Microbac

Laboratory Report Number: L12070640

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 July 31 2012

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

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

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0011041	G	0.0		1015923822860004575000795764475329
0011381	G	0.0		1002239522860004575000873013166780

Inspection Checklist

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

Microbac Laboratories ● Ohio Valley Division
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Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL21-0712-1	L12070640-01	07/19/2012 11:06	07/20/2012 10:42
MPL22-0712-1	L12070640-02	07/19/2012 12:45	07/20/2012 10:42
MPL25-0712-1	L12070640-03	07/19/2012 15:40	07/20/2012 10:42

Microbac REPORT L12070640
PREPARED FOR Environmental Waste Solutions
WORK ID:

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2.2.6.1 Summary Data 1022
2.2.6.2 QC Summary Data 1024
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2.2.7.2 QC Summary Data 1041
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2.2.8.1 Summary Data 1061
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2.2.11.2 QC Summary Data 1126
2.2.11.3 Raw Data 1133
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1.0 Summary Data

1.1 Narratives

Login Number: L12070640
Department: Conventionals
Analyst: Justin Hesson

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.

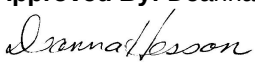
Duplicates: All acceptance criteria were met.

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: 50963
Approved By: Deanna Hesson



Login Number: L12070640
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG404480 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50888
Approved By: Maren Beery
Maren Beery

Login Number: L12070640
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: WG404829 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50835
Approved By: Maren Beery
Maren Beery

Login Number: L12070640
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470

Analysis: SW-846 7470

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG404404 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50598
Approved By: Maren Beery
Maren Beery

Login Number: L12070640
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 client did not specify an MS/MSD for this sample delivery group.

SAMPLES

Samples: All acceptance criteria were met.

MANUAL INTEGRATION: No manual integration was required.

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Narrative ID: 50652
Approved By: Mike Cochran

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

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: 50961
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis SM2320B (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: 50965
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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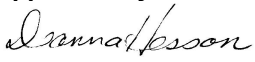
Narrative ID: 50968
Approved By: Deanna Hesson



Login Number: L12070640
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 50962
Approved By: Deanna Hesson

Login Number: L12070640
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: 50964
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Analysis: Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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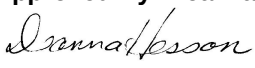
Narrative ID: 50966
Approved By: Deanna Hesson



Login Number: L12070640
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 365.2/SM4500-P E (Orthophosphate)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 50967
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Erin R Porter

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 50971
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)
Soil: Lloyd-Khan Methodology

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 50969
Approved By: Deanna Hesson

Login Number: L12070640
Department: Conventionals
Analyst: Erin R Porter

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: 50970
Approved By: Deanna Hesson

1.2 Certificate of Analysis

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL21-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 12:51
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	P2.072712.125143
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	32.5		0.200	0.100
Magnesium, Total	7439-95-4	4.98		0.500	0.250
Potassium, Total	7440-09-7	2.01		1.00	0.500
Sodium, Total	7440-23-5	20.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0109		0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL21-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:04
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	NI.072912.120407
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00262		0.00100	0.000500
Barium, Total	7440-39-3	0.0541		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00393		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00197		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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL21-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:46
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	HY.072512.104659
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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL21-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/26/2012 14:12
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG404674	**Analyst:**	JBK	**Run Date:**	07/26/2012 15:21
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	I10726121521.07
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	12.6		0.200	0.100
Fluoride	16984-48-8	0.316		0.200	0.100
Sulfate	14808-79-8	49.8		1.00	0.500

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL21-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	OS12072508203401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.89		0.000	0.000

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	75.9		20.0	10.0

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	75.9		20.0	10.0

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271550-11
Sample Tag:	w	**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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271530-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00530	J	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271610-10
Sample Tag:	a	**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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL21-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404325	**Analyst:**	DLP	**Run Date:**	07/24/2012 16:30
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	32.1207241630-04
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		332		1.00	0.500

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:25
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726005.040
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0623	J	0.100	0.0500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 11:06	**Dilution:**	4	**File ID:**	SC12072712072401
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.75		0.200	0.100

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207201155-08
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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL21-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG404328	**Analyst:**	ERP	**Run Date:**	07/24/2012 16:10
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	EN.1207241610-22
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		202		20.0	10.0

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL21-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 15:46
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	TC07252012.023
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.960	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL21-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	EN.1207251240-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		4.00	J	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL22-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 12:58
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	P2.072712.125842
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	22.8		0.200	0.100
Magnesium, Total	7439-95-4	2.43		0.500	0.250
Potassium, Total	7440-09-7	1.80		1.00	0.500
Sodium, Total	7440-23-5	19.2		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0213		0.0100	0.00500
Zinc, Total	7440-66-6	0.0193	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL22-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:07
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	NI.072912.120717
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00821		0.00100	0.000500
Barium, Total	7440-39-3	0.0880		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00215		0.00200	0.00100
Lead, Total	7439-92-1	0.000804	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0145		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00224		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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL22-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:48
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	HY.072512.104838
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL22-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/26/2012 14:12
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG404674	**Analyst:**	JBK	**Run Date:**	07/26/2012 15:39
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	I10726121539.08
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.5		0.200	0.100
Fluoride	16984-48-8	0.377		0.200	0.100
Sulfate	14808-79-8	30.7		1.00	0.500

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL22-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	OS12072508204101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.42		0.000	0.000

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	57.5		10.0	5.00

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	57.5		10.0	5.00

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	10.0	5.00

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

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271530-12
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271610-11
Sample Tag:	a	**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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271550-12
Sample Tag:	w	**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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL22-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404325	**Analyst:**	DLP	**Run Date:**	07/24/2012 16:30
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	32.1207241630-05
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		240		1.00	0.500

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL22-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:26
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	SC120726005.041
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0504	J	0.100	0.0500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL22-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 12:45	**Dilution:**	4	**File ID:**	SC12072712073301
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.34		0.200	0.100

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207201155-10
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL22-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG404328	**Analyst:**	ERP	**Run Date:**	07/24/2012 16:10
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	EN.1207241610-23
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		130		20.0	10.0

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL22-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 15:58
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	TC07252012.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.799	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL22-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	EN.1207251240-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		9.00		5.00	2.50

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL25-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 13:05
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	P2.072712.130539
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	45.2		0.200	0.100
Magnesium, Total	7439-95-4	10.1		0.500	0.250
Potassium, Total	7440-09-7	2.26		1.00	0.500
Sodium, Total	7440-23-5	26.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00629	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0199	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL25-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	NI.072912.121026
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.000924	J	0.00100	0.000500
Barium, Total	7440-39-3	0.0664		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00141	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00522		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00362		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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL25-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:50
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	HY.072512.105025
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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL25-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/26/2012 14:12
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG404674	**Analyst:**	JBK	**Run Date:**	07/26/2012 15:56
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	I10726121556.09
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.211		0.200	0.100
Sulfate	14808-79-8	57.8		1.00	0.500

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL25-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/26/2012 14:12
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG404674	**Analyst:**	JBK	**Run Date:**	07/26/2012 17:23
Collect Date:	07/19/2012 15:40	**Dilution:**	5	**File ID:**	I10726121723.14
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	48.5		1.00	0.500

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL25-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	OS12072508204401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.88		0.000	0.000

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	80.7		20.0	10.0

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	80.7		20.0	10.0

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271550-13
Sample Tag:	w	**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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271610-12
Sample Tag:	a	**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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271530-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00597	J	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL25-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404325	**Analyst:**	DLP	**Run Date:**	07/24/2012 16:30
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	32.1207241630-06
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		480		1.00	0.500

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:29
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726005.044
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0852	J	0.100	0.0500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 15:40	**Dilution:**	4	**File ID:**	SC12072712074701
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		4.81		0.200	0.100

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207201155-09
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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL25-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG404493	**Analyst:**	ERP	**Run Date:**	07/25/2012 14:30
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	EN.1207251430-04
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		328		20.0	10.0

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL25-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 16:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	TC07252012.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.03		1.00	0.500

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL25-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	EN.1207251240-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		4.50	J	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.

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: L12070640
Department: Metals
Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG404480 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50888
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL21-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 12:51
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	P2.072712.125143
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	32.5		0.200	0.100
Magnesium, Total	7439-95-4	4.98		0.500	0.250
Potassium, Total	7440-09-7	2.01		1.00	0.500
Sodium, Total	7440-23-5	20.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0109		0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL22-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 12:58
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	P2.072712.125842
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	22.8		0.200	0.100
Magnesium, Total	7439-95-4	2.43		0.500	0.250
Potassium, Total	7440-09-7	1.80		1.00	0.500
Sodium, Total	7440-23-5	19.2		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0213		0.0100	0.00500
Zinc, Total	7440-66-6	0.0193	J	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL25-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/23/2012 07:14
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/27/2012 08:32
Workgroup #:	WG404480	**Analyst:**	KHR	**Run Date:**	07/27/2012 13:05
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	P2.072712.130539
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Calcium, Total	7440-70-2	45.2		0.200	0.100
Magnesium, Total	7439-95-4	10.1		0.500	0.250
Potassium, Total	7440-09-7	2.26		1.00	0.500
Sodium, Total	7440-23-5	26.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00629	J	0.0100	0.00500
Zinc, Total	7440-66-6	0.0199	J	0.0200	0.0100

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

Certificate of Analysis

2.1.1.2 QC Summary Data

Example 6010 Calculations
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.
Metals Digest Log

Workgroup: WG404091
Analyst: REK
Spike Analyst: REK
Method: 3005A
Run Date: 07/23/2012 07:14
Hotblock Start Temp: 95 @ 05:20
Hotblock End Temp: 95 @ 09:20

SOP: ME401 Revison 14
Spike Solution: STD52371
Spike Witness: BRG
HNO3 Lot #: COA16174
ICP;WG401305 Filter Lot COA16240
Digestion Tubes Lot #: COA16262
HCL Lot #: COA16290

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG404091-02	BLANK	1	50 mL	50 mL		
2	WG404091-03	LCS	1	50 mL	50 mL	5 mL	
3	L12070491-08	SAMP	1	50 mL	50 mL		07/30/12
4	L12070491-10	SAMP	1	50 mL	50 mL		07/30/12
5	L12070491-12	SAMP	1	50 mL	50 mL		07/30/12
6	L12070590-01	SAMP	1	50 mL	50 mL		07/30/12
7	L12070590-02	SAMP	1	50 mL	50 mL		07/30/12
8	L12070590-03	SAMP	1	50 mL	50 mL		07/30/12
9	L12070590-04	SAMP	1	50 mL	50 mL		07/30/12
10	L12070590-05	SAMP	1	50 mL	50 mL		07/30/12
11	L12070590-06	SAMP	1	50 mL	50 mL		07/30/12
12	L12070590-07	SAMP	1	50 mL	50 mL		07/30/12
13	L12070590-08	SAMP	1	50 mL	50 mL		07/30/12
14	L12070590-12	RS01	1	50 mL	50 mL		07/30/12
15	L12070590-13	SAMP	1	50 mL	50 mL		07/30/12
16	L12070630-01	SAMP	1	50 mL	50 mL		07/31/12
17	WG404091-01	REF	1	50 mL	50 mL		
18	L12070639-01	SAMP	1	50 mL	50 mL		07/31/12
19	L12070639-02	SAMP	1	50 mL	50 mL		07/31/12
20	L12070639-03	SAMP	1	50 mL	50 mL		07/31/12
21	L12070640-01	SAMP	1	50 mL	50 mL		07/31/12
22	L12070640-02	SAMP	1	50 mL	50 mL		07/31/12
23	L12070640-03	SAMP	1	50 mL	50 mL		07/31/12
24	WG404091-04	MS	1	50 mL	50 mL	5 mL	
25	WG404091-05	MSD	1	50 mL	50 mL	5 mL	

L12070630-01	FILTERED DIGESTATE

Analyst: [signature]

Reviewer: [signature]

HB_DIG - Modified 09/30/2009
PDF ID: 2509417
Report generated: 07/23/2012 10:09

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 072712H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42647

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52974 Int. Std: RGT17310
CCV: STD52910 LLCCV:

Workgroups: 404480, 404603, 404481, 404736, 404772

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.072712.080523	WG404765-01	Calibration Point		1		07/27/12 08:05
2	P2.072712.081218	WG404765-02	Calibration Point		1		07/27/12 08:12
3	P2.072712.081916	WG404765-03	Calibration Point		1		07/27/12 08:19
4	P2.072712.082611	WG404765-04	Calibration Point		1		07/27/12 08:26
5	P2.072712.083209	WG404765-05	Calibration Point		1		07/27/12 08:32
6	P2.072712.083811	WG404765-06	Initial Calibration Verification		1		07/27/12 08:38
7	P2.072712.084407	WG404765-07	Initial Calib Blank		1		07/27/12 08:44
8	P2.072712.085101	WG404765-08	Low Level Initial Calibration V		1		07/27/12 08:51
9	P2.072712.085756	WG404765-09	Interference Check		1		07/27/12 08:57
10	P2.072712.090352	WG404765-10	Interference Check		1		07/27/12 09:03
11	P2.072712.090949	WG404765-11	CCV		1		07/27/12 09:09
12	P2.072712.091548	WG404765-12	CCB		1		07/27/12 09:15
13	P2.072712.092241	WG404765-13	Linear Range Check		1		07/27/12 09:22
14	P2.072712.092936	WG404765-13	Linear Range Check		1		07/27/12 09:29
15	P2.072712.093631	BLANK	BLANK		1		07/27/12 09:36
16	P2.072712.094326	WG404765-14	CCV		1		07/27/12 09:43
17	P2.072712.094926	WG404765-15	CCB		1		07/27/12 09:49
18	P2.072712.095619	WG404091-02	Method/Prep Blank	50/50	1		07/27/12 09:56
19	P2.072712.100314	WG404091-03	Laboratory Control S	50/50	1		07/27/12 10:03
20	P2.072712.100915	L12070491-08	BEF-BC1-T1-W211-F	50/50	1		07/27/12 10:09
21	P2.072712.101616	L12070491-10	BEF-BC2-T1-W211-F	50/50	1		07/27/12 10:16
22	P2.072712.102220	L12070491-12	BEF-BC3-T1-W211-F	50/50	1		07/27/12 10:22
23	P2.072712.102922	L12070590-01	TC-GW-09	50/50	1		07/27/12 10:29
24	P2.072712.103520	L12070590-02	TC-GW-09F	50/50	1		07/27/12 10:35
25	P2.072712.104218	L12070590-03	TC-GW-10	50/50	1		07/27/12 10:42
26	P2.072712.104816	WG404480-01	Post Digestion Spike		1	L12070590-03	07/27/12 10:48
27	P2.072712.105419	WG404480-02	Serial Dilution		5	L12070590-03	07/27/12 10:54
28	P2.072712.110114	WG404765-16	CCV		1		07/27/12 11:01
29	P2.072712.110713	WG404765-17	CCB		1		07/27/12 11:07
30	P2.072712.111407	L12070590-04	TC-GW-10F	50/50	1		07/27/12 11:14
31	P2.072712.112106	L12070590-05	TC-GW-10D	50/50	1		07/27/12 11:21
32	P2.072712.112706	L12070590-06	TC-GW-10DF	50/50	1		07/27/12 11:27
33	P2.072712.113406	L12070590-07	TC-GW-12	50/50	1		07/27/12 11:34
34	P2.072712.114006	L12070590-08	TC-GW-12F	50/50	1		07/27/12 11:40

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Instrument Run Log

Instrument: PE-ICP2 Dataset: 072712H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42647

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52974 Int. Std: RGT17310
CCV: STD52910 LLCCV:

Workgroups: 404480, 404603, 404481, 404736, 404772

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	P2.072712.114706	L12070590-12	TC-GW-13	50/50	1		07/27/12 11:47
36	P2.072712.115307	L12070590-13	TC-GW-13F	50/50	1		07/27/12 11:53
37	P2.072712.120008	L12070630-01	W9069	50/50	1		07/27/12 12:00
38	P2.072712.120701	WG404091-01	Reference Sample		1	L12070639-01	07/27/12 12:07
39	P2.072712.121356	WG404765-18	CCV		1		07/27/12 12:13
40	P2.072712.121956	WG404765-19	CCB		1		07/27/12 12:19
41	P2.072712.122649	WG404091-04	Matrix Spike	50/50	1	L12070639-01	07/27/12 12:26
42	P2.072712.123247	WG404091-05	Matrix Spike Duplica	50/50	1	L12070639-01	07/27/12 12:32
43	P2.072712.123846	L12070639-02	SMW1-0712-1	50/50	1		07/27/12 12:38
44	P2.072712.124544	L12070639-03	SMW4-0712-1	50/50	1		07/27/12 12:45
45	P2.072712.125143	L12070640-01	MPL21-0712-1	50/50	1		07/27/12 12:51
46	P2.072712.125842	L12070640-02	MPL22-0712-1	50/50	1		07/27/12 12:58
47	P2.072712.130539	L12070640-03	MPL25-0712-1	50/50	1		07/27/12 13:05
48	P2.072712.132510	L12070491-08	BEF-BC1-T1-W211-F	50/50	100		07/27/12 13:25
49	P2.072712.133206	L12070491-10	BEF-BC2-T1-W211-F	50/50	100		07/27/12 13:32
50	P2.072712.133902	L12070491-12	BEF-BC3-T1-W211-F	50/50	100		07/27/12 13:39
51	P2.072712.134558	WG404765-20	CCV		1		07/27/12 13:45
52	P2.072712.135157	WG404765-21	CCB		1		07/27/12 13:51
53	P2.072712.135850	WG404518-02	Method/Prep Blank	50/50	1		07/27/12 13:58
54	P2.072712.140544	WG404518-03	Laboratory Control S	50/50	1		07/27/12 14:05
55	P2.072712.141142	WG404518-01	Reference Sample		100	L12070725-02	07/27/12 14:11
56	P2.072712.141836	WG404518-04	Matrix Spike	50/50	100	L12070725-02	07/27/12 14:18
57	P2.072712.142531	WG404518-05	Matrix Spike Duplica	50/50	100	L12070725-02	07/27/12 14:25
58	P2.072712.143225	L12070725-04	BEF-BC1-T1-W213-F	50/50	100		07/27/12 14:32
59	P2.072712.143919	L12070725-06	BEF-BC2-T1-W213-F	50/50	100		07/27/12 14:39
60	P2.072712.144614	L12070725-08	BEF-BC3-T1-W213-F	50/50	100		07/27/12 14:46
61	P2.072712.145329	WG404603-01	Post Digestion Spike		100	L12070725-08	07/27/12 14:53
62	P2.072712.145930	WG404603-02	Serial Dilution		500	L12070725-08	07/27/12 14:59
63	P2.072712.150625	WG404765-22	CCV		1		07/27/12 15:06
64	P2.072712.151226	WG404765-23	CCB		1		07/27/12 15:12
65	P2.072712.151919	L12070725-10	BEF-SMF-T1-W213-F	50/50	100		07/27/12 15:19
66	P2.072712.152616	L12070725-12	BEF-CBE-T1-W213-F	50/50	100		07/27/12 15:26
67	P2.072712.153312	L12070750-02	DUP-01-120724	50/50	1		07/27/12 15:33
68	P2.072712.153911	L12070750-03	LF014CP074-120724	50/50	1		07/27/12 15:39

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 072712H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42647

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52974 Int. Std: RGT17310
CCV: STD52910 LLCCV:

Workgroups: 404480, 404603, 404481, 404736, 404772

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	P2.072712.154510	L12070750-04	LF015CP043-120724	50/50	1		07/27/12 15:45
70	P2.072712.155109	L12070750-05	LF012CP102-120724	50/50	1		07/27/12 15:51
71	P2.072712.155707	L12070750-04	LF015CP043-120724	50/50	10		07/27/12 15:57
72	P2.072712.160304	WG404765-24	CCV		1		07/27/12 16:03
73	P2.072712.160903	WG404765-25	CCB		1		07/27/12 16:09
74	P2.072712.161556	WG404765-26	Low Level Continuing Calibra		1		07/27/12 16:15
75	P2.072712.162251	WG404092-01	Reference Sample		1	L12070641-02	07/27/12 16:22
76	P2.072712.162851	WG404092-04	Matrix Spike	50/50	1	L12070641-02	07/27/12 16:28
77	P2.072712.163455	WG404092-05	Matrix Spike Duplica	50/50	1	L12070641-02	07/27/12 16:34
78	P2.072712.164059	L12070641-03	SS002CP27-120719	50/50	1		07/27/12 16:40
79	P2.072712.164659	L12070641-04	WP021CP057-120719	50/50	1		07/27/12 16:46
80	P2.072712.165301	L12070641-05	ST006CP166-120719	50/50	1		07/27/12 16:53
81	P2.072712.165902	L12070641-06	ST008CP230-120719	50/50	1		07/27/12 16:59
82	P2.072712.170501	L12070641-07	SS038CP003-120719	50/50	1		07/27/12 17:05
83	P2.072712.171100	L12070641-08	SS040CP280-120719	50/50	1		07/27/12 17:11
84	P2.072712.171756	L12070643-02	BIF-PND-T1-W212-F	50/50	10		07/27/12 17:17
85	P2.072712.172451	WG404765-27	CCV		1		07/27/12 17:24
86	P2.072712.173050	WG404765-28	CCB		1		07/27/12 17:30
87	P2.072712.173743	L12070643-04	BEF-BC1-T1-W212-F	50/50	10		07/27/12 17:37
88	P2.072712.174439	L12070643-06	BEF-BC2-T1-W212-F	50/50	10		07/27/12 17:44
89	P2.072712.175134	L12070643-08	BEF-BC3-T1-W212-F	50/50	10		07/27/12 17:51
90	P2.072712.175829	L12070643-10	BEF-SMF-T1-W212-F	50/50	10		07/27/12 17:58
91	P2.072712.180525	L12070643-12	BEF-CBE-T1-W212-F	50/50	10		07/27/12 18:05
92	P2.072712.181221	WG404481-03	Post Digestion Spike		10	L12070643-12	07/27/12 18:12
93	P2.072712.181821	WG404481-04	Serial Dilution		50	L12070643-12	07/27/12 18:18
94	P2.072712.182518	WG404765-29	CCV		1		07/27/12 18:25
95	P2.072712.183117	WG404765-30	CCB		1		07/27/12 18:31
96	P2.072712.183810	WG404765-31	Low Level Continuing Calibra		1		07/27/12 18:38
97	P2.072712.184507	WG404676-02	Method/Prep Blank	5/50	1		07/27/12 18:45
98	P2.072712.185201	WG404676-03	Laboratory Control S	5/50	1		07/27/12 18:52
99	P2.072712.185800	WG404620-01	TCLP Fluid Blank 1		1		07/27/12 18:58
100	P2.072712.190459	WG404620-02	TCLP Fluid Blank 2		1		07/27/12 19:04
101	P2.072712.191154	L12070706-01	IDW-SOIL-2	5/50	1		07/27/12 19:11
102	P2.072712.191858	L12070739-01	1207-298-1	5/50	1		07/27/12 19:18

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 072712H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42647

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52974 Int. Std: RGT17310
CCV: STD52910 LLCCV:

Workgroups: 404480, 404603, 404481, 404736, 404772

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	P2.072712.192556	L12070739-02	1207-298-2	5/50	1		07/27/12 19:25
104	P2.072712.193155	L12070746-01	REG. ORANGE	5/50	1		07/27/12 19:31
105	P2.072712.193856	WG404736-01	Post Digestion Spike		1	L12070746-01	07/27/12 19:38
106	P2.072712.194500	WG404736-02	Serial Dilution		5	L12070746-01	07/27/12 19:45
107	P2.072712.195157	WG404765-32	CCV		1		07/27/12 19:51
108	P2.072712.195757	WG404765-33	CCB		1		07/27/12 19:57
109	P2.072712.200450	L12070774-01	2071315-01		1	WG404676-01	07/27/12 20:04
110	P2.072712.201147	L12070774-02	2071315-02-MS	5/50	1	WG404676-04	07/27/12 20:11
111	P2.072712.201753	L12070774-03	2071315-03-MSD	5/50	1	WG404676-05	07/27/12 20:17
112	P2.072712.202358	L12070774-04	2071315-04	5/50	1		07/27/12 20:23
113	P2.072712.203002	L12070774-05	2071315-07 7/3-M8 QC	5/50	1		07/27/12 20:30
114	P2.072712.203657	L12070776-01	2071318-01	5/50	1		07/27/12 20:36
115	P2.072712.204356	WG404765-34	CCV		1		07/27/12 20:43
116	P2.072712.204956	WG404765-35	CCB		1		07/27/12 20:49
117	P2.072712.205649	WG404662-02	Method/Prep Blank	50/50	1		07/27/12 20:56
118	P2.072712.210344	WG404662-03	Laboratory Control S	50/50	1		07/27/12 21:03
119	P2.072712.210943	WG404662-04	Filter Blank		1		07/27/12 21:09
120	P2.072712.211638	L12070825-01	3570-W0001	50/50	1		07/27/12 21:16
121	P2.072712.212334	L12070825-01	3570-W0001		10		07/27/12 21:23
122	P2.072712.213029	L12070757-02	AS01PORT5B	50/50	1		07/27/12 21:30
123	P2.072712.213733	L12070757-03	AS01PORT5B	50/50	1		07/27/12 21:37
124	P2.072712.214438	L12070757-04	AS01PORT1	50/50	1		07/27/12 21:44
125	P2.072712.215043	WG404772-01	Post Digestion Spike		1	L12070757-04	07/27/12 21:50
126	P2.072712.215648	WG404772-02	Serial Dilution		5	L12070757-04	07/27/12 21:56
127	P2.072712.220344	WG404765-36	CCV		1		07/27/12 22:03
128	P2.072712.220944	WG404765-37	CCB		1		07/27/12 22:09
129	P2.072712.221637	L12070757-05	AS01PORT1	50/50	1		07/27/12 22:16
130	P2.072712.222341	L12070786-01	USDA/6-13-12	50/50	1		07/27/12 22:23
131	P2.072712.222939	WG404662-01	Reference Sample		1	L12070803-01	07/27/12 22:29
132	P2.072712.223539	WG404662-05	Matrix Spike	50/50	1	L12070803-01	07/27/12 22:35
133	P2.072712.224143	WG404662-06	Matrix Spike Duplica	50/50	1	L12070803-01	07/27/12 22:41
134	P2.072712.224747	L12070803-04	MPL1-0712-1	50/50	1		07/27/12 22:47
135	P2.072712.225346	L12070803-05	MPL2-0712-1	50/50	1		07/27/12 22:53
136	P2.072712.225945	L12070803-06	MPL3-0712-1	50/50	1		07/27/12 22:59

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Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 072712H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42647

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52974 Int. Std: RGT17310
CCV: STD52910 LLCCV:

Workgroups: 404480, 404603, 404481, 404736, 404772

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	P2.072712.230545	L12070803-07	MPL3-0712-2	50/50	1		07/27/12 23:05
138	P2.072712.231147	WG404765-38	CCV		1		07/27/12 23:11
139	P2.072712.231746	WG404765-39	CCB		1		07/27/12 23:17

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Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 27-JUL-2012
Analyst: KHR
Analyst: NA
Method: 6010
Instrument: PE-ICP2
Curve Workgroup: 404765
Runlog ID: 48094
Analytical Workgroups: 404480, 404603, 404481, 404736, 404772

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	X
Client Forms	X
Level X	
Level 3	750, 641
Level 4	491, 590, 630, 639, 640, 725, 643
Level 4	706, 774, 757, 803, 825
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	MMB
Comments	

Primary Reviewer: 30-JUL-2012 Kim H. Rhoden

Secondary Reviewer: 30-JUL-2012 Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-30-2012 15:08:59

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B

AAB#: WG404480

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/23/2012	3.8	180		07/27/12	8.1	180	
MPL22-0712-1	02	07/19/12					07/23/2012	3.8	180		07/27/12	8	180	
MPL25-0712-1	03	07/19/12					07/23/2012	3.6	180		07/27/12	7.9	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2524406
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: P2.072712.095619
Prep Date: 07/23/12 07:14
Analyzed Date: 07/27/12 09:56
Analyst: KHR

Work Group: WG404480
Blank Sample ID: WG404091-02
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	WG404091-03	P2.072712.100314	07/27/12 10:03	01
MPL21-0712-1	L12070640-01	P2.072712.125143	07/27/12 12:51	01
MPL22-0712-1	L12070640-02	P2.072712.125842	07/27/12 12:58	01
MPL25-0712-1	L12070640-03	P2.072712.130539	07/27/12 13:05	01

Report Name: BLANK_SUMMARY
PDF File ID: 2524407
Report generated 07/30/2012 09:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/23/12 07:14 Sample ID: WG404091-02
Instrument ID: PE-ICP2 Run Date: 07/27/12 09:56 Prep Method: 3005A
File ID: P2.072712.095619 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG404480 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 27-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Calcium, Total	0.100	0.200	0.100	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	0.00500	1	U
Zinc, Total	0.0100	0.0200	0.0100	1	U

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

Report Name: BLANK
PDF ID: 2524408
30-JUL-2012 09:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404091-03
Instrument ID: PE-ICP2 Run Time: 10:03 Prep Method: 3005A
File ID: P2.072712.100314 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG404480 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52371 Cal ID: PE-ICP - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Total	0.0250	0.0237	94.7	80 - 120	
Calcium, Total	5.00	5.12	102	80 - 120	
Magnesium, Total	5.00	4.90	98.0	80 - 120	
Potassium, Total	25.0	24.4	97.6	80 - 120	
Sodium, Total	25.0	25.7	103	80 - 120	
Tin, Total	0.500	0.511	102	80 - 120	
Vanadium, Total	0.500	0.503	101	80 - 120	
Zinc, Total	0.500	0.499	99.7	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2524409
Report generated: 07/30/2012 09:00

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

Loginnum: L12070640 Cal ID: PE-ICP2- Worknum: WG404480
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG404091-01 File ID: P2.072712.120701 Dil: 1 Matrix: WATER
Sample ID: WG404091-04 MS File ID: P2.072712.122649 Dil: 1 Units: mg/L
Sample ID: WG404091-05 MSD File ID: P2.072712.123247 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Total	ND	0.0250	0.0238	95.1	0.0250	0.0236	94.3	0.873	80 - 120	20	
Calcium, Total	45.6	5.00	53.0	148	5.00	53.4	155	0.738	80 - 120	20	*
Magnesium, Total	8.60	5.00	13.1	90.6	5.00	13.2	91.7	0.414	80 - 120	20	
Potassium, Total	2.22	25.0	26.2	95.9	25.0	26.5	97.2	1.23	80 - 120	20	
Sodium, Total	26.1	25.0	52.0	104	25.0	52.4	105	0.767	80 - 120	20	
Tin, Total	ND	0.500	0.517	103	0.500	0.531	106	2.59	80 - 120	20	
Vanadium, Total	0.00709	0.500	0.509	100	0.500	0.519	102	1.92	80 - 120	20	
Zinc, Total	ND	0.500	0.496	99.2	0.500	0.499	99.8	0.581	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: 2524410
Report generated 07/30/2012 09:00

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12070640 **Worknum:** WG404480
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG404480-02 **File ID:** P2.072712.105419 **Dil:** 5 **Units:** mg/L
Sample: L12070590-03 **File ID:** P2.072712.104218 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Beryllium	ND	U	ND	U		
Calcium	69.1		67.2		2.77	
Magnesium	14.2		14.4		1.38	
Potassium	0.929	F	ND	U		
Sodium	59.1		58.6		0.84	
Tin	ND	U	ND	U		
Vanadium	0.0184	X	ND	U		
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: 2524404
07/30/2012 09:00

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070640 **Worknum:** WG404480
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG404480-01 **File ID:** P2.072712.104816 **Dil:** 1 **Units:** mg/L
Sample ID: L12070590-03 **File ID:** P2.072712.104218 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0243		0	U	.025	97.1	75 - 125	
CALCIUM	68.0		69.1		5	116.9	75 - 125	
MAGNESIUM	17.4		14.2		5	92.7	75 - 125	
POTASSIUM	25.7		0.929	F	25	99.3	75 - 125	
SODIUM	79.1		59.1		25	103.6	75 - 125	
TIN	0.547		0	U	.5	109.3	75 - 125	
VANADIUM	0.524		0.0184		.5	101.5	75 - 125	
ZINC	0.492		0	U	.5	98.5	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: 2524405
Report generated: 07/30/2012 09:00

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12070640**	Workgroup (AAB#):	**WG404480**
Analytical Method:	**6010B**	Instrument ID:	**PE-ICP2**
ICAL Worknum:	**WG404765**	Initial Calibration Date:	**27-JUL-2012 08:32**

	WG404765-01		WG404765-02		WG404765-03		WG404765-04		WG404765-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-1580	.0005	581	.001	1180	.05	59300	.1	117000	.99999	
CALCIUM	0	-34.4	NA	NA	.2	63.7	10	4330	20	8780	.999977	
MAGNESIUM	0	45.3	.1	333	.2	667	10	32900	20	66200	.999996	
POTASSIUM	0	-201	.5	1770	1	3280	50	145000	100	287000	1	
SODIUM	0	896	.5	9880	1	19400	50	942000	100	1870000	1	
TIN	0	24.9	.01	126	.02	250	1	12200	1	24300	1	
VANADIUM	0	8950	.01	2630	.02	4750	1	244000	2	490000	1	
ZINC	0	3.87	.01	597	.02	1170	1	58000	2	116000	.999998	

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: 2524414
Report generated: 30-JUL-2012 08:59

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070640
Instrument ID: PE-ICP2
File ID: P2.072712.084407
Workgroup (AAB#): WG404480
Matrix: WATER

Run Date: 07/27/2012
Run Time: 08:44
Analyst: KHR
Cal ID: PE-ICP2 - 27-JUL-12

Sample ID: WG404765-07
Method: 6010B
Units: mg/L

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

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

ICB - Modified 07/14/2009
PDF File ID: 2524416
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-12
Instrument ID: PE-ICP2
Run Time: 09:15
Method: 6010B
File ID: P2.072712.091548
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER
QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2524419
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-15
Instrument ID: PE-ICP2
Run Time: 09:49
Method: 6010B
File ID: P2.072712.094926
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER
QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2524419
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-17
Instrument ID: PE-ICP2
Run Time: 11:07
Method: 6010B
File ID: P2.072712.110713
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER
QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2524419
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-19
Instrument ID: PE-ICP2
Run Time: 12:19
Method: 6010B
File ID: P2.072712.121956
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER
QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2524419
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-21
Instrument ID: PE-ICP2
Run Time: 13:51
Method: 6010B
File ID: P2.072712.135157
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER
QAPP: DOD4

