0.422	0.1247	0.00		10:29:16 AM
12	L13110393-01	X 11.628	3.5209	0.00	><,LH	10:29:34 AM
13	L13110404-01	1.371	0.4125	0.00		10:31:04 AM
14	L13110405-01	X 9.870	2.9882	0.00	EPL,><,LH	10:31:22 AM
15	L13110406-01	0.127	0.0353	0.00		10:32:52 AM
16	L13110406-03	0.138	0.0387	0.00		10:33:10 AM
17	L13110270-01	2.343	0.7070	0.00		10:34:40 AM
18	L13110302-04	0.915	0.2743	0.00		10:34:58 AM

Report Date :11/12/2013 **Run Date :11/12/2013** **Operator : WESTCO** **Plan # :20131112001**

Plan Description : NH3-A-DCM/11/12/2013

MICROBAC (OVD)
SMARTCHEM200 INST1 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 -Unit [mg/L] - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
19	L13110302-05	1.897	0.5719	0.00		10:36:28 AM
20	L13110302-06	2.602	0.7853	0.00		10:36:46 AM
ST-3	1CCV (1.5 mg/L)	1.498	0.4507	99.83		10:38:17 AM
ST-2	2CCB (0 mg/L)	0.014	0.0010	0.00		10:38:34 AM
21	L13110302-07	0.650	0.1939	0.00		10:40:05 AM
22	L13110388-01	0.158	0.0447	0.00		10:40:22 AM
23	L13110369-01 (20)	0.019	0.0025	0.00		10:41:53 AM
24	WG452344-04 DUP	2.378	0.7177	0.00		10:42:10 AM
25	WG452344-05 MS	X 3.124	0.9435	0.00	X,LH	10:43:41 AM
26	WG452344-07 MS	1.905	0.5741	0.00		10:43:59 AM
27	WG452355-01 BLK	X 0.112	0.0308	0.00		10:45:29 AM
28	WG452355-02 LCS	1.897	0.5717	0.00		10:45:47 AM
29	L13110337-01	0.172	0.0490	0.00		10:47:17 AM
30	L13110337-02	0.139	0.0390	0.00		10:47:35 AM
ST-3	1CCV (1.5 mg/L)	1.503	0.4523	100.18		10:49:05 AM
ST-2	2CCB (0 mg/L)	0.017	0.0019	0.00		10:49:23 AM
31	L13110337-03	0.185	0.0529	0.00		10:50:53 AM
32	L13110359-01	0.344	0.1012	0.00		10:51:11 AM
33	L13110390-01	0.117	0.0322	0.00		10:52:41 AM
34	L13110390-02	0.172	0.0489	0.00		10:52:59 AM
35	L13110390-03	0.137	0.0383	0.00		10:54:29 AM
36	WG452355-04 DUP	0.062	0.0156	0.00		10:54:47 AM
37	WG452355-06 MS	1.051	0.3154	0.00		10:56:17 AM
38	WG452371-01 BLK	0.022	0.0034	0.00		10:56:35 AM
39	WG452371-02 LCS	2.013	0.6070	0.00		10:58:05 AM
40	WG452371-03 LCSDUP	2.025	0.6106	0.00		10:58:23 AM
ST-3	1CCV (1.5 mg/L)	1.517	0.4566	101.13		10:59:53 AM
ST-2	2CCB (0 mg/L)	0.014	0.0012	0.00		11:00:11 AM
41	L13110383-01	0.023	0.0036	0.00		11:01:41 AM
42	L13110383-02	0.032	0.0067	0.00		11:01:59 AM
43	WG452371-05 DUP	0.026	0.0045	0.00		11:03:29 AM
44	WG452371-06 MS	0.970	0.2908	0.00		11:03:47 AM

Report Date :11/12/2013 **Run Date :11/12/2013** **Operator : WESTCO** **Plan # :20131112001**

Plan Description : NH3-A-DCM/11/12/2013

MICROBAC (OVD)
SMARTCHEM200 INST1 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 -Unit [mg/L] - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
45	ID 45 Blk	0.033	0.0069	0.00		11:05:17 AM
46	ID 46 Blk	0.016	0.0016	0.00		11:05:35 AM
47	ID 47	0.010	-0.0001	0.00	INV	11:07:05 AM
48	ID 48	0.016	0.0018	0.00		11:07:23 AM
ST-3	1CCV (1.5 mg/L)	1.522	0.4582	101.48		11:08:53 AM
ST-2	2CCB (0 mg/L)	0.021	0.0032	0.00		11:09:11 AM
10-[1/2]	L13110385-01 (2)	16.957	2.5664	0.00	EPL,><,LH	11:21:21 AM
12-[1/2]	L13110393-01 (2)	15.420	2.3335	0.00	><,LH	11:23:10 AM
ST-3	1CCV (1.5 mg/L)	1.520	0.4576	101.35		11:23:10 AM
ST-2	2CCB (0 mg/L)	0.019	0.0025	0.00		11:24:40 AM
14-[1/2]	L13110405-01 (2)	5.018	0.7573	0.00	LH	11:26:46 AM
25-[1/2]	WG452344-05 MS	3.097	0.4661	0.00	LH	11:28:34 AM
ST-3	1CCV (1.5 mg/L)	1.508	0.4538	100.51		11:28:34 AM
ST-2	2CCB (0 mg/L)	0.022	0.0034	0.00		11:30:04 AM
10-[1/5]	L13110385-01 (2)	16.104	0.9730	0.00	><,LH	11:42:14 AM
12-[1/5]	L13110393-01 (2)	15.293	0.9238	0.00	><,LH	11:44:02 AM
ST-3	1CCV (1.5 mg/L)	1.464	0.4405	97.59		11:44:02 AM
ST-2	2CCB (0 mg/L)	0.023	0.0038	0.00		11:45:32 AM
10-[1/10]	L13110385-01 (2)	17.037	0.5132	0.00	LH	11:57:42 AM
12-[1/10]	L13110393-01 (2)	15.714	0.4731	0.00	LH	11:59:30 AM
ST-3	1CCV (1.5 mg/L)	1.480	0.4455	98.69		11:59:30 AM
ST-2	2CCB (0 mg/L)	0.022	0.0034	0.00		12:01:01 PM

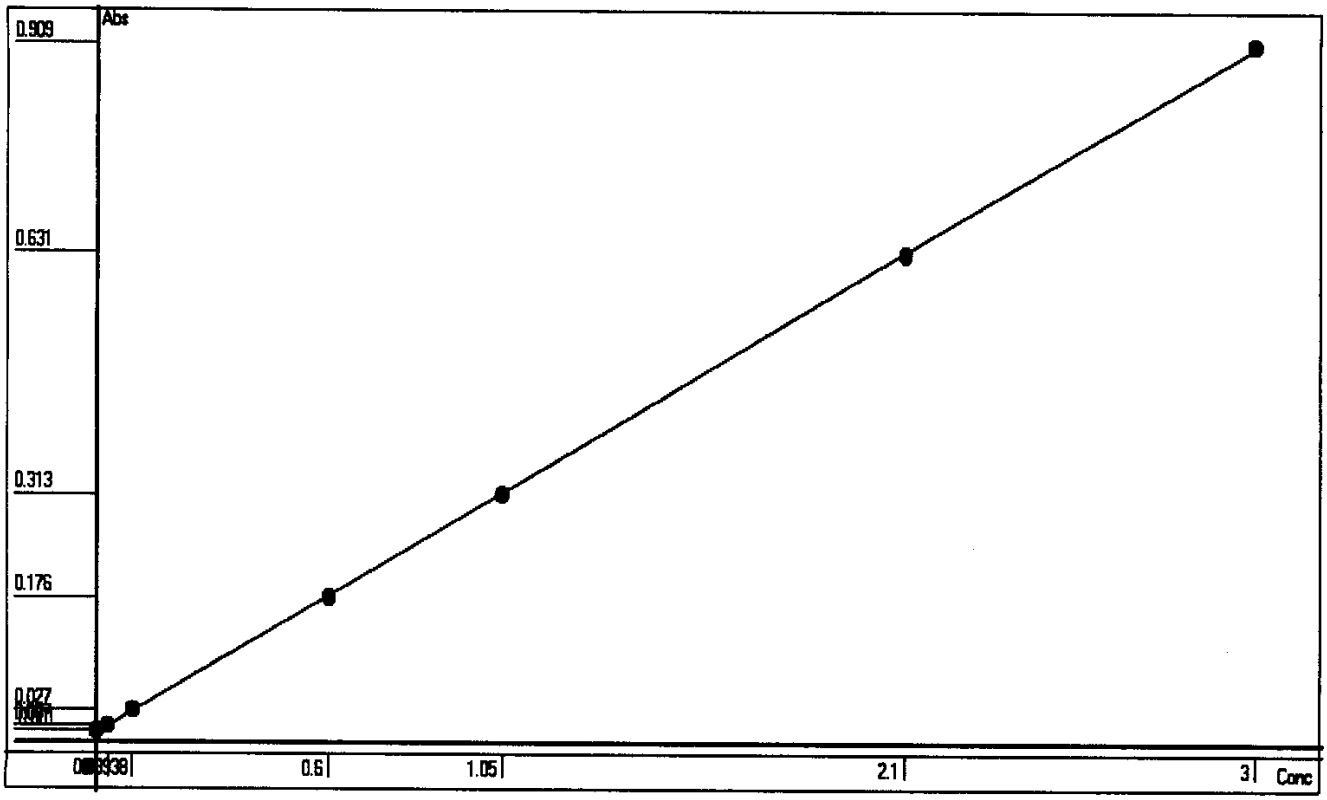
Report Date :11/12/2013 **Run Date :11/12/2013** **Operator : WESTCO** **Plan # :20131112001**

Plan Description : NH3-A-DCM/11/12/2013

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20131112001 Description : [NH3-A-DCM/11/12/2013] Unit



Point	OD	Conc	Recalc Conc	% Error
1	-0.0006	0	0.0085	0.85
2	0.0065	0.03	0.0319	6.33
3	0.0269	0.0938	0.0993	5.86
4	0.1759	0.6	0.5909	-1.52
5	0.3126	1.05	1.0420	-0.76
6	0.6306	2.1	2.0912	-0.42
7	0.9093	3	3.0108	0.36

Conc= +3.2996*Abso +0.0105 R^2=0.9999

RBL
0.0399
0

Report Date 11/12/2013 Run Date 11/12/2013

2.2.7 Nitrate Data

2.2.7.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Analysis: The instrument used for the analysis of nitrate only analyzes for nitrate-nitrite (NO3NO2) which is the amount of total nitrate (NO3) and nitrite (NO2) combined. The NO3 concentration is determined by analyzing for NO3NO2 and NO2 and calculating NO3 by the difference. An unpreserved bottle only has a 48 hour hold time for NO3 and NO2 separately. However if the bottle is preserved with sulfuric acid, the hold time for NO3NO2 is 28 days. The NO2 was analyzed within 48 hours. The NO3NO2 was analyzed from a preserved container within 28 days..

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: 74617
Approved By: Deanna Hesson

Dannat/Esson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #: L13110337-01
Client ID: MPL 30-1113-1
Matrix: Water
Workgroup #: WG451996
Collect Date: 11/05/2013 10:05
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: BAF
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 11/07/2013 15:03
Run Date: 11/08/2013 12:10
File ID: SC13111213490601

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		7.95		0.200	0.100

Sample #: L13110337-02
Client ID: MPL 16-1113-1
Matrix: Water
Workgroup #: WG451996
Collect Date: 11/05/2013 12:15
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: BAF
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 11/07/2013 15:03
Run Date: 11/08/2013 12:10
File ID: SC13111213492701

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		48.4		0.200	0.100

Sample #: L13110337-03
Client ID: MPL 26-1113-1
Matrix: Water
Workgroup #: WG451998
Collect Date: 11/05/2013 14:14
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: BAF
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 11/07/2013 15:03
Run Date: 11/08/2013 12:55
File ID: SC13111213143101

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		6.77		0.200	0.100

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: 08-NOV-2013
Analyst: BAF
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451996 WG451998

Calibration/Linearity	11-8-2013
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	BAF
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-NOV-2013

Brice Fenton

Secondary Reviewer:
13-NOV-2013

Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-13-2013 12:55:37

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG451996

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3.1	28		11/08/13	3.1	28	
MPL 16-1113-1	02	11/05/13					11/08/2013	3	28		11/08/13	3	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3198591
Report generated 11/12/2013 16:48

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG451998

Login Number: L13110337

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
MPL 26-1113-1	03	11/05/13					11/08/2013	2.9	28		11/08/13	2.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3198591
Report generated 11/12/2013 16:48

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: SC13111213392301
Prep Date: 11/08/13 12:10
Analyzed Date: 11/08/13 12:10
Analyst: BAF

Work Group: WG451996
Blank Sample ID: WG451996-01
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
LCS	WG451996-02	SC13111213393301	11/08/13 12:10	
DUP	WG451996-05	SC13111213402101	11/08/13 12:10	
MPL 16-1113-1	L13110337-02	SC13111213492701	11/08/13 12:10	
LCS2	WG451996-03	SC13111213394801	11/08/13 12:10	
MPL 30-1113-1	L13110337-01	SC13111213490601	11/08/13 12:10	

Report Name: BLANK_SUMMARY
PDF File ID: 3198592
Report generated 11/12/2013 16:48

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: SC13111213133101
Prep Date: 11/08/13 12:55
Analyzed Date: 11/08/13 12:55
Analyst: BAF

Work Group: WG451998
Blank Sample ID: WG451998-01
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	WG451998-03	SC13111213134201	11/08/13 12:55	
LCS	WG451998-02	SC13111213133701	11/08/13 12:55	
DUP	WG451998-05	SC13111213140201	11/08/13 12:55	
MPL 26-1113-1	L13110337-03	SC13111213143101	11/08/13 12:55	

Report Name: BLANK_SUMMARY
PDF File ID: 3198592
Report generated 11/12/2013 16:48

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 12:10 Sample ID: WG451996-01
Instrument ID: SMARTCHEM Run Date: 11/08/13 12:10 Prep Method: 353.2
File ID: SC13111213392301 Analyst: BAF Method: 353.2
Workgroup (AAB#): WG451996 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-07-NOV-13

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: 3198594
12-NOV-2013 16:48

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 12:55 Sample ID: WG451998-01
Instrument ID: SMARTCHEM Run Date: 11/08/13 12:55 Prep Method: 353.2
File ID: SC13111213133101 Analyst: BAF Method: 353.2
Workgroup (AAB#): WG451998 Matrix: Water 2 Units: mg/L
Contract #: Cal ID: SMARTC-07-NOV-13

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: 3198594
12-NOV-2013 16:48

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: BAF Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG451996 Units: mg/L
QC Key: DOD4 Lot #: STD61085

Sample ID: WG451996-02 LCS File ID: SC13111213393301 Run Date: 11/08/2013 12:10
Sample ID: WG451996-03 LCS2 File ID: SC13111213394801 Run Date: 11/08/2013 12:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	0.956	95.6	1.00	0.964	96.4	0.833	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3198595
Report generated: 11/12/2013 16:48

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: BAF Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG451998 Units: mg/L
QC Key: DOD4 Lot #: STD61085

Sample ID: WG451998-02 LCS File ID: SC13111213133701 Run Date: 11/08/2013 12:55
Sample ID: WG451998-03 LCS2 File ID: SC13111213134201 Run Date: 11/08/2013 12:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	0.933	93.3	1.00	0.902	90.2	3.38	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3198595
Report generated: 11/12/2013 16:48

2.2.7.3 Raw Data

SMARTCHEM RUN LOG
(smartchem2, smartchem3)

WORKGROUP: WG451996

451998

Daily Check

- [x] 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

Syringe filter lot # 169000

- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [ ] Waste Container Check

1) **Workgroup** _____
Plan # 20131108001
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Instrument: SC1 [x] SC2 [ ]

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	11-203-08	1/5		color
1-7	11-302-04	1/20		
1-8	.05			
1-9	.06			
1-10	.07			
1-11	11-393-01			
1-12	11-404-01			
1-13	11-405-01	1/5		color
1-14	11-409-04			
1-15	05			
1-16	06			
1-17	07			
1-18	09			
1-19	DUP09			
1-20	MS 10			
1-21	MSD 11			
1-22	.12			
2-1	.13			
2-2	11-406-01			
2-3	11-383-01			

Analyte		1	2	3
Position				
2-4	11-383-02			
2-5	11-337-01			
2-6	02			
2-7	MS ↓			
2-8	Blk			
2-9	LCS			
2-10	LCSDUP			
2-11	11-337-03			
2-12	11-390-01	1/5		color
2-13	02	1/5		↓
2-14	03	1/5		↓
2-15	DUP 337-03			
2-16	MS ↓			
2-17	11-419-01			
2-18	02			
2-19	11-479-02	1/10		Dupont
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
* LCSD must be run if no MS or Duplicate
*MS(10% sample): NO3, TKN, NH3, PHOS

DCN#98725

SMARTCHEM RUN LOG
(smartchem2, smartchem3)

WORKGROUP: WG451996

	Analyte	1	2	3
Position				
3-3				
3-4				
3-5				
3-6				
3-7				
3-8				
3-9				
3-10				
3-11				
3-12				
3-13				
3-14				
3-15				

	Analyte	1	2	3
Position				
3-16				
3-17				
3-18				
3-19				
3-20				
3-21				
3-22				
3-23				
3-24				
3-25				
3-26				
3-27				
3-28				

	Chloride	EPA 325.2/SM 4500-CI E-2000
✓	Nitrate-Nitrite	EPA 353.2/SM 4500-NO3 F-2000
	Alkalinity	EPA 310.2
	Sulfate	EPA 375.4/SM 426C (15th)/ SM4500-504 E-1997

	Ammonia	EPA 350.1/SM 4500-NH3 B-1997
	TKN	EPA 351.2
	Phos	EPA 365.4

Analyte	NO3		Reagents
SOP & Revision	K3532 Rev.19		RGT 28286
Curve Stock (SC made)	Std 61254		RGT 28425
NO2 STD	Std 61035		
ICV	Std 61036		
CCV	Std 60957		
LCS	Std 61085		
MS	Std 58660 Dilution 0.1/5 (25) = 0.5		

Comments: _____

Analyst: Brie Fenton Date: 11/8/13

DCN#98725

MICROBAC (OVD)
SMARTCHEM200 INST1 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD		Flag	Analysis Time
DIL-1	RBL	0.000	0.0346	0.00			11:58:46 AM
DIL-1	RBL	0.000	0.0321	0.00			11:59:58 AM
DIL-1	RBL	0.000	0.0262	0.00			12:01:10 PM
DIL-1	RBL	0.000	0.0292	0.00			12:02:22 PM
DIL-1	Std-1	0.000	-0.0048	0.00		INV	12:03:34 PM
SR5-1	Std-2	0.040	0.0070	0.00			12:04:46 PM
SR5-2	Std-3	0.100	0.0284	0.00			12:05:58 PM
SR5-3	Std-4	0.500	0.1561	0.00			12:07:10 PM
SR5-4	Std-5	1.000	0.3252	0.00			12:08:22 PM
ST-1	Std-6	2.000	0.6394	0.00			12:09:34 PM
ST-3	1CCV (1 mg/L)	0.996	0.3176	99.56			12:10:46 PM
ST-2	2CCB (0 mg/L)	0.011	-0.0008	0.00		INV	12:11:58 PM
1	ICV	1.423	0.4556	0.00			12:13:10 PM
2	WG451996-01 BLK	0.006	-0.0023	0.00		INV	12:14:22 PM
3	WG451996-02 LCS	0.956	0.3049	0.00			12:15:34 PM
4	WG451996-03 LCSDUP	0.964	0.3072	0.00			12:16:46 PM
5	NO2	0.898	0.2859	0.00	NO2		12:17:58 PM
6	L13110203-08 (5)	1.341	0.4292	0.00	0		12:19:10 PM
7	L13110302-04 (20)	0.679	0.2152	0.00	0.0766		12:20:22 PM
8	L13110302-05	0.266	0.0818	0.00	0.006		12:21:34 PM
9	L13110302-06	0.434	0.1361	0.00	0		12:22:46 PM
10	L13110302-07	0.203	0.0614	0.00	0.015		12:23:58 PM
ST-3	1CCV (1 mg/L)	0.994	0.3172	99.44			12:25:10 PM
ST-2	2CCB (0 mg/L)	0.016	0.0009	0.00			12:26:22 PM
11	L13110393-01	0.239	0.0729	0.00	0		12:27:34 PM
12	L13110404-01	X2.646	0.8511	0.00		><,LH	12:28:46 PM
13	L13110405-01 (5)	X2.015	0.6470	0.00		><,LH	12:29:59 PM
14	L13110409-04	0.615	0.1944	0.00	0.006		12:31:11 PM
15	L13110409-05	0.477	0.1501	0.00	0		12:32:23 PM
16	L13110409-06	0.481	0.1511	0.00	0.017		12:33:35 PM
17	L13110409-07	0.658	0.2085	0.00	0		12:34:47 PM
18	L113110409-09	0.270	0.0829	0.00	0		12:35:59 PM

Report Date :11/08/2013 **Run Date :11/8/2013** **Operator : WESTCO** **Plan # :20131108001**

Plan Description : NO3-A1-BAF/11/8/2013

MICROBAC (OVD)