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

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

CCB - Modified 03/05/2008
PDF File ID: 2524419
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404765-06
Instrument ID: PE-ICP2 Run Time: 08:38 Method: 6010B
File ID: P2.072712.083811 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG404480 Cal ID: PE-ICP - 27-JUL-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0498	99.5	90 - 110	
Calcium		10	10.5	105	90 - 110	
Magnesium		10	10.2	102	90 - 110	
Potassium		50	50.8	102	90 - 110	
Sodium		50	52.0	104	90 - 110	
Tin		1	1.03	103	90 - 110	
Vanadium		1	1.01	101	90 - 110	
Zinc		1	1.03	103	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2524415
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-11
Instrument ID: PE-ICP2
Run Time: 09:09
Method: 6010B
File ID: P2.072712.090949
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0495	mg/L	98.9	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	49.6	mg/L	99.2	90 - 110		
Sodium		50.0	51.2	mg/L	102	90 - 110		
Tin		1.00	0.996	mg/L	99.6	90 - 110		
Vanadium		1.00	0.998	mg/L	99.8	90 - 110		
Zinc		1.00	1.00	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2524418
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-14
Instrument ID: PE-ICP2
Run Time: 09:43
Method: 6010B
File ID: P2.072712.094326
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0499	mg/L	99.8	90 - 110		
Calcium		10.0	10.5	mg/L	105	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	50.5	mg/L	101	90 - 110		
Sodium		50.0	52.4	mg/L	105	90 - 110		
Tin		1.00	0.998	mg/L	99.8	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2524418
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-16
Instrument ID: PE-ICP2
Run Time: 11:01
Method: 6010B
File ID: P2.072712.110114
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0502	mg/L	100	90 - 110		
Calcium		10.0	10.5	mg/L	105	90 - 110		
Magnesium		10.0	10.1	mg/L	101	90 - 110		
Potassium		50.0	50.1	mg/L	100	90 - 110		
Sodium		50.0	51.3	mg/L	103	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.00	mg/L	100	90 - 110		
Zinc		1.00	1.01	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2524418
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-18
Instrument ID: PE-ICP2
Run Time: 12:13
Method: 6010B
File ID: P2.072712.121356
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.9	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Magnesium		10.0	9.89	mg/L	98.9	90 - 110		
Potassium		50.0	50.1	mg/L	100	90 - 110		
Sodium		50.0	50.6	mg/L	101	90 - 110		
Tin		1.00	1.00	mg/L	100	90 - 110		
Vanadium		1.00	1.00	mg/L	100	90 - 110		
Zinc		1.00	0.998	mg/L	99.8	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2524418
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765-20
Instrument ID: PE-ICP2
Run Time: 13:45
Method: 6010B
File ID: P2.072712.134558
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG404480
Cal ID: PE-ICP - 27-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0484	mg/L	96.8	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	9.89	mg/L	98.9	90 - 110		
Potassium		50.0	50.2	mg/L	100	90 - 110		
Sodium		50.0	51.8	mg/L	104	90 - 110		
Tin		1.00	0.994	mg/L	99.4	90 - 110		
Vanadium		1.00	0.997	mg/L	99.7	90 - 110		
Zinc		1.00	0.985	mg/L	98.5	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2524418
Report generated 07/30/2012 08:59

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070640 **Workgroup (AAB#):** WG404480
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG404765-09 **File ID:** P2.072712.085756 **Units:** mg/L
Sol. AB : WG404765-10 **File ID:** P2.072712.090352 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.000100	NS	0.250	0.250	100	
Calcium	250	256	102	250	262	105	
Magnesium	250	245	98.0	250	249	99.6	
Potassium	NS	-0.107	NS	5.00	4.86	97.2	
Sodium	NS	0.0113	NS	5.00	5.22	104	
Tin	NS	-0.0298	NS	NS	-0.0316	NS	
Vanadium	NS	0.00228	NS	0.250	0.254	102	
Zinc	NS	0.00308	NS	0.500	0.484	96.8	

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: 2524417
Report generated 07/30/2012 08:59

LRC SAMPLE

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404765
Instrument ID: PE-ICP2
Run Time: 08:26
Prep Method: 3005A
Analyst: KHR
Method: 6010B
Workgroup (AAB#): WG404480
Matrix: Water
Units: mg/L
Cal ID: 27-JUL-12 - 27-JUL-2012 08:26

Analytes	Expected	Found	% Rec	Limits	Q
Calcium, Total	500	515	103	90 - 110	
Magnesium, Total	500	490	98.0	90 - 110	

KEMRON FORMS - Modified 08/28/2006
Version 1.5 PDF File ID: 2524413
Report generated 07/30/2012 09:00

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0.206	0	0
ANTIMONY	206.84	0	0	-0.740	0	0
ARSENIC	188.98	0	0.0776	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	1.12	0	0	0
CADMIUM	228.80	0	0	3.00	0	0
CALCIUM	227.55	0	0.195	10.0	0	0
CHROMIUM	267.72	0	-0.00252	0	0	0
COBALT	228.62	0	0	0	0	0.337
COPPER	327.39	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0	-0.0265	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	-0.185	0	-0.231	-0.0949	-0.230
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0.147	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	0	0	0
VANADIUM	290.88	0	0	0.200	0	0.0400
ZINC	206.20	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	0	6.33
ARSENIC	188.98	0	0.0200	0	0	-6.59
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	-0.0733
BORON	249.68	0	0	24.1	5.90	1.50
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	0	300	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	-0.244
COPPER	327.39	0	0	0	0.380	-0.0400
IRON	239.56	0	0	0	1.91	0
LEAD	220.35	0	-0.0480	0	0.116	-0.0700
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	-1.04	0	-0.755	-0.0418	-0.110
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	-0.566	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.300	0	-1.52	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	0.400	0	3.48	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	-0.0100	0	0	0.297
VANADIUM	290.88	0	0	0	0	0
ZINC	206.20	0	0	0	0	-3.64

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	396.15	0	0.0192	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	-0.00250	0	0	0
BARIUM	233.53	0	-0.0187	0	0	0
BERYLLIUM	234.86	0	0.210	0	0	0
BORON	249.68	0	-4.66	0	0	0
CADMIUM	228.80	0	-0.00420	0	0	0
CALCIUM	227.55	-2.00	100	0	0	0.104
CHROMIUM	267.72	0	0.0391	0	0	0
COBALT	228.62	0	0.0262	0	0	0
COPPER	327.39	0	-0.0688	0	0.154	0
IRON	239.56	0	0	0	0	0.0276
LEAD	220.35	0.740	0.0440	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.540	0	0	0
MANGANESE	257.61	-0.0457	-0.0580	-0.0181	-0.794	0.0147
MOLYBDENUM	202.03	0	-0.0494	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.465	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0.0717	0.0240	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0.120	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	0	0.134	0	0	0
ZINC	206.20	-0.200	0.0198	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	13.5	0	0	0
ANTIMONY	206.84	0	-7.69	0	0	0
ARSENIC	188.98	0	6.00	0	0	0
BARIUM	233.53	0	-0.548	0	0	0
BERYLLIUM	234.86	-0.131	-1.50	0	-0.00974	0
BORON	249.68	0	-2.20	0	0	0
CADMIUM	228.80	0	-0.00900	0	-0.398	0
CALCIUM	227.55	0	-8.00	0	-900	0
CHROMIUM	267.72	0.434	-0.00100	0	0	0
COBALT	228.62	0	-0.125	0	0.129	0
COPPER	327.39	0	-0.0774	0	0.150	0.257
IRON	239.56	0.480	0	0	0	0.407
LEAD	220.35	0.100	-5.00	0	0.100	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-5.00	0	0	0.0252
MANGANESE	257.61	0	-0.0482	-0.00916	-0.0340	-0.0413
MOLYBDENUM	202.03	-0.209	0	0	0.120	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	1.00	0	0
SELENIUM	196.03	0.451	0.300	0	0.0940	0
SILICON	251.61	0	15.0	0	0	0
SILVER	328.07	0.130	0.100	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	-1.50	1.20	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.578	0	0	0
ZINC	206.20	0	0.180	0	-0.200	-0.100

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
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	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	0.148	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	-0.0100	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-0.0924	0	0	0
MANGANESE	257.61	-0.0505	-0.0281	-0.185	-0.0445	-0.625
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	-0.0500	-0.0100	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	0.200
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	0	0	0
VANADIUM	290.88	0	0	0	0	0
ZINC	206.20	-0.300	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070640 **Date:** 12/30/2011
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	0	0	0
ANTIMONY	206.84	0	0	0.000100	0
ARSENIC	188.98	0	0	0.0930	0
BARIUM	233.53	0	0	-2.29	0
BERYLLIUM	234.86	0	0	0	0
BORON	249.68	0	0	0	0
CADMIUM	228.80	0	0	0.0800	0
CALCIUM	227.55	3.00	0	60.0	0
CHROMIUM	267.72	0	0	-0.567	-0.0400
COBALT	228.62	2.21	0	0	0
COPPER	327.39	-1.05	0	-0.700	-0.0613
IRON	239.56	0	0	0	0
LEAD	220.35	0	0	0.0560	0
LITHIUM	670.78	0	0	0	0
MAGNESIUM	279.08	0	0	0	0
MANGANESE	257.61	-0.00931	-0.0414	-0.0601	-0.0552
MOLYBDENUM	202.03	0	0	-0.288	0
NICKEL	231.60	0	0.617	0	0
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	-0.220	0	-0.126	0
SILICON	251.61	0	0	0	0
SILVER	328.07	0	0	-1.67	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	-12.0	0	-1.41	0
TIN	189.93	0	0	0	0
TITANIUM	334.94	0	0	0	0
VANADIUM	290.88	0	0	0	0
ZINC	206.20	0	0	-0.100	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 2524412
Report generated: 07/30/2012 08:59

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12070640 **Date:** 06/22/2012
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

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

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 2524411
Report generated: 07/30/2012 08:59

2.1.1.3 Raw Data

==========

Analysis Begun

Start Time: 7/27/2012 8:05:20 AM **Plasma On Time: 7/27/2012 6:47:44 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: 072712H
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Method Loaded
Method Name: 200.7-6010 PE-ICP2.1 **Method Last Saved: 7/27/2012 6:25:50 AM**
IEC File: CA227_LiBeMOD.iec **SMF File:**
Method Description: STANDARD

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: S0 **Date Collected: 7/27/2012 8:05:23 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S0

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2357465.0	25966.63	1.10%		
YRADIAL	289569.5	6660.25	2.30%		
Ga 417.206	1247332.3	5681.75	0.46%		
GaRADIAL	81226.2	1220.57	1.50%		
Ag 328.068†	14.1	84.47	599.41%	[0.00]	mg/L
Al 396.153†	-36.7	11.21	30.56%	[0.00]	mg/L
As 188.979†	-17.8	3.91	21.94%	[0.00]	mg/L
Ba 233.527†	-186.0	18.31	9.84%	[0.00]	mg/L
Be 234.861†	-1581.2	25.75	1.63%	[0.00]	mg/L
B 249.677†	263.9	4.69	1.78%	[0.00]	mg/L
Ca 227.546†	-34.4	4.62	13.43%	[0.00]	mg/L
Cd 228.802†	40.8	1.22	2.97%	[0.00]	mg/L
Co 228.616†	-24.9	20.00	80.36%	[0.00]	mg/L
Cr 267.716†	165.8	21.64	13.05%	[0.00]	mg/L
Cu 327.393†	-680.5	14.95	2.20%	[0.00]	mg/L
Fe 239.562†	-15.7	4.92	31.23%	[0.00]	mg/L
Mg 279.077†	45.3	4.29	9.48%	[0.00]	mg/L
Mn 257.610†	362.6	11.83	3.26%	[0.00]	mg/L
Mo 202.031†	73.2	4.26	5.82%	[0.00]	mg/L
Ni 231.604†	-210.9	26.36	12.50%	[0.00]	mg/L
Pb 220.353†	-64.1	6.58	10.26%	[0.00]	mg/L
Sb 206.836†	13.8	4.74	34.33%	[0.00]	mg/L
Se 196.026†	18.0	7.27	40.46%	[0.00]	mg/L
Si 251.611†	1145.4	323.21	28.22%	[0.00]	mg/L
Sn 189.927†	24.9	4.47	17.95%	[0.00]	mg/L
Ti 334.940†	532.0	176.55	33.19%	[0.00]	mg/L
Tl 190.801†	-81.2	3.43	4.22%	[0.00]	mg/L
V 290.880†	8954.0	165.42	1.85%	[0.00]	mg/L
Zn 206.200†	3.9	2.68	69.22%	[0.00]	mg/L
K 766.490†	-201.0	19.59	9.75%	[0.00]	mg/L
Na 589.592†	896.0	66.70	7.44%	[0.00]	mg/L
Sr 407.771†	-548.8	54.86	9.99%	[0.00]	mg/L
Li 670.784†	-127.0	44.96	35.41%	[0.00]	mg/L

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S1 **Date Collected: 7/27/2012 8:12:18 AM**

Approved: July 31, 2012

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

Nebulizer Parameters: S1

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: S1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2370012.6	14319.04	0.60%		
YRADIAL	285820.2	8235.05	2.88%		
Ga 417.206	1250065.8	17301.63	1.38%		
GaRADIAL	79769.3	449.92	0.56%		
Ag 328.068†	1249.2	58.79	4.71%	[0.0040]	mg/L
Al 396.153†	679.0	14.88	2.19%	[0.10]	mg/L
Ba 233.527†	1725.4	15.55	0.90%	[0.010]	mg/L
Be 234.861†	580.9	9.37	1.61%	[0.0005]	mg/L
Cd 228.802†	27.8	0.38	1.38%	[0.00050]	mg/L
Co 228.616†	98.8	2.37	2.40%	[0.0020]	mg/L
Cr 267.716†	654.9	0.82	0.13%	[0.0050]	mg/L
Cu 327.393†	1427.9	143.76	10.07%	[0.0050]	mg/L
Fe 239.562†	578.9	12.00	2.07%	[0.040]	mg/L
Mg 279.077†	333.1	0.89	0.27%	[0.10]	mg/L
Mn 257.610†	4355.7	62.53	1.44%	[0.0050]	mg/L
Mo 202.031†	367.5	8.09	2.20%	[0.010]	mg/L
Ni 231.604†	377.9	10.23	2.71%	[0.0050]	mg/L
Pb 220.353†	62.3	4.00	6.43%	[0.0050]	mg/L
Sb 206.836†	52.2	1.06	2.04%	[0.012]	mg/L
Si 251.611†	3040.3	888.21	29.21%	[0.050]	mg/L
Sn 189.927†	126.4	7.83	6.19%	[0.010]	mg/L
Ti 334.940†	10358.3	132.35	1.28%	[0.010]	mg/L
V 290.880†	2626.7	70.27	2.68%	[0.010]	mg/L
Zn 206.200†	597.2	1.08	0.18%	[0.010]	mg/L
K 766.490†	1771.7	14.06	0.79%	[0.50]	mg/L
Na 589.592†	9881.8	245.41	2.48%	[0.50]	mg/L
Sr 407.771†	25638.5	852.17	3.32%	[0.010]	mg/L
Li 670.784†	1598.6	20.35	1.27%	[0.010]	mg/L

==========

Sequence No.: 3
Sample ID: S2
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 3
Date Collected: 7/27/2012 8:19:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: S2

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: S2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2402184.7	3074.05	0.13%		
YRADIAL	286302.2	4456.76	1.56%		
Ga 417.206	1260191.9	10281.72	0.82%		
GaRADIAL	80691.0	927.99	1.15%		
Ag 328.068†	2452.0	123.52	5.04%	[0.0080]	mg/L
Al 396.153†	1352.8	17.48	1.29%	[0.20]	mg/L
As 188.979†	21.5	3.36	15.64%	[0.0080]	mg/L
Ba 233.527†	3453.9	19.46	0.56%	[0.020]	mg/L
Be 234.861†	1177.6	18.35	1.56%	[0.0010]	mg/L
B 249.677†	1055.0	84.58	8.02%	[0.010]	mg/L
Ca 227.546†	63.7	4.34	6.81%	[0.20]	mg/L
Cd 228.802†	48.7	6.89	14.14%	[0.0010]	mg/L
Co 228.616†	188.9	11.74	6.21%	[0.0040]	mg/L
Cr 267.716†	1280.3	4.42	0.34%	[0.010]	mg/L

Approved: July 31, 2012

Cu 327.393†	2577.7	57.27	2.22%	[0.010]	mg/L
Fe 239.562†	1155.6	7.14	0.62%	[0.080]	mg/L
Mg 279.077†	666.7	11.11	1.67%	[0.20]	mg/L
Mn 257.610†	8305.6	136.49	1.64%	[0.010]	mg/L
Mo 202.031†	737.3	6.65	0.90%	[0.020]	mg/L
Ni 231.604†	733.1	10.39	1.42%	[0.010]	mg/L
Pb 220.353†	136.0	8.39	6.17%	[0.010]	mg/L
Sb 206.836†	110.0	4.14	3.76%	[0.024]	mg/L
Se 196.026†	19.6	5.96	30.46%	[0.0080]	mg/L
Si 251.611†	4859.1	142.68	2.94%	[0.10]	mg/L
Sn 189.927†	250.2	4.10	1.64%	[0.020]	mg/L
Ti 334.940†	20420.3	147.99	0.72%	[0.020]	mg/L
Tl 190.801†	41.9	2.87	6.85%	[0.010]	mg/L
V 290.880†	4750.9	128.53	2.71%	[0.020]	mg/L
Zn 206.200†	1168.0	11.36	0.97%	[0.020]	mg/L
K 766.490†	3278.0	35.95	1.10%	[1.00]	mg/L
Na 589.592†	19383.7	424.52	2.19%	[1.00]	mg/L
Sr 407.771†	50895.8	1356.47	2.67%	[0.020]	mg/L
Li 670.784†	3025.1	42.79	1.41%	[0.020]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S3 **Date Collected: 7/27/2012 8:26:11 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S3

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: S3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2315567.9	1937.28	0.08%		
YRADIAL	288266.4	2927.45	1.02%		
Ga 417.206	1223642.9	16598.10	1.36%		
GaRADIAL	80434.9	1306.92	1.62%		
Ag 328.068†	124739.8	2362.91	1.89%	[0.40]	mg/L
Al 396.153†	64887.7	191.94	0.30%	[10.00]	mg/L
As 188.979†	1379.4	14.18	1.03%	[0.40]	mg/L
Ba 233.527†	167379.9	735.70	0.44%	[1.00]	mg/L
Be 234.861†	59284.0	1035.83	1.75%	[0.05]	mg/L
B 249.677†	52927.3	1165.28	2.20%	[0.50]	mg/L
Ca 227.546†	4327.9	104.86	2.42%	[10.00]	mg/L
Cd 228.802†	2767.7	99.95	3.61%	[0.05]	mg/L
Co 228.616†	8787.3	54.62	0.62%	[0.20]	mg/L
Cr 267.716†	62161.5	270.77	0.44%	[0.50]	mg/L
Cu 327.393†	123854.7	2441.05	1.97%	[0.50]	mg/L
Fe 239.562†	57273.9	216.06	0.38%	[4.00]	mg/L
Mg 279.077†	32899.3	181.31	0.55%	[10.00]	mg/L
Mn 257.610†	404664.3	2301.66	0.57%	[0.50]	mg/L
Mo 202.031†	36502.5	134.93	0.37%	[1.00]	mg/L
Ni 231.604†	35528.4	160.42	0.45%	[0.50]	mg/L
Pb 220.353†	6846.6	36.95	0.54%	[0.50]	mg/L
Sb 206.836†	5510.9	120.02	2.18%	[1.20]	mg/L
Se 196.026†	808.9	15.69	1.94%	[0.40]	mg/L
Si 251.611†	249833.1	2902.46	1.16%	[5.00]	mg/L
Sn 189.927†	12160.0	49.66	0.41%	[1.00]	mg/L
Ti 334.940†	1020758.3	4637.76	0.45%	[1.00]	mg/L
Tl 190.801†	1998.9	9.60	0.48%	[0.50]	mg/L
V 290.880†	244497.7	2408.68	0.99%	[1.00]	mg/L
Zn 206.200†	58030.0	50.95	0.09%	[1.00]	mg/L
K 766.490†	144549.5	1313.69	0.91%	[50.00]	mg/L
Na 589.592†	941721.4	18162.21	1.93%	[50.00]	mg/L
Sr 407.771†	2429399.7	24279.18	1.00%	[1.00]	mg/L
Li 670.784†	142343.9	170.45	0.12%	[1.00]	mg/L

Sequence No.: 5 **Autosampler Location: 5**

Approved: July 31, 2012

Sample ID: S4
Analyst:
Initial Sample Wt:
Dilution:

Date Collected: 7/27/2012 8:32:09 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: S4

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: S4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2273472.3	11486.37	0.51%		
YRADIAL	282610.1	3490.22	1.23%		
Ga 417.206	1212100.2	20435.67	1.69%		
GaRADIAL	80448.1	1078.96	1.34%		
Ag 328.068†	248535.6	3717.45	1.50%	[0.80]	mg/L
Al 396.153†	129694.4	318.45	0.25%	[20.00]	mg/L
As 188.979†	2769.0	52.67	1.90%	[0.80]	mg/L
Ba 233.527†	332906.7	2707.44	0.81%	[2.00]	mg/L
Be 234.861†	117490.3	1792.18	1.53%	[0.10]	mg/L
B 249.677†	106562.9	1832.61	1.72%	[1.00]	mg/L
Ca 227.546†	8775.8	206.55	2.35%	[20.00]	mg/L
Cd 228.802†	5512.3	201.30	3.65%	[0.10]	mg/L
Co 228.616†	17454.0	87.33	0.50%	[0.40]	mg/L
Cr 267.716†	124105.9	431.90	0.35%	[1.00]	mg/L
Cu 327.393†	247517.3	4171.21	1.69%	[1.00]	mg/L
Fe 239.562†	114808.6	520.86	0.45%	[8.00]	mg/L
Mg 279.077†	66190.4	357.32	0.54%	[20.00]	mg/L
Mn 257.610†	804428.3	8892.52	1.11%	[1.00]	mg/L
Mo 202.031†	73388.3	499.64	0.68%	[2.00]	mg/L
Ni 231.604†	68017.8	936.28	1.38%	[1.00]	mg/L
Pb 220.353†	13576.8	97.20	0.72%	[1.00]	mg/L
Sb 206.836†	11007.5	277.16	2.52%	[2.40]	mg/L
Se 196.026†	1612.3	36.11	2.24%	[0.80]	mg/L
Si 251.611†	497495.6	4167.19	0.84%	[10.00]	mg/L
Sn 189.927†	24339.4	195.73	0.80%	[2.00]	mg/L
Ti 334.940†	2056373.0	5931.01	0.29%	[2.00]	mg/L
Tl 190.801†	3897.4	36.43	0.93%	[1.00]	mg/L
V 290.880†	489689.7	1433.84	0.29%	[2.00]	mg/L
Zn 206.200†	115562.3	1065.57	0.92%	[2.00]	mg/L
K 766.490†	287240.2	941.63	0.33%	[100.00]	mg/L
Na 589.592†	1868384.6	26465.49	1.42%	[100.00]	mg/L
Sr 407.771†	4909001.1	89255.99	1.82%	[2.00]	mg/L
Li 670.784†	282236.8	1698.25	0.60%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin, Calc Int	50.4	310800	0.00000	0.999998	
Al 396.153	4	Lin, Calc Int	32.1	6484	0.00000	1.000000	
As 188.979	3	Wt. Lin	-6.3	3467	0.00000	1.000000	
Ba 233.527	4	Lin, Calc Int	173.5	166500	0.00000	0.999997	
Be 234.861	4	Lin, Calc Int	65.9	1176000	0.00000	0.999990	
B 249.677	3	Lin, Calc Int	-69.3	106500	0.00000	0.999994	
Ca 227.546	3	Lin, Calc Int	-21.8	438.9	0.00000	0.999977	
Cd 228.802	4	Lin, Calc Int	-0.5	55170	0.00000	0.999997	
Co 228.616	4	Lin, Calc Int	15.6	43650	0.00000	0.999995	
Cr 267.716	4	Lin, Calc Int	36.6	124100	0.00000	1.000000	
Cu 327.393	4	Lin, Calc Int	103.8	247400	0.00000	1.000000	
Fe 239.562	4	Lin, Calc Int	-12.4	14350	0.00000	0.999999	
Mg 279.077	4	Lin, Calc Int	-22.2	3307	0.00000	0.999996	
Mn 257.610	4	Lin, Calc Int	491.5	804800	0.00000	0.999996	
Mo 202.031	4	Lin, Calc Int	-22.6	36670	0.00000	0.999997	
Ni 231.604	4	Lin, Calc Int	217.7	68360	0.00000	0.999770	
Pb 220.353	4	Lin, Calc Int	5.6	13590	0.00000	0.999991	
Sb 206.836	4	Lin, Calc Int	-0.0	4588	0.00000	1.000000	
Se 196.026	3	Wt. Lin	3.5	2012	0.00000	1.000000	
Si 251.611	4	Lin, Calc Int	272.7	49760	0.00000	0.999997	

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Sn 189.927	4	Lin, Calc Int	2.4	12170	0.00000	1.000000
Ti 334.940	4	Lin, Calc Int	-945.9	1027000	0.00000	0.999994
Tl 190.801	3	Lin, Calc Int	10.5	3905	0.00000	0.999914
V 290.880	4	Lin, Calc Int	-32.8	244800	0.00000	1.000000
Zn 206.200	4	Lin, Calc Int	40.9	57810	0.00000	0.999998
K 766.490	4	Non Lin, Calc Int	230.0	2903	-0.32918	1.000000
Na 589.592	4	Non Lin, Calc Int	265.6	18980	-2.96222	1.000000
Sr 407.771	4	Lin, Calc Int	-2218.8	2451000	0.00000	0.999987
Li 670.784	4	Lin, Calc Int	274.8	141200	0.00000	0.999992

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Sequence No.: 6 **Autosampler Location: 11**
Sample ID: ICV 2nd Vendor **Date Collected: 7/27/2012 8:38:11 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICV 2nd Vendor

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 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	2324215.6						8680.42	0.37%
YRADIAL	286445.7						1747.38	0.61%
Ga 417.206	1237220.9						26480.15	2.14%
GaRADIAL	79754.9						664.77	0.83%
Ag 328.068†	122795.5	0.398	mg/L	0.0089	0.398	mg/L	0.0089	2.24%
QC value within limits for Ag 328.068 Recovery = 99.59%								
Al 396.153†	66552.3	10.2	mg/L	0.02	10.2	mg/L	0.02	0.20%
QC value within limits for Al 396.153 Recovery = 101.92%								
As 188.979†	1388.0	0.397	mg/L	0.0122	0.397	mg/L	0.0122	3.07%
QC value within limits for As 188.979 Recovery = 99.34%								
Ba 233.527†	171834.1	1.03	mg/L	0.005	1.03	mg/L	0.005	0.44%
QC value within limits for Ba 233.527 Recovery = 103.10%								
Be 234.861†	59208.9	0.0498	mg/L	0.00117	0.0498	mg/L	0.00117	2.34%
QC value within limits for Be 234.861 Recovery = 99.52%								
B 249.677†	54183.3	0.505	mg/L	0.0087	0.505	mg/L	0.0087	1.73%
QC value within limits for B 249.677 Recovery = 101.08%								
Ca 227.546†	4366.6	10.5	mg/L	0.32	10.5	mg/L	0.32	3.09%
QC value within limits for Ca 227.546 Recovery = 104.84%								
Cd 228.802†	2787.8	0.0492	mg/L	0.00218	0.0492	mg/L	0.00218	4.44%
QC value within limits for Cd 228.802 Recovery = 98.31%								
Co 228.616†	8865.6	0.202	mg/L	0.0008	0.202	mg/L	0.0008	0.41%
QC value within limits for Co 228.616 Recovery = 100.93%								
Cr 267.716†	63627.7	0.513	mg/L	0.0057	0.513	mg/L	0.0057	1.10%
QC value within limits for Cr 267.716 Recovery = 102.56%								
Cu 327.393†	128064.1	0.519	mg/L	0.0100	0.519	mg/L	0.0100	1.93%
QC value within limits for Cu 327.393 Recovery = 103.74%								
Fe 239.562†	59181.7	4.13	mg/L	0.033	4.13	mg/L	0.033	0.81%
QC value within limits for Fe 239.562 Recovery = 103.13%								
Mg 279.077†	33568.0	10.2	mg/L	0.08	10.2	mg/L	0.08	0.77%
QC value within limits for Mg 279.077 Recovery = 101.73%								
Mn 257.610†	413792.0	0.514	mg/L	0.0018	0.514	mg/L	0.0018	0.36%
QC value within limits for Mn 257.610 Recovery = 102.81%								
Mo 202.031†	36325.8	0.992	mg/L	0.0078	0.992	mg/L	0.0078	0.78%
QC value within limits for Mo 202.031 Recovery = 99.20%								
Ni 231.604†	36390.0	0.529	mg/L	0.0024	0.529	mg/L	0.0024	0.46%
QC value greater than the upper limit for Ni 231.604 Recovery = 105.75%								
Pb 220.353†	6936.7	0.511	mg/L	0.0029	0.511	mg/L	0.0029	0.56%
QC value within limits for Pb 220.353 Recovery = 102.22%								
Sb 206.836†	5671.8	1.24	mg/L	0.039	1.24	mg/L	0.039	3.13%
QC value within limits for Sb 206.836 Recovery = 102.92%								
Se 196.026†	822.2	0.408	mg/L	0.0118	0.408	mg/L	0.0118	2.90%
QC value within limits for Se 196.026 Recovery = 102.08%								
Si 251.611†	250661.3	5.02	mg/L	0.085	5.02	mg/L	0.085	1.69%
QC value within limits for Si 251.611 Recovery = 100.42%								
Sn 189.927†	12553.2	1.03	mg/L	0.004	1.03	mg/L	0.004	0.35%
QC value within limits for Sn 189.927 Recovery = 103.16%								

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Ti 334.940†          1050008.4        1.02 mg/L         0.001        1.02 mg/L         0.001   0.10%
   QC value within limits for Ti 334.940  Recovery = 102.44%
Tl 190.801†              2043.2       0.535 mg/L        0.0110       0.535 mg/L        0.0110   2.05%
   QC value greater than the upper limit for Tl 190.801  Recovery = 107.06%
V 290.880†            247234.1        1.01 mg/L         0.008        1.01 mg/L         0.008   0.80%
   QC value within limits for V 290.880  Recovery = 100.93%
Zn 206.200†            59569.8        1.03 mg/L         0.015        1.03 mg/L         0.015   1.48%
   QC value within limits for Zn 206.200  Recovery = 103.46%
K 766.490†            147036.2        50.8 mg/L          0.18        50.8 mg/L          0.18   0.35%
   QC value within limits for K 766.490  Recovery = 101.62%
Na 589.592†           978531.8        52.0 mg/L          0.48        52.0 mg/L          0.48   0.93%
   QC value within limits for Na 589.592  Recovery = 103.94%
Sr 407.771†          2524060.7        1.03 mg/L         0.009        1.03 mg/L         0.009   0.91%
   QC value within limits for Sr 407.771  Recovery = 103.06%
Li 670.784†           145585.2        1.03 mg/L         0.003        1.03 mg/L         0.003   0.32%
   QC value within limits for Li 670.784  Recovery = 102.91%
QC Failed.  Continue with analysis.

==========================================================================================
Sequence No.: 7                                    Autosampler Location: 1
Sample ID: ICB                                     Date Collected: 7/27/2012 8:44:07 AM
Analyst:                                           Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: ICB
Analyte                  Back Pressure    Flow
All                     184.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: ICB
                   Mean Corrected          Calib.                          Sample
Analyte              Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2425844.4                                                     28584.26   1.18%
YRADIAL               291700.9                                                      1690.42   0.58%
Ga 417.206           1272244.7                                                     22240.98   1.75%
GaRADIAL               81781.3                                                      2428.14   2.97%
Ag 328.068†              -24.2    -0.00024 mg/L      0.000345    -0.00024 mg/L      0.000345 143.79%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               -4.7    -0.00572 mg/L      0.002076    -0.00572 mg/L      0.002076  36.30%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -5.2     0.00031 mg/L      0.001959     0.00031 mg/L      0.001959 638.33%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               13.5    -0.00096 mg/L      0.000111    -0.00096 mg/L      0.000111  11.51%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               45.4    -0.00002 mg/L      0.000009    -0.00002 mg/L      0.000009  48.62%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               545.0     0.00577 mg/L      0.001089     0.00577 mg/L      0.001089  18.88%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -4.4      0.0373 mg/L       0.00704      0.0373 mg/L       0.00704  18.88%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -3.1    -0.00005 mg/L      0.000132    -0.00005 mg/L      0.000132 267.12%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                9.4    -0.00014 mg/L      0.000126    -0.00014 mg/L      0.000126  87.66%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                3.5    -0.00027 mg/L      0.000135    -0.00027 mg/L      0.000135  50.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              238.8     0.00055 mg/L      0.000491     0.00055 mg/L      0.000491  89.71%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†                9.4     0.00152 mg/L      0.000437     0.00152 mg/L      0.000437  28.80%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              -17.1     0.00156 mg/L      0.004374     0.00156 mg/L      0.004374 281.24%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              -37.0    -0.00066 mg/L      0.000003    -0.00066 mg/L      0.000003   0.49%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                2.9     0.00070 mg/L      0.000110     0.00070 mg/L      0.000110  15.81%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               17.3    -0.00293 mg/L      0.000172    -0.00293 mg/L      0.000172   5.85%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -14.2    -0.00146 mg/L      0.001131    -0.00146 mg/L      0.001131  77.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
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Sb 206.836†	-3.7	-0.00080	mg/L	0.001267	-0.00080	mg/L	0.001267 159.41%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.5	0.00052	mg/L	0.004064	0.00052	mg/L	0.004064 786.27%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	53.0	-0.00442	mg/L	0.005340	-0.00442	mg/L	0.005340 120.78%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	32.9	0.00250	mg/L	0.000629	0.00250	mg/L	0.000629 25.11%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Ti 334.940†	57.0	0.00098	mg/L	0.000110	0.00098	mg/L	0.000110 11.23%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	9.2	-0.00031	mg/L	0.001659	-0.00031	mg/L	0.001659 533.45%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 290.880†	-102.6	-0.00029	mg/L	0.000734	-0.00029	mg/L	0.000734 257.21%
QC value within limits for V 290.880 Recovery = Not calculated							
Zn 206.200†	-6.5	-0.00082	mg/L	0.000031	-0.00082	mg/L	0.000031 3.71%
QC value within limits for Zn 206.200 Recovery = Not calculated							
K 766.490†	29.9	-0.0689	mg/L	0.01349	-0.0689	mg/L	0.01349 19.58%
QC value within limits for K 766.490 Recovery = Not calculated							
Na 589.592†	47.9	-0.0115	mg/L	0.00321	-0.0115	mg/L	0.00321 27.99%
QC value within limits for Na 589.592 Recovery = Not calculated							
Sr 407.771†	8.6	0.00091	mg/L	0.000025	0.00091	mg/L	0.000025 2.73%
QC value within limits for Sr 407.771 Recovery = Not calculated							
Li 670.784†	198.5	-0.00054	mg/L	0.000335	-0.00054	mg/L	0.000335 62.07%
QC value within limits for Li 670.784 Recovery = Not calculated							

All analyte(s) passed QC.

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Sequence No.: 8 **Autosampler Location: 14**
Sample ID: LLICV **Date Collected: 7/27/2012 8:51:01 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LLICV

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: LLICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2414420.6						18875.49	0.78%
YRADIAL	292524.2						1739.52	0.59%
Ga 417.206	1273777.0						11508.87	0.90%
GaRADIAL	81910.8						2417.29	2.95%
Ag 328.068†	2504.4	0.00796	mg/L	0.000425	0.00796	mg/L	0.000425	5.33%
Al 396.153†	1347.9	0.202	mg/L	0.0019	0.202	mg/L	0.0019	0.94%
As 188.979†	22.3	0.00814	mg/L	0.001342	0.00814	mg/L	0.001342	16.49%
Ba 233.527†	3454.0	0.0197	mg/L	0.00023	0.0197	mg/L	0.00023	1.15%
Be 234.861†	1194.2	0.00095	mg/L	0.000014	0.00095	mg/L	0.000014	1.47%
B 249.677†	1372.4	0.0135	mg/L	0.00067	0.0135	mg/L	0.00067	4.98%
Ca 227.546†	77.6	0.234	mg/L	0.0259	0.234	mg/L	0.0259	11.07%
Cd 228.802†	48.4	0.00086	mg/L	0.000068	0.00086	mg/L	0.000068	7.96%
Co 228.616†	189.5	0.00397	mg/L	0.000287	0.00397	mg/L	0.000287	7.23%
Cr 267.716†	1296.7	0.0102	mg/L	0.00016	0.0102	mg/L	0.00016	1.56%
Cu 327.393†	2594.1	0.0101	mg/L	0.00015	0.0101	mg/L	0.00015	1.47%
Fe 239.562†	1140.2	0.0803	mg/L	0.00125	0.0803	mg/L	0.00125	1.56%
Mg 279.077†	657.0	0.206	mg/L	0.0016	0.206	mg/L	0.0016	0.76%
Mn 257.610†	8333.9	0.00975	mg/L	0.000130	0.00975	mg/L	0.000130	1.34%
Mo 202.031†	747.2	0.0210	mg/L	0.00026	0.0210	mg/L	0.00026	1.22%
Ni 231.604†	739.2	0.00762	mg/L	0.000369	0.00762	mg/L	0.000369	4.85%
Pb 220.353†	140.5	0.00995	mg/L	0.001052	0.00995	mg/L	0.001052	10.57%
Sb 206.836†	105.2	0.0229	mg/L	0.00048	0.0229	mg/L	0.00048	2.11%
Se 196.026†	17.8	0.00713	mg/L	0.003502	0.00713	mg/L	0.003502	49.14%
Si 251.611†	4868.5	0.0921	mg/L	0.00114	0.0921	mg/L	0.00114	1.23%
Sn 189.927†	262.5	0.0214	mg/L	0.00059	0.0214	mg/L	0.00059	2.75%
Ti 334.940†	20645.9	0.0210	mg/L	0.00027	0.0210	mg/L	0.00027	1.28%
Tl 190.801†	41.2	0.00817	mg/L	0.001281	0.00817	mg/L	0.001281	15.68%
V 290.880†	4920.2	0.0202	mg/L	0.00084	0.0202	mg/L	0.00084	4.16%
Zn 206.200†	1240.9	0.0209	mg/L	0.00016	0.0209	mg/L	0.00016	0.75%
K 766.490†	3255.2	1.04	mg/L	0.012	1.04	mg/L	0.012	1.11%

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Na 589.592†	19576.5	1.02 mg/L	0.031	1.02 mg/L	0.031	3.04%
Sr 407.771†	50998.7	0.0217 mg/L	0.00075	0.0217 mg/L	0.00075	3.45%
Li 670.784†	3083.3	0.0199 mg/L	0.00056	0.0199 mg/L	0.00056	2.80%

Sequence No.: 9 **Autosampler Location: 12**
Sample ID: ICSA **Date Collected: 7/27/2012 8:57:56 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	184.0 kPa	0.50 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2214427.4						6000.15	0.27%
YRADIAL	284097.7						6618.73	2.33%
Ga 417.206	1225039.7						18451.63	1.51%
GaRADIAL	81268.6						1303.91	1.60%
Ag 328.068†	-12648.4	-0.00314	mg/L	0.000751	-0.00314	mg/L	0.000751	23.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	1589916.1	245	mg/L	5.6	245	mg/L	5.6	2.28%
QC value within limits for Al 396.153 Recovery = 98.09%								
As 188.979†	-26.7	-0.00055	mg/L	0.001356	-0.00055	mg/L	0.001356	247.79%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	797.7	-0.00165	mg/L	0.000237	-0.00165	mg/L	0.000237	14.29%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	25256.6	0.00010	mg/L	0.000333	0.00010	mg/L	0.000333	333.42%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	8138.6	0.0377	mg/L	0.00279	0.0377	mg/L	0.00279	7.38%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	111304.4	256	mg/L	6.6	256	mg/L	6.6	2.58%
QC value within limits for Ca 227.546 Recovery = 102.34%								
Cd 228.802†	-4.7	-0.00015	mg/L	0.000166	-0.00015	mg/L	0.000166	111.20%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	30.7	-0.00198	mg/L	0.000197	-0.00198	mg/L	0.000197	9.96%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	43.0	-0.00108	mg/L	0.000176	-0.00108	mg/L	0.000176	16.25%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-1371.1	-0.00152	mg/L	0.000210	-0.00152	mg/L	0.000210	13.83%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	1312414.7	91.5	mg/L	1.81	91.5	mg/L	1.81	1.98%
QC value within limits for Fe 239.562 Recovery = 91.48%								
Mg 279.077†	811259.2	245	mg/L	4.9	245	mg/L	4.9	1.98%
QC value within limits for Mg 279.077 Recovery = 98.11%								
Mn 257.610†	-2168.0	-0.00308	mg/L	0.000555	-0.00308	mg/L	0.000555	18.01%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-74.6	0.00307	mg/L	0.000534	0.00307	mg/L	0.000534	17.39%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	80.2	-0.00200	mg/L	0.000325	-0.00200	mg/L	0.000325	16.21%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-474.8	-0.00273	mg/L	0.003481	-0.00273	mg/L	0.003481	127.51%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-28.3	-0.00282	mg/L	0.001560	-0.00282	mg/L	0.001560	55.37%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-49.6	-0.00317	mg/L	0.000330	-0.00317	mg/L	0.000330	10.43%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	15468.1	0.305	mg/L	0.0047	0.305	mg/L	0.0047	1.55%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	-359.6	-0.0298	mg/L	0.00138	-0.0298	mg/L	0.00138	4.65%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-37255.9	0.00270	mg/L	0.003056	0.00270	mg/L	0.003056	113.13%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-65.3	-0.0132	mg/L	0.00240	-0.0132	mg/L	0.00240	18.21%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	3310.2	0.00228	mg/L	0.002011	0.00228	mg/L	0.002011	88.05%
QC value within limits for V 290.880 Recovery = Not calculated								

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Zn 206.200†	319.7	0.00308 mg/L	0.000281	0.00308 mg/L	0.000281	9.13%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	-81.0	-0.107 mg/L	0.0248	-0.107 mg/L	0.0248	23.19%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	480.3	0.0113 mg/L	0.00387	0.0113 mg/L	0.00387	34.20%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	2314.3	-0.00373 mg/L	0.000148	-0.00373 mg/L	0.000148	3.97%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	256.4	-0.00013 mg/L	0.001045	-0.00013 mg/L	0.001045	800.76%
QC value within limits for Li 670.784 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 10 **Autosampler Location: 13**
Sample ID: ICSAB **Date Collected: 7/27/2012 9:03:52 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2157814.8						20420.55	0.95%
YRADIAL	282699.1						1280.98	0.45%
Ga 417.206	1193997.6						12278.19	1.03%
GaRADIAL	80014.6						707.30	0.88%
Ag 328.068†	147376.2	0.513	mg/L	0.0068	0.513	mg/L	0.0068	1.33%
QC value within limits for Ag 328.068 Recovery = 102.56%								
Al 396.153†	1617191.9	249	mg/L	1.6	249	mg/L	1.6	0.64%
QC value within limits for Al 396.153 Recovery = 99.77%								
As 188.979†	788.7	0.235	mg/L	0.0030	0.235	mg/L	0.0030	1.29%
QC value within limits for As 188.979 Recovery = 93.94%								
Ba 233.527†	42885.0	0.251	mg/L	0.0024	0.251	mg/L	0.0024	0.94%
QC value within limits for Ba 233.527 Recovery = 100.37%								
Be 234.861†	319614.3	0.250	mg/L	0.0027	0.250	mg/L	0.0027	1.07%
QC value within limits for Be 234.861 Recovery = 100.01%								
B 249.677†	4673.8	-0.00878	mg/L	0.001115	-0.00878	mg/L	0.001115	12.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	113848.4	262	mg/L	5.0	262	mg/L	5.0	1.90%
QC value within limits for Ca 227.546 Recovery = 104.82%								
Cd 228.802†	26427.6	0.479	mg/L	0.0059	0.479	mg/L	0.0059	1.24%
QC value within limits for Cd 228.802 Recovery = 95.72%								
Co 228.616†	10365.0	0.235	mg/L	0.0021	0.235	mg/L	0.0021	0.89%
QC value within limits for Co 228.616 Recovery = 93.86%								
Cr 267.716†	30661.0	0.246	mg/L	0.0026	0.246	mg/L	0.0026	1.04%
QC value within limits for Cr 267.716 Recovery = 98.31%								
Cu 327.393†	60577.7	0.249	mg/L	0.0032	0.249	mg/L	0.0032	1.29%
QC value within limits for Cu 327.393 Recovery = 99.57%								
Fe 239.562†	1334447.5	93.0	mg/L	0.33	93.0	mg/L	0.33	0.35%
QC value within limits for Fe 239.562 Recovery = 93.01%								
Mg 279.077†	823434.7	249	mg/L	0.7	249	mg/L	0.7	0.26%
QC value within limits for Mg 279.077 Recovery = 99.58%								
Mn 257.610†	196993.2	0.244	mg/L	0.0014	0.244	mg/L	0.0014	0.59%
QC value within limits for Mn 257.610 Recovery = 97.79%								
Mo 202.031†	-100.4	0.00262	mg/L	0.000088	0.00262	mg/L	0.000088	3.35%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	33100.7	0.481	mg/L	0.0028	0.481	mg/L	0.0028	0.58%
QC value within limits for Ni 231.604 Recovery = 96.12%								
Pb 220.353†	6082.4	0.480	mg/L	0.0032	0.480	mg/L	0.0032	0.67%
QC value within limits for Pb 220.353 Recovery = 95.97%								
Sb 206.836†	2272.6	0.497	mg/L	0.0076	0.497	mg/L	0.0076	1.53%
QC value within limits for Sb 206.836 Recovery = 99.46%								
Se 196.026†	441.9	0.242	mg/L	0.0032	0.242	mg/L	0.0032	1.33%
QC value within limits for Se 196.026 Recovery = 96.67%								
Si 251.611†	-733.7	-0.0202	mg/L	0.00031	-0.0202	mg/L	0.00031	1.52%
QC value within limits for Si 251.611 Recovery = Not calculated								

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Sn 189.927†            -382.6     -0.0316 mg/L       0.00133     -0.0316 mg/L       0.00133   4.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†          -37986.0     0.00279 mg/L      0.002628     0.00279 mg/L      0.002628  94.30%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†            1868.4       0.482 mg/L        0.0028       0.482 mg/L        0.0028   0.59%
   QC value within limits for Tl 190.801  Recovery = 96.47%
V 290.880†            65065.4       0.254 mg/L        0.0023       0.254 mg/L        0.0023   0.89%
   QC value within limits for V 290.880  Recovery = 101.73%
Zn 206.200†           28000.2       0.484 mg/L        0.0015       0.484 mg/L        0.0015   0.31%
   QC value within limits for Zn 206.200  Recovery = 96.86%
K 766.490†            14356.8        4.86 mg/L         0.032        4.86 mg/L         0.032   0.66%
   QC value within limits for K 766.490  Recovery = 97.28%
Na 589.592†           99270.7        5.22 mg/L         0.029        5.22 mg/L         0.029   0.55%
   QC value within limits for Na 589.592  Recovery = 104.43%
Sr 407.771†            2460.2    -0.00380 mg/L      0.000131    -0.00380 mg/L      0.000131   3.44%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             283.3     0.00006 mg/L      0.000075     0.00006 mg/L      0.000075 123.82%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 11                                    Autosampler Location: 6
Sample ID: CCV                                      Date Collected: 7/27/2012 9:09:49 AM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCV
Analyte                 Back Pressure    Flow
All                    185.0 kPa         0.50 L/min

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Mean Data: CCV
                   Mean Corrected          Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2335363.7                                                     28876.76   1.24%
YRADIAL               288522.5                                                      2817.76   0.98%
Ga 417.206           1246949.5                                                     18905.87   1.52%
GaRADIAL               80198.6                                                       609.56   0.76%
Ag 328.068†           124244.6       0.403 mg/L        0.0075       0.403 mg/L        0.0075   1.86%
   QC value within limits for Ag 328.068  Recovery = 100.74%
Al 396.153†            65245.1        9.99 mg/L         0.041        9.99 mg/L         0.041   0.41%
   QC value within limits for Al 396.153  Recovery = 99.89%
As 188.979†             1356.9       0.388 mg/L        0.0047       0.388 mg/L        0.0047   1.20%
   QC value within limits for As 188.979  Recovery = 97.07%
Ba 233.527†           167186.0        1.00 mg/L         0.015        1.00 mg/L         0.015   1.47%
   QC value within limits for Ba 233.527  Recovery = 100.31%
Be 234.861†            58820.1      0.0495 mg/L       0.00087      0.0495 mg/L       0.00087   1.76%
   QC value within limits for Be 234.861  Recovery = 98.91%
B 249.677†             52626.9       0.491 mg/L        0.0100       0.491 mg/L        0.0100   2.03%
   QC value within limits for B 249.677  Recovery = 98.18%
Ca 227.546†             4301.9        10.3 mg/L          0.23        10.3 mg/L          0.23   2.27%
   QC value within limits for Ca 227.546  Recovery = 103.23%
Cd 228.802†             2739.8      0.0483 mg/L       0.00142      0.0483 mg/L       0.00142   2.94%
   QC value within limits for Cd 228.802  Recovery = 96.64%
Co 228.616†             8741.7       0.199 mg/L        0.0025       0.199 mg/L        0.0025   1.26%
   QC value within limits for Co 228.616  Recovery = 99.55%
Cr 267.716†            62262.3       0.502 mg/L        0.0019       0.502 mg/L        0.0019   0.38%
   QC value within limits for Cr 267.716  Recovery = 100.35%
Cu 327.393†           124470.7       0.504 mg/L        0.0106       0.504 mg/L        0.0106   2.11%
   QC value within limits for Cu 327.393  Recovery = 100.83%
Fe 239.562†            57802.3        4.03 mg/L         0.026        4.03 mg/L         0.026   0.63%
   QC value within limits for Fe 239.562  Recovery = 100.73%
Mg 279.077†            33178.4        10.1 mg/L          0.07        10.1 mg/L          0.07   0.74%
   QC value within limits for Mg 279.077  Recovery = 100.56%
Mn 257.610†           404438.9       0.502 mg/L        0.0098       0.502 mg/L        0.0098   1.95%
   QC value within limits for Mn 257.610  Recovery = 100.49%
Mo 202.031†            36763.8        1.00 mg/L         0.009        1.00 mg/L         0.009   0.86%
   QC value within limits for Mo 202.031  Recovery = 100.40%
Ni 231.604†            35432.7       0.515 mg/L        0.0054       0.515 mg/L        0.0054   1.05%
   QC value within limits for Ni 231.604  Recovery = 102.95%
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Pb 220.353†	6810.0	0.502 mg/L	0.0032	0.502 mg/L	0.0032	0.64%
QC value within limits for Pb 220.353 Recovery = 100.36%						
Sb 206.836†	5480.2	1.19 mg/L	0.027	1.19 mg/L	0.027	2.30%
QC value within limits for Sb 206.836 Recovery = 99.45%						
Se 196.026†	806.2	0.400 mg/L	0.0088	0.400 mg/L	0.0088	2.21%
QC value within limits for Se 196.026 Recovery = 100.08%						
Si 251.611†	248946.2	4.99 mg/L	0.045	4.99 mg/L	0.045	0.90%
QC value within limits for Si 251.611 Recovery = 99.73%						
Sn 189.927†	12118.4	0.996 mg/L	0.0086	0.996 mg/L	0.0086	0.87%
QC value within limits for Sn 189.927 Recovery = 99.59%						
Ti 334.940†	1025674.9	1.00 mg/L	0.010	1.00 mg/L	0.010	0.97%
QC value within limits for Ti 334.940 Recovery = 100.07%						
Tl 190.801†	2015.5	0.528 mg/L	0.0070	0.528 mg/L	0.0070	1.33%
QC value within limits for Tl 190.801 Recovery = 105.58%						
V 290.880†	244469.3	0.998 mg/L	0.0037	0.998 mg/L	0.0037	0.38%
QC value within limits for V 290.880 Recovery = 99.80%						
Zn 206.200†	57579.1	1.00 mg/L	0.010	1.00 mg/L	0.010	1.02%
QC value within limits for Zn 206.200 Recovery = 100.01%						
K 766.490†	143490.7	49.6 mg/L	0.26	49.6 mg/L	0.26	0.52%
QC value within limits for K 766.490 Recovery = 99.15%						
Na 589.592†	964164.4	51.2 mg/L	0.57	51.2 mg/L	0.57	1.11%
QC value within limits for Na 589.592 Recovery = 102.40%						
Sr 407.771†	2453504.3	1.00 mg/L	0.003	1.00 mg/L	0.003	0.32%
QC value within limits for Sr 407.771 Recovery = 100.18%						
Li 670.784†	143646.2	1.02 mg/L	0.006	1.02 mg/L	0.006	0.64%
QC value within limits for Li 670.784 Recovery = 101.54%						

All analyte(s) passed QC.

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Sequence No.: 12 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/27/2012 9:15:48 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2394701.6						16698.48	0.70%
YRADIAL	291771.5						6424.52	2.20%
Ga 417.206	1268182.3						9982.13	0.79%
GaRADIAL	81656.0						2241.85	2.75%
Ag 328.068†	44.6	-0.00002	mg/L	0.000403	-0.00002	mg/L	0.000403	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	12.7	-0.00303	mg/L	0.001240	-0.00303	mg/L	0.001240	40.96%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-4.4	0.00053	mg/L	0.001068	0.00053	mg/L	0.001068	201.42%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	18.4	-0.00093	mg/L	0.000099	-0.00093	mg/L	0.000099	10.65%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	56.8	-0.00001	mg/L	0.000021	-0.00001	mg/L	0.000021	236.69%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	230.6	0.00281	mg/L	0.000133	0.00281	mg/L	0.000133	4.72%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-8.3	0.0286	mg/L	0.01484	0.0286	mg/L	0.01484	51.94%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	1.6	0.00003	mg/L	0.000119	0.00003	mg/L	0.000119	349.62%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	9.3	-0.00015	mg/L	0.000089	-0.00015	mg/L	0.000089	61.26%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-0.5	-0.00030	mg/L	0.000091	-0.00030	mg/L	0.000091	30.49%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	196.9	0.00038	mg/L	0.000294	0.00038	mg/L	0.000294	77.67%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	67.4	0.00556	mg/L	0.000593	0.00556	mg/L	0.000593	10.67%
QC value within limits for Fe 239.562 Recovery = Not calculated								