SMARTCHEM200 INST1 (VER3.1.14)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
19	WG451996-05 DUP	0.412	0.1290	0.00		12:37:11 PM
20	L13110409-10 MS	0.720	0.2285	0.00		12:38:29 PM
ST-3	1CCV (1 mg/L)	0.971	0.3096	97.09		12:39:35 PM
ST-2	2CCB (0 mg/L)	0.004	-0.0030	0.00	INV	12:40:47 PM
21	L13110409-11 MSD	0.859	0.2733	0.00		12:41:59 PM
22	L13110409-12	0.518	0.1631	0.00		12:43:11 PM
23	L13110409-13	0.041	0.0090	0.00		12:44:23 PM
24	L13110406-01	6.725	2.1693	0.00	EPL,><,LH	12:45:35 PM
25	L13110383-01	1.136	0.3629	0.00		12:46:47 PM
26	L13110383-02	0.309	0.0958	0.00		12:47:59 PM
27	L13110337-01	7.853	2.5339	0.00	><,LH	12:49:11 PM
28	L13110337-02	4.778	1.5400	0.00	><,LH	12:50:23 PM
29	WG451996-09 MS	5.222	1.6836	0.00	EPL,><,LH	12:51:35 PM
30	WG451998-01 BLK	0.014	0.0004	0.00		12:52:47 PM
ST-3	1CCV (1 mg/L)	0.966	0.3079	96.56		12:53:59 PM
ST-2	2CCB (0 mg/L)	-0.002	-0.0048	0.00	INV,><,LL	12:55:11 PM
31	WG451998-02 LCS	0.933	0.2975	0.00		12:56:23 PM
32	WG451998-03 LCSDUP	0.902	0.2872	0.00		12:57:35 PM
33	L13110337-03	6.573	2.1204	0.00	><,LH	12:58:47 PM
34	L13110390-01 (5)	0.243	0.0744	0.00		12:59:59 PM
35	L13110390-02 (5)	0.254	0.0780	0.00		1:01:11 PM
36	L13110390-03 (5)	0.095	0.0266	0.00		1:02:23 PM
37	WG451998-05 DUP	6.580	2.1226	0.00	><,LH	1:03:35 PM
38	WG451998-06 MS	7.381	2.3814	0.00	><,LH	1:04:47 PM
39	ID 39 11-419-01	1.904	0.6113	0.00		1:05:59 PM
40	ID 40 02	1.212	0.3876	0.00		1:07:11 PM
ST-3	1CCV (1 mg/L)	0.972	0.3099	97.18		1:08:23 PM
ST-2	2CCB (0 mg/L)	0.009	-0.0012	0.00	INV	1:09:35 PM
41	ID 41 11-479-02 (10)	0.236	0.0720	0.00	0.251	1:10:47 PM
42	ID 42	0.006	-0.0024	0.00	INV	1:11:59 PM
43	ID 43	0.911	0.2902	0.00		1:13:11 PM
44	ID 44	0.921	0.2936	0.00		1:14:23 PM

Report Date :11/08/2013 **Run Date :11/8/2013** **Operator : WESTCO** **Plan # :20131108001**

Plan Description : NO3-A1-BAF/11/8/2013

MICROBAC (OVD)
SMARTCHEM200 INST1 (VER3.1.14)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD		Flag	Analysis Time
ST-3	1CCV (1 mg/L)	0.971	0.3095	97.06			1:15:35 PM
12-[1/4]	L13110404-01	2.572	0.2036	0.00	0.027	LH	1:24:46 PM
13-[1/4]	L13110405-01 (5)	1.923	0.1512	0.00	0.005		1:26:52 PM
24-[1/4]	L13110406-01	6.323	0.5067	0.00	0	LH	1:28:58 PM
27-[1/4]	L13110337-01	7.951	0.6383	0.00		LH	1:31:04 PM
28-[1/4]	L13110337-02	4.835	0.3865	0.00		LH	1:33:10 PM
29-[1/4]	WG451996-09 MS	5.272	0.4218	0.00		LH	1:35:16 PM
ST-3	1CCV (1 mg/L)	0.982	0.3132	98.20			1:36:10 PM
33-[1/4]	L13110337-03	6.770	0.5428	0.00		LH	1:38:34 PM
37-[1/4]	WG451998-05 DUP	6.671	0.5348	0.00		LH	1:40:40 PM
38-[1/4]	WG451998-06 MS	7.438	0.5968	0.00		LH	1:42:46 PM
ST-3	1CCV (1 mg/L)	0.976	0.3114	97.64			1:43:40 PM
ST-2	2CCB (0 mg/L)	0.017	0.0012	0.00			1:44:52 PM

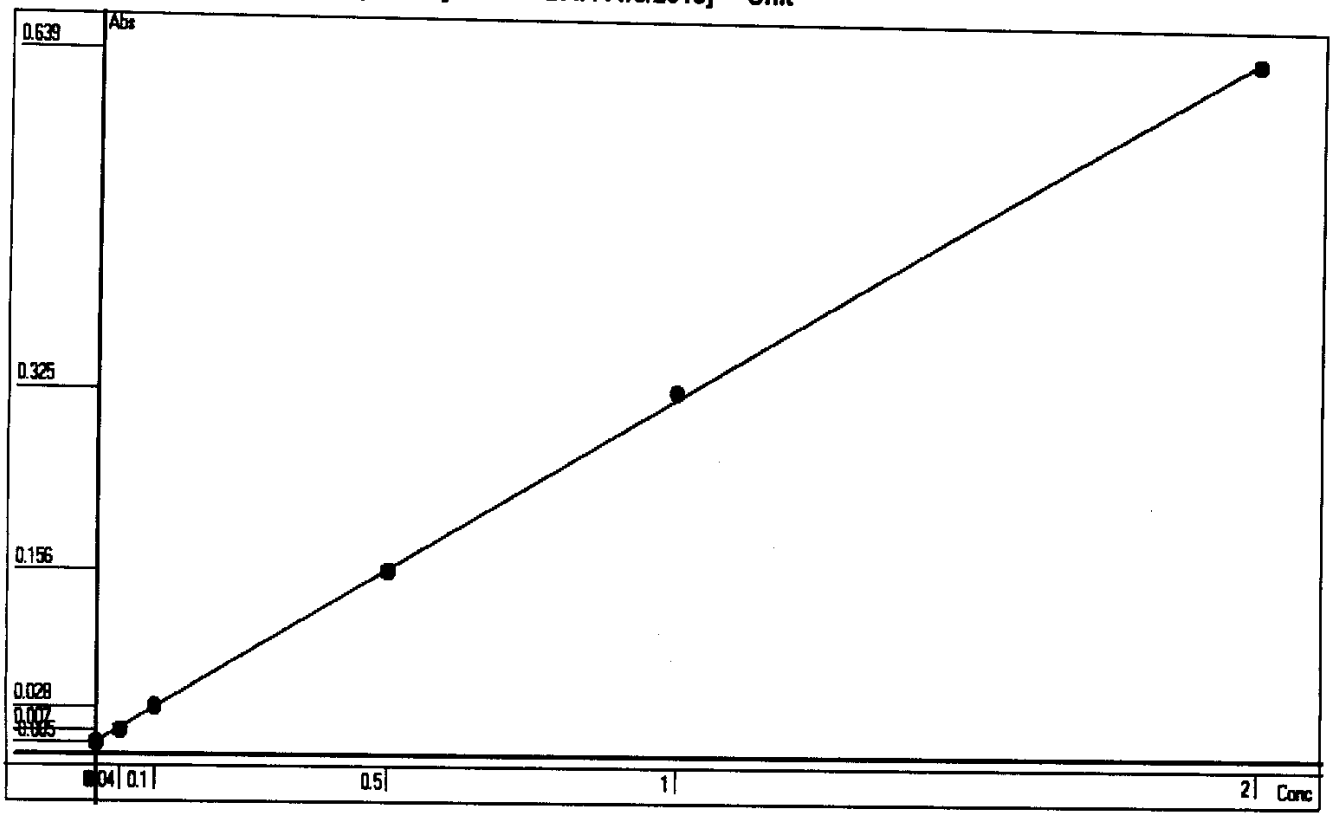
Report Date :11/08/2013 **Run Date :11/8/2013** **Operator : WESTCO** **Plan # :20131108001**

Plan Description : NO3-A1-BAF/11/8/2013

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20131108001 Description : [NO3-A1-BAF/11/8/2013] Unit



Point	OD	Conc	Recalc Conc	% Error
1	-0.0048	0	-0.0018	-0.18
2	0.0069	0.04	0.0344	-14.00
3	0.0283	0.1	0.1007	0.70
4	0.1560	0.5	0.4957	-0.86
5	0.3252	1	1.0192	1.92
6	0.6393	2	1.9910	-0.45

Conc= +3.0939*Abso +0.0131 R^2=0.9998

RBL
0.0306
0

Report Date 11/8/2013 Run Date 11/8/2013

2.2.8 Orthophosphate Data

2.2.8.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: Dorothy Payne

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: 74618
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 30-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	1V.1311070930-10
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 #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 16-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	1V.1311070930-11
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 #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL 26-1113-1	**Prep Method:**	SM4500-P-E-1999	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-1999	**Cal Date:**	10/30/2013 09:00
Workgroup #:	WG451829	**Analyst:**	DLP	**Run Date:**	11/07/2013 09:30
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	1V.1311070930-12
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: 07-NOV-2013
Analyst: DLP
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451829

Calibration/Linearity	10-31-13
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	SAV
Comments	

Primary Reviewer:
11-NOV-2013

Secondary Reviewer:
12-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-12-2013 17:22:07

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-1999 AAB#: WG451829

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/07/2013	2	2		11/07/13	2	2	
MPL 16-1113-1	02	11/05/13					11/07/2013	1.9	2		11/07/13	1.9	2	
MPL 26-1113-1	03	11/05/13					11/07/2013	1.8	2		11/07/13	1.8	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3198801
Report generated 11/12/2013 17:04

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: 1V.1311070930-02
Prep Date: 11/07/13 09:30
Analyzed Date: 11/07/13 09:30
Analyst: DLP

Work Group: WG451829
Blank Sample ID: WG451829-01
Instrument ID: UV-120-1V
Method: SM4500-P-E-1999

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451829-02	1V.1311070930-03	11/07/13 09:30	
LCS2	WG451829-03	1V.1311070930-04	11/07/13 09:30	
MPL 30-1113-1	L13110337-01	1V.1311070930-10	11/07/13 09:30	
MPL 16-1113-1	L13110337-02	1V.1311070930-11	11/07/13 09:30	
MPL 26-1113-1	L13110337-03	1V.1311070930-12	11/07/13 09:30	
DUP	WG451829-06	1V.1311070930-13	11/07/13 09:30	

Report Name: BLANK_SUMMARY
PDF File ID: 3198802
Report generated 11/12/2013 17:04

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/07/13 09:30 Sample ID: WG451829-01
Instrument ID: UV-120-1V Run Date: 11/07/13 09:30 Prep Method: SM4500-P-E-1999
File ID: 1V.1311070930-02 Analyst: DLP Method: SM4500-P-E-1999
Workgroup (AAB#): WG451829 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 06-NOV-13

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: 3198803
12-NOV-2013 17:04

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: DLP Prep Method: SM4500-P-E-1999
Instrument ID: UV-120-1V Matrix: Water Method: SM4500-P-E-1999
Workgroup (AAB#): WG451829 Units: mg/L
QC Key: DOD4 Lot #: STD61217

Sample ID: WG451829-02 LCS File ID: 1V.1311070930-03 Run Date: 11/07/2013 09:30
Sample ID: WG451829-03 LCS2 File ID: 1V.1311070930-04 Run Date: 11/07/2013 09:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	1.01	101	1.00	1.02	102	0.965	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3198804
Report generated: 11/12/2013 17:04

2.2.8.3 Raw Data

PLP 10-30-13
WG ~~450769~~
450776

Curves

Parameter: PO4

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std ~~60962~~ 60315 PSW 10-30-13

Concentration: 1000 mg/L

Recipe for preparation of curve standards found in:
SOP: 36513 Revision: 14 Page: 9

Second Source Stock: ~~std 60961~~ 60078 PSW 10-30-13 (concentration: 10mg/L)

Daily Preparation: 5(10)/50=

concentration = 1.0mg/L

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
1.0	50	1cm	880	0.612
0.7	↓	↓	↓	0.430
0.5				0.308
0.2				0.124
0.1				0.062
0.05				0.030
0.00				0.000
2nd source (1.0)	↓	↓	↓	0.640

Analyst: Peggy S. Webb

Date/Time: 10-30-13 @ 0900

DCN#98528

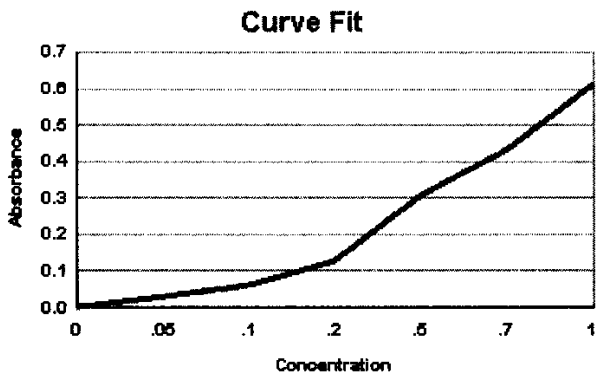
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG450776
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: DLP
Initial Calibration Date: 10/30/2013

Analyte: ORTHOPHOSPHATE
Number of Points: 7
Slope: 0.612605
Y-Intercept: 0.000550868
Coef. Of Correlation (R^2): 0.999983
Coef. Of Correlation (R): 0.999991

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	0.000550868
0.0500	0.0300	0.00250	0.00150	0.0311811
0.100	0.0620	0.0100	0.00620	0.0618114
0.200	0.124	0.0400	0.0248	0.123072
0.500	0.308	0.250	0.154	0.306854
0.700	0.430	0.490	0.301	0.429375
1.00	0.612	1.00	0.612	0.613156



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 10/30/2013 11:00

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG450776
File ID: 1V.1310300900-08
CCV ID: WG450776-08
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 10/30/2013
Run Time: 09:00
Analyst: DLP
Cal ID: UV-120 - 30-OCT-13 09:00:07

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	1	1.04	0.640	4.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 10/30/2013 11:01

[redacted]

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 14

Color Reagent Chemicals
28017
27551
27899
COA 16278

CCV: STD 61218
Daily Dilution: 5/50 1/50
Daily Dilution: 0.50
Spectrophotometer: UV-120-1V

LCS: STD 61217
Daily Dilution: 1/10 1/50
Daily Dilution: 1.0
Curve ID: 450776
10-31-13

Spike: STD 61217
Daily Dilution: 2/10 1/50 0.4
Daily Dilution:

SAMPLE	VOLUME	pH 7 ± 0.2	DILUTION	ABSORBANCE @ 880 nm
CCV: 0.5 mg/L	50	✓		0.313
BLANK	50	✓		0.001
LCS: 1.0 ppm	50	✓		0.619
LCSDUP: 1.0 ppm	50	✓		0.625
11-0270-01	50	✓	1/2	0.546
11-302-04	50	✓	~~1/2~~ DP 11-07-13	0.020
05	50	✓		0.006
-06	50	✓		0.005
-07	50	✓		0.002
11-337-01	50	✓		0.014
-02	50	✓		0.005
-03	50	✓		0.005
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
DUP 11-302-06	50	✓		0.005
MS: (0.4) 302-07	50	✓		0.252
MSD: ( )	50			
CCV: (0.5)	50	✓		0.315

ANALYST: [signature] DATE / TIME: 11-07-13 / 0930

DCN#98688

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG451829
Analyte: ORTHOPHOSPHATE

Analyst: DLP
Date: 11/07/2013

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG451829-01	50	50	0.00100	0.6126	0.0005509	0.00073315	0.00073315	1	mg/L
WG451829-02	50	50	0.619	0.6126	0.0005509	1.0095	1.0095	1	mg/L
WG451829-03	50	50	0.625	0.6126	0.0005509	1.0193	1.0193	1	mg/L
L13110270-01	50	50	0.546	0.6126	0.0005509	0.89038	1.7808	2	mg/L
L13110302-04	50	50	0.0200	0.6126	0.0005509	0.031748	0.031748 F	1	mg/L
L13110302-05	50	50	0.00600	0.6126	0.0005509	0.0088950	ND	1	mg/L
L13110302-06	50	50	0.00500	0.6126	0.0005509	0.0072626	ND	1	mg/L
WG451829-04	50	50	0.00500	0.6126	0.0005509	0.0072626	0.0072626	1	mg/L
L13110302-07	50	50	0.00200	0.6126	0.0005509	0.0023655	ND	1	mg/L
WG451829-05	50	50	0.00200	0.6126	0.0005509	0.0023655	0.0023655	1	mg/L
L13110337-01	50	50	0.0140	0.6126	0.0005509	0.021954	ND	1	mg/L
L13110337-02	50	50	0.00500	0.6126	0.0005509	0.0072626	ND	1	mg/L
L13110337-03	50	50	0.00500	0.6126	0.0005509	0.0072626	ND	1	mg/L
WG451829-06	50	50	0.00500	0.6126	0.0005509	0.0072626	0.0072626	1	mg/L
WG451829-07	50	50	0.252	0.6126	0.0005509	0.41046	0.41046	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 11/11/2013 11:17

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452208
File ID: 1V.1311070930-01
CCV ID: WG452208-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 11/07/2013
Run Time: 09:30
Analyst: DLP
Cal ID: UV-120 - 06-NOV-13

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.510	0.626	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/11/2013 11:15

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG452208
File ID: 1V.1311070930-15
CCV ID: WG452208-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 11/07/2013
Run Time: 09:30
Analyst: DLP
Cal ID: UV-120 - 06-NOV-13

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.513	0.630	2.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 11/11/2013 11:15

2.2.9 Total Dissolved Solids Data

2.2.9.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: April Greene

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: The LCS recovery was below the advisory limit due to a lab accident. The LCS duplicate was acceptable.

Sample #	Analyte	Date	Result	Lower	Upper	Type
WG451940-02	Total Dissolved Solids	2013-11-08 11:05:02	28.0	80	120	Recovery
WG451940-03	Total Dissolved Solids	2013-11-08 11:05:03	110		10	RPD

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: 74297

Approved By: Deanna Hesson

Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 30-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451940	**Analyst:**	ADG	**Run Date:**	11/08/2013 11:05
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	EN.1311081105-23
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		400		20.0	10.0

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 16-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451975	**Analyst:**	ADG	**Run Date:**	11/07/2013 08:42
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	EN.1311070842-08
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		22.0		20.0	10.0

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 26-1113-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-C-1997	**Cal Date:**	
Workgroup #:	WG451975	**Analyst:**	ADG	**Run Date:**	11/07/2013 08:42
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	EN.1311070842-09
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		1020		20.0	10.0

2.2.9.2 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: 08-NOV-2013
Analyst: ADG
Analyst: HCB
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451975

Calibration/Linearity	11/08/13
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	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	ADG
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
13-NOV-2013

Secondary Reviewer:
13-NOV-2013

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-13-2013 12:58:33

Microbac Laboratories Inc.

Data Checklist

Date: 08-NOV-2013
Analyst: ADG
Analyst: NA
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451940

Calibration/Linearity	11/08/13
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	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	ADG
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
11-NOV-2013

April Greene

Secondary Reviewer:
13-NOV-2013

Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-13-2013 13:17:43

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2540-C-1997 AAB#: WG451940

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3	7		11/08/13	3	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3196152
Report generated 11/13/2013 09:49

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2540-C-1997 AAB#: WG451975

Login Number: L13110337

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
MPL 16-1113-1	02	11/05/13					11/07/2013	1.9	7		11/07/13	1.9	7	
MPL 26-1113-1	03	11/05/13					11/07/2013	1.8	7		11/07/13	1.8	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3196152
Report generated 11/13/2013 09:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: EN.1311070842-01
Prep Date: 11/07/13 08:42
Analyzed Date: 11/07/13 08:42
Analyst: ADG

Work Group: WG451975
Blank Sample ID: WG451975-01
Instrument ID: OVEN
Method: SM2540-C-1997

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451975-02	EN.1311070842-02	11/07/13 08:42	
LCS2	WG451975-03	EN.1311070842-03	11/07/13 08:42	
MPL 16-1113-1	L13110337-02	EN.1311070842-08	11/07/13 08:42	
MPL 26-1113-1	L13110337-03	EN.1311070842-09	11/07/13 08:42	
DUP	WG451975-05	EN.1311070842-23	11/07/13 08:42	
DUP	WG451975-07	EN.1311070842-24	11/07/13 08:42	

Report Name: BLANK_SUMMARY
PDF File ID: 3196153
Report generated 11/13/2013 09:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: EN.1311081105-01
Prep Date: 11/08/13 11:05
Analyzed Date: 11/08/13 11:05
Analyst: ADG

Work Group: WG451940
Blank Sample ID: WG451940-01
Instrument ID: OVEN
Method: SM2540-C-1997

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451940-02	EN.1311081105-02	11/08/13 11:05	
LCS2	WG451940-03	EN.1311081105-03	11/08/13 11:05	
MPL 30-1113-1	L13110337-01	EN.1311081105-23	11/08/13 11:05	
DUP	WG451940-05	EN.1311081105-24	11/08/13 11:05	
DUP	WG451940-07	EN.1311081105-25	11/08/13 11:05	

Report Name: BLANK_SUMMARY
PDF File ID: 3196153
Report generated 11/13/2013 09:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/07/13 08:42 Sample ID: WG451975-01
Instrument ID: OVEN Run Date: 11/07/13 08:42 Prep Method: 160.1/SM2540C
File ID: EN.1311070842-01 Analyst: ADG Method: SM2540-C-1997
Workgroup (AAB#): WG451975 Matrix: Water Units: mg/L
Contract #: Cal ID: OVEN-

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Total Dissolved Solids	5.00	10.0	8.00	1	*

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: 3196154
13-NOV-2013 09:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 11:05 Sample ID: WG451940-01
Instrument ID: OVEN Run Date: 11/08/13 11:05 Prep Method: 160.1/SM2540C
File ID: EN.1311081105-01 Analyst: ADG Method: SM2540-C-1997
Workgroup (AAB#): WG451940 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: 3196154
13-NOV-2013 09:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: ADG Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: SM2540-C-1997
Workgroup (AAB#): WG451940 Units: mg/L
QC Key: DOD4 Lot #: STD60796

Sample ID: WG451940-02 LCS File ID: EN.1311081105-02 Run Date: 11/08/2013 11:05
Sample ID: WG451940-03 LCS2 File ID: EN.1311081105-03 Run Date: 11/08/2013 11:05

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	142	28.4	500	492	98.4	110	80 - 120	10	*#