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Mg 279.077†              75.3      0.0295 mg/L       0.00117      0.0295 mg/L       0.00117   3.95%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             -30.0    -0.00065 mg/L      0.000028    -0.00065 mg/L      0.000028   4.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               1.6     0.00066 mg/L      0.000211     0.00066 mg/L      0.000211  31.98%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              15.2    -0.00296 mg/L      0.000306    -0.00296 mg/L      0.000306  10.34%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -4.0    -0.00070 mg/L      0.001227    -0.00070 mg/L      0.001227 174.98%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -7.5    -0.00162 mg/L      0.000877    -0.00162 mg/L      0.000877  54.20%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.3    -0.00188 mg/L      0.002980    -0.00188 mg/L      0.002980 158.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -196.9    -0.00944 mg/L      0.000219    -0.00944 mg/L      0.000219   2.32%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              10.4     0.00066 mg/L      0.000095     0.00066 mg/L      0.000095  14.44%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             192.4     0.00111 mg/L      0.000064     0.00111 mg/L      0.000064   5.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -3.2    -0.00347 mg/L      0.001004    -0.00347 mg/L      0.001004  28.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -34.3    -0.00001 mg/L      0.000462    -0.00001 mg/L      0.000462 >999.9%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               1.9    -0.00068 mg/L      0.000070    -0.00068 mg/L      0.000070  10.36%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -57.3     -0.0990 mg/L       0.01545     -0.0990 mg/L       0.01545  15.61%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              84.9    -0.00952 mg/L      0.008458    -0.00952 mg/L      0.008458  88.84%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              70.8     0.00093 mg/L      0.000007     0.00093 mg/L      0.000007   0.80%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              55.0    -0.00156 mg/L      0.000345    -0.00156 mg/L      0.000345  22.16%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 13                                  Autosampler Location: 15
Sample ID: LRC                                    Date Collected: 7/27/2012 9:22:41 AM
Analyst: KHR                                      Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: LRC
Analyte                 Back Pressure    Flow
All                    185.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: LRC
                   Mean Corrected          Calib.                          Sample
Analyte               Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029           2187192.3                                                      12724.86   0.58%
YRADIAL              278748.8                                                       2574.48   0.92%
Ga 417.206          1226451.5                                                       6687.84   0.55%
GaRADIAL              79121.3                                                       1706.93   2.16%
Ag 328.068†            3860.3      0.0123 mg/L       0.00084      0.0123 mg/L       0.00084   6.84%
Al 396.153†            -247.2     -0.0432 mg/L       0.00158     -0.0432 mg/L       0.00158   3.65%
As 188.979†             -21.6    -0.00442 mg/L      0.002430    -0.00442 mg/L      0.002430  55.04%
Ba 233.527†              93.1    -0.00048 mg/L      0.000074    -0.00048 mg/L      0.000074  15.38%
Be 234.861†             113.0     0.00004 mg/L      0.000021     0.00004 mg/L      0.000021  52.83%
B 249.677†              -62.6     0.00005 mg/L      0.000190     0.00005 mg/L      0.000190 368.01%
Ca 227.546†          225979.4         515 mg/L           4.4         515 mg/L           4.4   0.85%
Cd 228.802†              -4.1    -0.00004 mg/L      0.000118    -0.00004 mg/L      0.000118 273.55%
Co 228.616†              10.5     0.00007 mg/L      0.000200     0.00007 mg/L      0.000200 302.81%
Cr 267.716†            1112.8     0.00867 mg/L      0.000050     0.00867 mg/L      0.000050   0.57%
Cu 327.393†            -862.7    -0.00399 mg/L      0.000529    -0.00399 mg/L      0.000529  13.26%
Fe 239.562†              51.0     0.00442 mg/L      0.001403     0.00442 mg/L      0.001403  31.77%
Mg 279.077†             108.6      0.0396 mg/L       0.00153      0.0396 mg/L       0.00153   3.87%
Mn 257.610†              27.0    -0.00057 mg/L      0.000034    -0.00057 mg/L      0.000034   5.95%
Mo 202.031†              26.6     0.00135 mg/L      0.000311     0.00135 mg/L      0.000311  23.13%
Ni 231.604†              26.7    -0.00279 mg/L      0.000085    -0.00279 mg/L      0.000085   3.04%
```

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Pb 220.353†	-43.8	0.00049	mg/L	0.000641	0.00049	mg/L	0.000641	131.60%
Sb 206.836†	-14.5	-0.00323	mg/L	0.001422	-0.00323	mg/L	0.001422	44.07%
Se 196.026†	3.3	-0.00012	mg/L	0.002716	-0.00012	mg/L	0.002716	>999.9%
Si 251.611†	-145.2	-0.00841	mg/L	0.001860	-0.00841	mg/L	0.001860	22.11%
Sn 189.927†	-473.5	-0.0391	mg/L	0.00089	-0.0391	mg/L	0.00089	2.27%
Ti 334.940†	-84744.8	-0.00434	mg/L	0.001785	-0.00434	mg/L	0.001785	41.15%
Tl 190.801†	-30.7	-0.0115	mg/L	0.00209	-0.0115	mg/L	0.00209	18.20%
V 290.880†	1060.3	0.00446	mg/L	0.000858	0.00446	mg/L	0.000858	19.21%
Zn 206.200†	49.2	0.00021	mg/L	0.000269	0.00021	mg/L	0.000269	127.58%
K 766.490†	241.0	0.00382	mg/L	0.005562	0.00382	mg/L	0.005562	145.53%
Na 589.592†	-274.5	-0.0285	mg/L	0.00280	-0.0285	mg/L	0.00280	9.85%
Sr 407.771†	49895.3	0.00994	mg/L	0.000921	0.00994	mg/L	0.000921	9.27%
Li 670.784†	119.7	-0.00110	mg/L	0.000062	-0.00110	mg/L	0.000062	5.68%

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Sequence No.: 14 **Autosampler Location: 16**
Sample ID: LRC **Date Collected: 7/27/2012 9:29:36 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LRC

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: LRC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2237468.2						1602.15	0.07%
YRADIAL	279827.6						3839.38	1.37%
Ga 417.206	1308316.4						18750.52	1.43%
GaRADIAL	81776.3						1734.27	2.12%
Ag 328.068†	-84.2	-0.00041	mg/L	0.000060	-0.00041	mg/L	0.000060	14.56%
Al 396.153†	5.1	-0.00418	mg/L	0.000114	-0.00418	mg/L	0.000114	2.74%
As 188.979†	9.5	0.00454	mg/L	0.002335	0.00454	mg/L	0.002335	51.46%
Ba 233.527†	71.3	-0.00062	mg/L	0.000080	-0.00062	mg/L	0.000080	12.89%
Be 234.861†	186.1	0.00010	mg/L	0.000009	0.00010	mg/L	0.000009	8.81%
B 249.677†	60.5	0.00121	mg/L	0.000138	0.00121	mg/L	0.000138	11.37%
Ca 227.546†	10.9	0.0214	mg/L	0.03635	0.0214	mg/L	0.03635	169.91%
Cd 228.802†	2.5	0.00003	mg/L	0.000134	0.00003	mg/L	0.000134	434.98%
Co 228.616†	11.4	-0.00010	mg/L	0.000148	-0.00010	mg/L	0.000148	150.61%
Cr 267.716†	490.5	0.00366	mg/L	0.000095	0.00366	mg/L	0.000095	2.60%
Cu 327.393†	31.0	-0.00029	mg/L	0.000467	-0.00029	mg/L	0.000467	162.39%
Fe 239.562†	115.3	-0.00091	mg/L	0.000737	-0.00091	mg/L	0.000737	81.36%
Mg 279.077†	1621487.0	490	mg/L	31.6	490	mg/L	31.6	6.45%
Mn 257.610†	385.4	-0.00013	mg/L	0.000023	-0.00013	mg/L	0.000023	17.61%
Mo 202.031†	-12.6	0.00028	mg/L	0.000042	0.00028	mg/L	0.000042	14.98%
Ni 231.604†	26.6	-0.00279	mg/L	0.000089	-0.00279	mg/L	0.000089	3.20%
Pb 220.353†	-10.2	-0.00116	mg/L	0.000374	-0.00116	mg/L	0.000374	32.22%
Sb 206.836†	-1.6	-0.00037	mg/L	0.001046	-0.00037	mg/L	0.001046	284.60%
Se 196.026†	-2.5	-0.00296	mg/L	0.002130	-0.00296	mg/L	0.002130	71.91%
Si 251.611†	160.8	-0.00225	mg/L	0.000707	-0.00225	mg/L	0.000707	31.41%
Sn 189.927†	19.1	0.00137	mg/L	0.000689	0.00137	mg/L	0.000689	50.12%
Ti 334.940†	284.6	0.00121	mg/L	0.000016	0.00121	mg/L	0.000016	1.34%
Tl 190.801†	-6.0	-0.00419	mg/L	0.001284	-0.00419	mg/L	0.001284	30.65%
V 290.880†	2072.8	-0.00415	mg/L	0.003490	-0.00415	mg/L	0.003490	84.13%
Zn 206.200†	116.7	0.00134	mg/L	0.000171	0.00134	mg/L	0.000171	12.75%
K 766.490†	272.8	0.0148	mg/L	0.00413	0.0148	mg/L	0.00413	27.92%
Na 589.592†	-274.3	-0.0285	mg/L	0.00071	-0.0285	mg/L	0.00071	2.49%
Sr 407.771†	31.1	0.00092	mg/L	0.000008	0.00092	mg/L	0.000008	0.86%
Li 670.784†	396.3	0.00086	mg/L	0.000070	0.00086	mg/L	0.000070	8.15%

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Sequence No.: 15 **Autosampler Location: 17**
Sample ID: BLANK **Date Collected: 7/27/2012 9:36:31 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 31, 2012

Kim H. Rhoden

Nebulizer Parameters: BLANK

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: BLANK

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2409693.6						23321.05	0.97%
YRADIAL	293272.4						2863.80	0.98%
Ga 417.206	1282491.8						16157.07	1.26%
GaRADIAL	82137.4						1741.72	2.12%
Ag 328.068†	-70.2	-0.00039	mg/L	0.000200	-0.00039	mg/L	0.000200	52.00%
Al 396.153†	5.3	-0.00416	mg/L	0.001002	-0.00416	mg/L	0.001002	24.11%
As 188.979†	-6.2	0.00002	mg/L	0.001743	0.00002	mg/L	0.001743	>999.9%
Ba 233.527†	25.6	-0.00089	mg/L	0.000042	-0.00089	mg/L	0.000042	4.67%
Be 234.861†	24.8	-0.00004	mg/L	0.000016	-0.00004	mg/L	0.000016	44.25%
B 249.677†	63.3	0.00124	mg/L	0.000057	0.00124	mg/L	0.000057	4.57%
Ca 227.546†	-13.1	0.0175	mg/L	0.02746	0.0175	mg/L	0.02746	157.26%
Cd 228.802†	0.6	0.00002	mg/L	0.000036	0.00002	mg/L	0.000036	191.15%
Co 228.616†	9.1	-0.00015	mg/L	0.000143	-0.00015	mg/L	0.000143	94.85%
Cr 267.716†	18.3	-0.00015	mg/L	0.000092	-0.00015	mg/L	0.000092	62.10%
Cu 327.393†	162.4	0.00024	mg/L	0.000115	0.00024	mg/L	0.000115	47.95%
Fe 239.562†	47.5	0.00418	mg/L	0.000432	0.00418	mg/L	0.000432	10.36%
Mg 279.077†	214.3	0.0715	mg/L	0.00192	0.0715	mg/L	0.00192	2.69%
Mn 257.610†	-57.8	-0.00068	mg/L	0.000009	-0.00068	mg/L	0.000009	1.39%
Mo 202.031†	-7.8	0.00040	mg/L	0.000039	0.00040	mg/L	0.000039	9.58%
Ni 231.604†	6.7	-0.00309	mg/L	0.000081	-0.00309	mg/L	0.000081	2.64%
Pb 220.353†	-7.6	-0.00097	mg/L	0.000542	-0.00097	mg/L	0.000542	55.76%
Sb 206.836†	0.9	0.00021	mg/L	0.001226	0.00021	mg/L	0.001226	577.91%
Se 196.026†	-0.1	-0.00178	mg/L	0.001966	-0.00178	mg/L	0.001966	110.46%
Si 251.611†	-236.2	-0.0102	mg/L	0.00045	-0.0102	mg/L	0.00045	4.42%
Sn 189.927†	6.4	0.00033	mg/L	0.000442	0.00033	mg/L	0.000442	134.01%
Ti 334.940†	175.8	0.00109	mg/L	0.000103	0.00109	mg/L	0.000103	9.43%
Tl 190.801†	5.7	-0.00121	mg/L	0.002350	-0.00121	mg/L	0.002350	194.27%
V 290.880†	109.5	0.00058	mg/L	0.000701	0.00058	mg/L	0.000701	121.06%
Zn 206.200†	81.7	0.00070	mg/L	0.000102	0.00070	mg/L	0.000102	14.50%
K 766.490†	49.2	-0.0623	mg/L	0.00136	-0.0623	mg/L	0.00136	2.18%
Na 589.592†	-9.2	-0.0145	mg/L	0.00116	-0.0145	mg/L	0.00116	7.98%
Sr 407.771†	80.2	0.00094	mg/L	0.000017	0.00094	mg/L	0.000017	1.83%
Li 670.784†	37.3	-0.00168	mg/L	0.000144	-0.00168	mg/L	0.000144	8.53%

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Sequence No.: 16 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 9:43:26 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2323345.5						24958.64	1.07%
YRADIAL	287386.8						3521.42	1.23%
Ga 417.206	1230704.4						26406.29	2.15%
GaRADIAL	79863.1						1176.62	1.47%
Ag 328.068†	125722.8	0.408	mg/L	0.0104	0.408	mg/L	0.0104	2.55%
QC value within limits for Ag 328.068 Recovery = 101.94%								
Al 396.153†	65879.0	10.1	mg/L	0.02	10.1	mg/L	0.02	0.20%
QC value within limits for Al 396.153 Recovery = 100.87%								
As 188.979†	1370.8	0.392	mg/L	0.0081	0.392	mg/L	0.0081	2.08%
QC value within limits for As 188.979 Recovery = 98.07%								
Ba 233.527†	168102.4	1.01	mg/L	0.004	1.01	mg/L	0.004	0.39%
QC value within limits for Ba 233.527 Recovery = 100.86%								
Be 234.861†	59350.2	0.0499	mg/L	0.00143	0.0499	mg/L	0.00143	2.86%
QC value within limits for Be 234.861 Recovery = 99.80%								

Approved: July 31, 2012

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B 249.677†            53063.8       0.495 mg/L        0.0144       0.495 mg/L        0.0144   2.90%
   QC value within limits for B 249.677  Recovery = 99.00%
Ca 227.546†            4381.5        10.5 mg/L          0.29        10.5 mg/L          0.29   2.78%
   QC value within limits for Ca 227.546  Recovery = 105.07%
Cd 228.802†            2773.3      0.0489 mg/L       0.00209      0.0489 mg/L       0.00209   4.27%
   QC value within limits for Cd 228.802  Recovery = 97.82%
Co 228.616†            8764.3       0.200 mg/L        0.0024       0.200 mg/L        0.0024   1.22%
   QC value within limits for Co 228.616  Recovery = 99.81%
Cr 267.716†           62679.0       0.505 mg/L        0.0034       0.505 mg/L        0.0034   0.67%
   QC value within limits for Cr 267.716  Recovery = 101.03%
Cu 327.393†          125456.3       0.508 mg/L        0.0112       0.508 mg/L        0.0112   2.20%
   QC value within limits for Cu 327.393  Recovery = 101.63%
Fe 239.562†           58200.4        4.06 mg/L         0.028        4.06 mg/L         0.028   0.70%
   QC value within limits for Fe 239.562  Recovery = 101.42%
Mg 279.077†           33484.1        10.1 mg/L          0.05        10.1 mg/L          0.05   0.53%
   QC value within limits for Mg 279.077  Recovery = 101.48%
Mn 257.610†          406856.3       0.505 mg/L        0.0037       0.505 mg/L        0.0037   0.73%
   QC value within limits for Mn 257.610  Recovery = 101.09%
Mo 202.031†           36943.6        1.01 mg/L         0.001        1.01 mg/L         0.001   0.10%
   QC value within limits for Mo 202.031  Recovery = 100.89%
Ni 231.604†           35618.2       0.517 mg/L        0.0052       0.517 mg/L        0.0052   1.01%
   QC value within limits for Ni 231.604  Recovery = 103.50%
Pb 220.353†            6846.3       0.504 mg/L        0.0045       0.504 mg/L        0.0045   0.90%
   QC value within limits for Pb 220.353  Recovery = 100.89%
Sb 206.836†            5548.0        1.21 mg/L         0.039        1.21 mg/L         0.039   3.26%
   QC value within limits for Sb 206.836  Recovery = 100.68%
Se 196.026†             815.5       0.405 mg/L        0.0101       0.405 mg/L        0.0101   2.50%
   QC value within limits for Se 196.026  Recovery = 101.23%
Si 251.611†          251578.1        5.04 mg/L         0.097        5.04 mg/L         0.097   1.93%
   QC value within limits for Si 251.611  Recovery = 100.78%
Sn 189.927†           12142.3       0.998 mg/L        0.0076       0.998 mg/L        0.0076   0.76%
   QC value within limits for Sn 189.927  Recovery = 99.78%
Ti 334.940†         1031107.1        1.01 mg/L         0.001        1.01 mg/L         0.001   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.60%
Tl 190.801†            2010.5       0.527 mg/L        0.0018       0.527 mg/L        0.0018   0.34%
   QC value within limits for Tl 190.801  Recovery = 105.34%
V 290.880†           246470.9        1.01 mg/L         0.007        1.01 mg/L         0.007   0.66%
   QC value within limits for V 290.880  Recovery = 100.62%
Zn 206.200†           57960.9        1.01 mg/L         0.012        1.01 mg/L         0.012   1.15%
   QC value within limits for Zn 206.200  Recovery = 100.67%
K 766.490†           146051.4        50.5 mg/L          0.37        50.5 mg/L          0.37   0.73%
   QC value within limits for K 766.490  Recovery = 100.94%
Na 589.592†          986470.1        52.4 mg/L          1.09        52.4 mg/L          1.09   2.07%
   QC value within limits for Na 589.592  Recovery = 104.79%
Sr 407.771†         2526382.3        1.03 mg/L         0.024        1.03 mg/L         0.024   2.30%
   QC value within limits for Sr 407.771  Recovery = 103.15%
Li 670.784†          145227.3        1.03 mg/L         0.001        1.03 mg/L         0.001   0.11%
   QC value within limits for Li 670.784  Recovery = 102.66%
All analyte(s) passed QC.

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Sequence No.: 17                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 7/27/2012 9:49:26 AM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                    185.0 kPa         0.50 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            2402391.4                                                      41040.06   1.71%
YRADIAL               293048.6                                                       5444.58   1.86%
Ga 417.206           1264147.0                                                       5685.10   0.45%
GaRADIAL               82253.9                                                        778.83   0.95%
Ag 328.068†               -4.0    -0.00017 mg/L      0.000492    -0.00017 mg/L      0.000492 288.74%
   QC value within limits for Ag 328.068  Recovery = Not calculated
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Al 396.153†              38.0     0.00086 mg/L      0.001157     0.00086 mg/L      0.001157 135.20%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -0.6     0.00164 mg/L      0.000345     0.00164 mg/L      0.000345  21.03%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              36.2    -0.00082 mg/L      0.000127    -0.00082 mg/L      0.000127  15.45%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              48.7    -0.00002 mg/L      0.000009    -0.00002 mg/L      0.000009  58.68%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              209.9     0.00262 mg/L      0.000187     0.00262 mg/L      0.000187   7.13%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†             -10.8      0.0226 mg/L       0.01179      0.0226 mg/L       0.01179  52.16%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               6.0     0.00011 mg/L      0.000093     0.00011 mg/L      0.000093  85.87%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              14.2    -0.00003 mg/L      0.000195    -0.00003 mg/L      0.000195 581.46%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              12.8    -0.00019 mg/L      0.000053    -0.00019 mg/L      0.000053  27.48%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             277.5     0.00070 mg/L      0.000375     0.00070 mg/L      0.000375  53.25%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              55.2     0.00471 mg/L      0.000310     0.00471 mg/L      0.000310   6.58%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†             100.1      0.0370 mg/L       0.00236      0.0370 mg/L       0.00236   6.39%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             -15.6    -0.00063 mg/L      0.000018    -0.00063 mg/L      0.000018   2.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               8.7     0.00085 mg/L      0.000055     0.00085 mg/L      0.000055   6.48%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              12.9    -0.00299 mg/L      0.000042    -0.00299 mg/L      0.000042   1.41%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†             -13.7    -0.00142 mg/L      0.001286    -0.00142 mg/L      0.001286  90.78%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -2.3    -0.00048 mg/L      0.000667    -0.00048 mg/L      0.000667 137.87%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               5.5     0.00101 mg/L      0.003282     0.00101 mg/L      0.003282 325.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -106.1    -0.00762 mg/L      0.002572    -0.00762 mg/L      0.002572  33.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               6.2     0.00031 mg/L      0.000390     0.00031 mg/L      0.000390 124.68%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             213.0     0.00113 mg/L      0.000121     0.00113 mg/L      0.000121  10.73%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               8.6    -0.00045 mg/L      0.002060    -0.00045 mg/L      0.002060 457.31%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              317.1     0.00143 mg/L      0.000732     0.00143 mg/L      0.000732  51.26%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -2.6    -0.00076 mg/L      0.000051    -0.00076 mg/L      0.000051   6.80%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -13.6     -0.0839 mg/L       0.01508     -0.0839 mg/L       0.01508  17.98%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              67.8     -0.0104 mg/L       0.00305     -0.0104 mg/L       0.00305  29.23%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             353.2     0.00105 mg/L      0.000017     0.00105 mg/L      0.000017   1.63%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              40.2    -0.00166 mg/L      0.000424    -0.00166 mg/L      0.000424  25.52%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 18                                  Autosampler Location: 18
Sample ID: PBW B7 WG404091-02                     Date Collected: 7/27/2012 9:56:19 AM
Analyst: KHR                                      Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: PBW B7 WG404091-02
Analyte                 Back Pressure    Flow
All                   184.0 kPa         0.50 L/min

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Mean Data: PBW B7 WG404091-02
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Approved: July 31, 2012

Kim H. Rhoden

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2419347.0						17436.11	0.72%
YRADIAL	297398.2						8538.67	2.87%
Ga 417.206	1316655.7						17717.30	1.35%
GaRADIAL	84423.3						408.98	0.48%
Ag 328.068†	103.8	0.00017	mg/L	0.000377	0.00017	mg/L	0.000377	216.17%
Al 396.153†	55.7	0.00362	mg/L	0.001143	0.00362	mg/L	0.001143	31.60%
As 188.979†	-6.8	-0.00016	mg/L	0.001590	-0.00016	mg/L	0.001590	978.80%
Ba 233.527†	40.7	-0.00080	mg/L	0.000121	-0.00080	mg/L	0.000121	15.19%
Be 234.861†	101.6	0.00003	mg/L	0.000014	0.00003	mg/L	0.000014	47.57%
B 249.677†	135.0	0.00192	mg/L	0.000140	0.00192	mg/L	0.000140	7.29%
Ca 227.546†	5.9	0.0609	mg/L	0.01345	0.0609	mg/L	0.01345	22.09%
Cd 228.802†	-2.0	-0.00003	mg/L	0.000153	-0.00003	mg/L	0.000153	580.11%
Co 228.616†	18.8	0.00007	mg/L	0.000219	0.00007	mg/L	0.000219	309.46%
Cr 267.716†	5.8	-0.00025	mg/L	0.000067	-0.00025	mg/L	0.000067	26.99%
Cu 327.393†	112.2	0.00004	mg/L	0.000251	0.00004	mg/L	0.000251	681.18%
Fe 239.562†	39.0	0.00358	mg/L	0.000255	0.00358	mg/L	0.000255	7.13%
Mg 279.077†	85.2	0.0325	mg/L	0.00496	0.0325	mg/L	0.00496	15.25%
Mn 257.610†	-18.9	-0.00063	mg/L	0.000008	-0.00063	mg/L	0.000008	1.26%
Mo 202.031†	-4.3	0.00050	mg/L	0.000254	0.00050	mg/L	0.000254	50.68%
Ni 231.604†	20.6	-0.00288	mg/L	0.000249	-0.00288	mg/L	0.000249	8.62%
Pb 220.353†	-6.8	-0.00091	mg/L	0.000684	-0.00091	mg/L	0.000684	75.37%
Sb 206.836†	-1.6	-0.00034	mg/L	0.001308	-0.00034	mg/L	0.001308	382.18%
Se 196.026†	-2.5	-0.00299	mg/L	0.001289	-0.00299	mg/L	0.001289	43.10%
Si 251.611†	-153.8	-0.00858	mg/L	0.000491	-0.00858	mg/L	0.000491	5.72%
Sn 189.927†	-0.9	-0.00027	mg/L	0.000414	-0.00027	mg/L	0.000414	153.44%
Ti 334.940†	230.5	0.00115	mg/L	0.000017	0.00115	mg/L	0.000017	1.51%
Tl 190.801†	-1.5	-0.00304	mg/L	0.000736	-0.00304	mg/L	0.000736	24.19%
V 290.880†	116.1	0.00061	mg/L	0.000557	0.00061	mg/L	0.000557	91.78%
Zn 206.200†	101.7	0.00105	mg/L	0.000161	0.00105	mg/L	0.000161	15.39%
K 766.490†	54.7	-0.0604	mg/L	0.02233	-0.0604	mg/L	0.02233	37.00%
Na 589.592†	-6.4	-0.0143	mg/L	0.00191	-0.0143	mg/L	0.00191	13.35%
Sr 407.771†	400.2	0.00107	mg/L	0.000040	0.00107	mg/L	0.000040	3.76%
Li 670.784†	28.6	-0.00174	mg/L	0.000599	-0.00174	mg/L	0.000599	34.37%

Sequence No.: 19
Sample ID: LCSW B7 WG404091-03
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 19
Date Collected: 7/27/2012 10:03:14 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW B7 WG404091-03

Analyte	Back Pressure	Flow
All	185.0 kPa	0.50 L/min

Mean Data: LCSW B7 WG404091-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2357616.7						7622.25	0.32%
YRADIAL	298846.2						2196.84	0.74%
Ga 417.206	1290004.3						31401.48	2.43%
GaRADIAL	83206.5						904.77	1.09%
Ag 328.068†	61477.3	0.199	mg/L	0.0051	0.199	mg/L	0.0051	2.58%
Al 396.153†	32281.7	4.94	mg/L	0.035	4.94	mg/L	0.035	0.70%
As 188.979†	647.9	0.186	mg/L	0.0038	0.186	mg/L	0.0038	2.05%
Ba 233.527†	83219.2	0.499	mg/L	0.0037	0.499	mg/L	0.0037	0.74%
Be 234.861†	28170.1	0.0237	mg/L	0.00074	0.0237	mg/L	0.00074	3.11%
B 249.677†	102424.6	0.960	mg/L	0.0303	0.960	mg/L	0.0303	3.15%
Ca 227.546†	2124.3	5.12	mg/L	0.136	5.12	mg/L	0.136	2.66%
Cd 228.802†	1325.4	0.0234	mg/L	0.00116	0.0234	mg/L	0.00116	4.94%
Co 228.616†	4350.4	0.0989	mg/L	0.00052	0.0989	mg/L	0.00052	0.52%
Cr 267.716†	30908.3	0.249	mg/L	0.0030	0.249	mg/L	0.0030	1.21%
Cu 327.393†	61815.1	0.250	mg/L	0.0055	0.250	mg/L	0.0055	2.19%
Fe 239.562†	27551.9	1.92	mg/L	0.024	1.92	mg/L	0.024	1.27%
Mg 279.077†	16148.1	4.90	mg/L	0.078	4.90	mg/L	0.078	1.60%
Mn 257.610†	201955.4	0.251	mg/L	0.0024	0.251	mg/L	0.0024	0.94%
Mo 202.031†	18134.7	0.496	mg/L	0.0044	0.496	mg/L	0.0044	0.88%
Ni 231.604†	17261.1	0.249	mg/L	0.0016	0.249	mg/L	0.0016	0.66%

Approved: July 31, 2012

Pb 220.353†	3393.9	0.250 mg/L	0.0014	0.250 mg/L	0.0014	0.55%
Sb 206.836†	2658.8	0.579 mg/L	0.0168	0.579 mg/L	0.0168	2.91%
Se 196.026†	400.9	0.198 mg/L	0.0104	0.198 mg/L	0.0104	5.26%
Si 251.611†	125065.5	2.50 mg/L	0.048	2.50 mg/L	0.048	1.91%
Sn 189.927†	6213.9	0.511 mg/L	0.0013	0.511 mg/L	0.0013	0.26%
Ti 334.940†	501088.9	0.489 mg/L	0.0030	0.489 mg/L	0.0030	0.61%
Tl 190.801†	1017.2	0.265 mg/L	0.0018	0.265 mg/L	0.0018	0.69%
V 290.880†	123143.0	0.503 mg/L	0.0032	0.503 mg/L	0.0032	0.63%
Zn 206.200†	28734.0	0.499 mg/L	0.0081	0.499 mg/L	0.0081	1.63%
K 766.490†	70954.5	24.4 mg/L	0.26	24.4 mg/L	0.26	1.06%
Na 589.592†	486938.1	25.7 mg/L	0.26	25.7 mg/L	0.26	1.03%
Sr 407.771†	1225152.3	0.501 mg/L	0.0030	0.501 mg/L	0.0030	0.59%
Li 670.784†	73780.6	0.521 mg/L	0.0037	0.521 mg/L	0.0037	0.71%

Sequence No.: 20 **Autosampler Location: 20**
Sample ID: L1207049108 **Date Collected: 7/27/2012 10:09:15 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207049108

Analyte	Back Pressure	Flow
All	191.0 kPa	0.50 L/min

Mean Data: L1207049108

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2127674.2						14573.36	0.68%
YRADIAL	269347.4						6138.93	2.28%
Ga 417.206	1282440.6						23876.34	1.86%
GaRADIAL	82255.7						1578.39	1.92%
Ag 328.068†	3657.7	0.0113	mg/L	0.00018	0.0113	mg/L	0.00018	1.60%
Al 396.153†	-44.8	-0.0122	mg/L	0.00055	-0.0122	mg/L	0.00055	4.49%
As 188.979†	-6.7	-0.00014	mg/L	0.002032	-0.00014	mg/L	0.002032	>999.9%
Ba 233.527†	10081.3	0.0595	mg/L	0.00049	0.0595	mg/L	0.00049	0.82%
Be 234.861†	151.6	0.00008	mg/L	0.000018	0.00008	mg/L	0.000018	21.28%
B 249.677†	3823.9	0.0365	mg/L	0.00092	0.0365	mg/L	0.00092	2.53%
Ca 227.546†	212659.1	485	mg/L	12.8	485	mg/L	12.8	2.64%
Cd 228.802†	-6.0	-0.00010	mg/L	0.000087	-0.00010	mg/L	0.000087	91.76%
Co 228.616†	70.4	0.00142	mg/L	0.000217	0.00142	mg/L	0.000217	15.21%
Cr 267.716†	286.1	0.00201	mg/L	0.000195	0.00201	mg/L	0.000195	9.71%
Cu 327.393†	-824.6	-0.00384	mg/L	0.000322	-0.00384	mg/L	0.000322	8.40%
Fe 239.562†	358.4	0.0232	mg/L	0.00153	0.0232	mg/L	0.00153	6.59%
Mg 279.077†	434396.3	131	mg/L	1.9	131	mg/L	1.9	1.43%
Mn 257.610†	118057.4	0.146	mg/L	0.0004	0.146	mg/L	0.0004	0.27%
Mo 202.031†	179.1	0.00554	mg/L	0.000281	0.00554	mg/L	0.000281	5.08%
Ni 231.604†	634.1	0.00610	mg/L	0.000283	0.00610	mg/L	0.000283	4.65%
Pb 220.353†	-36.5	0.00070	mg/L	0.001470	0.00070	mg/L	0.001470	210.90%
Sb 206.836†	-10.9	-0.00237	mg/L	0.000681	-0.00237	mg/L	0.000681	28.81%
Se 196.026†	19.7	0.00799	mg/L	0.002311	0.00799	mg/L	0.002311	28.93%
Si 251.611†	596435.3	12.0	mg/L	0.14	12.0	mg/L	0.14	1.13%
Sn 189.927†	-448.9	-0.0371	mg/L	0.00054	-0.0371	mg/L	0.00054	1.45%
Ti 334.940†	-85354.6	-0.00948	mg/L	0.003142	-0.00948	mg/L	0.003142	33.14%
Tl 190.801†	-54.8	-0.0178	mg/L	0.00011	-0.0178	mg/L	0.00011	0.63%
V 290.880†	1240.7	0.00178	mg/L	0.002025	0.00178	mg/L	0.002025	113.62%
Zn 206.200†	110.3	0.00122	mg/L	0.000192	0.00122	mg/L	0.000192	15.79%
K 766.490†	13358.6	4.51	mg/L	0.035	4.51	mg/L	0.035	0.78%
Na 589.592†	279996.1	14.8	mg/L	0.30	14.8	mg/L	0.30	2.04%
Sr 407.771†	3559312.5	1.44	mg/L	0.070	1.44	mg/L	0.070	4.85%
Li 670.784†	1078.4	0.00569	mg/L	0.000287	0.00569	mg/L	0.000287	5.04%

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: L1207049110 **Date Collected: 7/27/2012 10:16:16 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 31, 2012

Nebulizer Parameters: L1207049110

Analyte	Back Pressure	Flow
All	195.0 kPa	0.50 L/min

Mean Data: L1207049110

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2153033.4						21758.60	1.01%
YRADIAL	274263.7						1233.29	0.45%
Ga 417.206	1252849.2						9378.98	0.75%
GaRADIAL	81521.4						835.63	1.03%
Ag 328.068†	3677.3	0.0114	mg/L	0.00105	0.0114	mg/L	0.00105	9.19%
Al 396.153†	-90.2	-0.0191	mg/L	0.00320	-0.0191	mg/L	0.00320	16.77%
As 188.979†	-5.9	0.00014	mg/L	0.001235	0.00014	mg/L	0.001235	886.81%
Ba 233.527†	20566.5	0.122	mg/L	0.0025	0.122	mg/L	0.0025	2.06%
Be 234.861†	249.6	0.00013	mg/L	0.000028	0.00013	mg/L	0.000028	21.29%
B 249.677†	4697.9	0.0447	mg/L	0.00241	0.0447	mg/L	0.00241	5.39%
Ca 227.546†	226174.6	515	mg/L	12.3	515	mg/L	12.3	2.38%
Cd 228.802†	2.2	0.00005	mg/L	0.000125	0.00005	mg/L	0.000125	230.49%
Co 228.616†	88.6	0.00180	mg/L	0.000184	0.00180	mg/L	0.000184	10.21%
Cr 267.716†	321.1	0.00229	mg/L	0.000137	0.00229	mg/L	0.000137	5.98%
Cu 327.393†	-727.2	-0.00343	mg/L	0.000709	-0.00343	mg/L	0.000709	20.70%
Fe 239.562†	2475.2	0.171	mg/L	0.0073	0.171	mg/L	0.0073	4.28%
Mg 279.077†	442873.3	134	mg/L	1.0	134	mg/L	1.0	0.72%
Mn 257.610†	118327.3	0.146	mg/L	0.0022	0.146	mg/L	0.0022	1.51%
Mo 202.031†	110.6	0.00368	mg/L	0.000252	0.00368	mg/L	0.000252	6.85%
Ni 231.604†	210.9	-0.00010	mg/L	0.000493	-0.00010	mg/L	0.000493	507.57%
Pb 220.353†	-45.6	0.00026	mg/L	0.001994	0.00026	mg/L	0.001994	761.83%
Sb 206.836†	-13.5	-0.00295	mg/L	0.001656	-0.00295	mg/L	0.001656	56.22%
Se 196.026†	7.3	0.00187	mg/L	0.001618	0.00187	mg/L	0.001618	86.63%
Si 251.611†	871746.3	17.5	mg/L	0.13	17.5	mg/L	0.13	0.72%
Sn 189.927†	-486.8	-0.0402	mg/L	0.00236	-0.0402	mg/L	0.00236	5.87%
Ti 334.940†	-78411.2	0.00190	mg/L	0.005911	0.00190	mg/L	0.005911	311.61%
Tl 190.801†	-32.0	-0.0119	mg/L	0.00151	-0.0119	mg/L	0.00151	12.73%
V 290.880†	2160.3	0.00546	mg/L	0.002063	0.00546	mg/L	0.002063	37.77%
Zn 206.200†	188.4	0.00257	mg/L	0.000304	0.00257	mg/L	0.000304	11.86%
K 766.490†	14022.8	4.74	mg/L	0.029	4.74	mg/L	0.029	0.62%
Na 589.592†	307518.2	16.2	mg/L	0.14	16.2	mg/L	0.14	0.86%
Sr 407.771†	3625308.9	1.47	mg/L	0.021	1.47	mg/L	0.021	1.43%
Li 670.784†	1192.9	0.00650	mg/L	0.000547	0.00650	mg/L	0.000547	8.42%

Sequence No.: 22
Sample ID: L1207049112
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 22
Date Collected: 7/27/2012 10:22:20 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207049112

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207049112

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2136201.1						27403.12	1.28%
YRADIAL	274808.1						6538.59	2.38%
Ga 417.206	1275980.4						16581.78	1.30%
GaRADIAL	83723.4						1149.20	1.37%
Ag 328.068†	3636.9	0.0113	mg/L	0.00064	0.0113	mg/L	0.00064	5.66%
Al 396.153†	-116.7	-0.0239	mg/L	0.00212	-0.0239	mg/L	0.00212	8.86%
As 188.979†	1.4	0.00215	mg/L	0.002067	0.00215	mg/L	0.002067	96.06%
Ba 233.527†	15257.5	0.0906	mg/L	0.00116	0.0906	mg/L	0.00116	1.28%
Be 234.861†	175.1	0.00009	mg/L	0.000009	0.00009	mg/L	0.000009	9.91%
B 249.677†	6954.2	0.0659	mg/L	0.00150	0.0659	mg/L	0.00150	2.28%
Ca 227.546†	213573.6	487	mg/L	11.7	487	mg/L	11.7	2.41%
Cd 228.802†	-3.6	-0.00005	mg/L	0.000018	-0.00005	mg/L	0.000018	39.02%
Co 228.616†	280.6	0.00624	mg/L	0.000405	0.00624	mg/L	0.000405	6.49%
Cr 267.716†	300.1	0.00212	mg/L	0.000203	0.00212	mg/L	0.000203	9.57%

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Cu 327.393†	-815.5	-0.00379	mg/L	0.000361	-0.00379	mg/L	0.000361	9.52%
Fe 239.562†	1558.8	0.107	mg/L	0.0020	0.107	mg/L	0.0020	1.90%
Mg 279.077†	434755.0	131	mg/L	0.8	131	mg/L	0.8	0.58%
Mn 257.610†	116728.3	0.144	mg/L	0.0018	0.144	mg/L	0.0018	1.22%
Mo 202.031†	506.3	0.0145	mg/L	0.00065	0.0145	mg/L	0.00065	4.52%
Ni 231.604†	610.1	0.00574	mg/L	0.000481	0.00574	mg/L	0.000481	8.38%
Pb 220.353†	-36.3	0.00072	mg/L	0.001233	0.00072	mg/L	0.001233	170.55%
Sb 206.836†	-4.0	-0.00084	mg/L	0.000204	-0.00084	mg/L	0.000204	24.13%
Se 196.026†	-2.0	-0.00277	mg/L	0.001055	-0.00277	mg/L	0.001055	38.06%
Si 251.611†	903266.2	18.1	mg/L	0.02	18.1	mg/L	0.02	0.10%
Sn 189.927†	-453.1	-0.0374	mg/L	0.00091	-0.0374	mg/L	0.00091	2.44%
Ti 334.940†	-83909.9	-0.00776	mg/L	0.001287	-0.00776	mg/L	0.001287	16.58%
Tl 190.801†	-52.0	-0.0171	mg/L	0.00358	-0.0171	mg/L	0.00358	20.99%
V 290.880†	3132.5	0.00950	mg/L	0.001177	0.00950	mg/L	0.001177	12.39%
Zn 206.200†	164.6	0.00215	mg/L	0.000129	0.00215	mg/L	0.000129	6.00%
K 766.490†	13580.8	4.58	mg/L	0.069	4.58	mg/L	0.069	1.50%
Na 589.592†	310506.1	16.4	mg/L	0.37	16.4	mg/L	0.37	2.25%
Sr 407.771†	3666162.8	1.49	mg/L	0.054	1.49	mg/L	0.054	3.66%
Li 670.784†	1150.8	0.00620	mg/L	0.000183	0.00620	mg/L	0.000183	2.96%

Sequence No.: 23 **Autosampler Location: 23**
Sample ID: L1207059001 **Date Collected: 7/27/2012 10:29:22 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059001

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059001

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2360644.5						19389.53	0.82%
YRADIAL	296290.8						7028.12	2.37%
Ga 417.206	1314268.8						23177.51	1.76%
GaRADIAL	83015.8						1572.94	1.89%
Ag 328.068†	304.6	0.00113	mg/L	0.000240	0.00113	mg/L	0.000240	21.18%
Al 396.153†	7792.9	1.20	mg/L	0.008	1.20	mg/L	0.008	0.63%
As 188.979†	3.7	0.00302	mg/L	0.002164	0.00302	mg/L	0.002164	71.55%
Ba 233.527†	51865.2	0.310	mg/L	0.0028	0.310	mg/L	0.0028	0.91%
Be 234.861†	619.4	0.00022	mg/L	0.000086	0.00022	mg/L	0.000086	38.34%
B 249.677†	4710.1	0.0444	mg/L	0.00091	0.0444	mg/L	0.00091	2.04%
Ca 227.546†	25368.3	57.9	mg/L	0.99	57.9	mg/L	0.99	1.71%
Cd 228.802†	9.1	0.00016	mg/L	0.000075	0.00016	mg/L	0.000075	47.38%
Co 228.616†	28.8	0.00010	mg/L	0.000207	0.00010	mg/L	0.000207	197.54%
Cr 267.716†	392.7	0.00286	mg/L	0.000049	0.00286	mg/L	0.000049	1.70%
Cu 327.393†	323.6	0.00099	mg/L	0.000112	0.00099	mg/L	0.000112	11.31%
Fe 239.562†	15375.8	1.07	mg/L	0.012	1.07	mg/L	0.012	1.10%
Mg 279.077†	41114.2	12.4	mg/L	0.23	12.4	mg/L	0.23	1.84%
Mn 257.610†	18648.6	0.0226	mg/L	0.00035	0.0226	mg/L	0.00035	1.54%
Mo 202.031†	171.6	0.00537	mg/L	0.000132	0.00537	mg/L	0.000132	2.47%
Ni 231.604†	129.9	-0.00128	mg/L	0.000587	-0.00128	mg/L	0.000587	45.82%
Pb 220.353†	-0.3	0.00012	mg/L	0.001397	0.00012	mg/L	0.001397	>999.9%
Sb 206.836†	-9.2	-0.00194	mg/L	0.001375	-0.00194	mg/L	0.001375	70.88%
Se 196.026†	4.8	0.00087	mg/L	0.003115	0.00087	mg/L	0.003115	357.61%
Si 251.611†	1098507.8	22.1	mg/L	0.36	22.1	mg/L	0.36	1.61%
Sn 189.927†	-262.6	-0.0218	mg/L	0.00087	-0.0218	mg/L	0.00087	4.00%
Ti 334.940†	33534.8	0.0422	mg/L	0.00050	0.0422	mg/L	0.00050	1.18%
Tl 190.801†	-14.6	-0.00592	mg/L	0.002579	-0.00592	mg/L	0.002579	43.59%
V 290.880†	7160.3	0.0290	mg/L	0.00031	0.0290	mg/L	0.00031	1.08%
Zn 206.200†	225.2	0.00319	mg/L	0.000138	0.00319	mg/L	0.000138	4.32%
K 766.490†	3751.8	1.17	mg/L	0.040	1.17	mg/L	0.040	3.45%
Na 589.592†	798737.9	42.4	mg/L	0.82	42.4	mg/L	0.82	1.93%
Sr 407.771†	2258625.4	0.921	mg/L	0.0257	0.921	mg/L	0.0257	2.79%
Li 670.784†	2122.4	0.0131	mg/L	0.00014	0.0131	mg/L	0.00014	1.10%

Sequence No.: 24 **Autosampler Location: 24**

Approved: July 31, 2012

Sample ID: L1207059002 **Date Collected: 7/27/2012 10:35:20 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059002

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311650.2						19557.14	0.85%
YRADIAL	291666.9						1980.14	0.68%
Ga 417.206	1328221.2						21276.20	1.60%
GaRADIAL	83826.9						2737.11	3.27%
Ag 328.068†	458.0	0.00117	mg/L	0.000342	0.00117	mg/L	0.000342	29.25%
Al 396.153†	49.6	0.00231	mg/L	0.001230	0.00231	mg/L	0.001230	53.21%
As 188.979†	14.7	0.00601	mg/L	0.001685	0.00601	mg/L	0.001685	28.04%
Ba 233.527†	52744.3	0.316	mg/L	0.0012	0.316	mg/L	0.0012	0.38%
Be 234.861†	142.9	0.00007	mg/L	0.000018	0.00007	mg/L	0.000018	27.00%
B 249.677†	4512.9	0.0430	mg/L	0.00275	0.0430	mg/L	0.00275	6.40%
Ca 227.546†	25271.3	57.6	mg/L	0.98	57.6	mg/L	0.98	1.70%
Cd 228.802†	-0.6	-0.00003	mg/L	0.000125	-0.00003	mg/L	0.000125	363.66%
Co 228.616†	13.6	-0.00012	mg/L	0.000222	-0.00012	mg/L	0.000222	181.07%
Cr 267.716†	237.3	0.00163	mg/L	0.000035	0.00163	mg/L	0.000035	2.14%
Cu 327.393†	81.5	-0.00009	mg/L	0.000290	-0.00009	mg/L	0.000290	327.73%
Fe 239.562†	119.2	0.00892	mg/L	0.000320	0.00892	mg/L	0.000320	3.59%
Mg 279.077†	41945.3	12.7	mg/L	0.07	12.7	mg/L	0.07	0.55%
Mn 257.610†	1814.0	0.00165	mg/L	0.000013	0.00165	mg/L	0.000013	0.80%
Mo 202.031†	185.8	0.00570	mg/L	0.000201	0.00570	mg/L	0.000201	3.53%
Ni 231.604†	10.3	-0.00303	mg/L	0.000101	-0.00303	mg/L	0.000101	3.33%
Pb 220.353†	7.3	0.00059	mg/L	0.001018	0.00059	mg/L	0.001018	171.72%
Sb 206.836†	-10.8	-0.00233	mg/L	0.001117	-0.00233	mg/L	0.001117	47.97%
Se 196.026†	1.4	-0.00105	mg/L	0.000443	-0.00105	mg/L	0.000443	42.09%
Si 251.611†	972503.6	19.5	mg/L	0.24	19.5	mg/L	0.24	1.25%
Sn 189.927†	-273.4	-0.0227	mg/L	0.00067	-0.0227	mg/L	0.00067	2.95%
Ti 334.940†	-10004.0	-0.00017	mg/L	0.000355	-0.00017	mg/L	0.000355	204.49%
Tl 190.801†	-16.1	-0.00684	mg/L	0.001875	-0.00684	mg/L	0.001875	27.40%
V 290.880†	6252.3	0.0253	mg/L	0.00129	0.0253	mg/L	0.00129	5.11%
Zn 206.200†	108.6	0.00119	mg/L	0.000140	0.00119	mg/L	0.000140	11.85%
K 766.490†	3390.7	1.05	mg/L	0.022	1.05	mg/L	0.022	2.13%
Na 589.592†	815324.3	43.2	mg/L	1.26	43.2	mg/L	1.26	2.92%
Sr 407.771†	2413854.2	0.985	mg/L	0.0379	0.985	mg/L	0.0379	3.85%
Li 670.784†	2100.2	0.0129	mg/L	0.00067	0.0129	mg/L	0.00067	5.17%

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Sequence No.: 25 **Autosampler Location: 25**
Sample ID: L1207059003 **Date Collected: 7/27/2012 10:42:18 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059003

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207059003

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2337457.7						3056.01	0.13%
YRADIAL	288850.6						2394.78	0.83%
Ga 417.206	1301148.7						23784.16	1.83%
GaRADIAL	83513.7						223.40	0.27%
Ag 328.068†	537.2	0.00153	mg/L	0.000326	0.00153	mg/L	0.000326	21.30%
Al 396.153†	1976.8	0.300	mg/L	0.0139	0.300	mg/L	0.0139	4.65%
As 188.979†	-5.9	0.00014	mg/L	0.001574	0.00014	mg/L	0.001574	>999.9%
Ba 233.527†	80610.6	0.483	mg/L	0.0020	0.483	mg/L	0.0020	0.41%

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Be 234.861†	276.4	0.00011 mg/L	0.000029	0.00011 mg/L	0.000029	25.28%
B 249.677†	9557.1	0.0903 mg/L	0.00306	0.0903 mg/L	0.00306	3.39%
Ca 227.546†	30310.1	69.1 mg/L	2.74	69.1 mg/L	2.74	3.96%
Cd 228.802†	9.9	0.00018 mg/L	0.000084	0.00018 mg/L	0.000084	45.41%
Co 228.616†	-1.7	-0.00056 mg/L	0.000158	-0.00056 mg/L	0.000158	28.21%
Cr 267.716†	315.6	0.00225 mg/L	0.000036	0.00225 mg/L	0.000036	1.59%
Cu 327.393†	293.5	0.00079 mg/L	0.000282	0.00079 mg/L	0.000282	35.81%
Fe 239.562†	4111.3	0.287 mg/L	0.0040	0.287 mg/L	0.0040	1.41%
Mg 279.077†	47057.3	14.2 mg/L	0.27	14.2 mg/L	0.27	1.87%
Mn 257.610†	2389.1	0.00236 mg/L	0.000020	0.00236 mg/L	0.000020	0.83%
Mo 202.031†	148.3	0.00468 mg/L	0.000201	0.00468 mg/L	0.000201	4.30%
Ni 231.604†	83.8	-0.00196 mg/L	0.000373	-0.00196 mg/L	0.000373	19.08%
Pb 220.353†	6.3	0.00063 mg/L	0.001289	0.00063 mg/L	0.001289	203.22%
Sb 206.836†	-10.8	-0.00234 mg/L	0.000932	-0.00234 mg/L	0.000932	39.85%
Se 196.026†	0.8	-0.00128 mg/L	0.004081	-0.00128 mg/L	0.004081	317.59%
Si 251.611†	875522.6	17.6 mg/L	0.16	17.6 mg/L	0.16	0.91%
Sn 189.927†	-278.3	-0.0231 mg/L	0.00101	-0.0231 mg/L	0.00101	4.38%
Ti 334.940†	-878.9	0.0104 mg/L	0.00087	0.0104 mg/L	0.00087	8.37%
Tl 190.801†	-10.1	-0.00520 mg/L	0.002665	-0.00520 mg/L	0.002665	51.30%
V 290.880†	4562.0	0.0184 mg/L	0.00273	0.0184 mg/L	0.00273	14.85%
Zn 206.200†	142.5	0.00177 mg/L	0.000191	0.00177 mg/L	0.000191	10.79%
K 766.490†	3097.8	0.929 mg/L	0.0209	0.929 mg/L	0.0209	2.25%
Na 589.592†	1112059.5	59.1 mg/L	0.37	59.1 mg/L	0.37	0.62%
Sr 407.771†	2354111.6	0.960 mg/L	0.0035	0.960 mg/L	0.0035	0.36%
Li 670.784†	3340.6	0.0217 mg/L	0.00078	0.0217 mg/L	0.00078	3.58%

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Sequence No.: 26 **Autosampler Location: 26**
Sample ID: L1207059003PS WG404480-01 **Date Collected: 7/27/2012 10:48:16 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059003PS WG404480-01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207059003PS WG404480-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2320512.7						18516.89	0.80%
YRADIAL	293919.0						4227.65	1.44%
Ga 417.206	1284950.1						16296.50	1.27%
GaRADIAL	83020.6						1563.11	1.88%
Ag 328.068†	62271.7	0.202	mg/L	0.0030	0.202	mg/L	0.0030	1.46%
Al 396.153†	34613.4	5.30	mg/L	0.005	5.30	mg/L	0.005	0.09%
As 188.979†	657.0	0.189	mg/L	0.0024	0.189	mg/L	0.0024	1.26%
Ba 233.527†	155281.7	0.931	mg/L	0.0135	0.931	mg/L	0.0135	1.44%
Be 234.861†	28955.9	0.0243	mg/L	0.00052	0.0243	mg/L	0.00052	2.14%
B 249.677†	113615.2	1.07	mg/L	0.020	1.07	mg/L	0.020	1.89%
Ca 227.546†	29743.8	68.0	mg/L	1.27	68.0	mg/L	1.27	1.86%
Cd 228.802†	1315.0	0.0232	mg/L	0.00098	0.0232	mg/L	0.00098	4.24%
Co 228.616†	4282.7	0.0972	mg/L	0.00102	0.0972	mg/L	0.00102	1.05%
Cr 267.716†	31402.1	0.253	mg/L	0.0027	0.253	mg/L	0.0027	1.08%
Cu 327.393†	61403.6	0.249	mg/L	0.0033	0.249	mg/L	0.0033	1.34%
Fe 239.562†	31655.5	2.21	mg/L	0.031	2.21	mg/L	0.031	1.41%
Mg 279.077†	57647.0	17.4	mg/L	0.17	17.4	mg/L	0.17	0.95%
Mn 257.610†	205048.3	0.254	mg/L	0.0031	0.254	mg/L	0.0031	1.21%
Mo 202.031†	18563.5	0.507	mg/L	0.0081	0.507	mg/L	0.0081	1.60%
Ni 231.604†	16919.4	0.244	mg/L	0.0046	0.244	mg/L	0.0046	1.87%
Pb 220.353†	3386.0	0.250	mg/L	0.0022	0.250	mg/L	0.0022	0.89%
Sb 206.836†	2683.7	0.584	mg/L	0.0126	0.584	mg/L	0.0126	2.15%
Se 196.026†	395.6	0.196	mg/L	0.0037	0.196	mg/L	0.0037	1.87%
Si 251.611†	918502.3	18.4	mg/L	0.16	18.4	mg/L	0.16	0.85%
Sn 189.927†	6652.0	0.547	mg/L	0.0036	0.547	mg/L	0.0036	0.66%
Ti 334.940†	512999.4	0.510	mg/L	0.0007	0.510	mg/L	0.0007	0.14%
Tl 190.801†	985.7	0.257	mg/L	0.0027	0.257	mg/L	0.0027	1.06%
V 290.880†	128389.6	0.524	mg/L	0.0092	0.524	mg/L	0.0092	1.76%
Zn 206.200†	28370.4	0.492	mg/L	0.0081	0.492	mg/L	0.0081	1.65%
K 766.490†	74760.1	25.7	mg/L	0.25	25.7	mg/L	0.25	0.96%

Approved: July 31, 2012

Na 589.592†	1483071.9	79.1	mg/L	1.27	79.1	mg/L	1.27	1.60%
Sr 407.771†	3263820.9	1.33	mg/L	0.017	1.33	mg/L	0.017	1.24%
Li 670.784†	76165.6	0.537	mg/L	0.0049	0.537	mg/L	0.0049	0.91%

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Sequence No.: 27 **Autosampler Location: 27**
Sample ID: L1207059003DL WG404480-02 **Date Collected: 7/27/2012 10:54:19 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059003DL WG404480-02

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207059003DL WG404480-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2397189.3						10015.14	0.42%
YRADIAL	287347.8						1695.24	0.59%
Ga 417.206	1337216.3						17822.91	1.33%
GaRADIAL	83427.7						2140.59	2.57%
Ag 328.068†	42.5	-0.00003	mg/L	0.000258	-0.00003	mg/L	0.000258	803.63%
Al 396.153†	405.5	0.0575	mg/L	0.00180	0.0575	mg/L	0.00180	3.13%
As 188.979†	-5.3	0.00027	mg/L	0.001087	0.00027	mg/L	0.001087	399.69%
Ba 233.527†	16316.1	0.0969	mg/L	0.00095	0.0969	mg/L	0.00095	0.97%
Be 234.861†	125.8	0.00004	mg/L	0.000011	0.00004	mg/L	0.000011	29.17%
B 249.677†	2239.3	0.0217	mg/L	0.00072	0.0217	mg/L	0.00072	3.33%
Ca 227.546†	5877.1	13.4	mg/L	0.23	13.4	mg/L	0.23	1.69%
Cd 228.802†	4.4	0.00009	mg/L	0.000146	0.00009	mg/L	0.000146	170.70%
Co 228.616†	7.6	-0.00022	mg/L	0.000065	-0.00022	mg/L	0.000065	30.37%
Cr 267.716†	78.5	0.00034	mg/L	0.000027	0.00034	mg/L	0.000027	7.85%
Cu 327.393†	231.6	0.00052	mg/L	0.000259	0.00052	mg/L	0.000259	49.54%
Fe 239.562†	846.3	0.0598	mg/L	0.00040	0.0598	mg/L	0.00040	0.67%
Mg 279.077†	9523.7	2.89	mg/L	0.005	2.89	mg/L	0.005	0.17%
Mn 257.610†	555.6	0.00008	mg/L	0.000019	0.00008	mg/L	0.000019	23.92%
Mo 202.031†	38.8	0.00168	mg/L	0.000581	0.00168	mg/L	0.000581	34.59%
Ni 231.604†	41.2	-0.00258	mg/L	0.000057	-0.00258	mg/L	0.000057	2.22%
Pb 220.353†	3.6	-0.00003	mg/L	0.000824	-0.00003	mg/L	0.000824	>999.9%
Sb 206.836†	-10.2	-0.00222	mg/L	0.001419	-0.00222	mg/L	0.001419	63.92%
Se 196.026†	0.2	-0.00159	mg/L	0.002866	-0.00159	mg/L	0.002866	180.05%
Si 251.611†	174568.7	3.50	mg/L	0.037	3.50	mg/L	0.037	1.04%
Sn 189.927†	-122.3	-0.0102	mg/L	0.00013	-0.0102	mg/L	0.00013	1.22%
Ti 334.940†	-511.9	0.00244	mg/L	0.000054	0.00244	mg/L	0.000054	2.21%
Tl 190.801†	-5.2	-0.00400	mg/L	0.000642	-0.00400	mg/L	0.000642	16.04%
V 290.880†	984.9	0.00407	mg/L	0.001976	0.00407	mg/L	0.001976	48.50%
Zn 206.200†	109.5	0.00119	mg/L	0.000058	0.00119	mg/L	0.000058	4.92%
K 766.490†	855.0	0.204	mg/L	0.0027	0.204	mg/L	0.0027	1.31%
Na 589.592†	222414.1	11.7	mg/L	0.25	11.7	mg/L	0.25	2.12%
Sr 407.771†	483459.1	0.198	mg/L	0.0062	0.198	mg/L	0.0062	3.14%
Li 670.784†	774.6	0.00354	mg/L	0.000158	0.00354	mg/L	0.000158	4.47%

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Sequence No.: 28 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 11:01:14 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2361604.4						13236.44	0.56%
YRADIAL	290899.0						5724.16	1.97%

Approved: July 31, 2012

Kim H. Rhoden

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Ga 417.206          1247766.5                                                  15173.66   1.22%
GaRADIAL              80899.1                                                    870.28   1.08%
Ag 328.068†          126028.2       0.409 mg/L        0.0066       0.409 mg/L    0.0066   1.62%
   QC value within limits for Ag 328.068  Recovery = 102.18%
Al 396.153†           65813.2        10.1 mg/L          0.03        10.1 mg/L      0.03   0.31%
   QC value within limits for Al 396.153  Recovery = 100.77%
As 188.979†            1384.7       0.396 mg/L        0.0073       0.396 mg/L    0.0073   1.83%
   QC value within limits for As 188.979  Recovery = 99.08%
Ba 233.527†          167433.3        1.00 mg/L         0.007        1.00 mg/L     0.007   0.65%
   QC value within limits for Ba 233.527  Recovery = 100.45%
Be 234.861†           59643.0      0.0502 mg/L       0.00069      0.0502 mg/L   0.00069   1.37%
   QC value within limits for Be 234.861  Recovery = 100.31%
B 249.677†            53600.8       0.500 mg/L        0.0106       0.500 mg/L    0.0106   2.12%
   QC value within limits for B 249.677  Recovery = 100.01%
Ca 227.546†            4384.2        10.5 mg/L          0.24        10.5 mg/L      0.24   2.33%
   QC value within limits for Ca 227.546  Recovery = 105.12%
Cd 228.802†            2789.2      0.0492 mg/L       0.00183      0.0492 mg/L   0.00183   3.72%
   QC value within limits for Cd 228.802  Recovery = 98.35%
Co 228.616†            8751.8       0.199 mg/L        0.0011       0.199 mg/L    0.0011   0.57%
   QC value within limits for Co 228.616  Recovery = 99.67%
Cr 267.716†           62690.0       0.505 mg/L        0.0014       0.505 mg/L    0.0014   0.27%
   QC value within limits for Cr 267.716  Recovery = 101.04%
Cu 327.393†          125912.6       0.510 mg/L        0.0109       0.510 mg/L    0.0109   2.14%
   QC value within limits for Cu 327.393  Recovery = 102.00%
Fe 239.562†           57868.4        4.03 mg/L         0.015        4.03 mg/L     0.015   0.38%
   QC value within limits for Fe 239.562  Recovery = 100.84%
Mg 279.077†           33393.2        10.1 mg/L          0.06        10.1 mg/L      0.06   0.58%
   QC value within limits for Mg 279.077  Recovery = 101.20%
Mn 257.610†          403980.6       0.502 mg/L        0.0052       0.502 mg/L    0.0052   1.04%
   QC value within limits for Mn 257.610  Recovery = 100.37%
Mo 202.031†           36826.0        1.01 mg/L         0.007        1.01 mg/L     0.007   0.65%
   QC value within limits for Mo 202.031  Recovery = 100.57%
Ni 231.604†           35586.4       0.517 mg/L        0.0036       0.517 mg/L    0.0036   0.70%
   QC value within limits for Ni 231.604  Recovery = 103.40%
Pb 220.353†            6847.2       0.505 mg/L        0.0029       0.505 mg/L    0.0029   0.57%
   QC value within limits for Pb 220.353  Recovery = 100.91%
Sb 206.836†            5563.4        1.21 mg/L         0.023        1.21 mg/L     0.023   1.90%
   QC value within limits for Sb 206.836  Recovery = 100.96%
Se 196.026†             817.8       0.406 mg/L        0.0103       0.406 mg/L    0.0103   2.53%
   QC value within limits for Se 196.026  Recovery = 101.52%
Si 251.611†          251329.9        5.03 mg/L         0.037        5.03 mg/L     0.037   0.74%
   QC value within limits for Si 251.611  Recovery = 100.68%
Sn 189.927†           12273.0        1.01 mg/L         0.007        1.01 mg/L     0.007   0.72%
   QC value within limits for Sn 189.927  Recovery = 100.86%
Ti 334.940†         1028321.9        1.00 mg/L         0.004        1.00 mg/L     0.004   0.42%
   QC value within limits for Ti 334.940  Recovery = 100.33%
Tl 190.801†            2010.3       0.527 mg/L        0.0043       0.527 mg/L    0.0043   0.82%
   QC value within limits for Tl 190.801  Recovery = 105.33%
V 290.880†           245977.1        1.00 mg/L         0.005        1.00 mg/L     0.005   0.48%
   QC value within limits for V 290.880  Recovery = 100.42%
Zn 206.200†           58097.8        1.01 mg/L         0.005        1.01 mg/L     0.005   0.53%
   QC value within limits for Zn 206.200  Recovery = 100.91%
K 766.490†           145024.0        50.1 mg/L          0.48        50.1 mg/L      0.48   0.95%
   QC value within limits for K 766.490  Recovery = 100.22%
Na 589.592†          965510.7        51.3 mg/L          1.21        51.3 mg/L      1.21   2.37%
   QC value within limits for Na 589.592  Recovery = 102.55%
Sr 407.771†         2449976.0        1.00 mg/L         0.039        1.00 mg/L     0.039   3.94%
   QC value within limits for Sr 407.771  Recovery = 100.03%
Li 670.784†          144950.2        1.02 mg/L         0.002        1.02 mg/L     0.002   0.22%
   QC value within limits for Li 670.784  Recovery = 102.46%
All analyte(s) passed QC.
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Sequence No.: 29 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/27/2012 11:07:13 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	**Back Pressure**	**Flow**

Approved: July 31, 2012

Kim H. Rhoden

All 193.0 kPa 0.50 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2439702.5						5485.57	0.22%
YRADIAL	291685.6						5585.86	1.92%
Ga 417.206	1283158.5						19569.19	1.53%
GaRADIAL	81872.7						1257.17	1.54%
Ag 328.068†	97.8	0.00015	mg/L	0.000357	0.00015	mg/L	0.000357	231.66%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	18.1	-0.00223	mg/L	0.003192	-0.00223	mg/L	0.003192	143.42%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-5.1	0.00032	mg/L	0.001847	0.00032	mg/L	0.001847	569.18%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	47.3	-0.00076	mg/L	0.000050	-0.00076	mg/L	0.000050	6.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	47.1	-0.00002	mg/L	0.000020	-0.00002	mg/L	0.000020	119.98%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	436.4	0.00475	mg/L	0.000341	0.00475	mg/L	0.000341	7.19%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-14.4	0.0145	mg/L	0.00843	0.0145	mg/L	0.00843	58.00%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	2.5	0.00005	mg/L	0.000096	0.00005	mg/L	0.000096	182.67%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	10.0	-0.00013	mg/L	0.000183	-0.00013	mg/L	0.000183	141.81%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	13.7	-0.00018	mg/L	0.000045	-0.00018	mg/L	0.000045	24.19%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	220.0	0.00047	mg/L	0.000478	0.00047	mg/L	0.000478	101.25%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	42.6	0.00383	mg/L	0.000692	0.00383	mg/L	0.000692	18.06%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	45.6	0.0205	mg/L	0.00208	0.0205	mg/L	0.00208	10.12%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	-9.2	-0.00062	mg/L	0.000012	-0.00062	mg/L	0.000012	1.87%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	12.7	0.00096	mg/L	0.000203	0.00096	mg/L	0.000203	21.05%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	22.0	-0.00286	mg/L	0.000231	-0.00286	mg/L	0.000231	8.07%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	8.1	0.00019	mg/L	0.001076	0.00019	mg/L	0.001076	571.18%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-3.2	-0.00069	mg/L	0.001593	-0.00069	mg/L	0.001593	230.70%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.6	-0.00093	mg/L	0.003147	-0.00093	mg/L	0.003147	339.18%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-29.3	-0.00608	mg/L	0.000592	-0.00608	mg/L	0.000592	9.73%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	7.2	0.00039	mg/L	0.000193	0.00039	mg/L	0.000193	48.77%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	221.8	0.00114	mg/L	0.000093	0.00114	mg/L	0.000093	8.14%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	10.4	0.00000	mg/L	0.000887	0.00000	mg/L	0.000887	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	0.8	0.00014	mg/L	0.000377	0.00014	mg/L	0.000377	276.87%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	2.2	-0.00067	mg/L	0.000104	-0.00067	mg/L	0.000104	15.53%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	51.0	-0.0617	mg/L	0.04214	-0.0617	mg/L	0.04214	68.33%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	235.0	-0.00161	mg/L	0.008229	-0.00161	mg/L	0.008229	510.41%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	368.6	0.00106	mg/L	0.000020	0.00106	mg/L	0.000020	1.90%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	85.8	-0.00134	mg/L	0.000561	-0.00134	mg/L	0.000561	41.87%
QC value within limits for Li 670.784 Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 30 **Autosampler Location: 28**

Approved: July 31, 2012

Kim H. Rhoden

Sample ID: L1207059004 **Date Collected: 7/27/2012 11:14:07 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059004

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059004

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2323884.1						8047.86	0.35%
YRADIAL	292360.6						4120.72	1.41%
Ga 417.206	1339542.5						11354.64	0.85%
GaRADIAL	84338.2						1199.63	1.42%
Ag 328.068†	477.5	0.00121	mg/L	0.000766	0.00121	mg/L	0.000766	63.36%
Al 396.153†	30.8	-0.00051	mg/L	0.001550	-0.00051	mg/L	0.001550	302.00%
As 188.979†	-1.0	0.00150	mg/L	0.001345	0.00150	mg/L	0.001345	89.74%
Ba 233.527†	80852.1	0.484	mg/L	0.0026	0.484	mg/L	0.0026	0.53%
Be 234.861†	151.5	0.00007	mg/L	0.000010	0.00007	mg/L	0.000010	14.10%
B 249.677†	9479.6	0.0897	mg/L	0.00169	0.0897	mg/L	0.00169	1.89%
Ca 227.546†	29334.1	66.9	mg/L	1.67	66.9	mg/L	1.67	2.50%
Cd 228.802†	0.8	0.00001	mg/L	0.000092	0.00001	mg/L	0.000092	651.55%
Co 228.616†	13.0	-0.00019	mg/L	0.000411	-0.00019	mg/L	0.000411	213.90%
Cr 267.716†	272.6	0.00191	mg/L	0.000092	0.00191	mg/L	0.000092	4.80%
Cu 327.393†	125.8	0.00008	mg/L	0.000236	0.00008	mg/L	0.000236	284.42%
Fe 239.562†	43.9	0.00364	mg/L	0.000416	0.00364	mg/L	0.000416	11.42%
Mg 279.077†	46530.3	14.1	mg/L	0.15	14.1	mg/L	0.15	1.05%
Mn 257.610†	1542.7	0.00131	mg/L	0.000045	0.00131	mg/L	0.000045	3.45%
Mo 202.031†	149.2	0.00469	mg/L	0.000213	0.00469	mg/L	0.000213	4.53%
Ni 231.604†	32.5	-0.00270	mg/L	0.000098	-0.00270	mg/L	0.000098	3.64%
Pb 220.353†	21.9	0.00174	mg/L	0.001208	0.00174	mg/L	0.001208	69.35%
Sb 206.836†	-1.5	-0.00033	mg/L	0.000707	-0.00033	mg/L	0.000707	216.51%
Se 196.026†	0.6	-0.00145	mg/L	0.001850	-0.00145	mg/L	0.001850	127.36%
Si 251.611†	832215.7	16.7	mg/L	0.17	16.7	mg/L	0.17	1.02%
Sn 189.927†	-286.3	-0.0237	mg/L	0.00034	-0.0237	mg/L	0.00034	1.42%
Ti 334.940†	-11592.9	-0.00033	mg/L	0.000244	-0.00033	mg/L	0.000244	73.59%
Tl 190.801†	-26.4	-0.00954	mg/L	0.003613	-0.00954	mg/L	0.003613	37.88%
V 290.880†	3660.6	0.0147	mg/L	0.00130	0.0147	mg/L	0.00130	8.86%
Zn 206.200†	232.3	0.00333	mg/L	0.000232	0.00333	mg/L	0.000232	6.98%
K 766.490†	2927.4	0.870	mg/L	0.0520	0.870	mg/L	0.0520	5.98%
Na 589.592†	1119197.1	59.5	mg/L	1.89	59.5	mg/L	1.89	3.17%
Sr 407.771†	2407743.7	0.982	mg/L	0.0223	0.982	mg/L	0.0223	2.27%
Li 670.784†	3217.5	0.0208	mg/L	0.00070	0.0208	mg/L	0.00070	3.35%

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Sequence No.: 31 **Autosampler Location: 29**
Sample ID: L1207059005 **Date Collected: 7/27/2012 11:21:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059005

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207059005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2322174.9						12843.72	0.55%
YRADIAL	287505.5						1986.00	0.69%
Ga 417.206	1308673.6						15111.34	1.15%
GaRADIAL	82252.4						1013.06	1.23%
Ag 328.068†	505.3	0.00141	mg/L	0.000793	0.00141	mg/L	0.000793	56.14%
Al 396.153†	1744.8	0.264	mg/L	0.0031	0.264	mg/L	0.0031	1.17%
As 188.979†	-1.5	0.00139	mg/L	0.001736	0.00139	mg/L	0.001736	124.78%
Ba 233.527†	82262.0	0.493	mg/L	0.0034	0.493	mg/L	0.0034	0.69%

Approved: July 31, 2012

Be 234.861†	262.4	0.00011	mg/L	0.000045	0.00011	mg/L	0.000045	41.48%
B 249.677†	9747.8	0.0921	mg/L	0.00330	0.0921	mg/L	0.00330	3.58%
Ca 227.546†	30566.1	69.7	mg/L	1.60	69.7	mg/L	1.60	2.30%
Cd 228.802†	10.7	0.00019	mg/L	0.000163	0.00019	mg/L	0.000163	84.79%
Co 228.616†	-10.6	-0.00076	mg/L	0.000234	-0.00076	mg/L	0.000234	30.74%
Cr 267.716†	325.6	0.00233	mg/L	0.000148	0.00233	mg/L	0.000148	6.35%
Cu 327.393†	196.6	0.00039	mg/L	0.000509	0.00039	mg/L	0.000509	129.63%
Fe 239.562†	3698.5	0.258	mg/L	0.0063	0.258	mg/L	0.0063	2.43%
Mg 279.077†	48562.7	14.7	mg/L	0.07	14.7	mg/L	0.07	0.47%
Mn 257.610†	2117.1	0.00203	mg/L	0.000023	0.00203	mg/L	0.000023	1.11%
Mo 202.031†	146.0	0.00462	mg/L	0.000178	0.00462	mg/L	0.000178	3.86%
Ni 231.604†	102.2	-0.00169	mg/L	0.000551	-0.00169	mg/L	0.000551	32.67%
Pb 220.353†	-0.7	0.00012	mg/L	0.001063	0.00012	mg/L	0.001063	892.25%
Sb 206.836†	-11.2	-0.00242	mg/L	0.001100	-0.00242	mg/L	0.001100	45.48%
Se 196.026†	6.6	0.00161	mg/L	0.003945	0.00161	mg/L	0.003945	245.54%
Si 251.611†	886189.3	17.8	mg/L	0.23	17.8	mg/L	0.23	1.31%