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3196155
Report generated: 11/13/2013 09:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: ADG Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: SM2540-C-1997
Workgroup (AAB#): WG451975 Units: mg/L
QC Key: DOD4 Lot #: STD60796

Sample ID: WG451975-02 LCS File ID: EN.1311070842-02 Run Date: 11/07/2013 08:42
Sample ID: WG451975-03 LCS2 File ID: EN.1311070842-03 Run Date: 11/07/2013 08:42

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	498	99.6	500	468	93.6	6.21	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3196155
Report generated: 11/13/2013 09:49

2.2.9.3 Raw Data

WORKGROUP: WG451940

TOTAL DISSOLVED SOLIDS

(tds1)

Oven: TDS MICS1
☐ EPA 160.1 / SM2540C
LCS: Std 607916
Daily Dilution: 5(5000)/90 = 500

Balance: AND GR-202 / Other
Matrix Spike:
Daily Dilution:
Filter Lot #: 95216836

		On Temp/Time:	104/1115	180/1710	180/0817	/
SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BLK 609	100				
LCS: mg/L	LCS1	50				
LCSDUP: mg/L	LCS2	50				
110236-01	1	50				
110239-01	2	50				
02	3	50				
110240-02	4	50				
110282-03	5	20				
-05	6	10				
-07	7	50				
-09	8	50				
-11	9	50				
110415-07 ~~13~~	10	50				
AG 11/8/13 110282-15	11	10				
-17	12	50				
Rerun 110285-01 ~~19~~	13	10				
21	14	50				
110285-01	15	25				
04	16	50				
06	17	50				
08	18	50				
10	19	50				
110337-01	20	50				
DUP: 0282-03	Dup1	20				
DUP: 0285-01	Dup2	25				
		Off Temp/Time:	104/1710	181/0730	180/1010	/

ANALYST: April Greene

* Duplicate required on 10% of samples

DATE/TIME: (on) 11-8-13 1105
DATE/TIME: (off) 11-11-13
DATE/TIME: (off)
DATE/TIME: (off)

DCN#98703

Tray 3

WORKGROUP: WG451975

TOTAL DISSOLVED SOLIDS

(tds1)

Oven: TDS MICS1
☐ EPA 160.1 / SM2540C
LCS: STD ~~60796~~ 60796
Daily Dilution: 5 (5,000) X 50 = 500

Balance: AND GR-202 / Other
Matrix Spike:
Daily Dilution:
Filter Lot #: 952 6836

		On Temp/Time:	104 / 1515	180 / 10:50	180 / 0915	180 / 0655
SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BLK K9	100				
LCS: mg/L	LCS1	50				
LCSDUP: mg/L	LCS2	50				
~~L13110126-02~~	1	—	AG 11-8-13			
0280-01	2	50				
0327-01	3	25				
331-01	4 13	10m				
03	5 77	10				
0337-02	6	50				
-03	7	50				
0346-01	8	50				
-03	9	50				
-05	10	50				
-07	11	50				
-10	12	50				
L13110360-05	13	50				
-08	14	50				
0384-01	15	50				
-03	16	50				
-07	17	50				
-08	18	50				
-09	19	50				
-11	20	50				
DUP: L13110331-03	Dup1 ⊙	10				
DUP: L13110384-03	Dup2	50				
		Off Temp/Time:	104 / 10:50	181 / 08:00	180 / 0910	181 / 0845

TVDS

ANALYST: Heidi Brown

* Duplicate required on 10% of samples

Amil Greene

DATE/TIME: (on) 11/8/13
DATE/TIME: (off) 11/9/13
DATE/TIME: (off) 11-12-13
DATE/TIME: (off) 11-12-13

DCN#98711

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG451940
Analyst: ADG
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL018
Instrument#: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD60796
Daily Dilution:

SAMPLE NUMBER		INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG451940-01	BLK	100	75.7906	75.7904	75.7903		-3.000	-3.000	mg/L
WG451940-02	LCS	50	62.6091	62.6164	62.6162		142.0	142.0	mg/L
WG451940-03	LCS2	50	62.5054	62.5295	62.53		492.0	492.0	mg/L
L13110236-01	1	50	58.0207	58.0398	58.0403		392.0	392.0	mg/L
L13110239-01	2	50	55.3055	55.3685	55.3687		1264	1264	mg/L
L13110239-02	3	50	63.7487	63.8146	63.8145		1316	1316	mg/L
L13110240-02	4	50	61.5404	61.6216	61.6212		1616	1616	mg/L
L13110282-03	5	20	59.1943	59.2756	59.276		4085	4085	mg/L
WG451940-04	5	20	59.1943	59.2756	59.276		4085	4085	mg/L
L13110282-05	6	10	56.6686	56.7304	56.7306		6200	6200	mg/L
L13110282-07	7	50	57.1569	57.2923	57.2927		2716	2716	mg/L
L13110282-09	8	50	56.4369	56.4611	56.4616		494.0	494.0	mg/L
L13110282-11	9	50	48.7713	48.9792	48.9796		4166	4166	mg/L
L13110415-07	10	50	51.1549	51.1883	51.1888		678.0	678.0	mg/L
L13110282-15	11	10	51.6228	51.6708	51.6713		4850	4850	mg/L
L13110282-17	12	50	74.9951	75.0385	75.039		878.0	878.0	mg/L
L13110287-01	13	10	66.8482	66.9734	66.9737		12550	12550	mg/L
L13110282-21	14	50	77.9226	78.0983	78.0985		3518	3518	mg/L
L13110285-01	15	25	66.2165	66.301	66.3007		3368	3368	mg/L
WG451940-06	15	25	66.2165	66.301	66.3007		3368	3368	mg/L
L13110285-04	16	50	64.2015	64.2369	64.2374		718.0	718.0	mg/L
L13110285-06	17	50	80.6626	80.7001	80.7006		760.0	760.0	mg/L
L13110285-08	18	50	77.6762	77.6824	77.6825		126.0	126.0	mg/L
L13110285-10	19	50	67.839	67.8465	67.8465		150.0	150.0	mg/L
L13110337-01	20	50	76.7663	76.7859	76.7863		400.0	400.0	mg/L
WG451940-05	DUP	20	69.6673	69.7496	69.75		4135	4135	mg/L
WG451940-07	DUP2	25	73.4239	73.5075	73.5076		3348	3348	mg/L

Analyst: April Greene

*Duplicate required on 10% of samples

Date/Time (on) : 11/08/2013 11:05
Date/Time (off): 11/11/2013 08:06
Date/Time (off): 11/11/2013 10:58
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 3191208
Report generated: 11/11/2013 16:07

Microbac

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG451975
Analyst: ADG
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL018
Instrument#: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD60796
Daily Dilution:

SAMPLE NUMBER		INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG451975-01	BLK	100	83.748	83.7603	83.749	83.7488	8.000	8.000	mg/L
WG451975-02	LCS	50	61.1357	61.1607	61.1606	61.1606	498.0	498.0	mg/L
WG451975-03	LCS	50	66.5994	66.6229	66.6228	66.6228	468.0	468.0	mg/L
L13110280-01	2	50	63.9403	64.0293	64.0294	64.0294	1782	1782	mg/L
L13110327-01	3	25	68.8317	68.9503	68.9489	68.9488	4684	4684	mg/L
L13110331-01	4	10	21.9439	22.0138	22.0126	22.0126	6870	6870	mg/L
L13110331-03	5	10	20.5183	20.6372	20.6346	20.6344	11610	11610	mg/L
WG451975-04	5	10	20.5183	20.6372	20.6346	20.6344	11610	11610	mg/L
L13110337-02	6	50	64.1749	64.176	64.176	64.176	22.00	22.00	mg/L
L13110337-03	7	50	64.0872	64.1388	64.1376	64.1381	1018	1018	mg/L
L13110346-01	8	50	60.4428	60.4624	60.4594	60.4599	342.0	342.0	mg/L
L13110346-03	9	50	60.6629	60.6871	60.687	60.687	482.0	482.0	mg/L
L13110346-05	10	50	56.5342	56.5538	56.5542	56.5542	400.0	400.0	mg/L
L13110346-07	11	50	60.1328	60.1481	60.1481	60.1481	306.0	306.0	mg/L
L13110346-10	12	50	65.1689	65.1813	65.1817	65.1817	256.0	256.0	mg/L
L13110360-05	13	50	58.3049	58.3971	58.3967	58.3967	1836	1836	mg/L
L13110360-08	14	50	61.9676	62.0581	62.058	62.058	1808	1808	mg/L
L13110384-01	15	50	57.8187	57.833	57.8326	57.8326	278.0	278.0	mg/L
L13110384-03	16	50	66.534	66.5451	66.5417	66.5414	148.0	148.0	mg/L
WG451975-06	16	50	66.534	66.5451	66.5417	66.5414	148.0	148.0	mg/L
L13110384-07	17	50	60.2854	60.4421	60.4419	60.4419	3130	3130	mg/L
L13110384-08	18	50	56.6523	56.6755	56.6751	56.6751	456.0	456.0	mg/L
L13110384-09	19	50	55.3943	55.4761	55.4759	55.4759	1632	1632	mg/L
L13110384-11	20	50	60.1751	60.1912	60.1912	60.1912	322.0	322.0	mg/L
WG451975-05	DUP	10	45.6631	45.7853	45.7858	45.7858	12270	12270	mg/L
WG451975-07	DUP	50	56.8655	56.8856	56.8851	56.8851	392.0	392.0	mg/L
L13110327-02	3	25	68.8317	68.9503	68.9489	68.9488	4684	4684	mg/L

Analyst: April Greene

*Duplicate required on 10% of samples

Date/Time (on) : 11/07/2013 08:42
Date/Time (off): 11/11/2013 08:00
Date/Time (off): 11/12/2013 06:44
Date/Time (off): 11/12/2013 09:21

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 3190871
Report generated: 11/13/2013 16:51

Microbac

2.2.10 Total Organic Carbon Data

2.2.10.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: Brice Fenton

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: 74620
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 30-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 19:49
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	TC11082013.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	1.62		1.00	0.500

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 16-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 20:01
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	TC11082013.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	1.55		1.00	0.500

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL 26-1113-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	07/09/2013 14:51
Workgroup #:	WG452053	**Analyst:**	BAF	**Run Date:**	11/08/2013 20:34
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	TC11082013.028
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon	TOC	0.793	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

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: 08-NOV-2013
Analyst: BAF
Analyst: NA
Method: TOC
Instrument: TOC-VWP
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG452050 WG452053

Calibration/Linearity	7-9-2013
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	BAF
Secondary Reviewer	SAV
Comments	

Primary Reviewer:
14-NOV-2013
Brice Fenton

Secondary Reviewer:
14-NOV-2013
Sarah Vandenberg

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-14-2013 16:24:23

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG452053

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	3.4	28		11/08/13	3.4	28	
MPL 16-1113-1	02	11/05/13					11/08/2013	3.3	28		11/08/13	3.3	28	
MPL 26-1113-1	03	11/05/13					11/08/2013	3.3	28		11/08/13	3.3	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3204436
Report generated 11/14/2013 15:38

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: TC11082013.017
Prep Date: 11/08/13 18:15
Analyzed Date: 11/08/13 18:15
Analyst: BAF

Work Group: WG452053
Blank Sample ID: WG452053-01
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	WG452053-02	TC11082013.018	11/08/13 18:27	01
LCS2	WG452053-03	TC11082013.019	11/08/13 18:39	01
MPL 30-1113-1	L13110337-01	TC11082013.024	11/08/13 19:49	01
MPL 16-1113-1	L13110337-02	TC11082013.025	11/08/13 20:01	01
MPL 26-1113-1	L13110337-03	TC11082013.028	11/08/13 20:34	01
DUP	WG452053-05	TC11082013.035	11/08/13 22:15	01

Report Name: BLANK_SUMMARY
PDF File ID: 3204437
Report generated 11/14/2013 15:38

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 18:15 Sample ID: WG452053-01
Instrument ID: TOC-VWP Run Date: 11/08/13 18:15 Prep Method: 415.1
File ID: TC11082013.017 Analyst: BAF Method: 415.1
Workgroup (AAB#): WG452053 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-09-JUL-13

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: 3204438
14-NOV-2013 15:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: BAF Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG452053 Units: mg/L
QC Key: DOD4 Lot #: STD60155

Sample ID: WG452053-02 LCS File ID: TC11082013.018 Run Date: 11/08/2013 18:27
Sample ID: WG452053-03 LCS2 File ID: TC11082013.019 Run Date: 11/08/2013 18:39

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	24.8	99.2	25.0	25.0	100	0.803	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3204439
Report generated: 11/14/2013 15:38

2.2.10.3 Raw Data

WG437280

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: _____

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ SOP: K 4151 Rev. 15

WG_____ Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution	Position	Sample ID	Dilution	Position	Sample ID	Dilution
1	TC Curve		26	TC Curve		51		
2	TIC curve		27	Std 58866		52		
3	TC ICV		28			53	see SOP	
4	TIC ICV		29	TIC Curve		54	for curve	
5			30	Std 58877		55	points	
6			31			56		
7			32			57		
8			33	TC ICV		58	7/9/13	
9			34	Std 57523		59	~~Use~~ 5/200 (1000)	
10			35			60	= 25mg/L	
11			36	TIC ICV		61		
12			37	Std 58878		62		
13			38			63		
14			39			64		
15	all points		40	analyzed	its	65	duplicate	
16			41			66		
17			42			67		
18			43			68		
19			44			69		
20			45			70		
21			46			71		
22			47			72		
23			48			73		
24			49			74		
25			50			75		

Analyst: Brie Jenson Date/Time: 7/9/13/1400

DCN#96473

C:\TOC3201\Data\07-09-2013-BAF-TOC.t32

	Analy	Sample Name	Result	Status	Date / Time	Vial
1	TOC		TOC:2.208mg/L TC:26.74mg/L IC:24.53mg/L	Complete	7/9/2013 5:17:57 PM	1
2	TOC		TOC:23.65mg/L TC:23.65mg/L IC:0.00022mg/L	Complete	7/9/2013 5:29:56 PM	2
3	TOC		TOC:22.05mg/L TC:22.22mg/L IC:0.1735mg/L	Complete	7/9/2013 5:42:12 PM	3
4	TOC		!!Error!! TOC:24.67mg/L TC:24.54mg/L IC:-0.1326mg	Complete	7/9/2013 5:54:31 PM	4

7/11/2013 12:57:57 PM 1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Cal. Curve

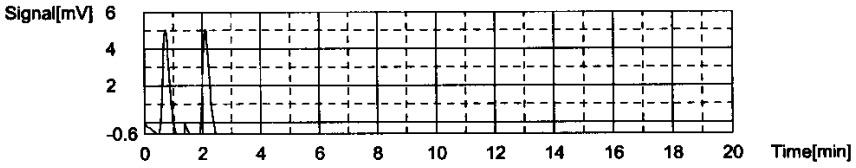
Sample Name: TCCURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-07-09-2013.2013_07_09_13_54_59.cal
Status Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	9.370	500uL	1	*******		7/9/2013 2:00:04 PM
2	10.94	500uL	1	*******		7/9/2013 2:03:54 PM

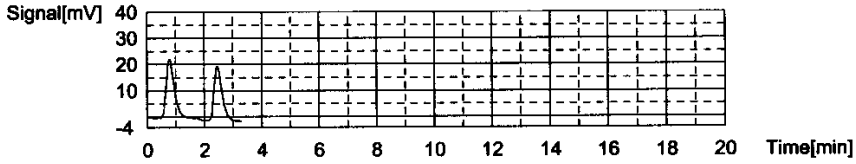
Acid Add. 0.000%
Mean Area 10.16



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	43.95	500uL	1	*******		7/9/2013 2:09:31 PM
2	40.43	500uL	1	*******		7/9/2013 2:13:23 PM

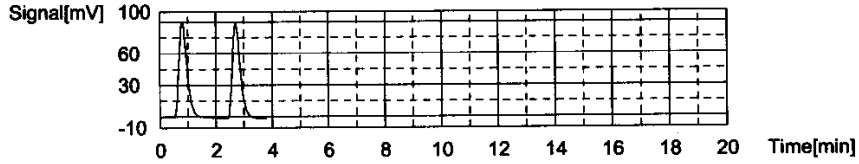
Acid Add. 0.000%
Mean Area 42.19



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	180.9	500uL	1	*******		7/9/2013 2:19:14 PM
2	179.0	500uL	1	*******		7/9/2013 2:23:23 PM

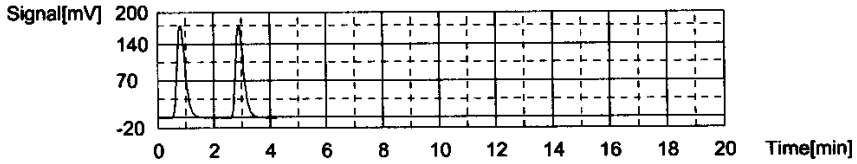
Acid Add. 0.000%
Mean Area 179.9



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	357.3	500uL	1	*******		7/9/2013 2:29:25 PM
2	358.1	500uL	1	*******		7/9/2013 2:33:50 PM

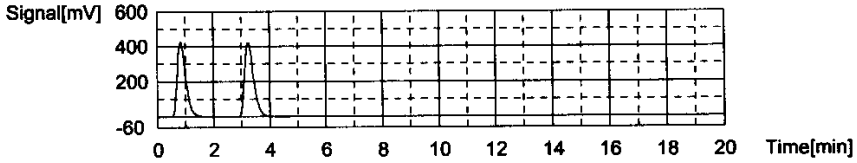
Acid Add. 0.000%
Mean Area 357.7



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	900.5	500uL	1	*******		7/9/2013 2:40:10 PM
2	968.7	500uL	1	*******		7/9/2013 2:44:47 PM

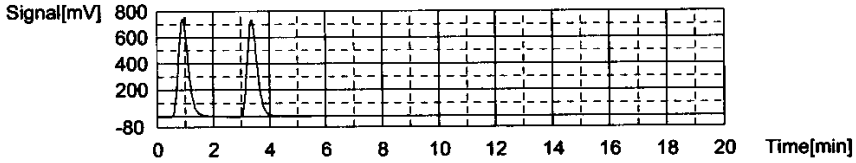
Acid Add. 0.000%
Mean Area 934.6



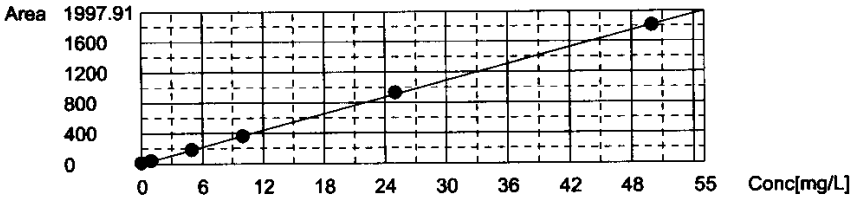
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1813	500uL	1	*******		7/9/2013 2:51:11 PM
2	1802	500uL	1	*******		7/9/2013 2:57:12 PM

Acid Add. 0.000%
Mean Area 1808



Slope: 36.20
Intercept 6.332
r^2 0.999673
Zero Shift No



Cal. Curve

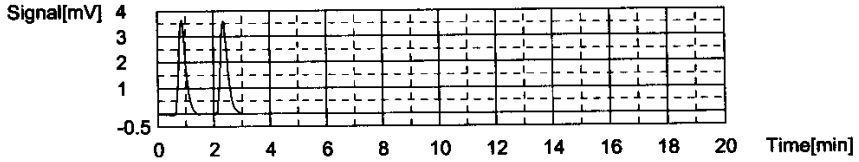
Sample Name: TICCURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-07-09-2013.2013_07_09_14_57_12.cal
Status Completed

Type	Anal.
Standard	IC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	6.571	500uL	1	*******		7/9/2013 3:02:59 PM
2	6.428	500uL	1	*******		7/9/2013 3:07:04 PM

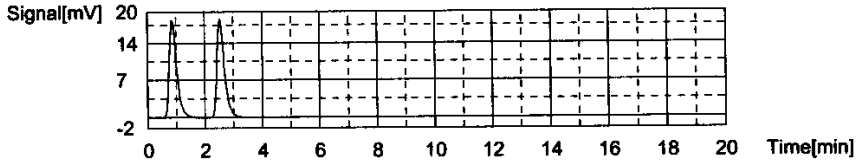
Acid Add. 10.00%
Mean Area 6.500



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	33.29	500uL	1	*******		7/9/2013 3:14:33 PM
2	33.59	500uL	1	*******		7/9/2013 3:18:50 PM

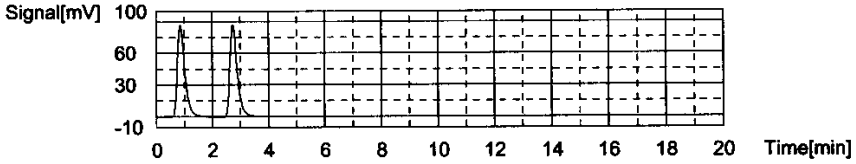
Acid Add. 10.00%
Mean Area 33.44



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	158.6	500uL	1	*******		7/9/2013 3:26:34 PM
2	158.4	500uL	1	*******		7/9/2013 3:31:09 PM

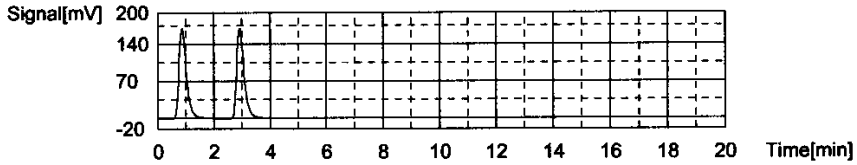
Acid Add. 10.00%
Mean Area 158.5



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	312.7	500uL	1	*******		7/9/2013 3:39:08 PM
2	313.0	500uL	1	*******		7/9/2013 3:44:01 PM

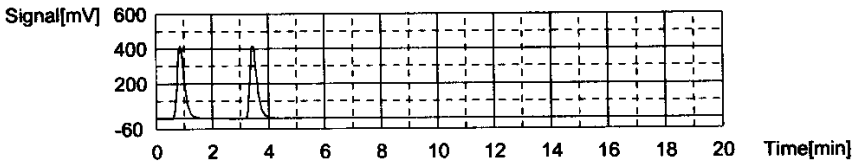
Acid Add. 10.00%
Mean Area 312.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	755.5	500uL	1	*******		7/9/2013 3:52:43 PM
2	755.7	500uL	1	*******		7/9/2013 3:58:05 PM

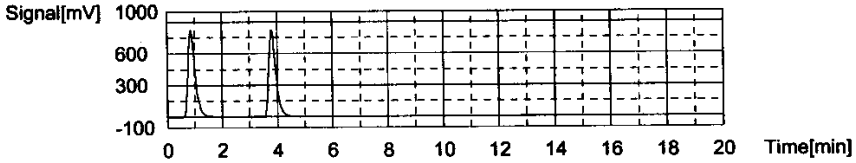
Acid Add. 10.00%
Mean Area 755.6



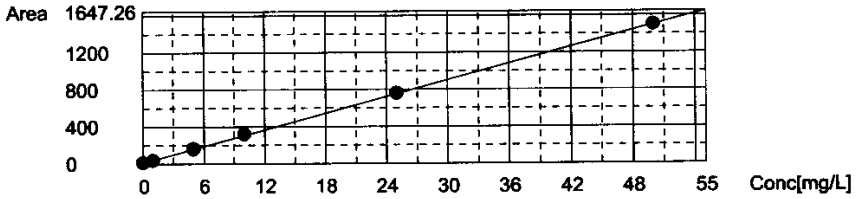
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1495	500uL	1	*******		7/9/2013 4:07:15 PM
2	1495	500uL	1	*******		7/9/2013 4:13:10 PM

Acid Add. 10.00%
Mean Area 1495



Slope: 29.78
Intercept 8.713
r^2 0.999949
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-07-09-2013.cal
Status Completed
Chk. Result

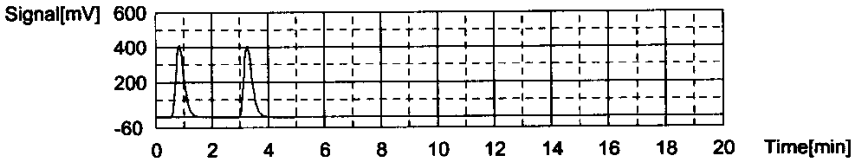
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:23.67mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	868.0	23.80mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	7/9/2013 4:21:01 PM
2	858.5	23.54mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	7/9/2013 4:25:50 PM

Mean Area 863.3
Mean Conc. 23.67mg/L



Sample

Sample Name:	TIC ICV
Sample ID:	Untitled
Origin:	TICCURVE-07-09-2013.cal
Status	Completed
Chk. Result	

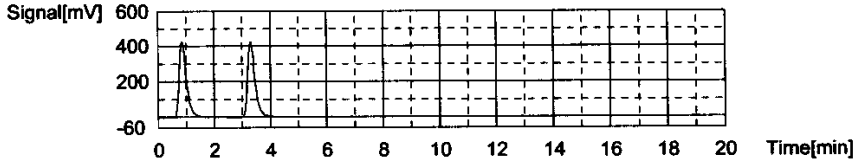
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:25.62mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	769.8	25.56mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	7/9/2013 4:32:54 PM
2	773.1	25.67mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	7/9/2013 4:38:08 PM

Mean Area	771.5
Mean Conc.	25.62mg/L



WORKGROUP: WG452050

452053

Total Organic Carbon

MAKE DAILY

CCV (TOC): Std 58866 (5/200)(1000) = 25mg/L

LCS (TOC): Std 60155 (5/200)(1000) = 25mg/L

CCV (TIC): Std 58878 (5/200)(1000) = 25mg/L

MS (TOC): Std 60155 0.4 (1000) = 10 / 40

Calibration Curve Date: 7-9-13

Reagent: RGT 28396 / RGT 27691

☑ SM5310-C : Matrix 2 WG 452050

☑ EPA 415.1/9060A(mod): Matrix 1 WG 452053 SOP: K 4151 Rev. 15

WG _____ Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full

☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate

☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution
1	TIC 25	
2	CCV 25	
3	Blk	
4	LCS 25	
5	LCSDUP	
6	11-395-01	
7	02	
8	03	
9	11-406-01	
10	05	
11	11-446-01	
12	11-448-01	
13	~~11-302-04~~ DUP 395-01	
14	CCV	
15	CCB 11/8/13	
16	~~11-302~~ MS 395-01	
17	Blk	
18	LCS	
19	LCSDUP	
20	11-302-04	
21	05	
22	06	
23	07	
24	11-337-01	
25	02	

Position	Sample ID	Dilution
26	CCV	
27	CCB	
28	11-337-03	
29	11-388-01	
30	11-409-04	
31	05	
32	06	
33	07	
34	09	
35	DUP 09	
36	MS 10	
37	MSD 11	
38	CCV	
39	CCB	
40	11-409-12	
41	13	
42	11-410-01	
43	11-442-01	
44	~~02~~ 09	
45	~~03~~ 02	
46	~~04~~ 03	
47	~~05~~ 04	
48	~~06~~ 05	
49	~~07~~ 06	
50	CCV	

Position	Sample ID	Dilution
51	CCB	
52	11-442-~~08~~ 07	
53	~~09~~ 08	
54	CCV	
55	CCB	
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		

Analyst: Brie Fenton Date/Time: 11/8/13/1200

DCN#98737

11-442 * Log-in mis labeled

C:\TOC3201\Data\11-08-2013-BAF-TOC.t32

	Analys	Sample Name	Result	Status	Date / Time	Vial
1	TOC	TIC	TOC:1.724mg/L TC:26.82mg/L IC:25.09mg/L	Completed	11/8/2013 1:09:13	1
2	TOC	CCV	!!Error!! TOC:25.34mg/L TC:25.28mg/L IC:-0.06305	Completed	11/8/2013 1:21:24	2
3	TOC	WG452050-01 BLK	!!Error!! TOC:0.1001mg/L TC:0.09475mg/L IC:-0.005	Completed	11/8/2013 1:37:54	0
4	TOC	WG452050-02 LCS	!!Error!! TOC:25.07mg/L TC:24.95mg/L IC:-0.1137m	Completed	11/8/2013 1:59:13	4
5	TOC	WG452050-03 LCSDUP	!!Error!! TOC:24.80mg/L TC:24.69mg/L IC:-0.1081m	Completed	11/8/2013 2:20:38	5
6	TOC	L13110395-01	TOC:3.714mg/L TC:18.15mg/L IC:14.44mg/L	Completed	11/8/2013 2:43:31	6
7	TOC	L13110395-02	TOC:3.518mg/L TC:16.32mg/L IC:12.81mg/L	Completed	11/8/2013 3:05:53	7
8	TOC	L13110395-03	TOC:3.079mg/L TC:18.77mg/L IC:15.69mg/L	Completed	11/8/2013 3:28:37	8
X 9	TOC	L13110406-01	TOC:3.720mg/L TC:16.86mg/L IC:13.14mg/L	Completed	11/8/2013 3:51:12	9
10	TOC	L13110406-05	TOC:9.423mg/L TC:14.99mg/L IC:5.564mg/L	Completed	11/8/2013 4:15:26	10
11	TOC	L13110446-01	TOC:6.086mg/L TC:9.320mg/L IC:3.234mg/L	Completed	11/8/2013 4:39:46	11
12	TOC	L13110448-01	TOC:8.425mg/L TC:19.67mg/L IC:11.25mg/L	Completed	11/8/2013 5:03:53	12
13	TOC	WG452050-05 DUP	TOC:3.300mg/L TC:13.22mg/L IC:9.920mg/L	Completed	11/8/2013 5:26:30	13
14	TOC	CCV	TOC:24.94mg/L TC:24.95mg/L IC:0.01436mg/L	Completed	11/8/2013 5:38:57	14
15	TOC	CCB	!!Error!! TOC:0.07253mg/L TC:0.06798mg/L IC:-0.00	Completed	11/8/2013 5:48:00	0
16	TOC	WG452050-06 MS	TOC:12.82mg/L TC:20.06mg/L IC:7.240mg/L	Completed	11/8/2013 6:10:30	16
17	TOC	WG452053-01 BLK	TOC:0.07098mg/L TC:0.09558mg/L IC:0.02460mg/L	Completed	11/8/2013 6:19:29	0
18	TOC	WG452053-02 LCS	!!Error!! TOC:24.81mg/L TC:24.77mg/L IC:-0.03632	Completed	11/8/2013 6:31:53	18
19	TOC	WG452053-03 LCSDUP	!!Error!! TOC:25.01mg/L TC:24.96mg/L IC:-0.05130	Completed	11/8/2013 6:44:06	19
20	TOC		TOC:28.34mg/L TC:59.19mg/L IC:30.85mg/L	Completed	11/8/2013 6:59:14	20
21	TOC	L13110302-05	TOC:15.36mg/L TC:35.49mg/L IC:20.13mg/L	Completed	11/8/2013 7:13:13	21
22	TOC		TOC:36.82mg/L TC:97.15mg/L IC:60.33mg/L	Completed	11/8/2013 7:28:58	22
23	TOC	L13110302-07	TOC:15.66mg/L TC:24.01mg/L IC:8.352mg/L	Completed	11/8/2013 7:42:10	23
24	TOC	L13110337-01	TOC:1.624mg/L TC:5.999mg/L IC:4.376mg/L	Completed	11/8/2013 7:54:25	24
25	TOC	L13110337-02	TOC:1.547mg/L TC:4.955mg/L IC:3.408mg/L	Completed	11/8/2013 8:06:32	25
26	TOC	CCV	!!Error!! TOC:24.93mg/L TC:24.92mg/L IC:-0.00976	Completed	11/8/2013 8:18:51	26
27	TOC	CCB	TOC:0.09308mg/L TC:0.09666mg/L IC:0.00358mg/L	Completed	11/8/2013 8:27:51	0
28	TOC	L13110337-03	TOC:0.7931mg/L TC:1.138mg/L IC:0.3445mg/L	Completed	11/8/2013 8:39:32	28
29	TOC	L13110338-01	!!Error!! TOC:0.6791mg/L TC:0.6513mg/L IC:-0.0277	Completed	11/8/2013 8:51:00	29
30	TOC	L13110409-04	TOC:16.81mg/L TC:43.25mg/L IC:26.44mg/L	Completed	11/8/2013 9:04:46	30
31	TOC	L13110409-05	TOC:18.73mg/L TC:41.07mg/L IC:22.34mg/L	Completed	11/8/2013 9:18:25	31
32	TOC		TOC:29.18mg/L TC:58.69mg/L IC:29.51mg/L	Completed	11/8/2013 9:33:35	32
33	TOC		TOC:33.18mg/L TC:88.97mg/L IC:55.79mg/L	Completed	11/8/2013 9:49:07	33
34	TOC	WG452053-04 ~~REF~~	TOC:1.189mg/L TC:110.4mg/L IC:109.2mg/L	Completed	11/8/2013 10:05:5	34
35	TOC	WG452053-05 DUP	TOC:0.03855mg/L TC:107.6mg/L IC:107.6mg/L	Completed	11/8/2013 10:22:5	35
36	TOC	WG452053-06 MS	TOC:39.41mg/L TC:90.44mg/L IC:51.02mg/L	Completed	11/8/2013 10:38:0	36
37	TOC		TOC:41.86mg/L TC:95.44mg/L IC:53.58mg/L	Completed	11/8/2013 10:54:3	37
38	TOC	CCV	TOC:25.27mg/L TC:25.51mg/L IC:0.2444mg/L	Completed	11/8/2013 11:07:0	38
39	TOC	CCB	TOC:0.08680mg/L TC:0.1428mg/L IC:0.05597mg/L	Completed	11/8/2013 11:16:1	0
40	TOC		TOC:10.85mg/L TC:112.5mg/L IC:101.6mg/L	Completed	11/8/2013 11:33:3	40
41	TOC	L13110409-13	TOC:1.115mg/L TC:1.697mg/L IC:0.5822mg/L	Completed	11/8/2013 11:45:3	41
42	TOC	L13110410-01	TOC:25.76mg/L TC:27.62mg/L IC:1.854mg/L	Completed	11/8/2013 11:59:4	42
43	TOC	L13110442-01	TOC:14.08mg/L TC:20.66mg/L IC:6.589mg/L	Completed	11/9/2013 12:22:3	43
44	TOC	L13110442-09	TOC:14.17mg/L TC:19.18mg/L IC:5.015mg/L	Completed	11/9/2013 12:45:0	44
45	TOC	L13110442-02	TOC:14.28mg/L TC:19.56mg/L IC:5.274mg/L	Completed	11/9/2013 1:08:01	45
46	TOC	L13110442-03	TOC:13.49mg/L TC:17.75mg/L IC:4.256mg/L	Completed	11/9/2013 1:30:21	46
47	TOC	L13110442-04	TOC:14.59mg/L TC:18.62mg/L IC:4.025mg/L	Completed	11/9/2013 1:53:01	47
48	TOC	L13110442-05	TOC:13.59mg/L TC:17.48mg/L IC:3.887mg/L	Completed	11/9/2013 2:16:01	48
49	TOC	L13110442-06	TOC:2.130mg/L TC:3.226mg/L IC:1.096mg/L	Completed	11/9/2013 2:36:25	49
50	TOC	CCV	TOC:26.11mg/L TC:26.14mg/L IC:0.03609mg/L	Completed	11/9/2013 2:48:45	50
51	TOC	CCB	!!Error!! TOC:0.1146mg/L TC:0.1146mg/L IC:-0.0000	Completed	11/9/2013 2:57:48	0
52	TOC	L13110442-07	TOC:2.008mg/L TC:2.831mg/L IC:0.8225mg/L	Completed	11/9/2013 3:18:05	52
53	TOC	L13110442-08	TOC:1.928mg/L TC:2.683mg/L IC:0.7554mg/L	Completed	11/9/2013 3:38:19	53
54	TOC	CCCV	TOC:25.29mg/L TC:25.32mg/L IC:0.03390mg/L	Completed	11/9/2013 3:50:37	54
55	TOC	CCB	!!Error!! TOC:0.1023mg/L TC:0.09318mg/L IC:-0.009	Completed	11/9/2013 3:59:36	0

11/12/2013 12:03:05 PM

1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

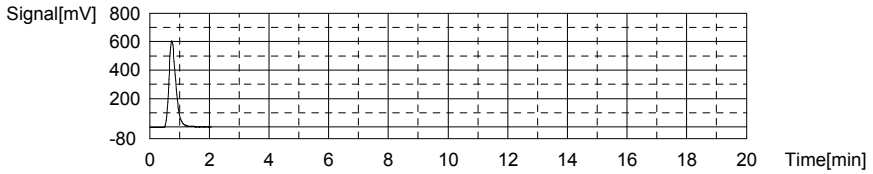
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.724mg/L TC:26.82mg/L IC:25.09mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	977.1	26.82mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:03:30 PM

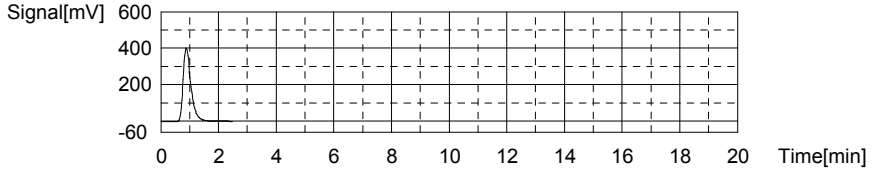
Mean Area 977.1
Mean Conc. 26.82mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	755.9	25.09mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:09:13 PM

Mean Area 755.9
Mean Conc. 25.09mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

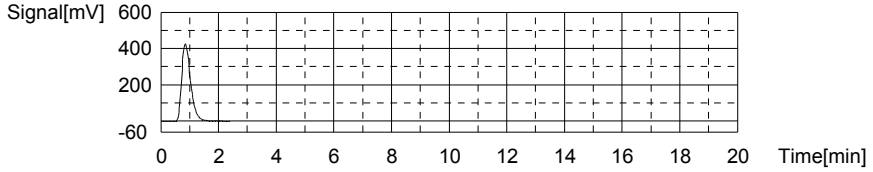
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.34mg/L TC:25.28mg/L IC:-0.06305mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	921.5	25.28mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:17:01 PM

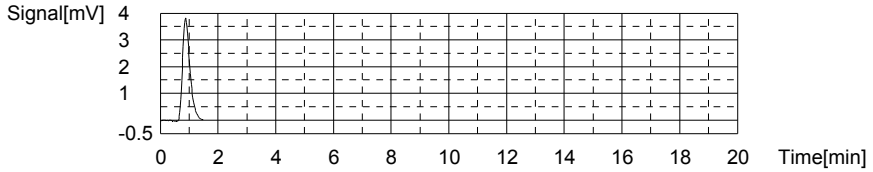
Mean Area 921.5
Mean Conc. 25.28mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.836	-0.06305mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:21:24 PM

Mean Area 6.836
Mean Conc. -0.06305mg/L



Sample

Sample Name: WG452050-01 BLK
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

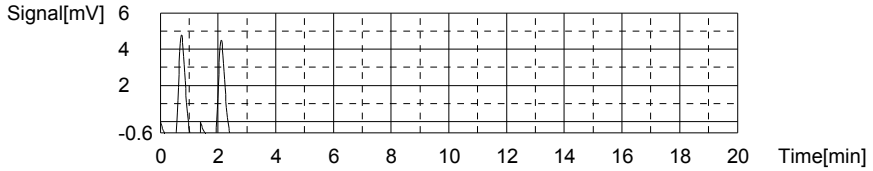
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.1001mg/L TC:0.09475mg/L IC:-0.00537mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.35	0.1110mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:26:26 PM
2	9.174	0.07851mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:29:57 PM

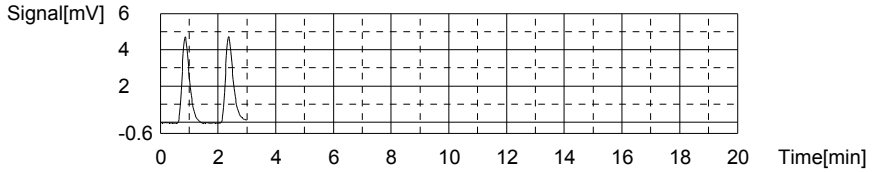
Mean Area 9.762
Mean Conc. 0.09475mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.567	-0.00492mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:33:55 PM
2	8.540	-0.00583mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:37:54 PM

Mean Area 8.553
Mean Conc. -0.00537mg/L



Sample

Sample Name: WG452050-02 LCS
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

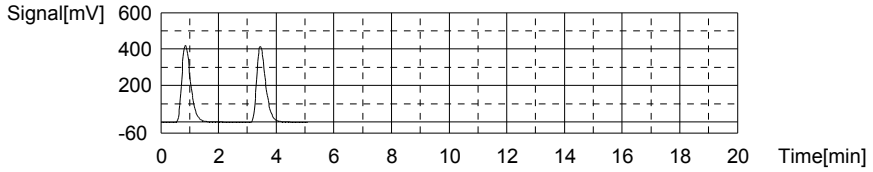
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.07mg/L TC:24.95mg/L IC:-0.1137mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	914.0	25.07mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:45:56 PM
2	905.3	24.83mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 1:50:41 PM

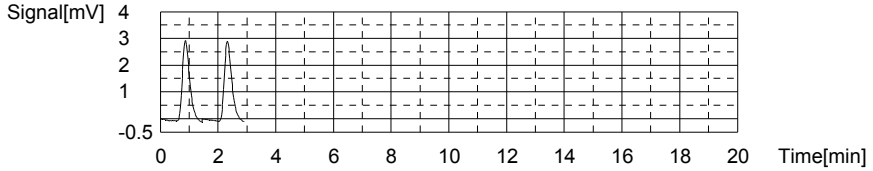
Mean Area 909.7
Mean Conc. 24.95mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.337	-0.1134mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:55:03 PM
2	5.319	-0.1140mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 1:59:13 PM

Mean Area 5.328
Mean Conc. -0.1137mg/L



Sample

Sample Name: WG452050-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

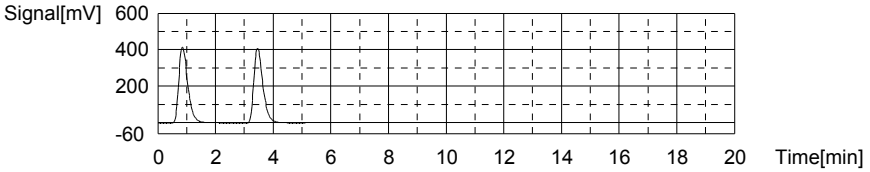
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.80mg/L TC:24.69mg/L IC:-0.1081mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	902.4	24.75mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:07:15 PM
2	897.9	24.63mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:12:01 PM

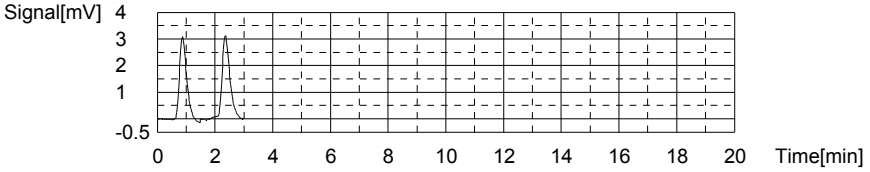
Mean Area 900.2
Mean Conc. 24.69mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.496	-0.1081mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 2:16:25 PM
2	5.496	-0.1081mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 2:20:38 PM