Sn 189.927†	-291.0	-0.0241	mg/L	0.00090	-0.0241	mg/L	0.00090	3.72%
Ti 334.940†	-2145.1	0.00929	mg/L	0.001107	0.00929	mg/L	0.001107	11.92%
Tl 190.801†	-19.7	-0.00769	mg/L	0.001740	-0.00769	mg/L	0.001740	22.62%
V 290.880†	4594.9	0.0185	mg/L	0.00149	0.0185	mg/L	0.00149	8.04%
Zn 206.200†	212.3	0.00298	mg/L	0.000110	0.00298	mg/L	0.000110	3.70%
K 766.490†	3206.8	0.964	mg/L	0.0278	0.964	mg/L	0.0278	2.88%
Na 589.592†	1154073.0	61.4	mg/L	0.23	61.4	mg/L	0.23	0.37%
Sr 407.771†	2403114.7	0.980	mg/L	0.0161	0.980	mg/L	0.0161	1.64%
Li 670.784†	3366.4	0.0219	mg/L	0.00021	0.0219	mg/L	0.00021	0.97%

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Sequence No.: 32 **Autosampler Location: 30**
Sample ID: L1207059006 **Date Collected: 7/27/2012 11:27:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059006

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207059006

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2291722.7						7147.44	0.31%
YRADIAL	286816.4						3026.66	1.06%
Ga 417.206	1321998.6						7964.21	0.60%
GaRADIAL	82702.4						1994.98	2.41%
Ag 328.068†	534.4	0.00140	mg/L	0.000092	0.00140	mg/L	0.000092	6.57%
Al 396.153†	16.8	-0.00266	mg/L	0.000794	-0.00266	mg/L	0.000794	29.82%
As 188.979†	-3.7	0.00072	mg/L	0.002545	0.00072	mg/L	0.002545	352.61%
Ba 233.527†	80015.0	0.479	mg/L	0.0061	0.479	mg/L	0.0061	1.28%
Be 234.861†	108.4	0.00004	mg/L	0.000012	0.00004	mg/L	0.000012	32.88%
B 249.677†	9333.1	0.0883	mg/L	0.00130	0.0883	mg/L	0.00130	1.47%
Ca 227.546†	28950.5	66.0	mg/L	0.62	66.0	mg/L	0.62	0.95%
Cd 228.802†	3.4	0.00006	mg/L	0.000132	0.00006	mg/L	0.000132	209.13%
Co 228.616†	-13.3	-0.00079	mg/L	0.000052	-0.00079	mg/L	0.000052	6.60%
Cr 267.716†	284.9	0.00201	mg/L	0.000151	0.00201	mg/L	0.000151	7.50%
Cu 327.393†	79.1	-0.00010	mg/L	0.000291	-0.00010	mg/L	0.000291	277.77%
Fe 239.562†	46.1	0.00380	mg/L	0.000621	0.00380	mg/L	0.000621	16.35%
Mg 279.077†	46350.6	14.0	mg/L	0.17	14.0	mg/L	0.17	1.23%
Mn 257.610†	422.0	-0.00008	mg/L	0.000008	-0.00008	mg/L	0.000008	9.86%
Mo 202.031†	139.3	0.00442	mg/L	0.000214	0.00442	mg/L	0.000214	4.83%
Ni 231.604†	20.2	-0.00289	mg/L	0.000251	-0.00289	mg/L	0.000251	8.71%
Pb 220.353†	18.5	0.00148	mg/L	0.001004	0.00148	mg/L	0.001004	67.66%
Sb 206.836†	-6.6	-0.00143	mg/L	0.000871	-0.00143	mg/L	0.000871	60.99%
Se 196.026†	2.6	-0.00044	mg/L	0.004363	-0.00044	mg/L	0.004363	981.88%
Si 251.611†	827843.3	16.6	mg/L	0.10	16.6	mg/L	0.10	0.61%
Sn 189.927†	-291.0	-0.0241	mg/L	0.00032	-0.0241	mg/L	0.00032	1.32%
Ti 334.940†	-11579.6	-0.00045	mg/L	0.000503	-0.00045	mg/L	0.000503	111.76%
Tl 190.801†	-15.9	-0.00684	mg/L	0.001997	-0.00684	mg/L	0.001997	29.20%
V 290.880†	4142.9	0.0167	mg/L	0.00114	0.0167	mg/L	0.00114	6.85%
Zn 206.200†	160.1	0.00208	mg/L	0.000227	0.00208	mg/L	0.000227	10.92%
K 766.490†	2869.4	0.850	mg/L	0.0261	0.850	mg/L	0.0261	3.07%

Approved: July 31, 2012

Na 589.592†	1117977.8	59.4	mg/L	1.55	59.4	mg/L	1.55	2.61%
Sr 407.771†	2398357.0	0.978	mg/L	0.0388	0.978	mg/L	0.0388	3.97%
Li 670.784†	3244.4	0.0210	mg/L	0.00041	0.0210	mg/L	0.00041	1.95%

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Sequence No.: 33 **Autosampler Location: 31**
Sample ID: L1207059007 **Date Collected: 7/27/2012 11:34:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059007

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059007

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2329170.0						22694.45	0.97%
YRADIAL	295048.1						4004.64	1.36%
Ga 417.206	1315347.5						25033.76	1.90%
GaRADIAL	82899.0						805.24	0.97%
Ag 328.068†	449.3	0.00202	mg/L	0.000885	0.00202	mg/L	0.000885	43.90%
Al 396.153†	14170.4	2.18	mg/L	0.005	2.18	mg/L	0.005	0.24%
As 188.979†	-5.8	0.00052	mg/L	0.000266	0.00052	mg/L	0.000266	51.29%
Ba 233.527†	16805.9	0.0997	mg/L	0.00102	0.0997	mg/L	0.00102	1.02%
Be 234.861†	832.7	0.00014	mg/L	0.000079	0.00014	mg/L	0.000079	58.59%
B 249.677†	44556.3	0.418	mg/L	0.0139	0.418	mg/L	0.0139	3.33%
Ca 227.546†	38387.6	87.6	mg/L	2.96	87.6	mg/L	2.96	3.38%
Cd 228.802†	11.5	0.00022	mg/L	0.000120	0.00022	mg/L	0.000120	54.81%
Co 228.616†	74.3	0.00113	mg/L	0.000136	0.00113	mg/L	0.000136	11.99%
Cr 267.716†	622.3	0.00466	mg/L	0.000098	0.00466	mg/L	0.000098	2.11%
Cu 327.393†	566.4	0.00204	mg/L	0.000485	0.00204	mg/L	0.000485	23.82%
Fe 239.562†	32769.4	2.28	mg/L	0.024	2.28	mg/L	0.024	1.07%
Mg 279.077†	105266.1	31.8	mg/L	0.28	31.8	mg/L	0.28	0.87%
Mn 257.610†	119463.8	0.148	mg/L	0.0022	0.148	mg/L	0.0022	1.45%
Mo 202.031†	100.2	0.00350	mg/L	0.000146	0.00350	mg/L	0.000146	4.16%
Ni 231.604†	318.7	0.00148	mg/L	0.000400	0.00148	mg/L	0.000400	27.07%
Pb 220.353†	9.5	0.00105	mg/L	0.001449	0.00105	mg/L	0.001449	138.24%
Sb 206.836†	-8.0	-0.00167	mg/L	0.001530	-0.00167	mg/L	0.001530	91.55%
Se 196.026†	20.6	0.00891	mg/L	0.003759	0.00891	mg/L	0.003759	42.18%
Si 251.611†	674322.8	13.5	mg/L	0.27	13.5	mg/L	0.27	2.00%
Sn 189.927†	-288.1	-0.0239	mg/L	0.00091	-0.0239	mg/L	0.00091	3.80%
Ti 334.940†	57652.0	0.0702	mg/L	0.00176	0.0702	mg/L	0.00176	2.51%
Tl 190.801†	-18.0	-0.00666	mg/L	0.002757	-0.00666	mg/L	0.002757	41.37%
V 290.880†	3222.6	0.0123	mg/L	0.00182	0.0123	mg/L	0.00182	14.77%
Zn 206.200†	430.7	0.00674	mg/L	0.000055	0.00674	mg/L	0.000055	0.81%
K 766.490†	3947.3	1.19	mg/L	0.030	1.19	mg/L	0.030	2.52%
Na 589.592†	1646465.6	88.0	mg/L	1.38	88.0	mg/L	1.38	1.57%
Sr 407.771†	2642974.2	1.08	mg/L	0.024	1.08	mg/L	0.024	2.24%
Li 670.784†	9098.1	0.0625	mg/L	0.00090	0.0625	mg/L	0.00090	1.44%

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Sequence No.: 34 **Autosampler Location: 32**
Sample ID: L1207059008 **Date Collected: 7/27/2012 11:40:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059008

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059008

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311548.3						9199.29	0.40%
YRADIAL	289395.0						4321.03	1.49%

Approved: July 31, 2012

Ga 417.206	1339104.3					21639.26	1.62%
GaRADIAL	83830.2					1845.05	2.20%
Ag 328.068†	757.3	0.00206	mg/L	0.000475	0.00206 mg/L	0.000475	23.01%
Al 396.153†	14.5	-0.00293	mg/L	0.000713	-0.00293 mg/L	0.000713	24.34%
As 188.979†	-8.4	-0.00063	mg/L	0.001203	-0.00063 mg/L	0.001203	189.95%
Ba 233.527†	12332.4	0.0730	mg/L	0.00034	0.0730 mg/L	0.00034	0.46%
Be 234.861†	119.4	0.00005	mg/L	0.000006	0.00005 mg/L	0.000006	12.04%
B 249.677†	42076.6	0.396	mg/L	0.0100	0.396 mg/L	0.0100	2.53%
Ca 227.546†	35743.3	81.5	mg/L	2.50	81.5 mg/L	2.50	3.07%
Cd 228.802†	-0.7	0.00000	mg/L	0.000009	0.00000 mg/L	0.000009	322.20%
Co 228.616†	5.1	-0.00023	mg/L	0.000131	-0.00023 mg/L	0.000131	56.67%
Cr 267.716†	148.9	0.00091	mg/L	0.000009	0.00091 mg/L	0.000009	1.00%
Cu 327.393†	89.8	-0.00008	mg/L	0.000295	-0.00008 mg/L	0.000295	386.99%
Fe 239.562†	61.3	0.00452	mg/L	0.000313	0.00452 mg/L	0.000313	6.92%
Mg 279.077†	101879.7	30.8	mg/L	0.32	30.8 mg/L	0.32	1.05%
Mn 257.610†	61690.0	0.0760	mg/L	0.00049	0.0760 mg/L	0.00049	0.65%
Mo 202.031†	96.8	0.00327	mg/L	0.000173	0.00327 mg/L	0.000173	5.29%
Ni 231.604†	16.2	-0.00294	mg/L	0.000155	-0.00294 mg/L	0.000155	5.28%
Pb 220.353†	25.4	0.00206	mg/L	0.000239	0.00206 mg/L	0.000239	11.56%
Sb 206.836†	-7.5	-0.00162	mg/L	0.000363	-0.00162 mg/L	0.000363	22.35%
Se 196.026†	23.2	0.00979	mg/L	0.003038	0.00979 mg/L	0.003038	31.03%
Si 251.611†	419519.4	8.43	mg/L	0.176	8.43 mg/L	0.176	2.08%
Sn 189.927†	-304.1	-0.0252	mg/L	0.00046	-0.0252 mg/L	0.00046	1.83%
Ti 334.940†	-14139.1	-0.00062	mg/L	0.000618	-0.00062 mg/L	0.000618	99.65%
Tl 190.801†	-29.4	-0.0104	mg/L	0.00146	-0.0104 mg/L	0.00146	13.96%
V 290.880†	1328.7	0.00476	mg/L	0.001093	0.00476 mg/L	0.001093	22.98%
Zn 206.200†	91.9	0.00089	mg/L	0.000296	0.00089 mg/L	0.000296	33.37%
K 766.490†	2762.4	0.788	mg/L	0.0140	0.788 mg/L	0.0140	1.78%
Na 589.592†	1587277.7	84.7	mg/L	2.12	84.7 mg/L	2.12	2.50%
Sr 407.771†	2621882.0	1.07	mg/L	0.049	1.07 mg/L	0.049	4.54%
Li 670.784†	8531.1	0.0585	mg/L	0.00141	0.0585 mg/L	0.00141	2.40%

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Sequence No.: 35 **Autosampler Location: 33**
Sample ID: L1207059012 **Date Collected: 7/27/2012 11:47:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059012

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059012

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2344363.2						16688.16	0.71%
YRADIAL	288061.1						1841.55	0.64%
Ga 417.206	1315429.0						40093.47	3.05%
GaRADIAL	83109.6						992.47	1.19%
Ag 328.068†	500.7	0.00152	mg/L	0.000440	0.00152	mg/L	0.000440	28.90%
Al 396.153†	3554.9	0.543	mg/L	0.0042	0.543	mg/L	0.0042	0.77%
As 188.979†	-5.6	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	26.02%
Ba 233.527†	17885.4	0.106	mg/L	0.0009	0.106	mg/L	0.0009	0.87%
Be 234.861†	527.2	0.00025	mg/L	0.000077	0.00025	mg/L	0.000077	30.67%
B 249.677†	17015.6	0.160	mg/L	0.0048	0.160	mg/L	0.0048	3.02%
Ca 227.546†	28855.5	65.8	mg/L	1.20	65.8	mg/L	1.20	1.82%
Cd 228.802†	8.4	0.00016	mg/L	0.000142	0.00016	mg/L	0.000142	88.20%
Co 228.616†	35.2	0.00038	mg/L	0.000272	0.00038	mg/L	0.000272	71.45%
Cr 267.716†	505.2	0.00376	mg/L	0.000073	0.00376	mg/L	0.000073	1.94%
Cu 327.393†	202.2	0.00044	mg/L	0.000448	0.00044	mg/L	0.000448	101.47%
Fe 239.562†	8969.7	0.626	mg/L	0.0107	0.626	mg/L	0.0107	1.71%
Mg 279.077†	75846.5	22.9	mg/L	0.19	22.9	mg/L	0.19	0.85%
Mn 257.610†	22046.4	0.0268	mg/L	0.00042	0.0268	mg/L	0.00042	1.57%
Mo 202.031†	201.5	0.00615	mg/L	0.000333	0.00615	mg/L	0.000333	5.41%
Ni 231.604†	141.0	-0.00112	mg/L	0.000162	-0.00112	mg/L	0.000162	14.46%
Pb 220.353†	-4.4	-0.00019	mg/L	0.000825	-0.00019	mg/L	0.000825	432.55%
Sb 206.836†	-10.4	-0.00226	mg/L	0.000855	-0.00226	mg/L	0.000855	37.78%
Se 196.026†	5.4	0.00107	mg/L	0.000878	0.00107	mg/L	0.000878	82.32%
Si 251.611†	621419.5	12.5	mg/L	0.25	12.5	mg/L	0.25	2.00%

Approved: July 31, 2012

Kim H. Rhoden

Sn 189.927†	-275.5	-0.0228	mg/L	0.00047	-0.0228	mg/L	0.00047	2.06%
Ti 334.940†	11260.4	0.0218	mg/L	0.00059	0.0218	mg/L	0.00059	2.70%
Tl 190.801†	-19.9	-0.00762	mg/L	0.001022	-0.00762	mg/L	0.001022	13.42%
V 290.880†	2689.1	0.0105	mg/L	0.00114	0.0105	mg/L	0.00114	10.87%
Zn 206.200†	208.9	0.00292	mg/L	0.000239	0.00292	mg/L	0.000239	8.18%
K 766.490†	2823.9	0.824	mg/L	0.0046	0.824	mg/L	0.0046	0.56%
Na 589.592†	1307790.7	69.7	mg/L	0.35	69.7	mg/L	0.35	0.51%
Sr 407.771†	2471094.0	1.01	mg/L	0.007	1.01	mg/L	0.007	0.70%
Li 670.784†	4746.8	0.0317	mg/L	0.00024	0.0317	mg/L	0.00024	0.75%

Sequence No.: 36 **Autosampler Location: 34**
Sample ID: L1207059013 **Date Collected: 7/27/2012 11:53:07 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207059013

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207059013

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2319397.6						13855.25	0.60%
YRADIAL	292790.6						5204.74	1.78%
Ga 417.206	1352256.6						16575.60	1.23%
GaRADIAL	84525.3						1743.26	2.06%
Ag 328.068†	513.2	0.00130	mg/L	0.000129	0.00130	mg/L	0.000129	9.96%
Al 396.153†	14.7	-0.00313	mg/L	0.000554	-0.00313	mg/L	0.000554	17.70%
As 188.979†	-10.0	-0.00111	mg/L	0.000651	-0.00111	mg/L	0.000651	58.85%
Ba 233.527†	18051.6	0.107	mg/L	0.0002	0.107	mg/L	0.0002	0.19%
Be 234.861†	128.0	0.00005	mg/L	0.000012	0.00005	mg/L	0.000012	21.21%
B 249.677†	16518.4	0.156	mg/L	0.0022	0.156	mg/L	0.0022	1.42%
Ca 227.546†	28293.9	64.5	mg/L	1.02	64.5	mg/L	1.02	1.59%
Cd 228.802†	3.6	0.00008	mg/L	0.000141	0.00008	mg/L	0.000141	179.18%
Co 228.616†	4.6	-0.00025	mg/L	0.000212	-0.00025	mg/L	0.000212	84.12%
Cr 267.716†	377.7	0.00275	mg/L	0.000140	0.00275	mg/L	0.000140	5.08%
Cu 327.393†	89.4	-0.00007	mg/L	0.000225	-0.00007	mg/L	0.000225	325.94%
Fe 239.562†	47.1	0.00369	mg/L	0.000280	0.00369	mg/L	0.000280	7.57%
Mg 279.077†	74522.0	22.5	mg/L	0.35	22.5	mg/L	0.35	1.55%
Mn 257.610†	332.4	-0.00019	mg/L	0.000046	-0.00019	mg/L	0.000046	23.73%
Mo 202.031†	217.8	0.00656	mg/L	0.000289	0.00656	mg/L	0.000289	4.41%
Ni 231.604†	21.0	-0.00287	mg/L	0.000092	-0.00287	mg/L	0.000092	3.20%
Pb 220.353†	23.2	0.00182	mg/L	0.000580	0.00182	mg/L	0.000580	31.89%
Sb 206.836†	1.1	0.00024	mg/L	0.000811	0.00024	mg/L	0.000811	334.72%
Se 196.026†	1.1	-0.00117	mg/L	0.001448	-0.00117	mg/L	0.001448	123.42%
Si 251.611†	556710.0	11.2	mg/L	0.18	11.2	mg/L	0.18	1.58%
Sn 189.927†	-282.0	-0.0234	mg/L	0.00054	-0.0234	mg/L	0.00054	2.30%
Ti 334.940†	-11512.2	-0.00061	mg/L	0.000536	-0.00061	mg/L	0.000536	88.04%
Tl 190.801†	-21.1	-0.00818	mg/L	0.000665	-0.00818	mg/L	0.000665	8.13%
V 290.880†	1678.7	0.00640	mg/L	0.000542	0.00640	mg/L	0.000542	8.47%
Zn 206.200†	85.7	0.00080	mg/L	0.000194	0.00080	mg/L	0.000194	24.39%
K 766.490†	2557.4	0.731	mg/L	0.0510	0.731	mg/L	0.0510	6.97%
Na 589.592†	1323129.1	70.5	mg/L	1.78	70.5	mg/L	1.78	2.53%
Sr 407.771†	2570284.1	1.05	mg/L	0.047	1.05	mg/L	0.047	4.51%
Li 670.784†	4595.4	0.0306	mg/L	0.00035	0.0306	mg/L	0.00035	1.13%

Sequence No.: 37 **Autosampler Location: 35**
Sample ID: L1207063001 **Date Collected: 7/27/2012 12:00:08 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207063001

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Approved: July 31, 2012

Kim H. Rhoden

Mean Data: L1207063001

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2316225.1						10990.80	0.47%
YRADIAL	274375.1						4336.03	1.58%
Ga 417.206	1357149.8						13543.09	1.00%
GaRADIAL	78793.3						1148.45	1.46%
Ag 328.068†	-600.4	-0.00043	mg/L	0.000348	-0.00043	mg/L	0.000348	80.52%
Al 396.153†	25557.4	3.94	mg/L	0.024	3.94	mg/L	0.024	0.60%
As 188.979†	5.6	0.00412	mg/L	0.000523	0.00412	mg/L	0.000523	12.67%
Ba 233.527†	4572.1	0.0262	mg/L	0.00006	0.0262	mg/L	0.00006	0.25%
Be 234.861†	1363.1	0.00018	mg/L	0.000035	0.00018	mg/L	0.000035	19.75%
B 249.677†	812.8	0.00650	mg/L	0.000287	0.00650	mg/L	0.000287	4.42%
Ca 227.546†	1558.1	3.70	mg/L	0.041	3.70	mg/L	0.041	1.12%
Cd 228.802†	29.4	0.00053	mg/L	0.000085	0.00053	mg/L	0.000085	16.13%
Co 228.616†	124.9	0.00226	mg/L	0.000171	0.00226	mg/L	0.000171	7.58%
Cr 267.716†	589.1	0.00435	mg/L	0.000163	0.00435	mg/L	0.000163	3.76%
Cu 327.393†	1629.3	0.00644	mg/L	0.000144	0.00644	mg/L	0.000144	2.23%
Fe 239.562†	58274.0	4.06	mg/L	0.008	4.06	mg/L	0.008	0.19%
Mg 279.077†	1869.7	0.570	mg/L	0.0094	0.570	mg/L	0.0094	1.64%
Mn 257.610†	159254.9	0.197	mg/L	0.0030	0.197	mg/L	0.0030	1.55%
Mo 202.031†	37.5	0.00188	mg/L	0.000191	0.00188	mg/L	0.000191	10.15%
Ni 231.604†	300.0	0.00120	mg/L	0.000026	0.00120	mg/L	0.000026	2.16%
Pb 220.353†	464.9	0.0340	mg/L	0.00075	0.0340	mg/L	0.00075	2.20%
Sb 206.836†	-2.5	-0.00042	mg/L	0.001343	-0.00042	mg/L	0.001343	318.98%
Se 196.026†	-2.1	-0.00205	mg/L	0.001444	-0.00205	mg/L	0.001444	70.44%
Si 251.611†	319286.8	6.41	mg/L	0.108	6.41	mg/L	0.108	1.68%
Sn 189.927†	6.2	0.00031	mg/L	0.000225	0.00031	mg/L	0.000225	72.13%
Ti 334.940†	60600.7	0.0605	mg/L	0.00107	0.0605	mg/L	0.00107	1.77%
Tl 190.801†	-2.9	-0.00278	mg/L	0.001897	-0.00278	mg/L	0.001897	68.24%
V 290.880†	2247.9	0.00908	mg/L	0.001014	0.00908	mg/L	0.001014	11.17%
Zn 206.200†	12060.9	0.208	mg/L	0.0010	0.208	mg/L	0.0010	0.49%
K 766.490†	16381.1	5.55	mg/L	0.024	5.55	mg/L	0.024	0.42%
Na 589.592†	331072.5	17.5	mg/L	0.37	17.5	mg/L	0.37	2.09%
Sr 407.771†	64163.3	0.0270	mg/L	0.00083	0.0270	mg/L	0.00083	3.08%
Li 670.784†	422.4	0.00105	mg/L	0.000168	0.00105	mg/L	0.000168	16.09%

Sequence No.: 38
Sample ID: L1207063901 WG404091-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 36
Date Collected: 7/27/2012 12:07:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207063901 WG404091-01

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207063901 WG404091-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2341795.3						27682.54	1.18%
YRADIAL	291213.8						6230.09	2.14%
Ga 417.206	1373607.8						18422.34	1.34%
GaRADIAL	85286.5						1496.98	1.76%
Ag 328.068†	310.6	0.00084	mg/L	0.000248	0.00084	mg/L	0.000248	29.72%
Al 396.153†	259.2	0.0348	mg/L	0.00182	0.0348	mg/L	0.00182	5.25%
As 188.979†	-10.7	-0.00127	mg/L	0.001810	-0.00127	mg/L	0.001810	142.10%
Ba 233.527†	17004.0	0.101	mg/L	0.0014	0.101	mg/L	0.0014	1.41%
Be 234.861†	230.5	0.00011	mg/L	0.000030	0.00011	mg/L	0.000030	28.11%
B 249.677†	1723.0	0.0168	mg/L	0.00022	0.0168	mg/L	0.00022	1.31%
Ca 227.546†	20006.0	45.6	mg/L	0.49	45.6	mg/L	0.49	1.08%
Cd 228.802†	-0.3	0.00001	mg/L	0.000079	0.00001	mg/L	0.000079	938.09%
Co 228.616†	0.5	-0.00036	mg/L	0.000050	-0.00036	mg/L	0.000050	13.58%
Cr 267.716†	341.0	0.00245	mg/L	0.000103	0.00245	mg/L	0.000103	4.20%
Cu 327.393†	95.7	-0.00003	mg/L	0.000253	-0.00003	mg/L	0.000253	930.76%
Fe 239.562†	2233.6	0.156	mg/L	0.0019	0.156	mg/L	0.0019	1.19%
Mg 279.077†	28411.3	8.60	mg/L	0.188	8.60	mg/L	0.188	2.19%
Mn 257.610†	2244.6	0.00218	mg/L	0.000025	0.00218	mg/L	0.000025	1.16%

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Mo 202.031†	124.4	0.00402 mg/L	0.000290	0.00402 mg/L	0.000290	7.20%
Ni 231.604†	38.8	-0.00261 mg/L	0.000104	-0.00261 mg/L	0.000104	3.97%
Pb 220.353†	21.1	0.00150 mg/L	0.000663	0.00150 mg/L	0.000663	44.17%
Sb 206.836†	-6.5	-0.00142 mg/L	0.000640	-0.00142 mg/L	0.000640	44.97%
Se 196.026†	0.2	-0.00163 mg/L	0.002088	-0.00163 mg/L	0.002088	128.38%
Si 251.611†	813286.3	16.3 mg/L	0.16	16.3 mg/L	0.16	0.99%
Sn 189.927†	-259.6	-0.0215 mg/L	0.00054	-0.0215 mg/L	0.00054	2.52%
Ti 334.940†	-6758.9	0.00119 mg/L	0.000245	0.00119 mg/L	0.000245	20.64%
Tl 190.801†	-17.0	-0.00708 mg/L	0.001054	-0.00708 mg/L	0.001054	14.88%
V 290.880†	1761.1	0.00709 mg/L	0.001191	0.00709 mg/L	0.001191	16.80%
Zn 206.200†	557.6	0.00895 mg/L	0.000239	0.00895 mg/L	0.000239	2.67%
K 766.490†	6756.9	2.22 mg/L	0.036	2.22 mg/L	0.036	1.61%
Na 589.592†	494109.5	26.1 mg/L	0.57	26.1 mg/L	0.57	2.17%
Sr 407.771†	988678.0	0.403 mg/L	0.0164	0.403 mg/L	0.0164	4.06%
Li 670.784†	1320.0	0.00740 mg/L	0.000072	0.00740 mg/L	0.000072	0.98%

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Sequence No.: 39 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 12:13:56 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2384145.4						22683.35	0.95%
YRADIAL	300065.5						2338.98	0.78%
Ga 417.206	1279378.6						19060.07	1.49%
GaRADIAL	83045.0						611.73	0.74%
Ag 328.068†	124713.6	0.404	mg/L	0.0088	0.404	mg/L	0.0088	2.17%
QC value within limits for Ag 328.068 Recovery = 101.11%								
Al 396.153†	65725.2	10.1	mg/L	0.06	10.1	mg/L	0.06	0.59%
QC value within limits for Al 396.153 Recovery = 100.63%								
As 188.979†	1343.8	0.384	mg/L	0.0055	0.384	mg/L	0.0055	1.43%
QC value within limits for As 188.979 Recovery = 96.12%								
Ba 233.527†	167222.1	1.00	mg/L	0.006	1.00	mg/L	0.006	0.65%
QC value within limits for Ba 233.527 Recovery = 100.33%								
Be 234.861†	58791.5	0.0494	mg/L	0.00105	0.0494	mg/L	0.00105	2.13%
QC value within limits for Be 234.861 Recovery = 98.90%								
B 249.677†	52962.2	0.494	mg/L	0.0123	0.494	mg/L	0.0123	2.50%
QC value within limits for B 249.677 Recovery = 98.82%								
Ca 227.546†	4336.7	10.4	mg/L	0.25	10.4	mg/L	0.25	2.43%
QC value within limits for Ca 227.546 Recovery = 104.00%								
Cd 228.802†	2734.3	0.0482	mg/L	0.00187	0.0482	mg/L	0.00187	3.87%
QC value within limits for Cd 228.802 Recovery = 96.47%								
Co 228.616†	8694.3	0.198	mg/L	0.0027	0.198	mg/L	0.0027	1.38%
QC value within limits for Co 228.616 Recovery = 99.01%								
Cr 267.716†	62447.0	0.503	mg/L	0.0013	0.503	mg/L	0.0013	0.26%
QC value within limits for Cr 267.716 Recovery = 100.65%								
Cu 327.393†	125336.1	0.508	mg/L	0.0108	0.508	mg/L	0.0108	2.12%
QC value within limits for Cu 327.393 Recovery = 101.53%								
Fe 239.562†	56859.2	3.96	mg/L	0.018	3.96	mg/L	0.018	0.46%
QC value within limits for Fe 239.562 Recovery = 99.09%								
Mg 279.077†	32639.4	9.89	mg/L	0.097	9.89	mg/L	0.097	0.98%
QC value within limits for Mg 279.077 Recovery = 98.93%								
Mn 257.610†	403619.7	0.501	mg/L	0.0058	0.501	mg/L	0.0058	1.16%
QC value within limits for Mn 257.610 Recovery = 100.28%								
Mo 202.031†	36990.3	1.01	mg/L	0.001	1.01	mg/L	0.001	0.12%
QC value within limits for Mo 202.031 Recovery = 101.01%								
Ni 231.604†	35323.2	0.513	mg/L	0.0066	0.513	mg/L	0.0066	1.29%
QC value within limits for Ni 231.604 Recovery = 102.63%								
Pb 220.353†	6814.7	0.502	mg/L	0.0045	0.502	mg/L	0.0045	0.89%
QC value within limits for Pb 220.353 Recovery = 100.43%								
Sb 206.836†	5447.2	1.19	mg/L	0.025	1.19	mg/L	0.025	2.14%
QC value within limits for Sb 206.836 Recovery = 98.85%								

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Se 196.026†	804.1	0.399 mg/L	0.0115	0.399 mg/L	0.0115	2.88%
QC value within limits for Se 196.026 Recovery = 99.82%						
Si 251.611†	248988.9	4.99 mg/L	0.065	4.99 mg/L	0.065	1.30%
QC value within limits for Si 251.611 Recovery = 99.74%						
Sn 189.927†	12227.2	1.00 mg/L	0.010	1.00 mg/L	0.010	1.03%
QC value within limits for Sn 189.927 Recovery = 100.48%						
Ti 334.940†	1030211.6	1.01 mg/L	0.005	1.01 mg/L	0.005	0.51%
QC value within limits for Ti 334.940 Recovery = 100.51%						
Tl 190.801†	2012.0	0.527 mg/L	0.0058	0.527 mg/L	0.0058	1.11%
QC value within limits for Tl 190.801 Recovery = 105.42%						
V 290.880†	245408.7	1.00 mg/L	0.001	1.00 mg/L	0.001	0.09%
QC value within limits for V 290.880 Recovery = 100.19%						
Zn 206.200†	57431.5	0.998 mg/L	0.0018	0.998 mg/L	0.0018	0.18%
QC value within limits for Zn 206.200 Recovery = 99.75%						
K 766.490†	144871.6	50.1 mg/L	0.36	50.1 mg/L	0.36	0.72%
QC value within limits for K 766.490 Recovery = 100.12%						
Na 589.592†	952432.9	50.6 mg/L	1.10	50.6 mg/L	1.10	2.18%
QC value within limits for Na 589.592 Recovery = 101.15%						
Sr 407.771†	2413956.4	0.986 mg/L	0.0071	0.986 mg/L	0.0071	0.72%
QC value within limits for Sr 407.771 Recovery = 98.56%						
Li 670.784†	146567.6	1.04 mg/L	0.011	1.04 mg/L	0.011	1.03%
QC value within limits for Li 670.784 Recovery = 103.61%						

All analyte(s) passed QC.

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Sequence No.: 40 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/27/2012 12:19:56 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2406811.5						7682.75	0.32%
YRADIAL	292592.5						1564.14	0.53%
Ga 417.206	1276412.2						10382.58	0.81%
GaRADIAL	82029.3						2274.53	2.77%
Ag 328.068†	20.5	-0.00009	mg/L	0.000203	-0.00009	mg/L	0.000203	221.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	29.5	-0.00045	mg/L	0.000620	-0.00045	mg/L	0.000620	139.22%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-8.1	-0.00052	mg/L	0.000722	-0.00052	mg/L	0.000722	138.46%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	40.7	-0.00080	mg/L	0.000072	-0.00080	mg/L	0.000072	9.05%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	48.2	-0.00002	mg/L	0.000003	-0.00002	mg/L	0.000003	18.85%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	224.2	0.00275	mg/L	0.000197	0.00275	mg/L	0.000197	7.15%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-13.5	0.0166	mg/L	0.01823	0.0166	mg/L	0.01823	110.11%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	4.5	0.00009	mg/L	0.000107	0.00009	mg/L	0.000107	113.66%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	18.1	0.00006	mg/L	0.000142	0.00006	mg/L	0.000142	249.40%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	15.0	-0.00017	mg/L	0.000008	-0.00017	mg/L	0.000008	4.63%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	165.5	0.00025	mg/L	0.000459	0.00025	mg/L	0.000459	181.70%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	43.1	0.00387	mg/L	0.001014	0.00387	mg/L	0.001014	26.22%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	44.7	0.0202	mg/L	0.00116	0.0202	mg/L	0.00116	5.73%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	-19.1	-0.00063	mg/L	0.000012	-0.00063	mg/L	0.000012	1.93%
QC value within limits for Mn 257.610 Recovery = Not calculated								

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Mo 202.031†	6.9	0.00081 mg/L	0.000361	0.00081 mg/L	0.000361	44.78%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	13.2	-0.00299 mg/L	0.000310	-0.00299 mg/L	0.000310	10.38%
QC value within limits for Ni 231.604 Recovery = Not calculated						
Pb 220.353†	-13.3	-0.00139 mg/L	0.001053	-0.00139 mg/L	0.001053	75.93%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	-6.1	-0.00132 mg/L	0.000961	-0.00132 mg/L	0.000961	72.56%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.3	-0.00187 mg/L	0.002322	-0.00187 mg/L	0.002322	123.90%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	125.2	-0.00297 mg/L	0.000627	-0.00297 mg/L	0.000627	21.09%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	9.7	0.00060 mg/L	0.000475	0.00060 mg/L	0.000475	78.74%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	231.1	0.00115 mg/L	0.000104	0.00115 mg/L	0.000104	9.08%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	7.1	-0.00084 mg/L	0.001097	-0.00084 mg/L	0.001097	130.35%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 290.880†	373.4	0.00166 mg/L	0.000346	0.00166 mg/L	0.000346	20.83%
QC value within limits for V 290.880 Recovery = Not calculated						
Zn 206.200†	-1.1	-0.00073 mg/L	0.000286	-0.00073 mg/L	0.000286	39.19%
QC value within limits for Zn 206.200 Recovery = Not calculated						
K 766.490†	57.8	-0.0593 mg/L	0.04731	-0.0593 mg/L	0.04731	79.76%
QC value within limits for K 766.490 Recovery = Not calculated						
Na 589.592†	379.3	0.00599 mg/L	0.003769	0.00599 mg/L	0.003769	62.93%
QC value within limits for Na 589.592 Recovery = Not calculated						
Sr 407.771†	475.4	0.00110 mg/L	0.000015	0.00110 mg/L	0.000015	1.38%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	102.9	-0.00122 mg/L	0.000210	-0.00122 mg/L	0.000210	17.22%
QC value within limits for Li 670.784 Recovery = Not calculated						

All analyte(s) passed QC.

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Sequence No.: 41 **Autosampler Location: 37**
Sample ID: L1207063901S WG404091-04 **Date Collected: 7/27/2012 12:26:49 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207063901S WG404091-04

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207063901S WG404091-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2360869.5						46790.02	1.98%
YRADIAL	298353.2						524.42	0.18%
Ga 417.206	1318982.8						23854.04	1.81%
GaRADIAL	84354.6						594.28	0.70%
Ag 328.068†	60983.1	0.198	mg/L	0.0047	0.198	mg/L	0.0047	2.40%
Al 396.153†	32483.7	4.97	mg/L	0.004	4.97	mg/L	0.004	0.09%
As 188.979†	643.3	0.185	mg/L	0.0025	0.185	mg/L	0.0025	1.36%
Ba 233.527†	99212.5	0.595	mg/L	0.0093	0.595	mg/L	0.0093	1.56%
Be 234.861†	28360.2	0.0238	mg/L	0.00061	0.0238	mg/L	0.00061	2.57%
B 249.677†	105073.0	0.985	mg/L	0.0274	0.985	mg/L	0.0274	2.78%
Ca 227.546†	23146.0	53.0	mg/L	1.35	53.0	mg/L	1.35	2.55%
Cd 228.802†	1296.5	0.0229	mg/L	0.00094	0.0229	mg/L	0.00094	4.10%
Co 228.616†	4234.3	0.0962	mg/L	0.00240	0.0962	mg/L	0.00240	2.49%
Cr 267.716†	31063.3	0.250	mg/L	0.0032	0.250	mg/L	0.0032	1.28%
Cu 327.393†	59947.4	0.243	mg/L	0.0061	0.243	mg/L	0.0061	2.50%
Fe 239.562†	30016.6	2.09	mg/L	0.012	2.09	mg/L	0.012	0.58%
Mg 279.077†	43371.7	13.1	mg/L	0.03	13.1	mg/L	0.03	0.21%
Mn 257.610†	202300.2	0.251	mg/L	0.0053	0.251	mg/L	0.0053	2.12%
Mo 202.031†	18179.5	0.497	mg/L	0.0093	0.497	mg/L	0.0093	1.88%
Ni 231.604†	16645.4	0.240	mg/L	0.0070	0.240	mg/L	0.0070	2.92%
Pb 220.353†	3374.9	0.249	mg/L	0.0065	0.249	mg/L	0.0065	2.61%
Sb 206.836†	2641.6	0.575	mg/L	0.0115	0.575	mg/L	0.0115	2.01%
Se 196.026†	392.1	0.194	mg/L	0.0039	0.194	mg/L	0.0039	2.02%
Si 251.611†	966579.4	19.4	mg/L	0.45	19.4	mg/L	0.45	2.31%

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Sn 189.927†	6291.8	0.517 mg/L	0.0112	0.517 mg/L	0.0112	2.17%
Ti 334.940†	501559.9	0.497 mg/L	0.0026	0.497 mg/L	0.0026	0.52%
Tl 190.801†	986.8	0.257 mg/L	0.0012	0.257 mg/L	0.0012	0.47%
V 290.880†	124830.9	0.509 mg/L	0.0086	0.509 mg/L	0.0086	1.68%
Zn 206.200†	28576.0	0.496 mg/L	0.0066	0.496 mg/L	0.0066	1.33%
K 766.490†	76187.5	26.2 mg/L	0.19	26.2 mg/L	0.19	0.72%
Na 589.592†	979921.1	52.0 mg/L	0.13	52.0 mg/L	0.13	0.24%
Sr 407.771†	2163873.3	0.883 mg/L	0.0153	0.883 mg/L	0.0153	1.73%
Li 670.784†	73509.2	0.519 mg/L	0.0007	0.519 mg/L	0.0007	0.14%

Sequence No.: 42 **Autosampler Location: 38**
Sample ID: L1207063901SD WG404091-05 **Date Collected: 7/27/2012 12:32:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207063901SD WG404091-05

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207063901SD WG404091-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2341038.9						19533.38	0.83%
YRADIAL	299524.2						2713.41	0.91%
Ga 417.206	1339192.5						28052.90	2.09%
GaRADIAL	83970.0						813.86	0.97%
Ag 328.068†	60519.4	0.196	mg/L	0.0042	0.196	mg/L	0.0042	2.17%
Al 396.153†	32362.3	4.95	mg/L	0.009	4.95	mg/L	0.009	0.19%
As 188.979†	639.7	0.184	mg/L	0.0041	0.184	mg/L	0.0041	2.23%
Ba 233.527†	100878.9	0.605	mg/L	0.0120	0.605	mg/L	0.0120	1.98%
Be 234.861†	28109.6	0.0236	mg/L	0.00072	0.0236	mg/L	0.00072	3.03%
B 249.677†	104681.9	0.982	mg/L	0.0206	0.982	mg/L	0.0206	2.10%
Ca 227.546†	23317.4	53.4	mg/L	1.10	53.4	mg/L	1.10	2.06%
Cd 228.802†	1279.7	0.0226	mg/L	0.00116	0.0226	mg/L	0.00116	5.13%
Co 228.616†	4287.1	0.0975	mg/L	0.00045	0.0975	mg/L	0.00045	0.46%
Cr 267.716†	31508.0	0.254	mg/L	0.0042	0.254	mg/L	0.0042	1.66%
Cu 327.393†	59920.5	0.243	mg/L	0.0041	0.243	mg/L	0.0041	1.68%
Fe 239.562†	29855.4	2.08	mg/L	0.009	2.08	mg/L	0.009	0.43%