Mean Area 5.496
Mean Conc. -0.1081mg/L



Sample

Sample Name: L13110395-01
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

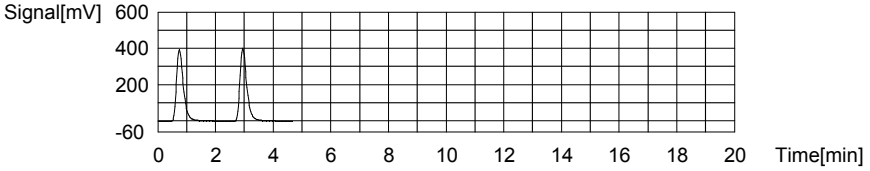
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.714mg/L TC:18.15mg/L IC:14.44mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	655.6	17.94mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:28:16 PM
2	671.1	18.36mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:33:06 PM

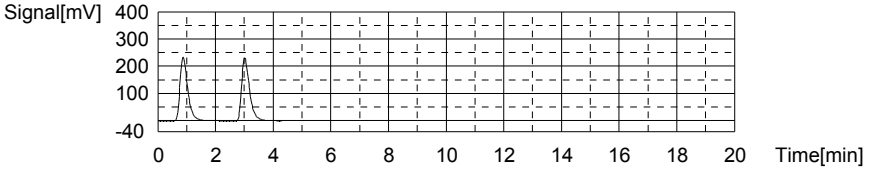
Mean Area 663.4
Mean Conc. 18.15mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	437.3	14.39mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 2:38:23 PM
2	439.8	14.48mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 2:43:31 PM

Mean Area 438.6
Mean Conc. 14.44mg/L



Sample

Sample Name: L13110395-02
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

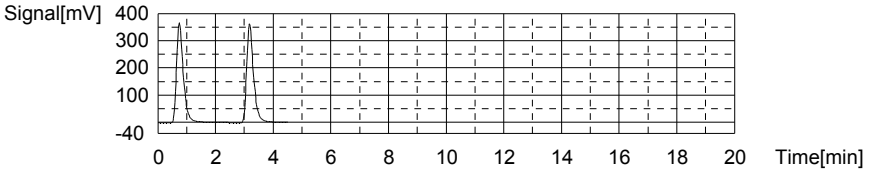
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.518mg/L TC:16.32mg/L IC:12.81mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	598.5	16.36mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:51:22 PM
2	595.9	16.29mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 2:55:42 PM

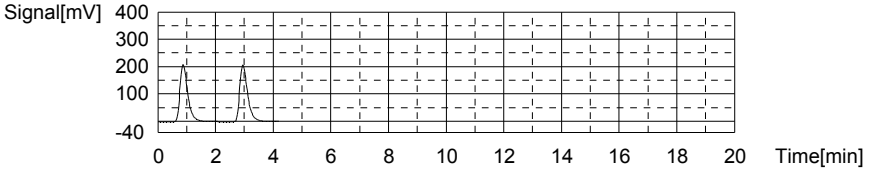
Mean Area 597.2
Mean Conc. 16.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	387.8	12.73mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:00:53 PM
2	392.2	12.88mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:05:53 PM

Mean Area 390.0
Mean Conc. 12.81mg/L



Sample

Sample Name: L13110395-03
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

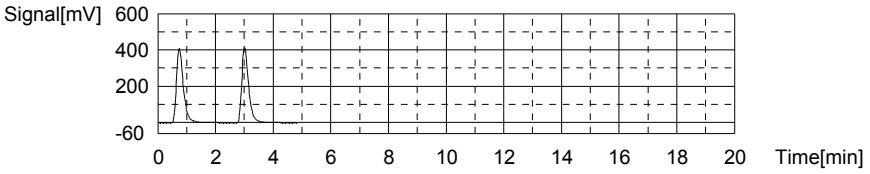
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.079mg/L TC:18.77mg/L IC:15.69mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	682.0	18.67mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 3:13:35 PM
2	689.4	18.87mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 3:18:22 PM

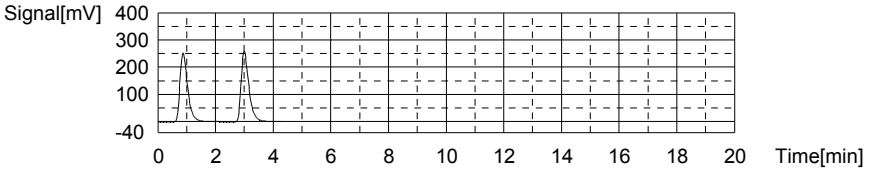
Mean Area 685.7
Mean Conc. 18.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	467.4	15.40mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:23:33 PM
2	484.3	15.97mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:28:37 PM

Mean Area 475.9
Mean Conc. 15.69mg/L



Sample

Sample Name: L13110406-01
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

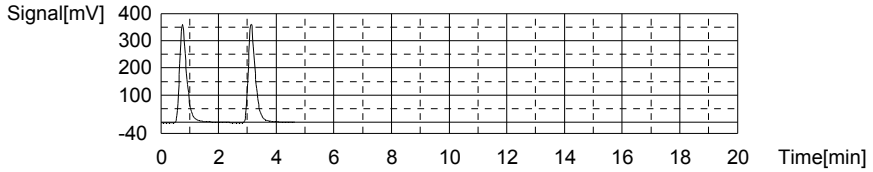
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.720mg/L TC:16.86mg/L IC:13.14mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	614.5	16.80mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 3:36:26 PM
2	619.1	16.93mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 3:41:05 PM

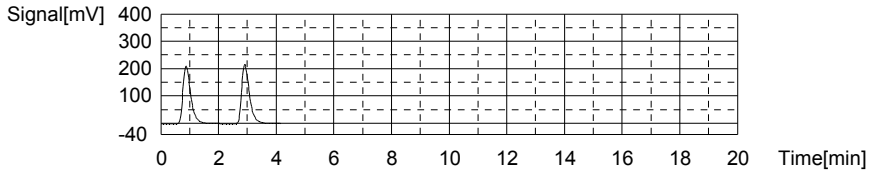
Mean Area 616.8
Mean Conc. 16.86mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	393.5	12.92mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:46:14 PM
2	406.7	13.37mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 3:51:12 PM

Mean Area 400.1
Mean Conc. 13.14mg/L



Sample

Sample Name: L13110406-05
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

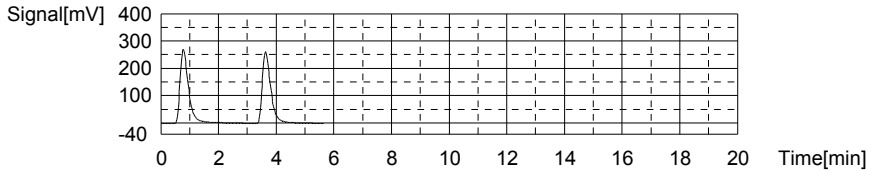
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.423mg/L TC:14.99mg/L IC:5.564mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	554.4	15.14mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 3:59:28 PM
2	543.3	14.83mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 4:05:39 PM

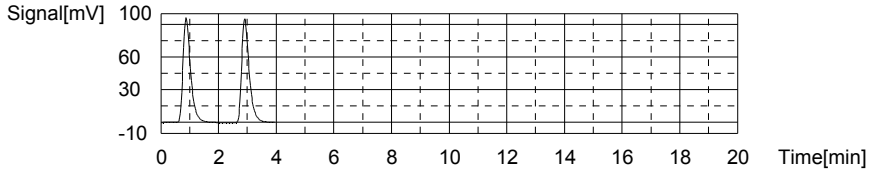
Mean Area 548.9
Mean Conc. 14.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	175.0	5.585mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 4:10:45 PM
2	173.8	5.544mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 4:15:26 PM

Mean Area 174.4
Mean Conc. 5.564mg/L



Sample

Sample Name: L13110446-01
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

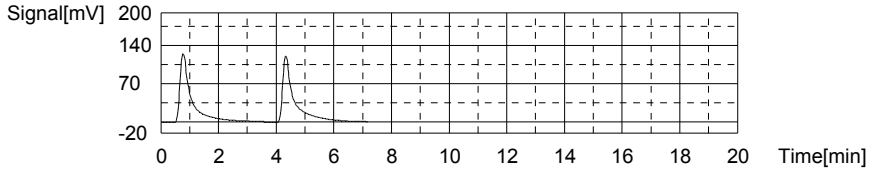
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.086mg/L TC:9.320mg/L IC:3.234mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	344.4	9.339mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 4:24:25 PM
2	343.0	9.300mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 4:30:26 PM

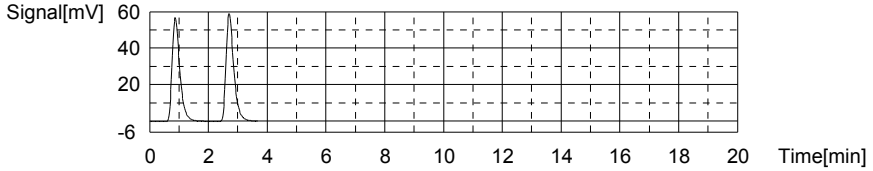
Mean Area 343.7
Mean Conc. 9.320mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	103.0	3.167mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 4:35:14 PM
2	107.0	3.301mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 4:39:46 PM

Mean Area 105.0
Mean Conc. 3.234mg/L



Sample

Sample Name: L13110448-01
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

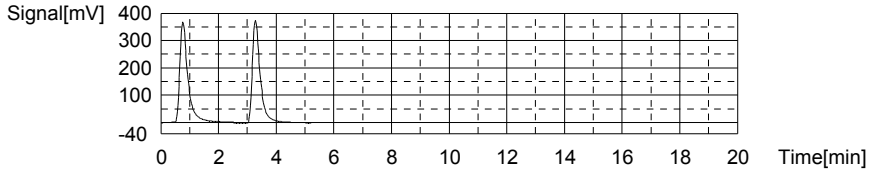
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.425mg/L TC:19.67mg/L IC:11.25mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	719.1	19.69mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 4:47:43 PM
2	717.8	19.65mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 4:53:50 PM

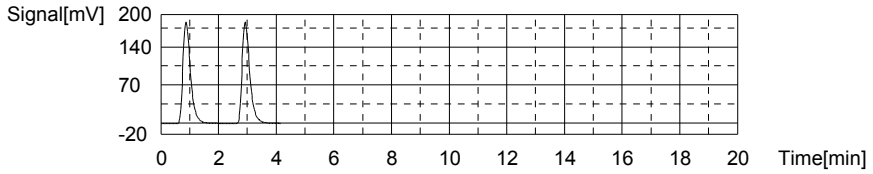
Mean Area 718.5
Mean Conc. 19.67mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	341.5	11.18mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 4:58:55 PM
2	345.7	11.32mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 5:03:53 PM

Mean Area 343.6
Mean Conc. 11.25mg/L



Sample

Sample Name: WG452050-05 DUP
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

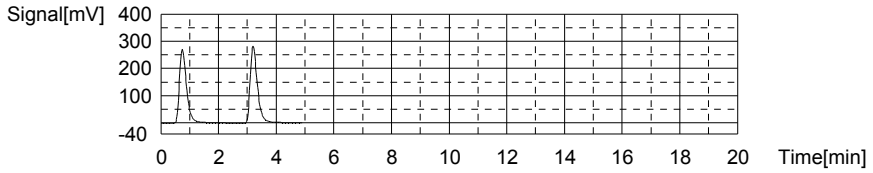
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.300mg/L TC:13.22mg/L IC:9.920mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	469.2	12.79mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 5:11:46 PM
2	500.6	13.65mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 5:16:30 PM

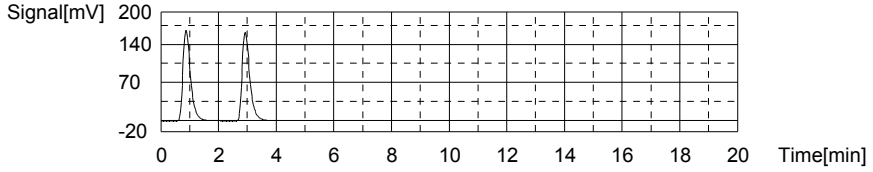
Mean Area 484.9
Mean Conc. 13.22mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	304.6	9.937mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 5:21:41 PM
2	303.6	9.904mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 5:26:30 PM

Mean Area 304.1
Mean Conc. 9.920mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

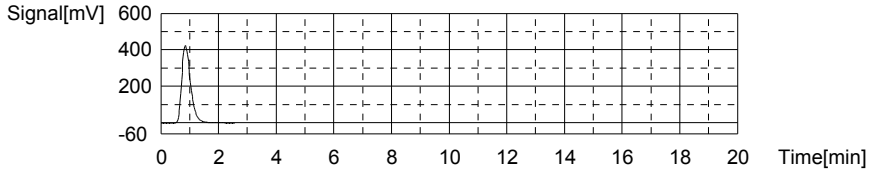
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:24.94mg/L TC:24.95mg/L IC:0.01436mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	909.5	24.95mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 5:34:28 PM

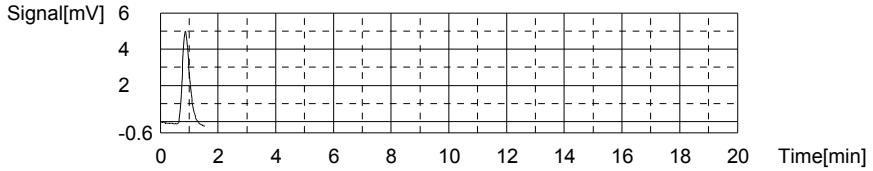
Mean Area 909.5
Mean Conc. 24.95mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.141	0.01436mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 5:38:57 PM

Mean Area 9.141
Mean Conc. 0.01436mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

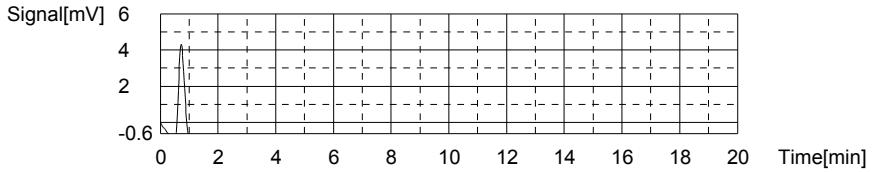
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.07253mg/L TC:0.06798mg/L IC:-0.00455mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.793	0.06798mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 5:44:00 PM

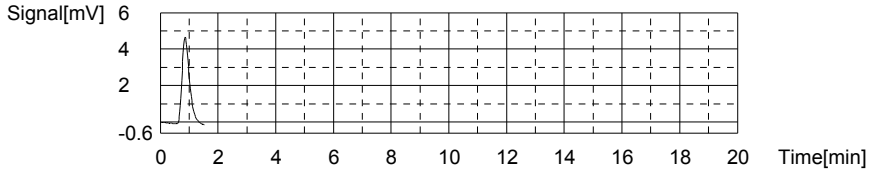
Mean Area 8.793
Mean Conc. 0.06798mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.578	-0.00455mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 5:48:00 PM

Mean Area 8.578
Mean Conc. -0.00455mg/L



Sample

Sample Name: WG452050-06 MS
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

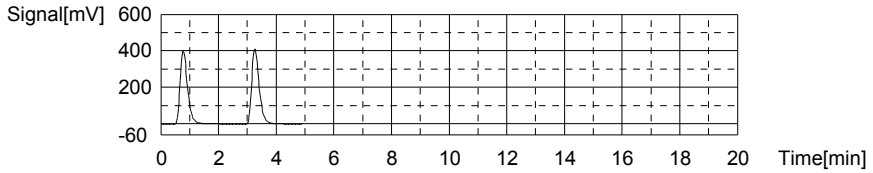
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.82mg/L TC:20.06mg/L IC:7.240mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	719.8	19.71mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 5:55:55 PM
2	745.5	20.42mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 6:00:36 PM

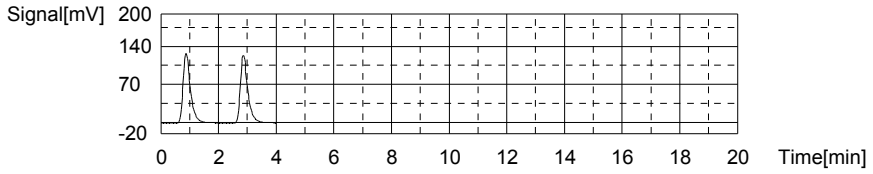
Mean Area 732.7
Mean Conc. 20.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	226.4	7.311mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:05:41 PM
2	222.2	7.170mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:10:30 PM

Mean Area 224.3
Mean Conc. 7.240mg/L



Sample

Sample Name: WG452053-01 BLK
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

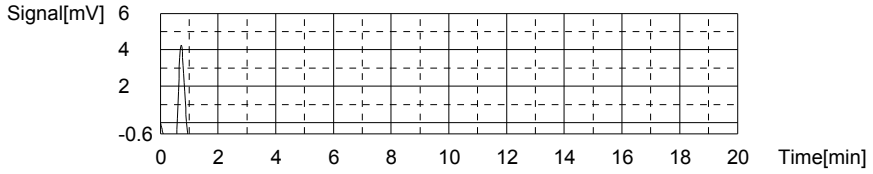
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.07098mg/L TC:0.09558mg/L IC:0.02460mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.792	0.09558mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 6:15:30 PM

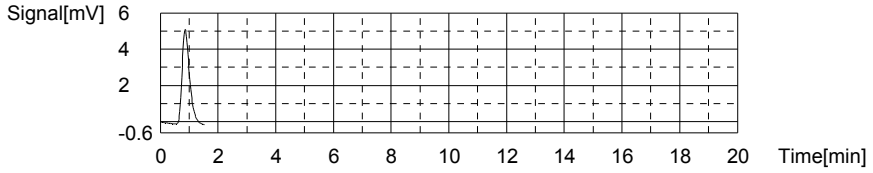
Mean Area 9.792
Mean Conc. 0.09558mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.446	0.02460mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:19:29 PM

Mean Area 9.446
Mean Conc. 0.02460mg/L



Sample

Sample Name: WG452053-02 LCS
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

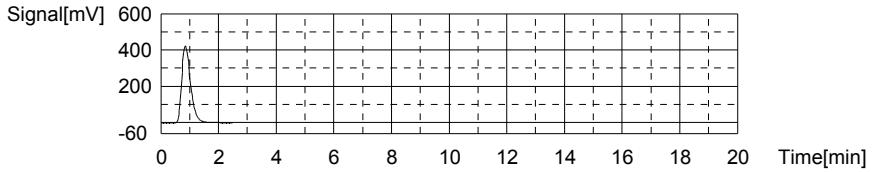
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.81mg/L TC:24.77mg/L IC:-0.03632mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	903.1	24.77mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 6:27:23 PM

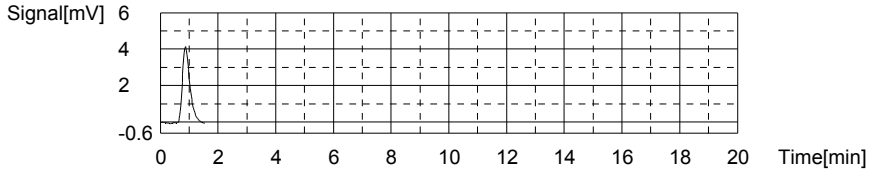
Mean Area 903.1
Mean Conc. 24.77mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.632	-0.03632mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:31:53 PM

Mean Area 7.632
Mean Conc. -0.03632mg/L



Sample

Sample Name: WG452053-03 LCSDUP
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

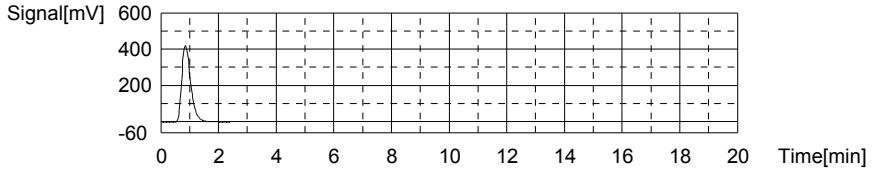
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.01mg/L TC:24.96mg/L IC:-0.05130mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	909.9	24.96mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 6:39:41 PM

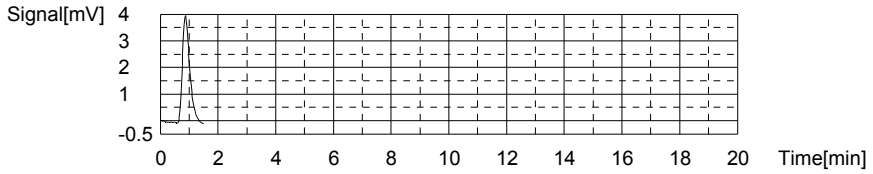
Mean Area 909.9
Mean Conc. 24.96mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.186	-0.05130mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:44:06 PM

Mean Area 7.186
Mean Conc. -0.05130mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

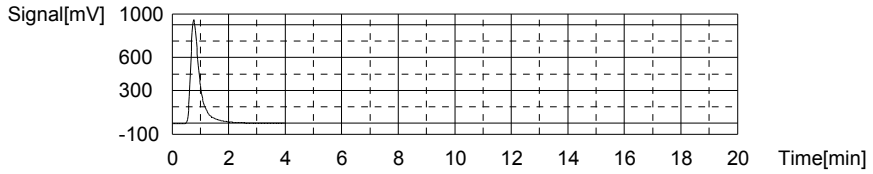
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:28.34mg/L TC:59.19mg/L IC:30.85mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2149	59.19mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 6:53:31 PM

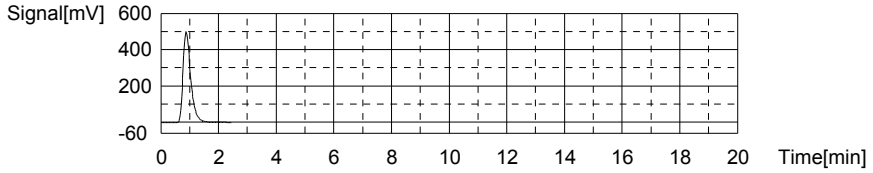
Mean Area 2149
Mean Conc. 59.19mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	927.4	30.85mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 6:59:14 PM

Mean Area 927.4
Mean Conc. 30.85mg/L



Sample

Sample Name: L13110302-05
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

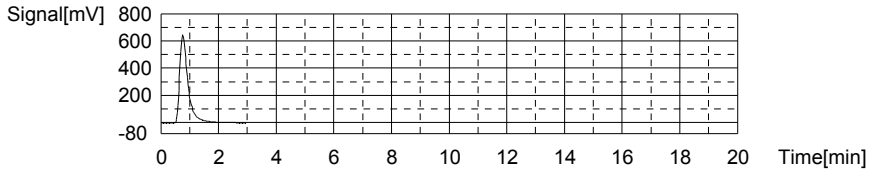
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.36mg/L TC:35.49mg/L IC:20.13mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1291	35.49mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 7:07:36 PM

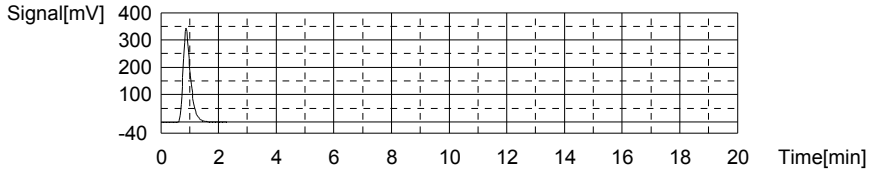
Mean Area 1291
Mean Conc. 35.49mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	608.2	20.13mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 7:13:13 PM

Mean Area 608.2
Mean Conc. 20.13mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

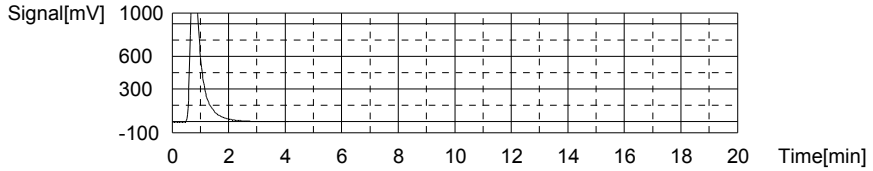
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:36.82mg/L TC:97.15mg/L IC:60.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3523	97.15mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 7:22:45 PM

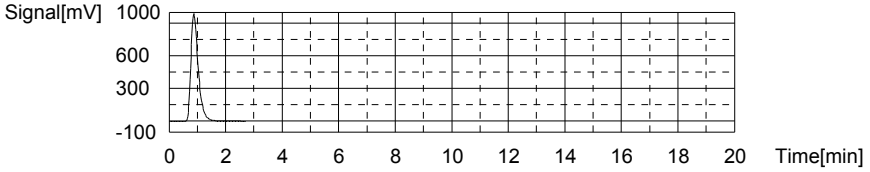
Mean Area 3523
Mean Conc. 97.15mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1805	60.33mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 7:28:58 PM

Mean Area 1805
Mean Conc. 60.33mg/L



Sample

Sample Name: L13110302-07
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

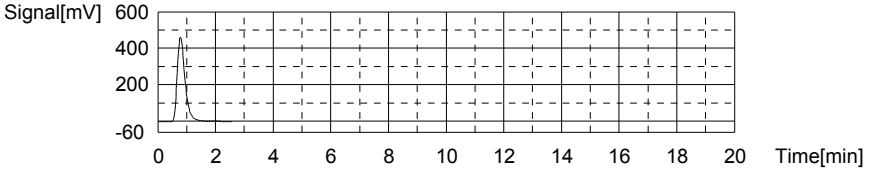
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.66mg/L TC:24.01mg/L IC:8.352mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	875.4	24.01mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 7:36:58 PM

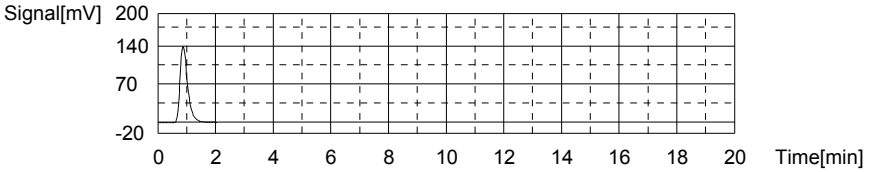
Mean Area 875.4
Mean Conc. 24.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	257.4	8.352mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 7:42:10 PM

Mean Area 257.4
Mean Conc. 8.352mg/L



Sample

Sample Name: L13110337-01
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

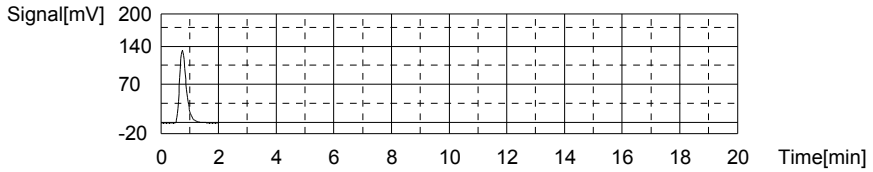
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.624mg/L TC:5.999mg/L IC:4.376mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	223.5	5.999mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 7:49:33 PM

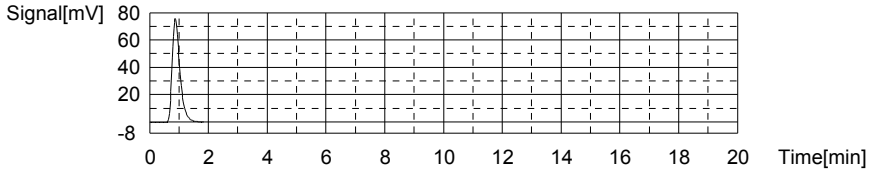
Mean Area 223.5
Mean Conc. 5.999mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	139.0	4.376mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 7:54:25 PM

Mean Area 139.0
Mean Conc. 4.376mg/L



Sample

Sample Name: L13110337-02
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

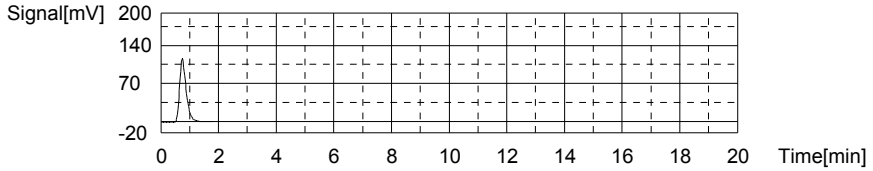
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.547mg/L TC:4.955mg/L IC:3.408mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	185.7	4.955mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:01:38 PM

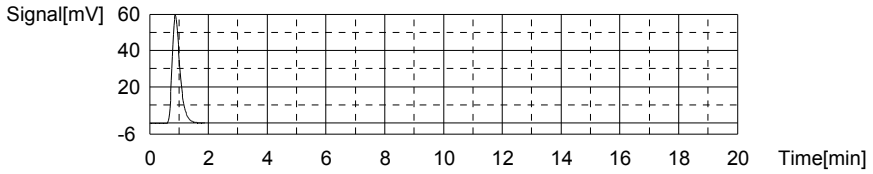
Mean Area 185.7
Mean Conc. 4.955mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	110.2	3.408mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 8:06:32 PM

Mean Area 110.2
Mean Conc. 3.408mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

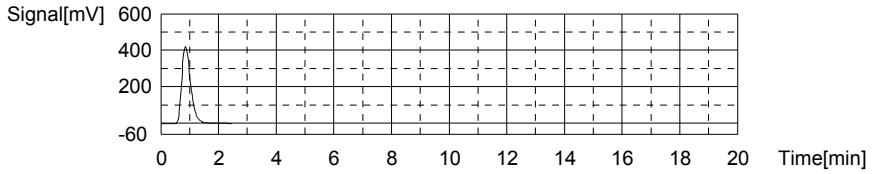
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.93mg/L TC:24.92mg/L IC:-0.00976mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	908.3	24.92mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:14:25 PM

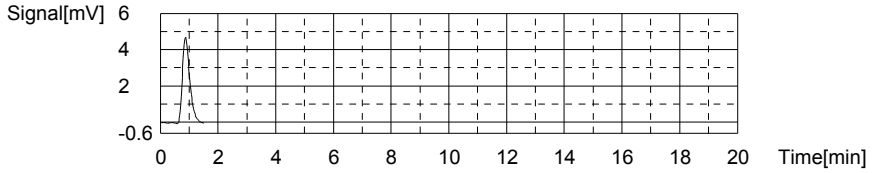
Mean Area 908.3
Mean Conc. 24.92mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.423	-0.00976mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 8:18:51 PM

Mean Area 8.423
Mean Conc. -0.00976mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

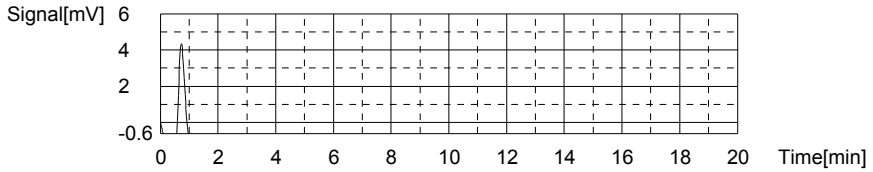
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.09308mg/L TC:0.09666mg/L IC:0.00358mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.831	0.09666mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:23:51 PM

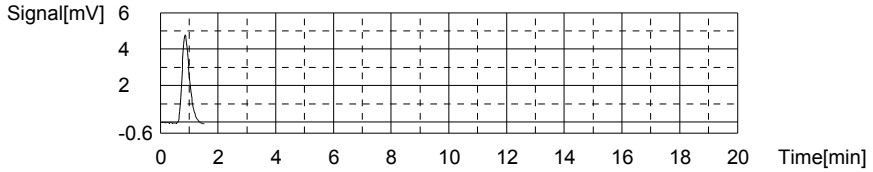
Mean Area 9.831
Mean Conc. 0.09666mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.820	0.00358mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 8:27:51 PM

Mean Area 8.820
Mean Conc. 0.00358mg/L



Sample

Sample Name: L13110337-03
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

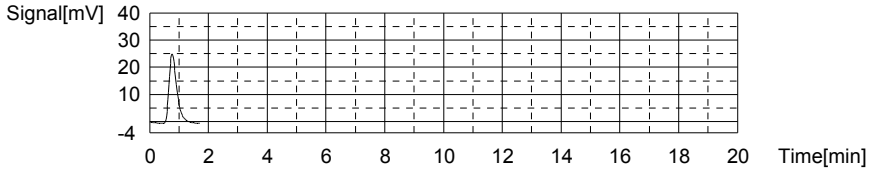
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7931mg/L TC:1.138mg/L IC:0.3445mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.51	1.138mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:34:59 PM

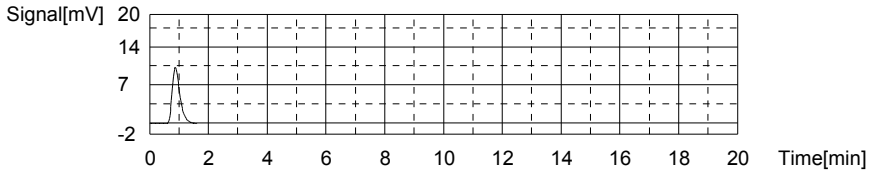
Mean Area 47.51
Mean Conc. 1.138mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	18.97	0.3445mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 8:39:32 PM

Mean Area 18.97
Mean Conc. 0.3445mg/L



Sample

Sample Name: L13110338-01
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

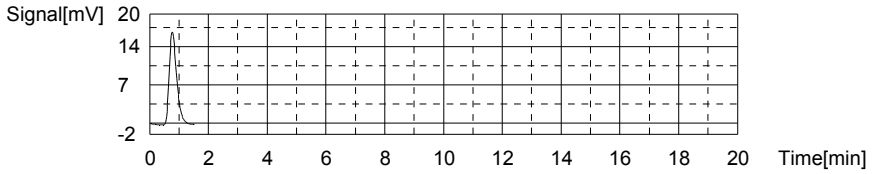
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.6791mg/L TC:0.6513mg/L IC:-0.02779mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	29.91	0.6513mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:46:30 PM

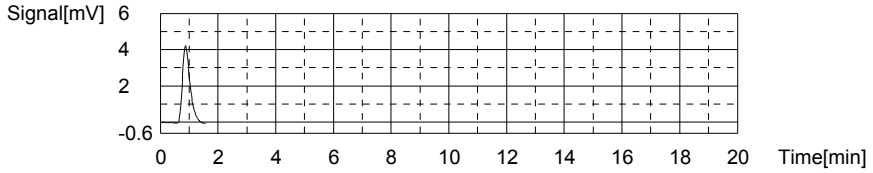
Mean Area 29.91
Mean Conc. 0.6513mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.886	-0.02779mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 8:51:00 PM

Mean Area 7.886
Mean Conc. -0.02779mg/L



Sample

Sample Name: L13110409-04
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

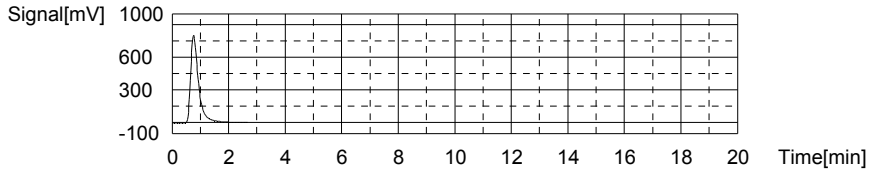
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:16.81mg/L TC:43.25mg/L IC:26.44mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1572	43.25mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 8:59:07 PM

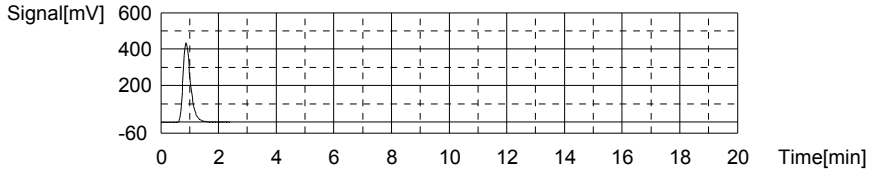
Mean Area 1572
Mean Conc. 43.25mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	796.0	26.44mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 9:04:46 PM

Mean Area 796.0
Mean Conc. 26.44mg/L



Sample

Sample Name: L13110409-05
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

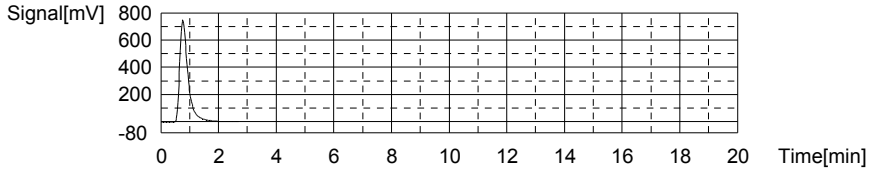
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:18.73mg/L TC:41.07mg/L IC:22.34mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1493	41.07mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 9:12:54 PM

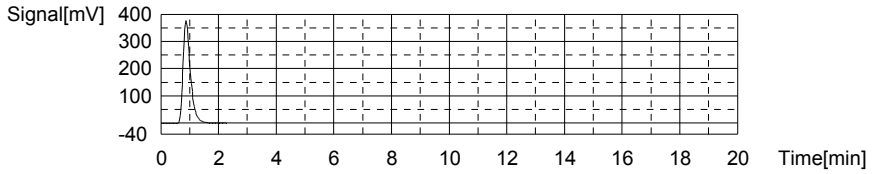
Mean Area 1493
Mean Conc. 41.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	673.9	22.34mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 9:18:25 PM

Mean Area 673.9
Mean Conc. 22.34mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

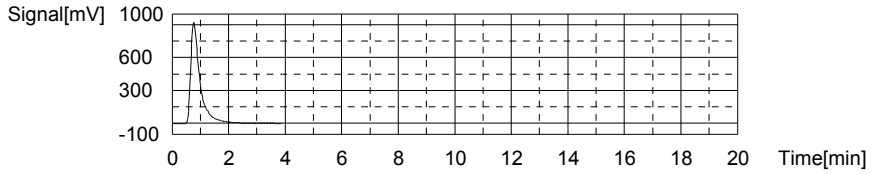
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:29.18mg/L TC:58.69mg/L IC:29.51mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2131	58.69mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 9:27:42 PM

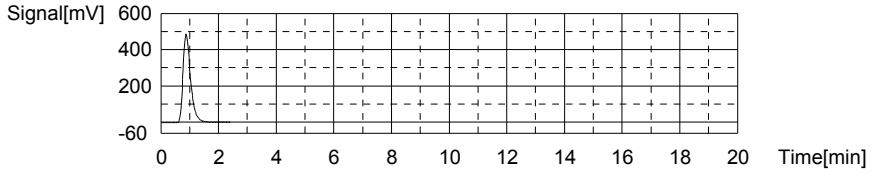
Mean Area 2131
Mean Conc. 58.69mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	887.5	29.51mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 9:33:35 PM

Mean Area 887.5
Mean Conc. 29.51mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

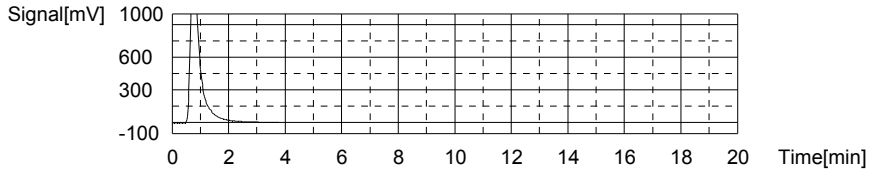
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:33.18mg/L TC:88.97mg/L IC:55.79mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3227	88.97mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 9:42:49 PM

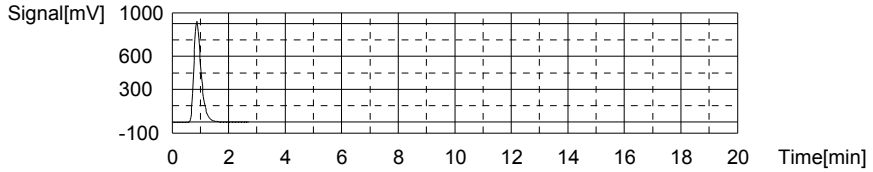
Mean Area 3227
Mean Conc. 88.97mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1670	55.79mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 9:49:07 PM

Mean Area 1670
Mean Conc. 55.79mg/L



Sample

Sample Name: WG452053-04 REF
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

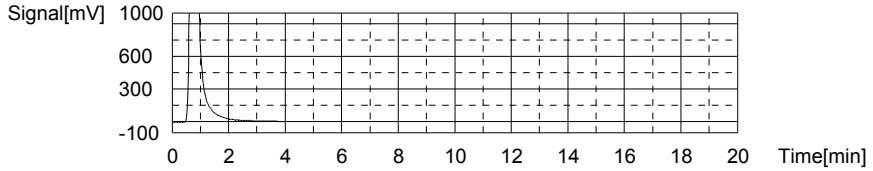
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.189mg/L TC:110.4mg/L IC:109.2mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4002	110.4mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 9:58:40 PM

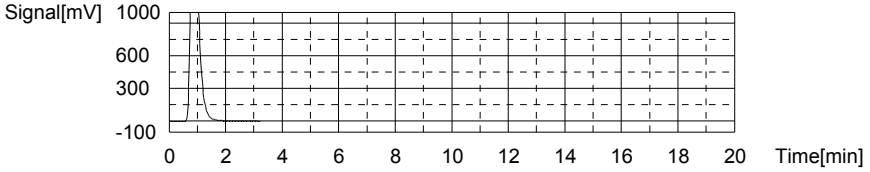
Mean Area 4002
Mean Conc. 110.4mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3260	109.2mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 10:05:51 PM

Mean Area 3260
Mean Conc. 109.2mg/L



Sample

Sample Name: WG452053-05 DUP
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

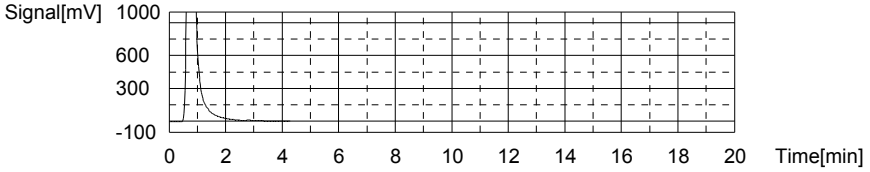
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.03855mg/L TC:107.6mg/L IC:107.6mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3902	107.6mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 10:15:34 PM

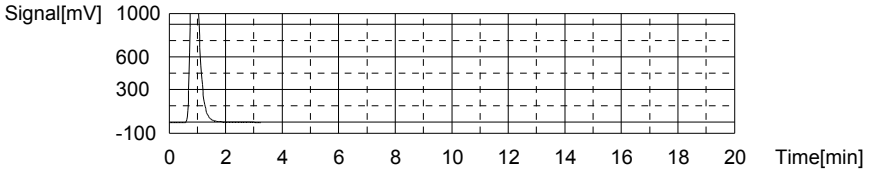
Mean Area 3902
Mean Conc. 107.6mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3212	107.6mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 10:22:51 PM

Mean Area 3212
Mean Conc. 107.6mg/L



Sample

Sample Name: WG452053-06 MS
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

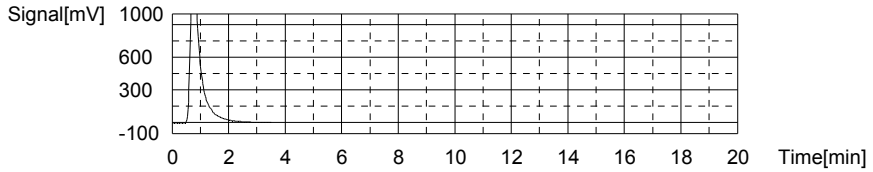
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:39.41mg/L TC:90.44mg/L IC:51.02mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3280	90.44mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 10:31:47 PM