Mg 279.077†	43551.4	13.2	mg/L	0.06	13.2	mg/L	0.06	0.48%
Mn 257.610†	205823.1	0.255	mg/L	0.0048	0.255	mg/L	0.0048	1.89%
Mo 202.031†	18484.0	0.505	mg/L	0.0099	0.505	mg/L	0.0099	1.96%
Ni 231.604†	16868.8	0.243	mg/L	0.0055	0.243	mg/L	0.0055	2.27%
Pb 220.353†	3400.4	0.251	mg/L	0.0014	0.251	mg/L	0.0014	0.56%
Sb 206.836†	2600.6	0.566	mg/L	0.0169	0.566	mg/L	0.0169	2.98%
Se 196.026†	387.1	0.191	mg/L	0.0092	0.191	mg/L	0.0092	4.83%
Si 251.611†	957454.5	19.2	mg/L	0.20	19.2	mg/L	0.20	1.06%
Sn 189.927†	6457.1	0.531	mg/L	0.0045	0.531	mg/L	0.0045	0.84%
Ti 334.940†	500316.6	0.496	mg/L	0.0018	0.496	mg/L	0.0018	0.35%
Tl 190.801†	985.4	0.257	mg/L	0.0078	0.257	mg/L	0.0078	3.04%
V 290.880†	127255.1	0.519	mg/L	0.0089	0.519	mg/L	0.0089	1.71%
Zn 206.200†	28741.5	0.499	mg/L	0.0110	0.499	mg/L	0.0110	2.20%
K 766.490†	77123.3	26.5	mg/L	0.19	26.5	mg/L	0.19	0.73%
Na 589.592†	987401.4	52.4	mg/L	0.49	52.4	mg/L	0.49	0.93%
Sr 407.771†	2159983.0	0.881	mg/L	0.0085	0.881	mg/L	0.0085	0.97%
Li 670.784†	73612.4	0.519	mg/L	0.0056	0.519	mg/L	0.0056	1.08%

Sequence No.: 43 **Autosampler Location: 39**
Sample ID: L1207063902 **Date Collected: 7/27/2012 12:38:46 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207063902

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Approved: July 31, 2012

Kim H. Rhoden

Mean Data: L1207063902

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2393804.5						13658.61	0.57%
YRADIAL	297889.3						6954.35	2.33%
Ga 417.206	1378808.9						22870.15	1.66%
GaRADIAL	86167.8						957.25	1.11%
Ag 328.068†	184.3	0.00039	mg/L	0.000267	0.00039	mg/L	0.000267	67.91%
Al 396.153†	111.6	0.0118	mg/L	0.00115	0.0118	mg/L	0.00115	9.76%
As 188.979†	-8.1	-0.00056	mg/L	0.001545	-0.00056	mg/L	0.001545	274.58%
Ba 233.527†	12630.0	0.0748	mg/L	0.00091	0.0748	mg/L	0.00091	1.21%
Be 234.861†	211.5	0.00012	mg/L	0.000014	0.00012	mg/L	0.000014	11.51%
B 249.677†	1578.4	0.0155	mg/L	0.00069	0.0155	mg/L	0.00069	4.49%
Ca 227.546†	13675.2	31.2	mg/L	0.72	31.2	mg/L	0.72	2.31%
Cd 228.802†	-0.0	0.00001	mg/L	0.000024	0.00001	mg/L	0.000024	265.06%
Co 228.616†	1.0	-0.00034	mg/L	0.000134	-0.00034	mg/L	0.000134	39.46%
Cr 267.716†	116.3	0.00064	mg/L	0.000131	0.00064	mg/L	0.000131	20.36%
Cu 327.393†	524.9	0.00170	mg/L	0.000068	0.00170	mg/L	0.000068	4.02%
Fe 239.562†	198.9	0.0146	mg/L	0.00112	0.0146	mg/L	0.00112	7.68%
Mg 279.077†	26285.9	7.96	mg/L	0.103	7.96	mg/L	0.103	1.29%
Mn 257.610†	920.5	0.00054	mg/L	0.000023	0.00054	mg/L	0.000023	4.33%
Mo 202.031†	242.8	0.00724	mg/L	0.000173	0.00724	mg/L	0.000173	2.39%
Ni 231.604†	49.2	-0.00246	mg/L	0.000249	-0.00246	mg/L	0.000249	10.11%
Pb 220.353†	28.7	0.00195	mg/L	0.001540	0.00195	mg/L	0.001540	78.81%
Sb 206.836†	-3.6	-0.00078	mg/L	0.001073	-0.00078	mg/L	0.001073	137.73%
Se 196.026†	1.7	-0.00090	mg/L	0.002448	-0.00090	mg/L	0.002448	273.20%
Si 251.611†	946612.7	19.0	mg/L	0.24	19.0	mg/L	0.24	1.27%
Sn 189.927†	-212.4	-0.0177	mg/L	0.00024	-0.0177	mg/L	0.00024	1.34%
Ti 334.940†	-4840.8	0.00089	mg/L	0.000186	0.00089	mg/L	0.000186	20.87%
Tl 190.801†	-9.8	-0.00521	mg/L	0.001651	-0.00521	mg/L	0.001651	31.65%
V 290.880†	1291.8	0.00520	mg/L	0.001015	0.00520	mg/L	0.001015	19.52%
Zn 206.200†	1080.5	0.0180	mg/L	0.00025	0.0180	mg/L	0.00025	1.40%
K 766.490†	5718.5	1.87	mg/L	0.028	1.87	mg/L	0.028	1.52%
Na 589.592†	462908.3	24.5	mg/L	0.39	24.5	mg/L	0.39	1.60%
Sr 407.771†	659560.7	0.269	mg/L	0.0127	0.269	mg/L	0.0127	4.73%
Li 670.784†	760.9	0.00344	mg/L	0.000334	0.00344	mg/L	0.000334	9.69%

Sequence No.: 44
Sample ID: L1207063903
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 7/27/2012 12:45:44 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207063903

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207063903

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2409965.1						4816.88	0.20%
YRADIAL	296233.0						2360.97	0.80%
Ga 417.206	1366769.7						31154.87	2.28%
GaRADIAL	85225.3						844.91	0.99%
Ag 328.068†	326.0	0.00094	mg/L	0.000354	0.00094	mg/L	0.000354	37.78%
Al 396.153†	109.9	0.0116	mg/L	0.00575	0.0116	mg/L	0.00575	49.59%
As 188.979†	-9.0	-0.00075	mg/L	0.001886	-0.00075	mg/L	0.001886	250.30%
Ba 233.527†	13506.7	0.0801	mg/L	0.00018	0.0801	mg/L	0.00018	0.22%
Be 234.861†	338.2	0.00018	mg/L	0.000029	0.00018	mg/L	0.000029	16.07%
B 249.677†	1385.7	0.0135	mg/L	0.00048	0.0135	mg/L	0.00048	3.55%
Ca 227.546†	14888.5	34.1	mg/L	0.73	34.1	mg/L	0.73	2.15%
Cd 228.802†	7.5	0.00015	mg/L	0.000161	0.00015	mg/L	0.000161	105.56%
Co 228.616†	29.1	0.00029	mg/L	0.000091	0.00029	mg/L	0.000091	31.83%
Cr 267.716†	3239.7	0.0258	mg/L	0.00010	0.0258	mg/L	0.00010	0.41%
Cu 327.393†	657.7	0.00223	mg/L	0.000193	0.00223	mg/L	0.000193	8.64%
Fe 239.562†	3273.0	0.229	mg/L	0.0083	0.229	mg/L	0.0083	3.62%
Mg 279.077†	26842.7	8.12	mg/L	0.084	8.12	mg/L	0.084	1.04%
Mn 257.610†	2169.4	0.00209	mg/L	0.000050	0.00209	mg/L	0.000050	2.38%

Approved: July 31, 2012

Mo 202.031†	209.4	0.00634	mg/L	0.000361	0.00634	mg/L	0.000361	5.69%
Ni 231.604†	7719.1	0.110	mg/L	0.0004	0.110	mg/L	0.0004	0.34%
Pb 220.353†	1.1	-0.00005	mg/L	0.001863	-0.00005	mg/L	0.001863	>999.9%
Sb 206.836†	-6.4	-0.00151	mg/L	0.001303	-0.00151	mg/L	0.001303	86.39%
Se 196.026†	4.2	0.00042	mg/L	0.005174	0.00042	mg/L	0.005174	>999.9%
Si 251.611†	943399.7	19.0	mg/L	0.33	19.0	mg/L	0.33	1.75%
Sn 189.927†	-211.2	-0.0176	mg/L	0.00023	-0.0176	mg/L	0.00023	1.34%
Ti 334.940†	-5148.9	0.00100	mg/L	0.000487	0.00100	mg/L	0.000487	48.88%
Tl 190.801†	0.5	-0.00257	mg/L	0.001506	-0.00257	mg/L	0.001506	58.55%
V 290.880†	1672.0	0.00674	mg/L	0.000890	0.00674	mg/L	0.000890	13.21%
Zn 206.200†	454.6	0.00739	mg/L	0.000127	0.00739	mg/L	0.000127	1.71%
K 766.490†	5845.2	1.91	mg/L	0.071	1.91	mg/L	0.071	3.73%
Na 589.592†	469815.6	24.8	mg/L	0.11	24.8	mg/L	0.11	0.44%
Sr 407.771†	691545.1	0.282	mg/L	0.0021	0.282	mg/L	0.0021	0.76%
Li 670.784†	910.3	0.00450	mg/L	0.000282	0.00450	mg/L	0.000282	6.27%

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Sequence No.: 45 **Autosampler Location: 41**
Sample ID: L1207064001 **Date Collected: 7/27/2012 12:51:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064001

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064001

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2364587.0						12359.33	0.52%
YRADIAL	299640.7						3036.49	1.01%
Ga 417.206	1376877.0						4847.43	0.35%
GaRADIAL	86028.3						2669.71	3.10%
Ag 328.068†	244.0	0.00058	mg/L	0.000027	0.00058	mg/L	0.000027	4.61%
Al 396.153†	99.3	0.00998	mg/L	0.000131	0.00998	mg/L	0.000131	1.32%
As 188.979†	4.9	0.00319	mg/L	0.000765	0.00319	mg/L	0.000765	23.94%
Ba 233.527†	9631.2	0.0568	mg/L	0.00032	0.0568	mg/L	0.00032	0.57%
Be 234.861†	185.8	0.00010	mg/L	0.000027	0.00010	mg/L	0.000027	26.79%
B 249.677†	3029.0	0.0291	mg/L	0.00031	0.0291	mg/L	0.00031	1.05%
Ca 227.546†	14235.9	32.5	mg/L	0.71	32.5	mg/L	0.71	2.19%
Cd 228.802†	3.5	0.00005	mg/L	0.000069	0.00005	mg/L	0.000069	128.21%
Co 228.616†	7.4	-0.00019	mg/L	0.000326	-0.00019	mg/L	0.000326	174.55%
Cr 267.716†	577.3	0.00436	mg/L	0.000051	0.00436	mg/L	0.000051	1.16%
Cu 327.393†	274.7	0.00069	mg/L	0.000203	0.00069	mg/L	0.000203	29.40%
Fe 239.562†	148.7	0.0111	mg/L	0.00042	0.0111	mg/L	0.00042	3.79%
Mg 279.077†	16454.0	4.98	mg/L	0.064	4.98	mg/L	0.064	1.29%
Mn 257.610†	329.7	-0.00020	mg/L	0.000013	-0.00020	mg/L	0.000013	6.61%
Mo 202.031†	187.1	0.00572	mg/L	0.000125	0.00572	mg/L	0.000125	2.18%
Ni 231.604†	60.0	-0.00230	mg/L	0.000168	-0.00230	mg/L	0.000168	7.29%
Pb 220.353†	12.9	0.00080	mg/L	0.000987	0.00080	mg/L	0.000987	122.80%
Sb 206.836†	-2.4	-0.00053	mg/L	0.001481	-0.00053	mg/L	0.001481	280.88%
Se 196.026†	-0.3	-0.00189	mg/L	0.003091	-0.00189	mg/L	0.003091	163.93%
Si 251.611†	623642.3	12.5	mg/L	0.02	12.5	mg/L	0.02	0.14%
Sn 189.927†	-226.5	-0.0188	mg/L	0.00064	-0.0188	mg/L	0.00064	3.39%
Ti 334.940†	-5722.8	0.00022	mg/L	0.000066	0.00022	mg/L	0.000066	29.79%
Tl 190.801†	-3.4	-0.00357	mg/L	0.001105	-0.00357	mg/L	0.001105	30.95%
V 290.880†	2672.6	0.0109	mg/L	0.00145	0.0109	mg/L	0.00145	13.25%
Zn 206.200†	498.7	0.00795	mg/L	0.000233	0.00795	mg/L	0.000233	2.93%
K 766.490†	6133.0	2.01	mg/L	0.029	2.01	mg/L	0.029	1.42%
Na 589.592†	388559.0	20.5	mg/L	0.63	20.5	mg/L	0.63	3.07%
Sr 407.771†	866370.1	0.354	mg/L	0.0191	0.354	mg/L	0.0191	5.40%
Li 670.784†	1623.7	0.00955	mg/L	0.000385	0.00955	mg/L	0.000385	4.03%

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Sequence No.: 46 **Autosampler Location: 42**
Sample ID: L1207064002 **Date Collected: 7/27/2012 12:58:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 31, 2012

Nebulizer Parameters: L1207064002

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207064002

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2391816.3						10058.17	0.42%
YRADIAL	293059.8						3387.97	1.16%
Ga 417.206	1377137.9						19005.45	1.38%
GaRADIAL	86995.4						2997.67	3.45%
Ag 328.068†	208.3	0.00053	mg/L	0.000344	0.00053	mg/L	0.000344	64.73%
Al 396.153†	693.2	0.102	mg/L	0.0039	0.102	mg/L	0.0039	3.84%
As 188.979†	19.3	0.00735	mg/L	0.001116	0.00735	mg/L	0.001116	15.19%
Ba 233.527†	15576.7	0.0925	mg/L	0.00154	0.0925	mg/L	0.00154	1.67%
Be 234.861†	229.1	0.00012	mg/L	0.000007	0.00012	mg/L	0.000007	5.40%
B 249.677†	4128.2	0.0394	mg/L	0.00067	0.0394	mg/L	0.00067	1.69%
Ca 227.546†	9997.1	22.8	mg/L	0.49	22.8	mg/L	0.49	2.13%
Cd 228.802†	3.0	0.00002	mg/L	0.000041	0.00002	mg/L	0.000041	178.25%
Co 228.616†	4.6	-0.00027	mg/L	0.000075	-0.00027	mg/L	0.000075	27.48%
Cr 267.716†	192.7	0.00127	mg/L	0.000089	0.00127	mg/L	0.000089	6.98%
Cu 327.393†	637.9	0.00217	mg/L	0.000101	0.00217	mg/L	0.000101	4.66%
Fe 239.562†	1136.2	0.0800	mg/L	0.00141	0.0800	mg/L	0.00141	1.76%
Mg 279.077†	8028.0	2.43	mg/L	0.038	2.43	mg/L	0.038	1.56%
Mn 257.610†	10171.2	0.0120	mg/L	0.00007	0.0120	mg/L	0.00007	0.56%
Mo 202.031†	193.9	0.00592	mg/L	0.000126	0.00592	mg/L	0.000126	2.12%
Ni 231.604†	53.4	-0.00240	mg/L	0.000084	-0.00240	mg/L	0.000084	3.50%
Pb 220.353†	10.9	0.00058	mg/L	0.001082	0.00058	mg/L	0.001082	185.20%
Sb 206.836†	-2.6	-0.00054	mg/L	0.001634	-0.00054	mg/L	0.001634	301.10%
Se 196.026†	-1.9	-0.00264	mg/L	0.001425	-0.00264	mg/L	0.001425	54.03%
Si 251.611†	624156.5	12.5	mg/L	0.16	12.5	mg/L	0.16	1.25%
Sn 189.927†	-192.3	-0.0160	mg/L	0.00075	-0.0160	mg/L	0.00075	4.67%
Ti 334.940†	-1418.2	0.00296	mg/L	0.000218	0.00296	mg/L	0.000218	7.36%
Tl 190.801†	-11.4	-0.00555	mg/L	0.001450	-0.00555	mg/L	0.001450	26.10%
V 290.880†	5194.7	0.0213	mg/L	0.00095	0.0213	mg/L	0.00095	4.45%
Zn 206.200†	1156.3	0.0193	mg/L	0.00009	0.0193	mg/L	0.00009	0.49%
K 766.490†	5515.2	1.80	mg/L	0.023	1.80	mg/L	0.023	1.28%
Na 589.592†	362622.6	19.2	mg/L	0.36	19.2	mg/L	0.36	1.87%
Sr 407.771†	621038.0	0.254	mg/L	0.0077	0.254	mg/L	0.0077	3.04%
Li 670.784†	1683.8	0.00998	mg/L	0.000353	0.00998	mg/L	0.000353	3.54%

Sequence No.: 47
Sample ID: L1207064003
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 7/27/2012 1:05:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207064003

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064003

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2375459.7						23813.23	1.00%
YRADIAL	292768.6						5772.79	1.97%
Ga 417.206	1400787.9						9147.27	0.65%
GaRADIAL	87248.2						826.69	0.95%
Ag 328.068†	358.6	0.00097	mg/L	0.000130	0.00097	mg/L	0.000130	13.35%
Al 396.153†	797.0	0.118	mg/L	0.0011	0.118	mg/L	0.0011	0.96%
As 188.979†	-6.4	-0.00006	mg/L	0.002759	-0.00006	mg/L	0.002759	>999.9%
Ba 233.527†	11882.6	0.0703	mg/L	0.00080	0.0703	mg/L	0.00080	1.14%
Be 234.861†	251.4	0.00013	mg/L	0.000003	0.00013	mg/L	0.000003	2.43%
B 249.677†	1761.2	0.0171	mg/L	0.00028	0.0171	mg/L	0.00028	1.62%
Ca 227.546†	19810.6	45.2	mg/L	1.01	45.2	mg/L	1.01	2.24%
Cd 228.802†	-0.9	-0.00001	mg/L	0.000153	-0.00001	mg/L	0.000153	>999.9%

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Co 228.616†	6.1	-0.00023 mg/L	0.000291	-0.00023 mg/L	0.000291	128.19%
Cr 267.716†	307.3	0.00218 mg/L	0.000127	0.00218 mg/L	0.000127	5.84%
Cu 327.393†	143.7	0.00017 mg/L	0.000443	0.00017 mg/L	0.000443	266.24%
Fe 239.562†	1552.2	0.109 mg/L	0.0010	0.109 mg/L	0.0010	0.95%
Mg 279.077†	33436.2	10.1 mg/L	0.19	10.1 mg/L	0.19	1.84%
Mn 257.610†	3815.6	0.00413 mg/L	0.000070	0.00413 mg/L	0.000070	1.69%
Mo 202.031†	160.7	0.00501 mg/L	0.000305	0.00501 mg/L	0.000305	6.09%
Ni 231.604†	69.8	-0.00216 mg/L	0.000257	-0.00216 mg/L	0.000257	11.88%
Pb 220.353†	15.3	0.00109 mg/L	0.000544	0.00109 mg/L	0.000544	50.16%
Sb 206.836†	-9.7	-0.00211 mg/L	0.001185	-0.00211 mg/L	0.001185	56.09%
Se 196.026†	7.0	0.00177 mg/L	0.001981	0.00177 mg/L	0.001981	111.84%
Si 251.611†	949502.3	19.1 mg/L	0.15	19.1 mg/L	0.15	0.80%
Sn 189.927†	-259.6	-0.0215 mg/L	0.00018	-0.0215 mg/L	0.00018	0.84%
Ti 334.940†	-4553.6	0.00327 mg/L	0.000418	0.00327 mg/L	0.000418	12.82%
Tl 190.801†	-8.6	-0.00492 mg/L	0.002070	-0.00492 mg/L	0.002070	42.08%
V 290.880†	1572.6	0.00629 mg/L	0.000872	0.00629 mg/L	0.000872	13.88%
Zn 206.200†	1191.7	0.0199 mg/L	0.00016	0.0199 mg/L	0.00016	0.81%
K 766.490†	6880.7	2.26 mg/L	0.029	2.26 mg/L	0.029	1.29%
Na 589.592†	503126.6	26.6 mg/L	0.55	26.6 mg/L	0.55	2.08%
Sr 407.771†	970199.2	0.396 mg/L	0.0103	0.396 mg/L	0.0103	2.61%
Li 670.784†	1360.8	0.00769 mg/L	0.000122	0.00769 mg/L	0.000122	1.58%

User canceled analysis.

Approved: July 31, 2012

Kim H. Rhoden

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Analysis Begun

Start Time: 7/27/2012 1:25:08 PM **Plasma On Time: 7/27/2012 6:47:44 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: 072712H
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 44**
Sample ID: L1207049108 0.01 **Date Collected: 7/27/2012 1:25:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207049108 0.01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207049108 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2488800.3						21697.46	0.87%
YRADIAL	309091.4						4854.14	1.57%
Ga 417.206	1404743.7						22235.56	1.58%
GaRADIAL	87552.8						1938.83	2.21%
Ag 328.068†	-18.6	-0.00022	mg/L	0.000324	-0.00022	mg/L	0.000324	145.53%
Al 396.153†	-39.5	-0.0110	mg/L	0.00148	-0.0110	mg/L	0.00148	13.41%
As 188.979†	0.3	0.00188	mg/L	0.001582	0.00188	mg/L	0.001582	84.07%
Ba 233.527†	136.7	-0.00022	mg/L	0.000053	-0.00022	mg/L	0.000053	23.95%
Be 234.861†	291.9	0.00019	mg/L	0.000026	0.00019	mg/L	0.000026	13.60%
B 249.677†	-107.7	-0.00036	mg/L	0.000206	-0.00036	mg/L	0.000206	57.67%
Ca 227.546†	2056.1	4.73	mg/L	0.093	4.73	mg/L	0.093	1.96%
Cd 228.802†	-7.7	-0.00014	mg/L	0.000009	-0.00014	mg/L	0.000009	6.43%
Co 228.616†	15.0	-0.00001	mg/L	0.000145	-0.00001	mg/L	0.000145	>999.9%
Cr 267.716†	-2.0	-0.00031	mg/L	0.000132	-0.00031	mg/L	0.000132	42.45%
Cu 327.393†	17.8	-0.00035	mg/L	0.000373	-0.00035	mg/L	0.000373	107.79%
Fe 239.562†	18.8	0.00215	mg/L	0.000166	0.00215	mg/L	0.000166	7.72%
Mg 279.077†	4232.8	1.29	mg/L	0.019	1.29	mg/L	0.019	1.46%
Mn 257.610†	1122.9	0.00078	mg/L	0.000031	0.00078	mg/L	0.000031	3.96%
Mo 202.031†	-15.1	0.00020	mg/L	0.000038	0.00020	mg/L	0.000038	18.61%
Ni 231.604†	47.6	-0.00249	mg/L	0.000060	-0.00249	mg/L	0.000060	2.40%
Pb 220.353†	7.3	0.00016	mg/L	0.000452	0.00016	mg/L	0.000452	278.06%
Sb 206.836†	-5.3	-0.00114	mg/L	0.001295	-0.00114	mg/L	0.001295	113.15%
Se 196.026†	1.2	-0.00114	mg/L	0.002931	-0.00114	mg/L	0.002931	256.76%
Si 251.611†	6114.1	0.117	mg/L	0.0016	0.117	mg/L	0.0016	1.40%
Sn 189.927†	-65.3	-0.00557	mg/L	0.000266	-0.00557	mg/L	0.000266	4.77%
Ti 334.940†	-802.5	0.00085	mg/L	0.000019	0.00085	mg/L	0.000019	2.19%
Tl 190.801†	16.4	0.00153	mg/L	0.001239	0.00153	mg/L	0.001239	81.12%
V 290.880†	211.5	0.00096	mg/L	0.000135	0.00096	mg/L	0.000135	14.05%
Zn 206.200†	37.5	-0.00006	mg/L	0.000128	-0.00006	mg/L	0.000128	200.76%
K 766.490†	162.9	-0.0233	mg/L	0.00784	-0.0233	mg/L	0.00784	33.72%
Na 589.592†	3023.4	0.145	mg/L	0.0074	0.145	mg/L	0.0074	5.07%
Sr 407.771†	35441.8	0.0153	mg/L	0.00022	0.0153	mg/L	0.00022	1.43%
Li 670.784†	57.3	-0.00154	mg/L	0.000026	-0.00154	mg/L	0.000026	1.69%

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Sequence No.: 2 **Autosampler Location: 45**
Sample ID: L1207049110 0.01 **Date Collected: 7/27/2012 1:32:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207049110 0.01

Approved: July 31, 2012

Kim H. Rhoden

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207049110 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2490528.5						13633.58	0.55%
YRADIAL	305872.5						9139.71	2.99%
Ga 417.206	1423576.1						29121.72	2.05%
GaRADIAL	87275.0						2442.68	2.80%
Ag 328.068†	9.5	-0.00013	mg/L	0.000474	-0.00013	mg/L	0.000474	360.42%
Al 396.153†	-35.8	-0.0105	mg/L	0.00131	-0.0105	mg/L	0.00131	12.49%
As 188.979†	1.4	0.00221	mg/L	0.001394	0.00221	mg/L	0.001394	62.95%
Ba 233.527†	245.7	0.00043	mg/L	0.000112	0.00043	mg/L	0.000112	25.93%
Be 234.861†	288.0	0.00019	mg/L	0.000018	0.00019	mg/L	0.000018	9.39%
B 249.677†	-94.1	-0.00023	mg/L	0.000115	-0.00023	mg/L	0.000115	49.34%
Ca 227.546†	2098.9	4.83	mg/L	0.124	4.83	mg/L	0.124	2.57%
Cd 228.802†	-1.5	-0.00003	mg/L	0.000156	-0.00003	mg/L	0.000156	541.25%
Co 228.616†	19.1	0.00008	mg/L	0.000110	0.00008	mg/L	0.000110	138.60%
Cr 267.716†	-1.3	-0.00030	mg/L	0.000039	-0.00030	mg/L	0.000039	12.68%
Cu 327.393†	103.8	0.00000	mg/L	0.000186	0.00000	mg/L	0.000186	>999.9%
Fe 239.562†	29.8	0.00291	mg/L	0.000586	0.00291	mg/L	0.000586	20.12%
Mg 279.077†	4363.6	1.33	mg/L	0.036	1.33	mg/L	0.036	2.74%
Mn 257.610†	1148.8	0.00082	mg/L	0.000011	0.00082	mg/L	0.000011	1.34%
Mo 202.031†	-7.2	0.00042	mg/L	0.000128	0.00042	mg/L	0.000128	30.38%
Ni 231.604†	43.1	-0.00255	mg/L	0.000170	-0.00255	mg/L	0.000170	6.66%
Pb 220.353†	6.1	0.00007	mg/L	0.001104	0.00007	mg/L	0.001104	>999.9%
Sb 206.836†	-7.7	-0.00167	mg/L	0.000628	-0.00167	mg/L	0.000628	37.47%
Se 196.026†	-2.4	-0.00290	mg/L	0.001984	-0.00290	mg/L	0.001984	68.52%
Si 251.611†	8430.8	0.164	mg/L	0.0031	0.164	mg/L	0.0031	1.86%
Sn 189.927†	-67.1	-0.00571	mg/L	0.000095	-0.00571	mg/L	0.000095	1.67%
Ti 334.940†	-819.0	0.00085	mg/L	0.000142	0.00085	mg/L	0.000142	16.69%
Tl 190.801†	8.2	-0.00056	mg/L	0.001994	-0.00056	mg/L	0.001994	353.05%
V 290.880†	254.4	0.00114	mg/L	0.000697	0.00114	mg/L	0.000697	61.27%
Zn 206.200†	41.5	0.00001	mg/L	0.000085	0.00001	mg/L	0.000085	>999.9%
K 766.490†	183.9	-0.0160	mg/L	0.00967	-0.0160	mg/L	0.00967	60.34%
Na 589.592†	3058.6	0.147	mg/L	0.0048	0.147	mg/L	0.0048	3.28%
Sr 407.771†	37287.3	0.0160	mg/L	0.00052	0.0160	mg/L	0.00052	3.28%
Li 670.784†	-9.7	-0.00202	mg/L	0.000130	-0.00202	mg/L	0.000130	6.45%

Sequence No.: 3
Sample ID: L1207049112 0.01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/27/2012 1:39:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207049112 0.01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207049112 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2483149.8						10695.05	0.43%
YRADIAL	299688.3						3797.82	1.27%
Ga 417.206	1406189.0						19664.85	1.40%
GaRADIAL	85544.0						1543.40	1.80%
Ag 328.068†	59.8	0.00003	mg/L	0.000264	0.00003	mg/L	0.000264	862.00%
Al 396.153†	-40.2	-0.0112	mg/L	0.00060	-0.0112	mg/L	0.00060	5.38%
As 188.979†	-0.6	0.00163	mg/L	0.001751	0.00163	mg/L	0.001751	107.23%
Ba 233.527†	187.3	0.00008	mg/L	0.000024	0.00008	mg/L	0.000024	28.93%
Be 234.861†	258.2	0.00016	mg/L	0.000033	0.00016	mg/L	0.000033	20.29%
B 249.677†	-61.7	0.00007	mg/L	0.000047	0.00007	mg/L	0.000047	63.96%
Ca 227.546†	2044.2	4.70	mg/L	0.022	4.70	mg/L	0.022	0.47%
Cd 228.802†	-7.4	-0.00013	mg/L	0.000135	-0.00013	mg/L	0.000135	101.26%
Co 228.616†	20.4	0.00011	mg/L	0.000092	0.00011	mg/L	0.000092	82.60%
Cr 267.716†	0.1	-0.00029	mg/L	0.000064	-0.00029	mg/L	0.000064	21.79%
Cu 327.393†	266.8	0.00066	mg/L	0.000070	0.00066	mg/L	0.000070	10.60%

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Fe 239.562†	15.8	0.00194 mg/L	0.000465	0.00194 mg/L	0.000465	24.04%
Mg 279.077†	4361.9	1.33 mg/L	0.018	1.33 mg/L	0.018	1.37%
Mn 257.610†	1094.0	0.00075 mg/L	0.000014	0.00075 mg/L	0.000014	1.92%
Mo 202.031†	-8.7	0.00038 mg/L	0.000127	0.00038 mg/L	0.000127	33.43%
Ni 231.604†	39.7	-0.00260 mg/L	0.000151	-0.00260 mg/L	0.000151	5.79%
Pb 220.353†	-2.7	-0.00058 mg/L	0.000527	-0.00058 mg/L	0.000527	91.48%
Sb 206.836†	-3.6	-0.00077 mg/L	0.000699	-0.00077 mg/L	0.000699	91.39%
Se 196.026†	-0.6	-0.00203 mg/L	0.002812	-0.00203 mg/L	0.002812	138.59%
Si 251.611†	8840.5	0.172 mg/L	0.0020	0.172 mg/L	0.0020	1.16%
Sn 189.927†	-69.0	-0.00586 mg/L	0.000183	-0.00586 mg/L	0.000183	3.11%
Ti 334.940†	-899.5	0.00075 mg/L	0.000077	0.00075 mg/L	0.000077	10.28%
Tl 190.801†	11.2	0.00018 mg/L	0.002715	0.00018 mg/L	0.002715	>999.9%
V 290.880†	343.4	0.00150 mg/L	0.000871	0.00150 mg/L	0.000871	57.99%
Zn 206.200†	31.1	-0.00017 mg/L	0.000065	-0.00017 mg/L	0.000065	37.74%
K 766.490†	160.9	-0.0240 mg/L	0.02501	-0.0240 mg/L	0.02501	104.42%
Na 589.592†	3201.0	0.155 mg/L	0.0048	0.155 mg/L	0.0048	3.12%
Sr 407.771†	37016.1	0.0159 mg/L	0.00022	0.0159 mg/L	0.00022	1.35%
Li 670.784†	25.5	-0.00177 mg/L	0.000714	-0.00177 mg/L	0.000714	40.44%

Sequence No.: 4 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 1:45:58 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2409267.9						30157.23	1.25%
YRADIAL	300243.3						4952.26	1.65%
Ga 417.206	1306035.1						6822.88	0.52%
GaRADIAL	82459.5						956.44	1.16%
Ag 328.068†	123084.7	0.399	mg/L	0.0072	0.399	mg/L	0.0072	1.80%
QC value within limits for Ag 328.068 Recovery = 99.80%								
Al 396.153†	66060.0	10.1	mg/L	0.06	10.1	mg/L	0.06	0.55%
QC value within limits for Al 396.153 Recovery = 101.16%								
As 188.979†	1325.7	0.379	mg/L	0.0033	0.379	mg/L	0.0033	0.87%
QC value within limits for As 188.979 Recovery = 94.83%								
Ba 233.527†	165478.0	0.993	mg/L	0.0107	0.993	mg/L	0.0107	1.08%
QC value within limits for Ba 233.527 Recovery = 99.28%								
Be 234.861†	57564.5	0.0484	mg/L	0.00059	0.0484	mg/L	0.00059	1.23%
QC value within limits for Be 234.861 Recovery = 96.79%								
B 249.677†	52303.3	0.488	mg/L	0.0090	0.488	mg/L	0.0090	1.84%
QC value within limits for B 249.677 Recovery = 97.59%								
Ca 227.546†	4305.7	10.3	mg/L	0.12	10.3	mg/L	0.12	1.14%
QC value within limits for Ca 227.546 Recovery = 103.27%								
Cd 228.802†	2697.6	0.0476	mg/L	0.00125	0.0476	mg/L	0.00125	2.62%
QC value within limits for Cd 228.802 Recovery = 95.19%								
Co 228.616†	8654.0	0.197	mg/L	0.0036	0.197	mg/L	0.0036	1.84%
QC value within limits for Co 228.616 Recovery = 98.55%								
Cr 267.716†	62262.6	0.502	mg/L	0.0012	0.502	mg/L	0.0012	0.24%
QC value within limits for Cr 267.716 Recovery = 100.36%								
Cu 327.393†	124547.8	0.504	mg/L	0.0108	0.504	mg/L	0.0108	2.14%
QC value within limits for Cu 327.393 Recovery = 100.89%								
Fe 239.562†	57047.4	3.98	mg/L	0.034	3.98	mg/L	0.034	0.85%
QC value within limits for Fe 239.562 Recovery = 99.41%								
Mg 279.077†	32647.4	9.89	mg/L	0.052	9.89	mg/L	0.052	0.53%
QC value within limits for Mg 279.077 Recovery = 98.95%								
Mn 257.610†	400629.7	0.498	mg/L	0.0064	0.498	mg/L	0.0064	1.28%
QC value within limits for Mn 257.610 Recovery = 99.54%								
Mo 202.031†	36485.6	0.996	mg/L	0.0046	0.996	mg/L	0.0046	0.46%
QC value within limits for Mo 202.031 Recovery = 99.64%								
Ni 231.604†	35129.2	0.510	mg/L	0.0080	0.510	mg/L	0.0080	1.57%
QC value within limits for Ni 231.604 Recovery = 102.07%								
Pb 220.353†	6777.7	0.499	mg/L	0.0055	0.499	mg/L	0.0055	1.10%

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   QC value within limits for Pb 220.353  Recovery = 99.89%
Sb 206.836†            5366.9        1.17 mg/L        0.011        1.17 mg/L        0.011   0.97%
   QC value within limits for Sb 206.836  Recovery = 97.39%
Se 196.026†             791.7       0.393 mg/L       0.0034       0.393 mg/L       0.0034   0.85%
   QC value within limits for Se 196.026  Recovery = 98.28%
Si 251.611†          245313.9        4.91 mg/L        0.045        4.91 mg/L        0.045   0.91%
   QC value within limits for Si 251.611  Recovery = 98.27%
Sn 189.927†           12101.2       0.994 mg/L       0.0113       0.994 mg/L       0.0113   1.14%
   QC value within limits for Sn 189.927  Recovery = 99.44%
Ti 334.940†         1024253.8       0.999 mg/L       0.0063       0.999 mg/L       0.0063   0.63%
   QC value within limits for Ti 334.940  Recovery = 99.93%
Tl 190.801†            1995.6       0.523 mg/L       0.0045       0.523 mg/L       0.0045   0.86%
   QC value within limits for Tl 190.801  Recovery = 104.56%
V 290.880†           244132.3       0.997 mg/L       0.0053       0.997 mg/L       0.0053   0.54%
   QC value within limits for V 290.880  Recovery = 99.67%
Zn 206.200†           56696.4       0.985 mg/L       0.0065       0.985 mg/L       0.0065   0.66%
   QC value within limits for Zn 206.200  Recovery = 98.48%
K 766.490†           145150.8        50.2 mg/L         0.41        50.2 mg/L         0.41   0.82%
   QC value within limits for K 766.490  Recovery = 100.31%
Na 589.592†          974436.7        51.8 mg/L         1.10        51.8 mg/L         1.10   2.13%
   QC value within limits for Na 589.592  Recovery = 103.50%
Sr 407.771†         2439000.7       0.996 mg/L       0.0332       0.996 mg/L       0.0332   3.33%
   QC value within limits for Sr 407.771  Recovery = 99.59%
Li 670.784†          147372.1        1.04 mg/L        0.006        1.04 mg/L        0.006   0.53%
   QC value within limits for Li 670.784  Recovery = 104.18%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 5                                  Autosampler Location: 1
Sample ID: CCB                                   Date Collected: 7/27/2012 1:51:57 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                    193.0 kPa        0.50 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            2449469.2                                                     22227.14   0.91%
YRADIAL               296872.4                                                      6553.03   2.21%
Ga 417.206           1330862.8                                                     11786.86   0.89%
GaRADIAL               83455.6                                                       477.13   0.57%
Ag 328.068†              -10.0    -0.00019 mg/L      0.000212    -0.00019 mg/L      0.000212 110.61%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               11.9    -0.00317 mg/L      0.000641    -0.00317 mg/L      0.000641  20.20%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -4.9     0.00038 mg/L      0.001772     0.00038 mg/L      0.001772 465.33%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               32.8    -0.00085 mg/L      0.000078    -0.00085 mg/L      0.000078   9.27%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              116.3     0.00004 mg/L      0.000006     0.00004 mg/L      0.000006  12.90%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                66.1     0.00127 mg/L      0.000185     0.00127 mg/L      0.000185  14.58%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -9.8      0.0251 mg/L       0.02703      0.0251 mg/L       0.02703 107.53%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                2.4     0.00005 mg/L      0.000067     0.00005 mg/L      0.000067 131.71%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               12.9    -0.00006 mg/L      0.000198    -0.00006 mg/L      0.000198 318.20%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -1.1    -0.00030 mg/L      0.000137    -0.00030 mg/L      0.000137  45.34%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              135.3     0.00013 mg/L      0.000013     0.00013 mg/L      0.000013   9.76%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               13.5     0.00180 mg/L      0.000455     0.00180 mg/L      0.000455  25.22%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†                9.5     0.00960 mg/L      0.002516     0.00960 mg/L      0.002516  26.21%
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QC value within limits for Mg 279.077 Recovery = Not calculated
Mn 257.610† -35.1 -0.00065 mg/L 0.000004 -0.00065 mg/L 0.000004 0.54%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† 9.1 0.00087 mg/L 0.000077 0.00087 mg/L 0.000077 8.88%
QC value within limits for Mo 202.031 Recovery = Not calculated
Ni 231.604† 20.2 -0.00289 mg/L 0.000068 -0.00289 mg/L 0.000068 2.36%
QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† -21.3 -0.00198 mg/L 0.000296 -0.00198 mg/L 0.000296 14.94%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† -5.0 -0.00109 mg/L 0.000757 -0.00109 mg/L 0.000757 69.51%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† 0.8 -0.00132 mg/L 0.002582 -0.00132 mg/L 0.002582 196.35%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† -69.1 -0.00688 mg/L 0.000555 -0.00688 mg/L 0.000555 8.07%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 10.5 0.00066 mg/L 0.000626 0.00066 mg/L 0.000626 94.25%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 211.7 0.00113 mg/L 0.000179 0.00113 mg/L 0.000179 15.83%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† 7.5 -0.00075 mg/L 0.002431 -0.00075 mg/L 0.002431 325.09%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† 269.3 0.00123 mg/L 0.000460 0.00123 mg/L 0.000460 37.26%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† -7.0 -0.00083 mg/L 0.000088 -0.00083 mg/L 0.000088 10.50%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 104.5 -0.0432 mg/L 0.01231 -0.0432 mg/L 0.01231 28.48%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† 190.0 -0.00399 mg/L 0.006146 -0.00399 mg/L 0.006146 154.17%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 174.0 0.00098 mg/L 0.000022 0.00098 mg/L 0.000022 2.30%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 146.9 -0.00091 mg/L 0.000216 -0.00091 mg/L 0.000216 23.84%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 6 **Autosampler Location: 47**