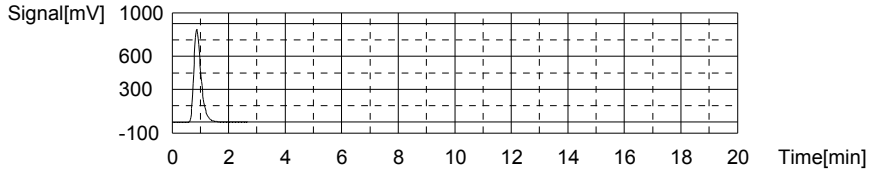
Mean Area 3280
Mean Conc. 90.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1528	51.02mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 10:38:07 PM

Mean Area 1528
Mean Conc. 51.02mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

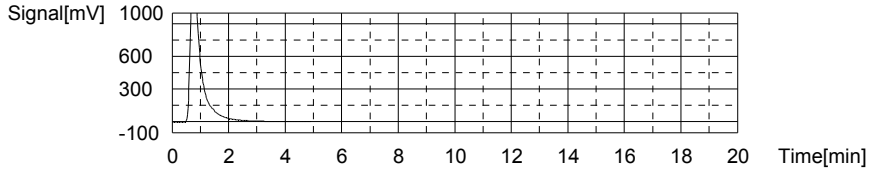
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:41.86mg/L TC:95.44mg/L IC:53.58mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3461	95.44mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 10:48:28 PM

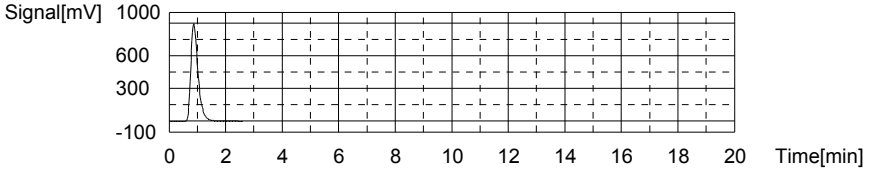
Mean Area 3461
Mean Conc. 95.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1604	53.58mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 10:54:32 PM

Mean Area 1604
Mean Conc. 53.58mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

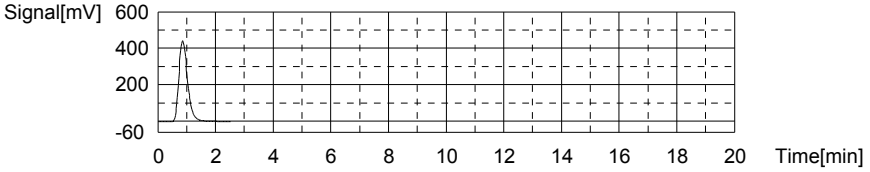
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:25.27mg/L TC:25.51mg/L IC:0.2444mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	929.8	25.51mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 11:02:30 PM

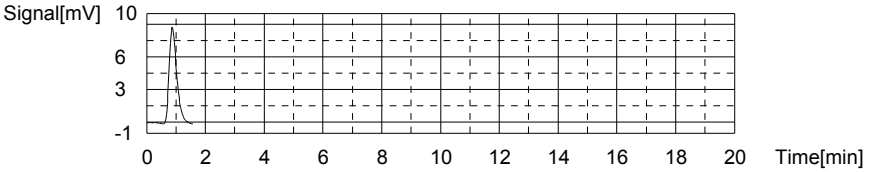
Mean Area 929.8
Mean Conc. 25.51mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.99	0.2444mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 11:07:07 PM

Mean Area 15.99
Mean Conc. 0.2444mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

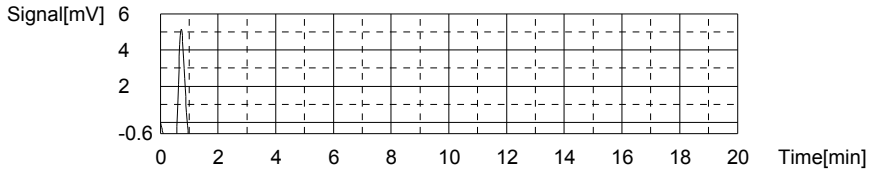
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.08680mg/L TC:0.1428mg/L IC:0.05597mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.50	0.1428mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 11:12:10 PM

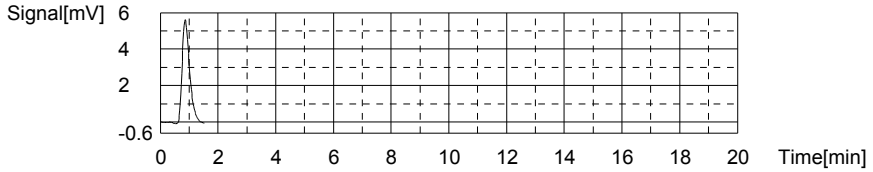
Mean Area 11.50
Mean Conc. 0.1428mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.38	0.05597mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 11:16:12 PM

Mean Area 10.38
Mean Conc. 0.05597mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

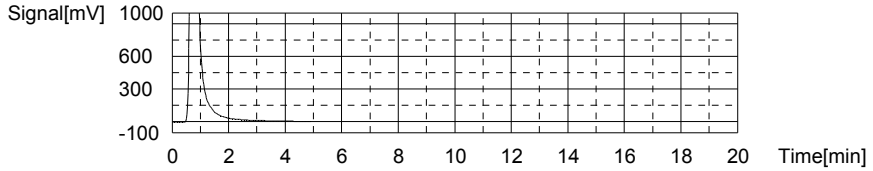
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.85mg/L TC:112.5mg/L IC:101.6mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4077	112.5mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 11:26:34 PM

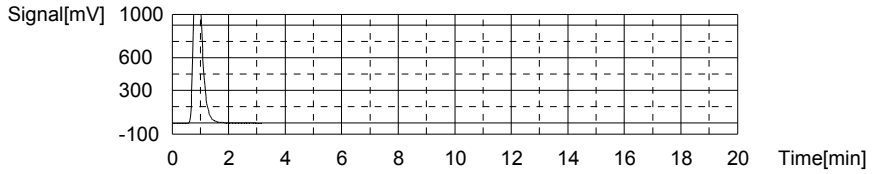
Mean Area 4077
Mean Conc. 112.5mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3034	101.6mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 11:33:38 PM

Mean Area 3034
Mean Conc. 101.6mg/L



Sample

Sample Name: L13110409-13
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

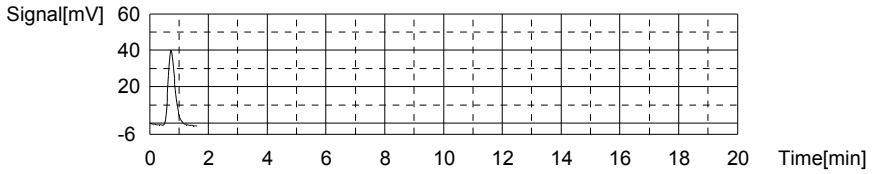
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.115mg/L TC:1.697mg/L IC:0.5822mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.77	1.697mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 11:40:40 PM

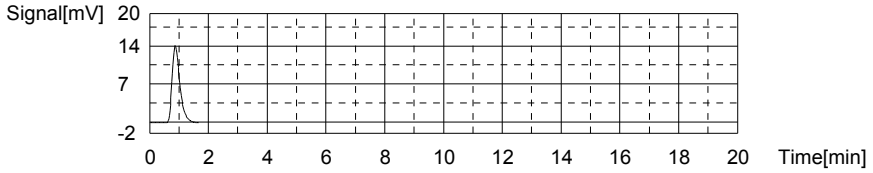
Mean Area 67.77
Mean Conc. 1.697mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	26.05	0.5822mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 11:45:30 PM

Mean Area 26.05
Mean Conc. 0.5822mg/L



Sample

Sample Name: L13110410-01
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

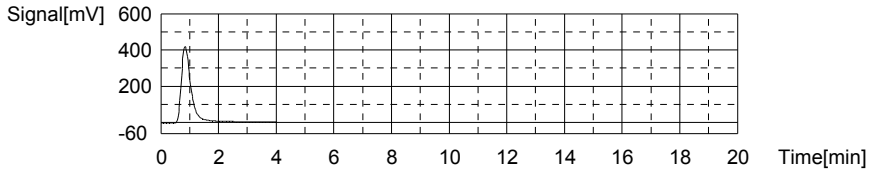
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:25.76mg/L TC:27.62mg/L IC:1.854mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1006	27.62mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/8/2013 11:54:58 PM

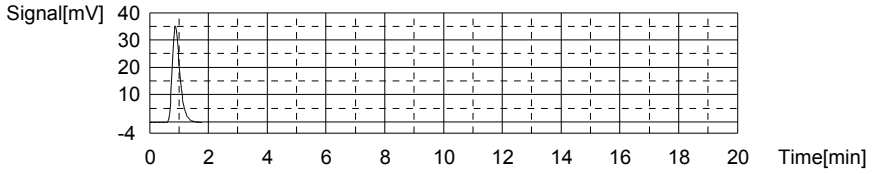
Mean Area 1006
Mean Conc. 27.62mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	63.92	1.854mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/8/2013 11:59:46 PM

Mean Area 63.92
Mean Conc. 1.854mg/L



Sample

Sample Name: L13110442-01
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

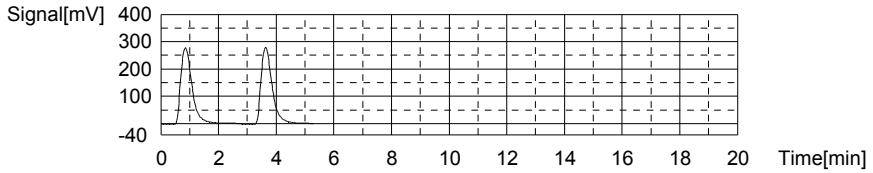
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:14.08mg/L TC:20.66mg/L IC:6.589mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	758.2	20.77mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:08:00 AM
2	750.5	20.56mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:12:45 AM

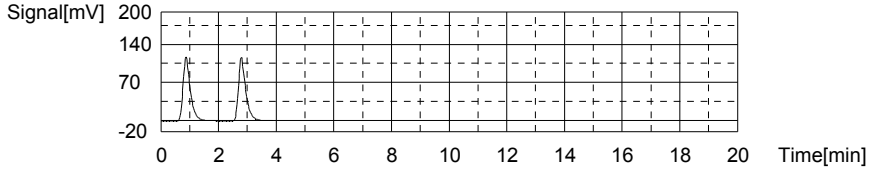
Mean Area 754.4
Mean Conc. 20.66mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	204.9	6.589mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 12:17:43 AM
2	204.9	6.589mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 12:22:30 AM

Mean Area 204.9
Mean Conc. 6.589mg/L



Sample

Sample Name: L13110442-09
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

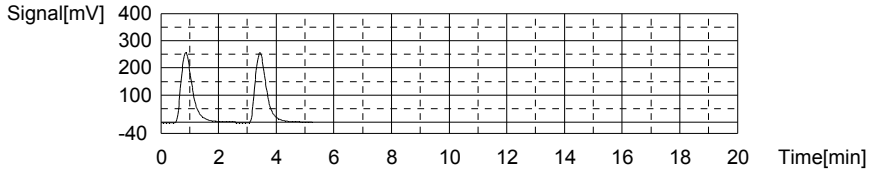
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:14.17mg/L TC:19.18mg/L IC:5.015mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	703.2	19.25mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:30:32 AM
2	698.4	19.12mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:35:29 AM

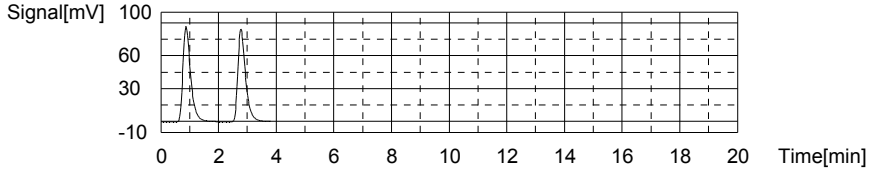
Mean Area 700.8
Mean Conc. 19.18mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	159.7	5.071mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 12:40:25 AM
2	156.4	4.960mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 12:45:08 AM

Mean Area 158.1
Mean Conc. 5.015mg/L



Sample

Sample Name: L13110442-02
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

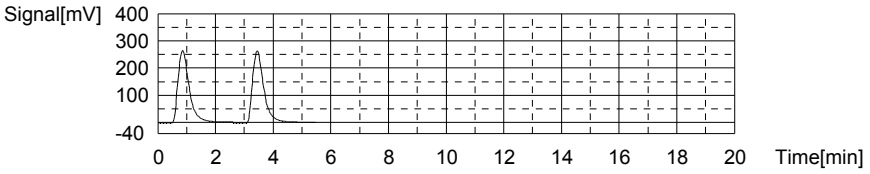
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:14.28mg/L TC:19.56mg/L IC:5.274mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	711.1	19.47mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:53:10 AM
2	717.4	19.64mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 12:58:19 AM

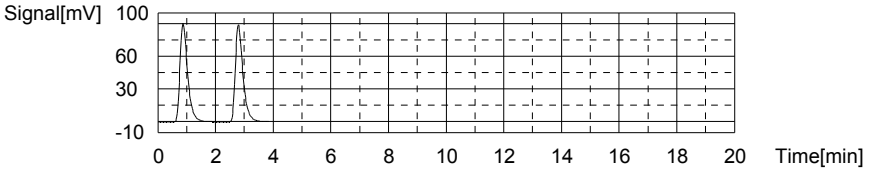
Mean Area 714.3
Mean Conc. 19.56mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	166.3	5.292mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:03:15 AM
2	165.2	5.255mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:08:01 AM

Mean Area 165.8
Mean Conc. 5.274mg/L



Sample

Sample Name: L13110442-03
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

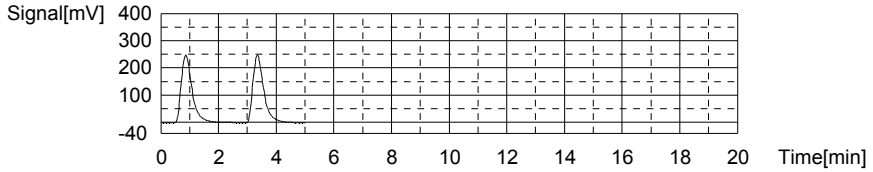
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:13.49mg/L TC:17.75mg/L IC:4.256mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	647.8	17.72mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 1:15:56 AM
2	650.0	17.78mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 1:20:50 AM

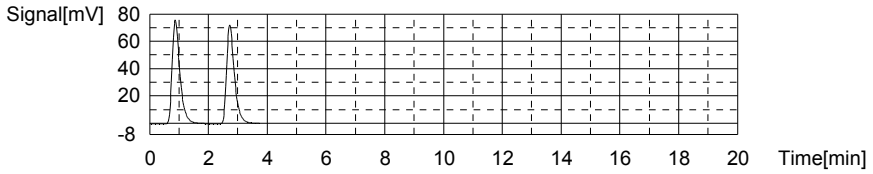
Mean Area 648.9
Mean Conc. 17.75mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	138.3	4.352mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:25:41 AM
2	132.6	4.161mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:30:21 AM

Mean Area 135.4
Mean Conc. 4.256mg/L



Sample

Sample Name: L13110442-04
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

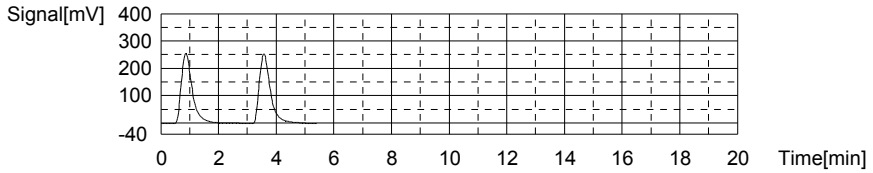
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:14.59mg/L TC:18.62mg/L IC:4.025mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	676.7	18.52mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 1:38:30 AM
2	683.8	18.72mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 1:43:28 AM

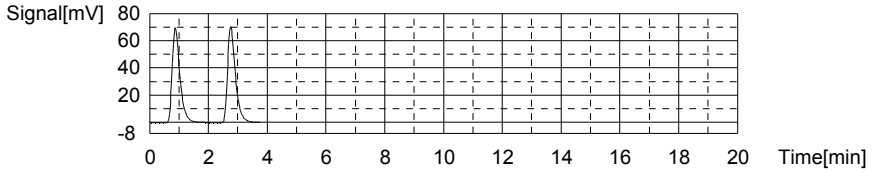
Mean Area 680.3
Mean Conc. 18.62mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	127.4	3.986mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:48:23 AM
2	129.7	4.063mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 1:53:01 AM

Mean Area 128.6
Mean Conc. 4.025mg/L



Sample

Sample Name: L13110442-05
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

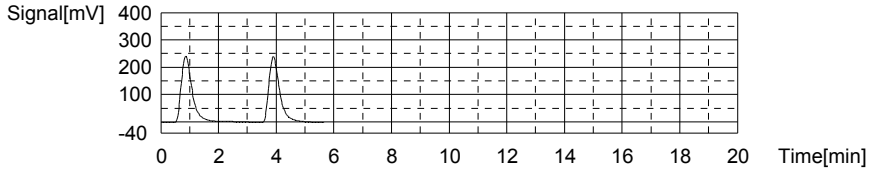
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:13.59mg/L TC:17.48mg/L IC:3.887mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	643.3	17.60mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:01:35 AM
2	634.7	17.36mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:06:28 AM

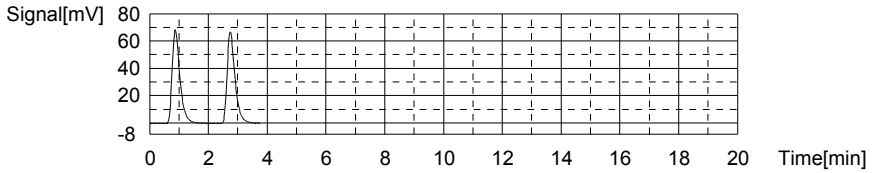
Mean Area 639.0
Mean Conc. 17.48mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	125.4	3.919mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:11:20 AM
2	123.5	3.855mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:16:01 AM

Mean Area 124.5
Mean Conc. 3.887mg/L



Sample

Sample Name: L13110442-06
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

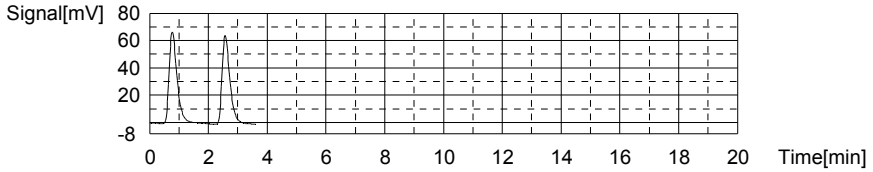
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.130mg/L TC:3.226mg/L IC:1.096mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	125.2	3.284mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:23:16 AM
2	121.0	3.168mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:27:20 AM

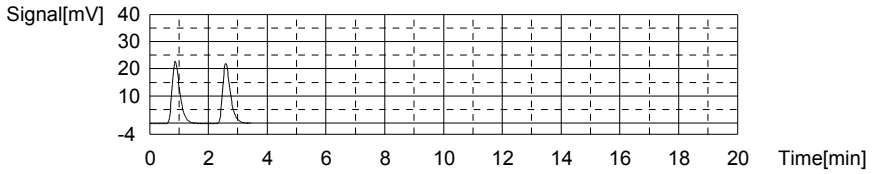
Mean Area 123.1
Mean Conc. 3.226mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	41.89	1.114mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:31:59 AM
2	40.79	1.077mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:36:25 AM

Mean Area 41.34
Mean Conc. 1.096mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

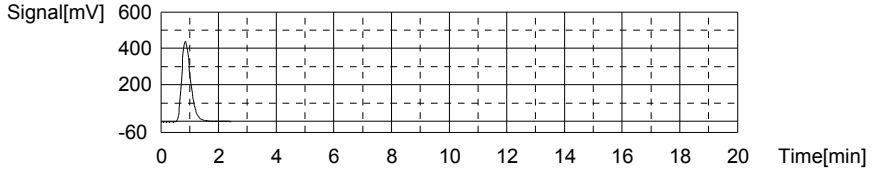
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:26.11mg/L TC:26.14mg/L IC:0.03609mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	952.7	26.14mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:44:19 AM

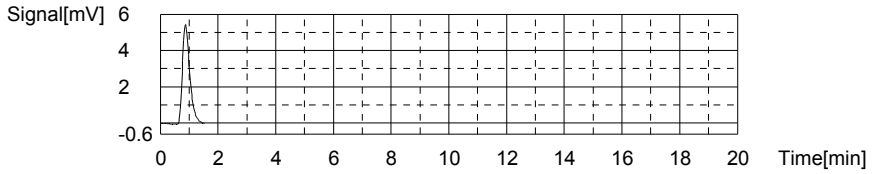
Mean Area 952.7
Mean Conc. 26.14mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.788	0.03609mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:48:45 AM

Mean Area 9.788
Mean Conc. 0.03609mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

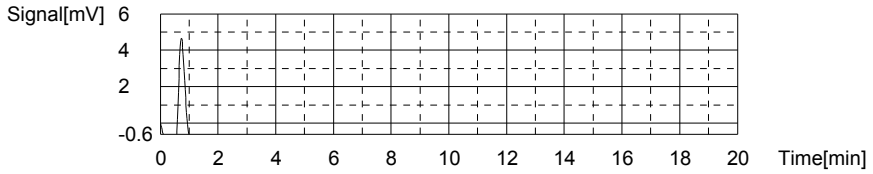
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.1146mg/L TC:0.1146mg/L IC:-0.00002mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.48	0.1146mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 2:53:48 AM

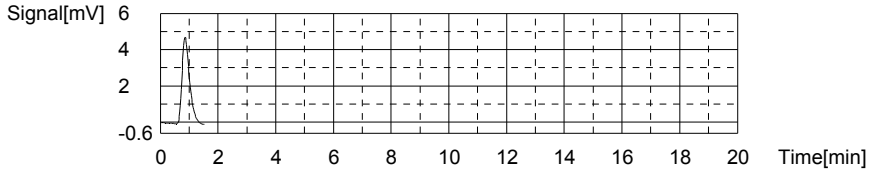
Mean Area 10.48
Mean Conc. 0.1146mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.713	-0.00002mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 2:57:48 AM

Mean Area 8.713
Mean Conc. -0.00002mg/L



Sample

Sample Name: L13110442-07
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

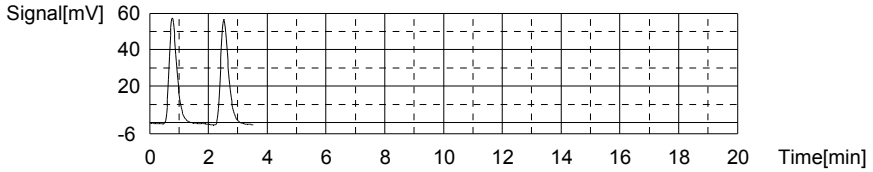
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.008mg/L TC:2.831mg/L IC:0.8225mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	107.9	2.806mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:05:02 AM
2	109.7	2.856mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:09:04 AM

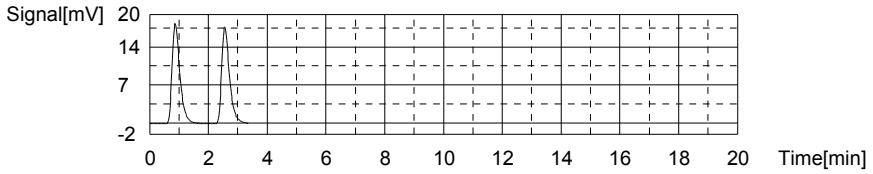
Mean Area 108.8
Mean Conc. 2.831mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.68	0.8385mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:13:40 AM
2	32.73	0.8066mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:18:05 AM

Mean Area 33.20
Mean Conc. 0.8225mg/L



Sample

Sample Name: L13110442-08
Sample ID: <Untitled>
Origin: TOC-07-09-2013A.met
Status Completed
Chk. Result

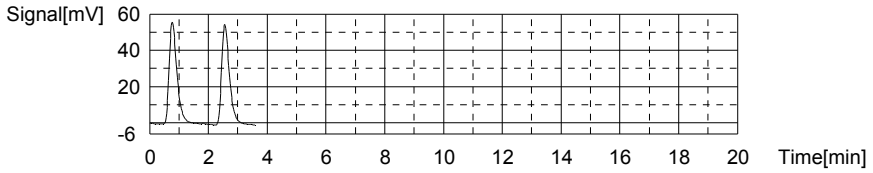
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.928mg/L TC:2.683mg/L IC:0.7554mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	104.0	2.698mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:25:21 AM
2	102.9	2.668mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:29:25 AM

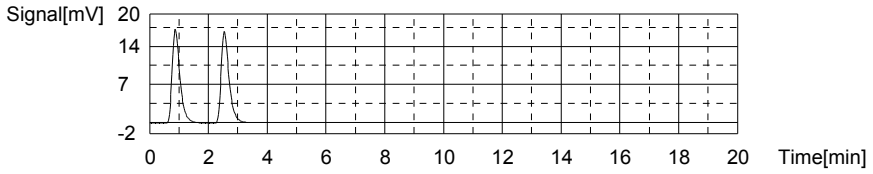
Mean Area 103.5
Mean Conc. 2.683mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.42	0.7626mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:33:56 AM
2	30.99	0.7481mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:38:19 AM

Mean Area 31.21
Mean Conc. 0.7554mg/L



Sample

Sample Name: CCCV
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

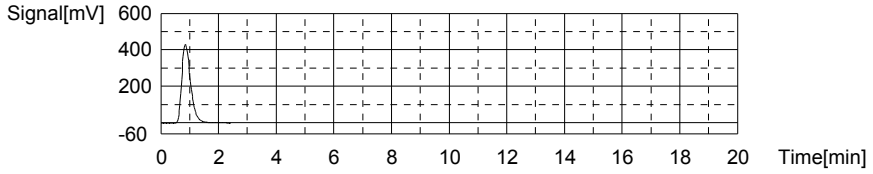
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:25.29mg/L TC:25.32mg/L IC:0.03390mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	923.0	25.32mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:46:12 AM

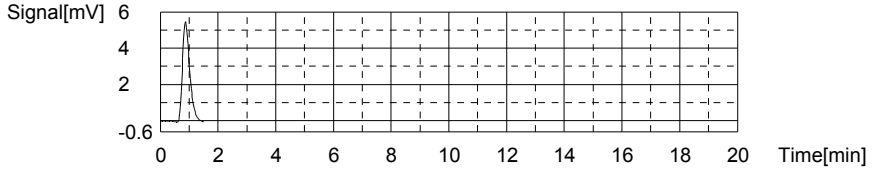
Mean Area 923.0
Mean Conc. 25.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.723	0.03390mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:50:37 AM

Mean Area 9.723
Mean Conc. 0.03390mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-07-09-2013.met
Status Completed
Chk. Result

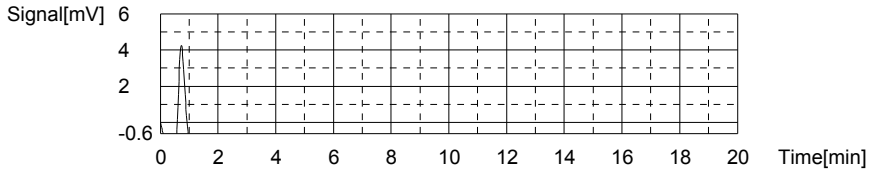
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.1023mg/L TC:0.09318mg/L IC:-0.00912mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.705	0.09318mg/L	500uL	1		TCCURVE-07-09-2013.2013_07_09_13_54_5	11/9/2013 3:55:38 AM

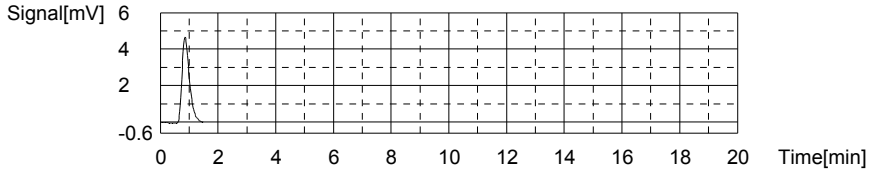
Mean Area 9.705
Mean Conc. 0.09318mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.442	-0.00912mg/L	500uL	1		TICCURVE-07-09-2013.2013_07_09_14_57_1	11/9/2013 3:59:36 AM

Mean Area 8.442
Mean Conc. -0.00912mg/L



2.2.11 Total Suspended Solids Data

2.2.11.1 Summary Data

Login Number: L13110337
Department: Conventionals
Analyst: April Greene

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: 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: 74621
Approved By: Deanna Hesson

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 30-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 10:05	**Dilution:**	1	**File ID:**	EN.1311080832-13
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

Sample #:	L13110337-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 16-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 12:15	**Dilution:**	1	**File ID:**	EN.1311080832-14
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.

Microbac

Lab Report #: L13110337
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L13110337-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL 26-1113-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2540-D-1997	**Cal Date:**	
Workgroup #:	WG451988	**Analyst:**	ADG	**Run Date:**	11/08/2013 08:32
Collect Date:	11/05/2013 14:14	**Dilution:**	1	**File ID:**	EN.1311080832-15
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		10.0		5.00	2.50

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: 11-NOV-2013
Analyst: ADG
Analyst: HCB
Method: TSS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG451988

Calibration/Linearity	11/11/13
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	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	ADG
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
13-NOV-2013

April Greene

Secondary Reviewer:
14-NOV-2013

Dianna Hesson

CHECKLIST1 - Modified 03/05/2008
Generated: NOV-14-2013 09:45:54

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2540-D-1997 AAB#: WG451988

Login Number: L13110337

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
MPL 30-1113-1	01	11/05/13					11/08/2013	2.9	7		11/08/13	2.9	7	
MPL 16-1113-1	02	11/05/13					11/08/2013	2.8	7		11/08/13	2.8	7	
MPL 26-1113-1	03	11/05/13					11/08/2013	2.8	7		11/08/13	2.8	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3201385
Report generated 11/13/2013 17:05

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L13110337
Blank File ID: EN.1311080832-01
Prep Date: 11/08/13 08:32
Analyzed Date: 11/08/13 08:32
Analyst: ADG

Work Group: WG451988
Blank Sample ID: WG451988-01
Instrument ID: OVEN
Method: SM2540-D-1997

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG451988-02	EN.1311080832-02	11/08/13 08:32	
LCS2	WG451988-03	EN.1311080832-03	11/08/13 08:32	
MPL 30-1113-1	L13110337-01	EN.1311080832-13	11/08/13 08:32	
MPL 16-1113-1	L13110337-02	EN.1311080832-14	11/08/13 08:32	
MPL 26-1113-1	L13110337-03	EN.1311080832-15	11/08/13 08:32	
DUP	WG451988-05	EN.1311080832-24	11/08/13 08:32	
DUP	WG451988-07	EN.1311080832-25	11/08/13 08:32	

Report Name: BLANK_SUMMARY
PDF File ID: 3201386
Report generated 11/13/2013 17:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L13110337 Prep Date: 11/08/13 08:32 Sample ID: WG451988-01
Instrument ID: OVEN Run Date: 11/08/13 08:32 Prep Method: 160.2/SM2540D
File ID: EN.1311080832-01 Analyst: ADG Method: SM2540-D-1997
Workgroup (AAB#): WG451988 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: 3201387
13-NOV-2013 17:05

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L13110337 Analyst: ADG Prep Method: 160.2/SM2540D
Instrument ID: OVEN Matrix: Water Method: SM2540-D-1997
Workgroup (AAB#): WG451988 Units: mg/L
QC Key: DOD4 Lot #: STD61213

Sample ID: WG451988-02 LCS File ID: EN.1311080832-02 Run Date: 11/08/2013 08:32
Sample ID: WG451988-03 LCS2 File ID: EN.1311080832-03 Run Date: 11/08/2013 08:32

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	45.0	90.0	50.0	43.0	86.0	4.55	75 - 125	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3201388
Report generated: 11/13/2013 17:05

2.2.11.3 Raw Data

Tray 5

WORKGROUP: WG451988

TOTAL SUSPENDED SOLIDS

(tss1)

Oven: TSS1 Other
Method: EPA 160.2 / SM2540D
LCS: STD 61213
MS: _____ mL LCS & _____ mL sample

Balance: AND GR-202 / Other
SOP: K1602 Rev #: 14
Filter Lot #: 9517112

		On Temp/Time:	104 /11:25	104 /0932	/	/
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	LCS1	100				
LCSDUP: mg/L	LCS2	100				
L13110279-07	1	200				
-09	2	200				
0282-05	3	~~200~~ 150				
-07	4	200				
0285-01	5	200				
0294-02	6	200				
0300-02	7	200				
0332-03	8	10				
-09	9	10				
0337-01	10	200				
-02	11	200				
-03	12	200				
0355-03	13	200				
-06	14	200				
0356-01	15	200				
0356-05	16	200				
-07	17	200				
-09	18	200				
-12	19	200				
0282-03	20	200				
DUP: L13110282-07	Dup1	200				
DUP: L13110337-02	Dup2	200				
		Off Temp/Time:	104 /08:00	104 /11:00	~~104 /1100~~	/

ANALYST: Judi Brown

* Duplicate required on 10% of samples

DATE/TIME: (on) 11/8/13 @ 10:25
DATE/TIME: (off) 11/9/13 @08:00
DATE/TIME: (off) 11/11/13 @ 11:00
DATE/TIME: (off)

DCN#98722

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG451988
Analyst: ADG
Analyte: TOTAL SUSPENDED SOLIDS
Balance: BAL018
Instrument#: OVEN

Method: 160.2/SM2540D
SOP: K1602 Revison 14
Spike Solution: STD61213
Daily Dilution:

SAMPLE NUMBER		INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG451988-01	BLK	200	0.0877	0.0876	0.0876		-0.5000	-0.5000	mg/L
WG451988-02	LCS	100	0.088	0.0925	0.0925		45.00	45.00	mg/L
WG451988-03	LCS2	100	0.0878	0.092	0.0921		43.00	43.00	mg/L
L13110279-07	1	200	0.0857	0.0855	0.0857		0	ND	mg/L
L13110279-09	2	200	0.0868	0.0869	0.0869		0.5000	ND	mg/L
L13110282-05	3	150	0.0875	0.0892	0.0893		12.00	12.00	mg/L
L13110282-07	4	200	0.087	0.087	0.0871		0.5000	ND	mg/L
WG451988-04	4	200	0.087	0.087	0.0871		0.5000	0.5000	mg/L
L13110285-01	5	200	0.0867	0.0869	0.0868		0.5000	ND	mg/L
L13110294-02	6	200	0.0864	0.0886	0.0886		11.00	11.00	mg/L
L13110300-02	7	200	0.0859	0.0867	0.0867		4.000	4.000	mg/L
L13110332-03	8	10	0.0882	0.0889	0.0887		50.00	ND	mg/L
L13110332-09	9	10	0.0863	0.1194	0.1194		3310	3310	mg/L
L13110337-01	10	200	0.0859	0.086	0.086		0.5000	ND	mg/L
L13110337-02	11	200	0.0857	0.0862	0.0861		2.000	ND	mg/L
WG451988-06	11	200	0.0857	0.0862	0.0861		2.000	2.000	mg/L
L13110337-03	12	200	0.087	0.0891	0.089		10.00	10.00	mg/L
L13110355-03	13	200	0.0893	0.0895	0.0894		0.5000	ND	mg/L
L13110355-06	14	200	0.0876	0.0879	0.0879		1.500	ND	mg/L
L13110356-01	15	200	0.0868	0.087	0.0872		2.000	ND	mg/L
L13110356-05	16	200	0.0869	0.0867	0.0869		0	ND	mg/L
L13110356-07	17	200	0.087	0.087	0.0873		1.500	ND	mg/L
L13110356-09	18	200	0.0887	0.0886	0.0889		1.000	ND	mg/L
L13110356-12	19	200	0.0889	0.0887	0.0877		-6.000	ND	mg/L
L13110282-03	20	200	0.0886	0.0886	0.0887		0.5000	ND	mg/L
WG451988-05	DUP	200	0.0873	0.0875	0.0875		1.000	1.000	mg/L
WG451988-07	DUP	200	0.0883	0.0891	0.0889		3.000	3.000	mg/L

Analyst: April Greene

*Duplicate required on 10% of samples

Date/Time (on) : 11/08/2013 08:32
Date/Time (off): 11/09/2013 11:25
Date/Time (off): 11/11/2013 11:00
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 3190540
Report generated: 11/13/2013 08:38

Microbac

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
November 20, 2013

001 - BIO-CHEM TESTING WVDEP 220	002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental	004 - MICROBAC PITTSBURGH
ADC - ANTHONY D. CANTER	ADG - APRIL D. GREENE
AJF - AMANDA J. FICKIESEN	AML - TONY M. LONG
AZH - AFTER HOURS	BAF - BRICE A. FENTON
BJO - BRIAN J. OGDEN	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
CRW - CHRISTINA R. WILSON	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DAK - DEAN A. K
DCM - DAVID C. MERCKLE	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	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
ENY - EMILY N. YOAK	EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN
HCB - HEIDI C. BROWN	HJR - HOLLY J. REED
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	KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	KRB - KAELY R. BECKER
KSC - KELLY S. CUNNINGHAM	LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS	LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING
MLW - MATTHEW L. WARREN	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS	PIT - MICROBAC WARRENDALE
PSW - PEGGY S. WEBB	QX - QIN XU
RAH - ROY A. HALSTEAD	REK - BOB E. KYER
RLB - BOB BUCHANAN	RM - RAYMOND MALEKE
RNP - RICK N. PETTY	RS - ROSEMARY SCOTT
RWC - RODNEY W. CAMPBELL	SAV - SARAH A. VANDENBERG
SEP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	TPA - TYLER P. AMRINE
VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG	XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
November 20, 2013

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.
>	Greater than
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
CT1	The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
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)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
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,CT1	Estimated value; the analyte concentration was less than the RL/LOQ.
J,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
JQ	The reported result is an estimated value and one or more quality control criteria failed. See narrative.
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/MDL).
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, H1	Not detected; Sample analysis performed past holding time.
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 MDL and RL are estimated due to quality control discrepancies.
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

COC No. A 35156

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: C B & I

Project Contact: Mark Lyon

Contact Phone #: 505-262-[redacted]

Turn Around Requirements: Normal

Location: WSMR [redacted]

Project ID: WSMR STP

Sampler (print): Bradley T. Davis

Signature: Bradley T. Davis

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	CN - Total	CN- Amenable	CN- Free	Metals = Sb, As, Ba, Be, Cd,	Cr, Co, Cu, Pb, Ni, Se, Ag,	Tl, Sn, V, Zn, Hg	Chloride, Fluoride, Sulfate	Ammonia-N	Nitrate + Nitrite-N	pH, Spec. Conductivity	TDS, TSS, TOC	Alkalinity	PO4	Na, K, Mg, Mn		TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MPL 30-1113-1		X	11-5-13	1005	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MPL 16-1113-1		X	11-5-13	1215	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MPL 26-1113-1		X	11-5-13	1414	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Relinquished by: (Signature)	Date	Time	Received (Signatur
Bradley T. Davis	11-5-13	1630	
Relinquished by: (Signature)	Date	Time	Received (Signatur

Microbac OVD
Received: 11/06/2013 10:54
By: CARA STRICKLER
221000044769

Cara Strickler

Date	Time	Received by: (Signature)

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-01	273685	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	SEM	07-NOV-2013 08:20	JBK	CLS	

Samplenum	Container ID	Products
L13110337-01	273686	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	08-NOV-2013 09:27	BAF	CLS	
3	STORE	WET	A1	14-NOV-2013 11:39	CLS	BAF	

Samplenum	Container ID	Products
L13110337-01	273687	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	06-NOV-2013 16:57	CLS		
2	STORE	WET	A1	14-NOV-2013 11:39	CLS	BAF	

Samplenum	Container ID	Products
L13110337-01	273688	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 07:39	ADG	AZH	
3	STORE	WET	A1	12-NOV-2013 08:36	CLS	ADG	

Samplenum	Container ID	Products
L13110337-01	273689	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		<2
2	ANALYZ	W1	WET	08-NOV-2013 07:36	EPT	CLS	
3	ANALYZ	WET	A1	11-NOV-2013 16:46	CLS	PSW	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-01	273690	AG-MS AS-MS BA-MS BE-AX CA CD-MS CO-MS CR-MS (

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	11-NOV-2013 14:05	RS	ERP	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	08-NOV-2013 13:08	CLS	ERP	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L13110337-01	273691	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 08:08	DCM	RS	
3	ANALYZ	W1	WET	13-NOV-2013 08:35	DCM	CLS	
4	STORE	WET	A1	18-NOV-2013 08:53	RS	DCM	

Samplenum	Container ID	Products
L13110337-02	273692	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	SEM	07-NOV-2013 08:20	JBK	CLS	

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: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-02	273693	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	08-NOV-2013 09:27	BAF	CLS	
3	STORE	WET	A1	14-NOV-2013 11:39	CLS	BAF	

Samplenum	Container ID	Products
L13110337-02	273694	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	06-NOV-2013 16:57	CLS		
2	STORE	WET	A1	14-NOV-2013 11:39	CLS	BAF	

Samplenum	Container ID	Products
L13110337-02	273695	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 07:39	ADG	AZH	
3	STORE	WET	A1	12-NOV-2013 08:36	CLS	ADG	

Samplenum	Container ID	Products
L13110337-02	273696	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		<2
2	ANALYZ	W1	WET	08-NOV-2013 07:36	EPT	CLS	
3	ANALYZ	WET	A1	11-NOV-2013 16:47	CLS	PSW	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-02	273697	AG-MS AS-MS BE-AX CA CD-MS CO-MS CR-MS CU-MS H

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	11-NOV-2013 14:05	RS	ERP	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	08-NOV-2013 13:08	CLS	ERP	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L13110337-02	273698	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 08:08	DCM	RS	
3	ANALYZ	W1	WET	13-NOV-2013 08:35	DCM	CLS	
4	STORE	WET	A1	18-NOV-2013 08:53	RS	DCM	

Samplenum	Container ID	Products
L13110337-03	273699	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	SEM	07-NOV-2013 08:20	JBK	CLS	

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: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-03	273700	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	08-NOV-2013 09:27	BAF	CLS	
3	STORE	WET	A1	14-NOV-2013 11:39	CLS	BAF	

Samplenum	Container ID	Products
L13110337-03	273701	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	06-NOV-2013 16:57	CLS		
2	STORE	WET	A1	14-NOV-2013 11:40	CLS	BAF	

Samplenum	Container ID	Products
L13110337-03	273702	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 07:39	ADG	AZH	
3	STORE	WET	A1	12-NOV-2013 08:36	CLS	ADG	

Samplenum	Container ID	Products
L13110337-03	273703	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		<2
2	ANALYZ	W1	WET	08-NOV-2013 07:36	EPT	CLS	
3	ANALYZ	WET	A1	11-NOV-2013 16:46	CLS	PSW	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L13110337
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 15-NOV-2013

Samplenum	Container ID	Products
L13110337-03	273704	AG-MS AS-MS BA-MS BE-AX CA CD-MS CO-MS CR-MS (

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	11-NOV-2013 14:05	RS	ERP	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	PREP	W1	DIG	07-NOV-2013 06:48	ERP	RS	
3	ANALYZ*	DIG	METALS	08-NOV-2013 11:28	KHR	ERP	
4	STORE	DIG	A1	08-NOV-2013 13:08	CLS	ERP	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L13110337-03	273705	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	06-NOV-2013 16:57	CLS		
2	ANALYZ	W1	WET	07-NOV-2013 08:08	DCM	RS	
3	ANALYZ	W1	WET	13-NOV-2013 08:35	DCM	CLS	
4	STORE	WET	A1	18-NOV-2013 08:53	RS	DCM	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login