Sample ID: PBW 1B WG404518-02 **Date Collected: 7/27/2012 1:58:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 1B WG404518-02

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: PBW 1B WG404518-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2443837.8						17369.05	0.71%
YRADIAL	302387.0						4312.02	1.43%
Ga 417.206	1387896.5						21457.96	1.55%
GaRADIAL	85620.7						1020.55	1.19%
Ag 328.068†	-15.1	-0.00020	mg/L	0.000164	-0.00020	mg/L	0.000164	80.70%
Al 396.153†	2.1	-0.00466	mg/L	0.001042	-0.00466	mg/L	0.001042	22.35%
As 188.979†	-2.6	0.00105	mg/L	0.001296	0.00105	mg/L	0.001296	123.28%
Ba 233.527†	79.2	-0.00057	mg/L	0.000059	-0.00057	mg/L	0.000059	10.40%
Be 234.861†	164.8	0.00008	mg/L	0.000030	0.00008	mg/L	0.000030	35.62%
B 249.677†	-25.5	0.00041	mg/L	0.000149	0.00041	mg/L	0.000149	36.39%
Ca 227.546†	-2.5	0.0418	mg/L	0.00919	0.0418	mg/L	0.00919	22.00%
Cd 228.802†	1.0	0.00002	mg/L	0.000045	0.00002	mg/L	0.000045	213.21%
Co 228.616†	11.5	-0.00010	mg/L	0.000201	-0.00010	mg/L	0.000201	209.87%
Cr 267.716†	-6.1	-0.00034	mg/L	0.000065	-0.00034	mg/L	0.000065	19.00%
Cu 327.393†	187.3	0.00034	mg/L	0.000491	0.00034	mg/L	0.000491	143.82%
Fe 239.562†	17.8	0.00211	mg/L	0.000406	0.00211	mg/L	0.000406	19.28%
Mg 279.077†	5.7	0.00845	mg/L	0.002995	0.00845	mg/L	0.002995	35.42%
Mn 257.610†	275.1	-0.00027	mg/L	0.000010	-0.00027	mg/L	0.000010	3.68%
Mo 202.031†	2.0	0.00067	mg/L	0.000239	0.00067	mg/L	0.000239	35.51%
Ni 231.604†	32.1	-0.00271	mg/L	0.000059	-0.00271	mg/L	0.000059	2.18%
Pb 220.353†	-14.1	-0.00144	mg/L	0.001046	-0.00144	mg/L	0.001046	72.39%

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Sb 206.836†	-2.1	-0.00044 mg/L	0.000417	-0.00044 mg/L	0.000417	94.21%
Se 196.026†	-0.3	-0.00186 mg/L	0.000593	-0.00186 mg/L	0.000593	31.85%
Si 251.611†	26.2	-0.00496 mg/L	0.000163	-0.00496 mg/L	0.000163	3.29%
Sn 189.927†	0.3	-0.00017 mg/L	0.000147	-0.00017 mg/L	0.000147	84.40%
Ti 334.940†	329.0	0.00125 mg/L	0.000126	0.00125 mg/L	0.000126	10.08%
Tl 190.801†	10.7	0.00009 mg/L	0.000939	0.00009 mg/L	0.000939	>999.9%
V 290.880†	708.0	0.00303 mg/L	0.000470	0.00303 mg/L	0.000470	15.54%
Zn 206.200†	170.8	0.00224 mg/L	0.000240	0.00224 mg/L	0.000240	10.69%
K 766.490†	85.1	-0.0499 mg/L	0.05293	-0.0499 mg/L	0.05293	106.05%
Na 589.592†	370.1	0.00551 mg/L	0.006745	0.00551 mg/L	0.006745	122.46%
Sr 407.771†	52.2	0.00093 mg/L	0.000018	0.00093 mg/L	0.000018	1.89%
Li 670.784†	70.9	-0.00144 mg/L	0.000549	-0.00144 mg/L	0.000549	38.03%

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Sequence No.: 7 **Autosampler Location: 48**
Sample ID: LCSW 1B WG404518-03 **Date Collected: 7/27/2012 2:05:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 1B WG404518-03

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: LCSW 1B WG404518-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2381302.5						27242.13	1.14%
YRADIAL	299638.1						3412.39	1.14%
Ga 417.206	1348116.7						25342.29	1.88%
GaRADIAL	83198.2						908.37	1.09%
Ag 328.068†	62063.4	0.201	mg/L	0.0038	0.201	mg/L	0.0038	1.87%
Al 396.153†	33803.0	5.17	mg/L	0.023	5.17	mg/L	0.023	0.44%
As 188.979†	647.1	0.186	mg/L	0.0015	0.186	mg/L	0.0015	0.81%
Ba 233.527†	85290.7	0.511	mg/L	0.0054	0.511	mg/L	0.0054	1.06%
Be 234.861†	28270.5	0.0237	mg/L	0.00055	0.0237	mg/L	0.00055	2.30%
B 249.677†	103582.1	0.971	mg/L	0.0234	0.971	mg/L	0.0234	2.40%
Ca 227.546†	2130.6	5.14	mg/L	0.116	5.14	mg/L	0.116	2.26%
Cd 228.802†	1330.9	0.0235	mg/L	0.00100	0.0235	mg/L	0.00100	4.25%
Co 228.616†	4517.4	0.103	mg/L	0.0016	0.103	mg/L	0.0016	1.60%
Cr 267.716†	31648.9	0.255	mg/L	0.0044	0.255	mg/L	0.0044	1.72%
Cu 327.393†	62919.4	0.255	mg/L	0.0044	0.255	mg/L	0.0044	1.72%
Fe 239.562†	28602.1	1.99	mg/L	0.018	1.99	mg/L	0.018	0.92%
Mg 279.077†	16655.3	5.05	mg/L	0.022	5.05	mg/L	0.022	0.44%
Mn 257.610†	207363.0	0.257	mg/L	0.0041	0.257	mg/L	0.0041	1.59%
Mo 202.031†	18463.9	0.505	mg/L	0.0075	0.505	mg/L	0.0075	1.48%
Ni 231.604†	17735.4	0.256	mg/L	0.0035	0.256	mg/L	0.0035	1.37%
Pb 220.353†	3520.4	0.259	mg/L	0.0066	0.259	mg/L	0.0066	2.54%
Sb 206.836†	2674.8	0.582	mg/L	0.0148	0.582	mg/L	0.0148	2.55%
Se 196.026†	396.4	0.196	mg/L	0.0048	0.196	mg/L	0.0048	2.47%
Si 251.611†	125920.1	2.52	mg/L	0.026	2.52	mg/L	0.026	1.02%
Sn 189.927†	6486.4	0.533	mg/L	0.0070	0.533	mg/L	0.0070	1.31%
Ti 334.940†	525652.5	0.513	mg/L	0.0025	0.513	mg/L	0.0025	0.50%
Tl 190.801†	1056.1	0.275	mg/L	0.0026	0.275	mg/L	0.0026	0.93%
V 290.880†	126833.6	0.518	mg/L	0.0058	0.518	mg/L	0.0058	1.12%
Zn 206.200†	29110.8	0.505	mg/L	0.0073	0.505	mg/L	0.0073	1.44%
K 766.490†	74312.4	25.6	mg/L	0.10	25.6	mg/L	0.10	0.40%
Na 589.592†	510233.1	27.0	mg/L	0.84	27.0	mg/L	0.84	3.11%
Sr 407.771†	1266596.7	0.518	mg/L	0.0191	0.518	mg/L	0.0191	3.69%
Li 670.784†	77983.6	0.550	mg/L	0.0044	0.550	mg/L	0.0044	0.81%

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Sequence No.: 8 **Autosampler Location: 49**
Sample ID: L1207072502 WG404518-01 **Date Collected: 7/27/2012 2:11:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072502 WG404518-01

Approved: July 31, 2012

Kim H. Rhoden

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207072502 WG404518-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2487841.2						11266.72	0.45%
YRADIAL	309661.1						6399.77	2.07%
Ga 417.206	1420769.6						9360.85	0.66%
GaRADIAL	88207.8						1673.12	1.90%
Ag 328.068†	18.0	-0.00010	mg/L	0.000283	-0.00010	mg/L	0.000283	273.66%
Al 396.153†	-34.5	-0.0103	mg/L	0.00067	-0.0103	mg/L	0.00067	6.49%
As 188.979†	-0.4	0.00169	mg/L	0.001407	0.00169	mg/L	0.001407	83.43%
Ba 233.527†	63.6	-0.00066	mg/L	0.000045	-0.00066	mg/L	0.000045	6.89%
Be 234.861†	285.4	0.00019	mg/L	0.000004	0.00019	mg/L	0.000004	2.32%
B 249.677†	65.3	0.00127	mg/L	0.000325	0.00127	mg/L	0.000325	25.65%
Ca 227.546†	2225.2	5.12	mg/L	0.242	5.12	mg/L	0.242	4.72%
Cd 228.802†	-7.5	-0.00014	mg/L	0.000106	-0.00014	mg/L	0.000106	78.63%
Co 228.616†	15.4	0.00000	mg/L	0.000047	0.00000	mg/L	0.000047	>999.9%
Cr 267.716†	15.6	-0.00017	mg/L	0.000043	-0.00017	mg/L	0.000043	25.63%
Cu 327.393†	128.7	0.00010	mg/L	0.000393	0.00010	mg/L	0.000393	387.25%
Fe 239.562†	10.3	0.00156	mg/L	0.000758	0.00156	mg/L	0.000758	48.65%
Mg 279.077†	4277.3	1.30	mg/L	0.076	1.30	mg/L	0.076	5.88%
Mn 257.610†	640.6	0.00019	mg/L	0.000024	0.00019	mg/L	0.000024	13.08%
Mo 202.031†	16.0	0.00105	mg/L	0.000119	0.00105	mg/L	0.000119	11.27%
Ni 231.604†	516.2	0.00437	mg/L	0.000436	0.00437	mg/L	0.000436	9.98%
Pb 220.353†	-3.0	-0.00059	mg/L	0.000128	-0.00059	mg/L	0.000128	21.78%
Sb 206.836†	-5.0	-0.00107	mg/L	0.000394	-0.00107	mg/L	0.000394	36.69%
Se 196.026†	4.0	0.00028	mg/L	0.000969	0.00028	mg/L	0.000969	343.34%
Si 251.611†	3155.1	0.0579	mg/L	0.00240	0.0579	mg/L	0.00240	4.14%
Sn 189.927†	-73.7	-0.00625	mg/L	0.000493	-0.00625	mg/L	0.000493	7.90%
Ti 334.940†	-833.7	0.00088	mg/L	0.000124	0.00088	mg/L	0.000124	14.13%
Tl 190.801†	16.6	0.00157	mg/L	0.001496	0.00157	mg/L	0.001496	95.03%
V 290.880†	397.8	0.00172	mg/L	0.000903	0.00172	mg/L	0.000903	52.38%
Zn 206.200†	394.6	0.00612	mg/L	0.000161	0.00612	mg/L	0.000161	2.63%
K 766.490†	191.2	-0.0135	mg/L	0.01196	-0.0135	mg/L	0.01196	88.73%
Na 589.592†	2710.4	0.129	mg/L	0.0116	0.129	mg/L	0.0116	8.99%
Sr 407.771†	38660.2	0.0166	mg/L	0.00061	0.0166	mg/L	0.00061	3.70%
Li 670.784†	31.3	-0.00172	mg/L	0.000528	-0.00172	mg/L	0.000528	30.63%

Sequence No.: 9
Sample ID: L1207072502S WG404518-04
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 7/27/2012 2:18:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207072502S WG404518-04

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207072502S WG404518-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2466735.3						32492.37	1.32%
YRADIAL	303103.9						4564.44	1.51%
Ga 417.206	1417099.5						22090.19	1.56%
GaRADIAL	86492.6						1814.81	2.10%
Ag 328.068†	711.6	0.00214	mg/L	0.000476	0.00214	mg/L	0.000476	22.20%
Al 396.153†	348.7	0.0484	mg/L	0.00441	0.0484	mg/L	0.00441	9.11%
As 188.979†	8.3	0.00418	mg/L	0.002238	0.00418	mg/L	0.002238	53.56%
Ba 233.527†	866.8	0.00416	mg/L	0.000359	0.00416	mg/L	0.000359	8.62%
Be 234.861†	561.0	0.00042	mg/L	0.000021	0.00042	mg/L	0.000021	5.10%
B 249.677†	927.2	0.00934	mg/L	0.000770	0.00934	mg/L	0.000770	8.25%
Ca 227.546†	2200.7	5.07	mg/L	0.366	5.07	mg/L	0.366	7.22%
Cd 228.802†	3.3	0.00005	mg/L	0.000060	0.00005	mg/L	0.000060	120.12%
Co 228.616†	49.8	0.00078	mg/L	0.000163	0.00078	mg/L	0.000163	20.91%
Cr 267.716†	315.8	0.00225	mg/L	0.000163	0.00225	mg/L	0.000163	7.25%
Cu 327.393†	743.2	0.00259	mg/L	0.000405	0.00259	mg/L	0.000405	15.62%

Approved: July 31, 2012

Fe 239.562†	323.8	0.0234	mg/L	0.00206	0.0234	mg/L	0.00206	8.80%
Mg 279.077†	4934.0	1.50	mg/L	0.137	1.50	mg/L	0.137	9.14%
Mn 257.610†	2628.8	0.00266	mg/L	0.000196	0.00266	mg/L	0.000196	7.36%
Mo 202.031†	189.8	0.00580	mg/L	0.000406	0.00580	mg/L	0.000406	7.00%
Ni 231.604†	671.2	0.00663	mg/L	0.000849	0.00663	mg/L	0.000849	12.80%
Pb 220.353†	30.7	0.00190	mg/L	0.000309	0.00190	mg/L	0.000309	16.32%
Sb 206.836†	21.0	0.00459	mg/L	0.000163	0.00459	mg/L	0.000163	3.55%
Se 196.026†	7.8	0.00217	mg/L	0.001426	0.00217	mg/L	0.001426	65.60%
Si 251.611†	4207.5	0.0790	mg/L	0.00761	0.0790	mg/L	0.00761	9.63%
Sn 189.927†	-15.7	-0.00149	mg/L	0.000057	-0.00149	mg/L	0.000057	3.86%
Ti 334.940†	4005.7	0.00558	mg/L	0.000372	0.00558	mg/L	0.000372	6.68%
Tl 190.801†	18.3	0.00208	mg/L	0.001040	0.00208	mg/L	0.001040	49.99%
V 290.880†	1566.4	0.00649	mg/L	0.001019	0.00649	mg/L	0.001019	15.70%
Zn 206.200†	668.8	0.0109	mg/L	0.00085	0.0109	mg/L	0.00085	7.84%
K 766.490†	1053.4	0.283	mg/L	0.0303	0.283	mg/L	0.0303	10.70%
Na 589.592†	8918.4	0.456	mg/L	0.0607	0.456	mg/L	0.0607	13.30%
Sr 407.771†	58257.9	0.0246	mg/L	0.00165	0.0246	mg/L	0.00165	6.70%
Li 670.784†	921.0	0.00458	mg/L	0.001137	0.00458	mg/L	0.001137	24.84%

Sequence No.: 10 **Autosampler Location: 51**
Sample ID: L1207072502SD WG404518-05 **Date Collected: 7/27/2012 2:25:31 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072502SD WG404518-05

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207072502SD WG404518-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2461051.5						23431.70	0.95%
YRADIAL	307959.9						3945.19	1.28%
Ga 417.206	1398783.4						25809.34	1.85%
GaRADIAL	87911.7						2258.35	2.57%
Ag 328.068†	696.5	0.00210	mg/L	0.000235	0.00210	mg/L	0.000235	11.19%
Al 396.153†	337.6	0.0467	mg/L	0.00655	0.0467	mg/L	0.00655	14.00%
As 188.979†	9.2	0.00444	mg/L	0.002405	0.00444	mg/L	0.002405	54.17%
Ba 233.527†	847.1	0.00405	mg/L	0.000194	0.00405	mg/L	0.000194	4.79%
Be 234.861†	524.2	0.00039	mg/L	0.000015	0.00039	mg/L	0.000015	3.84%
B 249.677†	901.0	0.00910	mg/L	0.000930	0.00910	mg/L	0.000930	10.22%
Ca 227.546†	2201.6	5.07	mg/L	0.262	5.07	mg/L	0.262	5.17%
Cd 228.802†	1.1	0.00001	mg/L	0.000063	0.00001	mg/L	0.000063	673.78%
Co 228.616†	50.8	0.00080	mg/L	0.000256	0.00080	mg/L	0.000256	31.79%
Cr 267.716†	300.3	0.00213	mg/L	0.000179	0.00213	mg/L	0.000179	8.43%
Cu 327.393†	647.1	0.00220	mg/L	0.000781	0.00220	mg/L	0.000781	35.44%
Fe 239.562†	313.7	0.0227	mg/L	0.00267	0.0227	mg/L	0.00267	11.75%
Mg 279.077†	4853.2	1.47	mg/L	0.140	1.47	mg/L	0.140	9.53%
Mn 257.610†	2576.2	0.00259	mg/L	0.000128	0.00259	mg/L	0.000128	4.94%
Mo 202.031†	182.3	0.00559	mg/L	0.000351	0.00559	mg/L	0.000351	6.27%
Ni 231.604†	654.9	0.00639	mg/L	0.000632	0.00639	mg/L	0.000632	9.88%
Pb 220.353†	45.0	0.00295	mg/L	0.000199	0.00295	mg/L	0.000199	6.74%
Sb 206.836†	18.2	0.00397	mg/L	0.001601	0.00397	mg/L	0.001601	40.30%
Se 196.026†	8.8	0.00264	mg/L	0.002231	0.00264	mg/L	0.002231	84.46%
Si 251.611†	4065.8	0.0762	mg/L	0.00779	0.0762	mg/L	0.00779	10.22%
Sn 189.927†	-16.7	-0.00157	mg/L	0.000842	-0.00157	mg/L	0.000842	53.79%
Ti 334.940†	3838.4	0.00542	mg/L	0.000266	0.00542	mg/L	0.000266	4.92%
Tl 190.801†	21.8	0.00298	mg/L	0.000345	0.00298	mg/L	0.000345	11.55%
V 290.880†	1753.6	0.00726	mg/L	0.001446	0.00726	mg/L	0.001446	19.94%
Zn 206.200†	647.2	0.0105	mg/L	0.00030	0.0105	mg/L	0.00030	2.81%
K 766.490†	963.5	0.252	mg/L	0.0240	0.252	mg/L	0.0240	9.50%
Na 589.592†	8748.8	0.447	mg/L	0.0498	0.447	mg/L	0.0498	11.13%
Sr 407.771†	57961.3	0.0244	mg/L	0.00124	0.0244	mg/L	0.00124	5.07%
Li 670.784†	912.6	0.00452	mg/L	0.000306	0.00452	mg/L	0.000306	6.78%

Sequence No.: 11 **Autosampler Location: 52**
Sample ID: L1207072504 0.01 **Date Collected: 7/27/2012 2:32:25 PM**

Approved: July 31, 2012

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

Nebulizer Parameters: L1207072504 0.01

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207072504 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2460412.1						14010.81	0.57%
YRADIAL	299983.5						5734.03	1.91%
Ga 417.206	1419615.2						27640.90	1.95%
GaRADIAL	86006.8						1137.86	1.32%
Ag 328.068†	54.1	0.00001	mg/L	0.000170	0.00001	mg/L	0.000170	>999.9%
Al 396.153†	-39.6	-0.0111	mg/L	0.00134	-0.0111	mg/L	0.00134	12.13%
As 188.979†	-0.7	0.00161	mg/L	0.000880	0.00161	mg/L	0.000880	54.64%
Ba 233.527†	142.5	-0.00019	mg/L	0.000075	-0.00019	mg/L	0.000075	40.08%
Be 234.861†	302.5	0.00020	mg/L	0.000031	0.00020	mg/L	0.000031	15.48%
B 249.677†	-119.7	-0.00047	mg/L	0.000111	-0.00047	mg/L	0.000111	23.72%
Ca 227.546†	2144.7	4.93	mg/L	0.189	4.93	mg/L	0.189	3.83%
Cd 228.802†	-7.2	-0.00013	mg/L	0.000062	-0.00013	mg/L	0.000062	47.44%
Co 228.616†	5.2	-0.00024	mg/L	0.000111	-0.00024	mg/L	0.000111	46.91%
Cr 267.716†	-6.9	-0.00035	mg/L	0.000092	-0.00035	mg/L	0.000092	26.39%
Cu 327.393†	105.8	0.00001	mg/L	0.000293	0.00001	mg/L	0.000293	>999.9%
Fe 239.562†	4.3	0.00113	mg/L	0.000195	0.00113	mg/L	0.000195	17.17%
Mg 279.077†	5052.8	1.53	mg/L	0.054	1.53	mg/L	0.054	3.49%
Mn 257.610†	1204.3	0.00089	mg/L	0.000055	0.00089	mg/L	0.000055	6.21%
Mo 202.031†	-11.8	0.00030	mg/L	0.000185	0.00030	mg/L	0.000185	62.60%
Ni 231.604†	30.5	-0.00274	mg/L	0.000156	-0.00274	mg/L	0.000156	5.70%
Pb 220.353†	2.4	-0.00020	mg/L	0.000594	-0.00020	mg/L	0.000594	299.66%
Sb 206.836†	-6.5	-0.00141	mg/L	0.000393	-0.00141	mg/L	0.000393	27.92%
Se 196.026†	-6.7	-0.00504	mg/L	0.000516	-0.00504	mg/L	0.000516	10.24%
Si 251.611†	6467.4	0.124	mg/L	0.0070	0.124	mg/L	0.0070	5.59%
Sn 189.927†	-64.1	-0.00547	mg/L	0.000139	-0.00547	mg/L	0.000139	2.54%
Ti 334.940†	-895.2	0.00079	mg/L	0.000050	0.00079	mg/L	0.000050	6.39%
Tl 190.801†	16.6	0.00158	mg/L	0.000620	0.00158	mg/L	0.000620	39.34%
V 290.880†	237.4	0.00106	mg/L	0.000755	0.00106	mg/L	0.000755	71.02%
Zn 206.200†	66.4	0.00044	mg/L	0.000046	0.00044	mg/L	0.000046	10.62%
K 766.490†	258.0	0.00951	mg/L	0.034907	0.00951	mg/L	0.034907	367.15%
Na 589.592†	3281.1	0.159	mg/L	0.0134	0.159	mg/L	0.0134	8.42%
Sr 407.771†	42891.0	0.0183	mg/L	0.00039	0.0183	mg/L	0.00039	2.13%
Li 670.784†	15.3	-0.00184	mg/L	0.000211	-0.00184	mg/L	0.000211	11.46%

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Sequence No.: 12 **Autosampler Location: 53**
Sample ID: L1207072506 0.01 **Date Collected: 7/27/2012 2:39:19 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072506 0.01

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207072506 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2469256.2						19481.43	0.79%
YRADIAL	302621.2						4057.61	1.34%
Ga 417.206	1435191.4						55096.04	3.84%
GaRADIAL	86422.0						1553.67	1.80%
Ag 328.068†	-88.1	-0.00044	mg/L	0.000232	-0.00044	mg/L	0.000232	52.17%
Al 396.153†	-40.9	-0.0113	mg/L	0.00092	-0.0113	mg/L	0.00092	8.13%
As 188.979†	-4.0	0.00065	mg/L	0.001059	0.00065	mg/L	0.001059	162.39%
Ba 233.527†	215.3	0.00025	mg/L	0.000152	0.00025	mg/L	0.000152	60.84%
Be 234.861†	288.0	0.00019	mg/L	0.000027	0.00019	mg/L	0.000027	14.13%

Approved: July 31, 2012

B 249.677†	-121.0	-0.00048	mg/L	0.000120	-0.00048	mg/L	0.000120 24.72%
Ca 227.546†	2035.7	4.69	mg/L	0.310	4.69	mg/L	0.310 6.62%
Cd 228.802†	-3.7	-0.00006	mg/L	0.000145	-0.00006	mg/L	0.000145 237.08%
Co 228.616†	13.4	-0.00005	mg/L	0.000127	-0.00005	mg/L	0.000127 252.92%
Cr 267.716†	-16.1	-0.00042	mg/L	0.000039	-0.00042	mg/L	0.000039 9.09%
Cu 327.393†	198.4	0.00038	mg/L	0.000313	0.00038	mg/L	0.000313 81.52%
Fe 239.562†	15.4	0.00191	mg/L	0.000498	0.00191	mg/L	0.000498 26.08%
Mg 279.077†	5060.4	1.54	mg/L	0.087	1.54	mg/L	0.087 5.63%
Mn 257.610†	958.4	0.00058	mg/L	0.000043	0.00058	mg/L	0.000043 7.41%
Mo 202.031†	-6.4	0.00044	mg/L	0.000150	0.00044	mg/L	0.000150 33.88%
Ni 231.604†	31.0	-0.00273	mg/L	0.000097	-0.00273	mg/L	0.000097 3.54%
Pb 220.353†	-3.2	-0.00061	mg/L	0.000205	-0.00061	mg/L	0.000205 33.61%
Sb 206.836†	0.0	0.00002	mg/L	0.000496	0.00002	mg/L	0.000496 >999.9%
Se 196.026†	-6.7	-0.00504	mg/L	0.003937	-0.00504	mg/L	0.003937 78.18%
Si 251.611†	7441.8	0.144	mg/L	0.0112	0.144	mg/L	0.0112 7.75%
Sn 189.927†	-63.8	-0.00544	mg/L	0.000320	-0.00544	mg/L	0.000320 5.88%
Ti 334.940†	-951.3	0.00070	mg/L	0.000080	0.00070	mg/L	0.000080 11.46%
Tl 190.801†	10.9	0.00011	mg/L	0.000727	0.00011	mg/L	0.000727 666.25%
V 290.880†	436.9	0.00188	mg/L	0.001006	0.00188	mg/L	0.001006 53.53%
Zn 206.200†	58.9	0.00031	mg/L	0.000143	0.00031	mg/L	0.000143 46.80%
K 766.490†	229.3	-0.00039	mg/L	0.012517	-0.00039	mg/L	0.012517 >999.9%
Na 589.592†	3450.5	0.168	mg/L	0.0171	0.168	mg/L	0.0171 10.16%
Sr 407.771†	44119.2	0.0188	mg/L	0.00043	0.0188	mg/L	0.00043 2.28%
Li 670.784†	-0.8	-0.00195	mg/L	0.000467	-0.00195	mg/L	0.000467 23.94%

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Sequence No.: 13 **Autosampler Location: 54**
Sample ID: L1207072508 0.01 **Date Collected: 7/27/2012 2:46:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072508 0.01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207072508 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2494065.0						19883.35	0.80%
YRADIAL	303785.0						7624.89	2.51%
Ga 417.206	1451004.5						45534.43	3.14%
GaRADIAL	87203.3						1630.08	1.87%
Ag 328.068†	-0.8	-0.00016	mg/L	0.000277	-0.00016	mg/L	0.000277	168.45%
Al 396.153†	-40.6	-0.0112	mg/L	0.00100	-0.0112	mg/L	0.00100	8.92%
As 188.979†	3.9	0.00292	mg/L	0.001102	0.00292	mg/L	0.001102	37.79%
Ba 233.527†	212.9	0.00024	mg/L	0.000096	0.00024	mg/L	0.000096	40.73%
Be 234.861†	304.8	0.00020	mg/L	0.000056	0.00020	mg/L	0.000056	27.46%
B 249.677†	-92.8	-0.00022	mg/L	0.000107	-0.00022	mg/L	0.000107	48.94%
Ca 227.546†	2114.7	4.87	mg/L	0.207	4.87	mg/L	0.207	4.25%
Cd 228.802†	-6.8	-0.00013	mg/L	0.000060	-0.00013	mg/L	0.000060	46.12%
Co 228.616†	15.1	-0.00001	mg/L	0.000166	-0.00001	mg/L	0.000166	>999.9%
Cr 267.716†	-9.3	-0.00037	mg/L	0.000073	-0.00037	mg/L	0.000073	19.68%
Cu 327.393†	139.8	0.00015	mg/L	0.000496	0.00015	mg/L	0.000496	336.81%
Fe 239.562†	31.9	0.00306	mg/L	0.000318	0.00306	mg/L	0.000318	10.39%
Mg 279.077†	4723.7	1.44	mg/L	0.033	1.44	mg/L	0.033	2.32%
Mn 257.610†	933.1	0.00055	mg/L	0.000020	0.00055	mg/L	0.000020	3.57%
Mo 202.031†	0.4	0.00063	mg/L	0.000139	0.00063	mg/L	0.000139	22.14%
Ni 231.604†	34.6	-0.00268	mg/L	0.000059	-0.00268	mg/L	0.000059	2.20%
Pb 220.353†	12.3	0.00053	mg/L	0.001261	0.00053	mg/L	0.001261	238.11%
Sb 206.836†	-6.4	-0.00138	mg/L	0.001105	-0.00138	mg/L	0.001105	80.04%
Se 196.026†	-0.7	-0.00209	mg/L	0.002125	-0.00209	mg/L	0.002125	101.75%
Si 251.611†	9391.1	0.183	mg/L	0.0094	0.183	mg/L	0.0094	5.14%
Sn 189.927†	-62.2	-0.00531	mg/L	0.000295	-0.00531	mg/L	0.000295	5.56%
Ti 334.940†	-865.2	0.00081	mg/L	0.000103	0.00081	mg/L	0.000103	12.79%
Tl 190.801†	5.8	-0.00120	mg/L	0.000506	-0.00120	mg/L	0.000506	42.33%
V 290.880†	288.9	0.00128	mg/L	0.001478	0.00128	mg/L	0.001478	115.85%
Zn 206.200†	49.8	0.00015	mg/L	0.000136	0.00015	mg/L	0.000136	90.80%
K 766.490†	194.5	-0.0124	mg/L	0.02121	-0.0124	mg/L	0.02121	171.64%
Na 589.592†	3047.3	0.147	mg/L	0.0075	0.147	mg/L	0.0075	5.08%

Approved: July 31, 2012

Kim H. Rhoden

Sr 407.771†	40660.9	0.0174 mg/L	0.00012	0.0174 mg/L	0.00012	0.68%
Li 670.784†	-17.5	-0.00207 mg/L	0.000303	-0.00207 mg/L	0.000303	14.63%

User canceled analysis.

Approved: July 31, 2012

Kim H. Rhoden

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Analysis Begun

Start Time: 7/27/2012 2:53:27 PM **Plasma On Time: 7/27/2012 6:47:44 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: 072712H
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 55**
Sample ID: L1207072508PS WG404603-01 **Date Collected: 7/27/2012 2:53:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072508PS WG404603-01

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207072508PS WG404603-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2471269.9						5286.39	0.21%
YRADIAL	306923.4						3269.88	1.07%
Ga 417.206	1409740.2						37792.58	2.68%
GaRADIAL	85375.6						901.06	1.06%
Ag 328.068†	60920.4	0.198	mg/L	0.0084	0.198	mg/L	0.0084	4.27%
Al 396.153†	32504.5	4.97	mg/L	0.006	4.97	mg/L	0.006	0.13%
As 188.979†	633.8	0.182	mg/L	0.0047	0.182	mg/L	0.0047	2.56%
Ba 233.527†	83157.8	0.498	mg/L	0.0033	0.498	mg/L	0.0033	0.66%
Be 234.861†	28393.8	0.0238	mg/L	0.00100	0.0238	mg/L	0.00100	4.19%
B 249.677†	102245.1	0.959	mg/L	0.0444	0.959	mg/L	0.0444	4.63%
Ca 227.546†	4350.8	10.2	mg/L	0.33	10.2	mg/L	0.33	3.23%
Cd 228.802†	1309.3	0.0231	mg/L	0.00118	0.0231	mg/L	0.00118	5.11%
Co 228.616†	4331.0	0.0985	mg/L	0.00043	0.0985	mg/L	0.00043	0.44%
Cr 267.716†	30831.1	0.248	mg/L	0.0032	0.248	mg/L	0.0032	1.29%
Cu 327.393†	59277.4	0.240	mg/L	0.0108	0.240	mg/L	0.0108	4.52%
Fe 239.562†	27881.7	1.94	mg/L	0.011	1.94	mg/L	0.011	0.58%
Mg 279.077†	20745.0	6.29	mg/L	0.005	6.29	mg/L	0.005	0.08%
Mn 257.610†	203718.2	0.253	mg/L	0.0010	0.253	mg/L	0.0010	0.39%
Mo 202.031†	17972.6	0.491	mg/L	0.0045	0.491	mg/L	0.0045	0.92%
Ni 231.604†	17320.2	0.250	mg/L	0.0015	0.250	mg/L	0.0015	0.60%
Pb 220.353†	3446.2	0.254	mg/L	0.0009	0.254	mg/L	0.0009	0.34%
Sb 206.836†	2624.0	0.571	mg/L	0.0190	0.571	mg/L	0.0190	3.33%
Se 196.026†	402.0	0.199	mg/L	0.0075	0.199	mg/L	0.0075	3.76%
Si 251.611†	132439.7	2.65	mg/L	0.097	2.65	mg/L	0.097	3.67%
Sn 189.927†	-107.3	-0.00902	mg/L	0.000553	-0.00902	mg/L	0.000553	6.13%
Ti 334.940†	503067.4	0.492	mg/L	0.0011	0.492	mg/L	0.0011	0.22%
Tl 190.801†	1048.0	0.273	mg/L	0.0037	0.273	mg/L	0.0037	1.35%
V 290.880†	122611.7	0.501	mg/L	0.0080	0.501	mg/L	0.0080	1.59%
Zn 206.200†	29396.8	0.510	mg/L	0.0062	0.510	mg/L	0.0062	1.22%
K 766.490†	71901.7	24.7	mg/L	0.12	24.7	mg/L	0.12	0.48%
Na 589.592†	492219.1	26.0	mg/L	0.28	26.0	mg/L	0.28	1.09%
Sr 407.771†	1243546.6	0.508	mg/L	0.0090	0.508	mg/L	0.0090	1.77%
Li 670.784†	73736.1	0.520	mg/L	0.0028	0.520	mg/L	0.0028	0.54%

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Sequence No.: 2 **Autosampler Location: 56**
Sample ID: L1207072508DL WG404603-02 **Date Collected: 7/27/2012 2:59:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072508DL WG404603-02

Approved: July 31, 2012

Kim H. Rhoden

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207072508DL WG404603-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2530806.8						18137.97	0.72%
YRADIAL	311836.0						4493.66	1.44%
Ga 417.206	1463530.1						32180.25	2.20%
GaRADIAL	88573.1						2225.32	2.51%
Ag 328.068†	51.5	0.00001	mg/L	0.000318	0.00001	mg/L	0.000318	>999.9%
Al 396.153†	-32.4	-0.00996	mg/L	0.000244	-0.00996	mg/L	0.000244	2.45%
As 188.979†	-1.9	0.00126	mg/L	0.000408	0.00126	mg/L	0.000408	32.34%
Ba 233.527†	93.3	-0.00048	mg/L	0.000073	-0.00048	mg/L	0.000073	15.17%
Be 234.861†	323.6	0.00022	mg/L	0.000004	0.00022	mg/L	0.000004	1.77%
B 249.677†	36.1	0.00099	mg/L	0.000310	0.00099	mg/L	0.000310	31.20%
Ca 227.546†	411.0	0.984	mg/L	0.0205	0.984	mg/L	0.0205	2.09%
Cd 228.802†	-8.6	-0.00015	mg/L	0.000138	-0.00015	mg/L	0.000138	90.15%
Co 228.616†	14.3	-0.00003	mg/L	0.000239	-0.00003	mg/L	0.000239	778.10%
Cr 267.716†	-13.0	-0.00040	mg/L	0.000037	-0.00040	mg/L	0.000037	9.20%
Cu 327.393†	158.1	0.00022	mg/L	0.000143	0.00022	mg/L	0.000143	64.72%
Fe 239.562†	5.4	0.00123	mg/L	0.000294	0.00123	mg/L	0.000294	23.83%
Mg 279.077†	912.4	0.283	mg/L	0.0090	0.283	mg/L	0.0090	3.19%
Mn 257.610†	141.0	-0.00044	mg/L	0.000014	-0.00044	mg/L	0.000014	3.12%
Mo 202.031†	-10.0	0.00035	mg/L	0.000098	0.00035	mg/L	0.000098	28.40%
Ni 231.604†	46.5	-0.00250	mg/L	0.000137	-0.00250	mg/L	0.000137	5.47%
Pb 220.353†	2.3	-0.00024	mg/L	0.001211	-0.00024	mg/L	0.001211	513.04%
Sb 206.836†	-4.6	-0.00100	mg/L	0.000467	-0.00100	mg/L	0.000467	46.89%
Se 196.026†	-1.0	-0.00220	mg/L	0.001776	-0.00220	mg/L	0.001776	80.67%
Si 251.611†	1724.7	0.0292	mg/L	0.00199	0.0292	mg/L	0.00199	6.81%
Sn 189.927†	-19.3	-0.00178	mg/L	0.000460	-0.00178	mg/L	0.000460	25.79%
Ti 334.940†	-208.0	0.00087	mg/L	0.000084	0.00087	mg/L	0.000084	9.74%
Tl 190.801†	17.2	0.00174	mg/L	0.002314	0.00174	mg/L	0.002314	132.62%
V 290.880†	300.2	0.00135	mg/L	0.001031	0.00135	mg/L	0.001031	76.20%
Zn 206.200†	53.1	0.00021	mg/L	0.000078	0.00021	mg/L	0.000078	37.99%
K 766.490†	109.2	-0.0416	mg/L	0.02626	-0.0416	mg/L	0.02626	63.11%
Na 589.592†	457.0	0.0101	mg/L	0.00380	0.0101	mg/L	0.00380	37.66%
Sr 407.771†	7848.5	0.00409	mg/L	0.000069	0.00409	mg/L	0.000069	1.69%
Li 670.784†	40.5	-0.00166	mg/L	0.000336	-0.00166	mg/L	0.000336	20.23%

Sequence No.: 3 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 3:06:25 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 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	2384829.0						3339.29	0.14%
YRADIAL	296764.7						3481.44	1.17%
Ga 417.206	1331153.0						24972.12	1.88%
GaRADIAL	82946.0						498.56	0.60%
Ag 328.068†	122459.0	0.397	mg/L	0.0079	0.397	mg/L	0.0079	1.98%
QC value within limits for Ag 328.068 Recovery = 99.31%								
Al 396.153†	65837.3	10.1	mg/L	0.04	10.1	mg/L	0.04	0.44%
QC value within limits for Al 396.153 Recovery = 100.81%								
As 188.979†	1301.9	0.372	mg/L	0.0077	0.372	mg/L	0.0077	2.06%
QC value within limits for As 188.979 Recovery = 93.11%								
Ba 233.527†	167845.4	1.01	mg/L	0.007	1.01	mg/L	0.007	0.65%
QC value within limits for Ba 233.527 Recovery = 100.70%								
Be 234.861†	56201.2	0.0472	mg/L	0.00112	0.0472	mg/L	0.00112	2.36%
QC value within limits for Be 234.861 Recovery = 94.48%								
B 249.677†	51104.6	0.477	mg/L	0.0113	0.477	mg/L	0.0113	2.36%

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   QC value within limits for B 249.677  Recovery = 95.33%
Ca 227.546†            4306.5        10.3 mg/L          0.25        10.3 mg/L          0.25   2.43%
   QC value within limits for Ca 227.546  Recovery = 103.19%
Cd 228.802†            2682.2      0.0474 mg/L       0.00152      0.0474 mg/L       0.00152   3.20%
   QC value within limits for Cd 228.802  Recovery = 94.71%
Co 228.616†            8769.5       0.200 mg/L        0.0012       0.200 mg/L        0.0012   0.62%
   QC value within limits for Co 228.616  Recovery = 99.87%
Cr 267.716†           62775.3       0.506 mg/L        0.0024       0.506 mg/L        0.0024   0.47%
   QC value within limits for Cr 267.716  Recovery = 101.18%
Cu 327.393†          123650.6       0.501 mg/L        0.0113       0.501 mg/L        0.0113   2.26%
   QC value within limits for Cu 327.393  Recovery = 100.17%
Fe 239.562†           57070.0        3.98 mg/L         0.025        3.98 mg/L         0.025   0.64%
   QC value within limits for Fe 239.562  Recovery = 99.45%
Mg 279.077†           32753.6        9.93 mg/L         0.091        9.93 mg/L         0.091   0.92%
   QC value within limits for Mg 279.077  Recovery = 99.27%
Mn 257.610†          411935.0       0.512 mg/L        0.0050       0.512 mg/L        0.0050   0.97%
   QC value within limits for Mn 257.610  Recovery = 102.35%
Mo 202.031†           36687.6        1.00 mg/L         0.005        1.00 mg/L         0.005   0.53%
   QC value within limits for Mo 202.031  Recovery = 100.19%
Ni 231.604†           34369.5       0.499 mg/L        0.0033       0.499 mg/L        0.0033   0.67%
   QC value within limits for Ni 231.604  Recovery = 99.84%
Pb 220.353†            6925.4       0.510 mg/L        0.0006       0.510 mg/L        0.0006   0.12%
   QC value within limits for Pb 220.353  Recovery = 102.06%
Sb 206.836†            5326.0        1.16 mg/L         0.028        1.16 mg/L         0.028   2.45%
   QC value within limits for Sb 206.836  Recovery = 96.64%
Se 196.026†             782.1       0.388 mg/L        0.0097       0.388 mg/L        0.0097   2.51%
   QC value within limits for Se 196.026  Recovery = 97.08%
Si 251.611†          244557.5        4.90 mg/L         0.057        4.90 mg/L         0.057   1.16%
   QC value within limits for Si 251.611  Recovery = 97.96%
Sn 189.927†           12307.3        1.01 mg/L         0.003        1.01 mg/L         0.003   0.27%
   QC value within limits for Sn 189.927  Recovery = 101.14%
Ti 334.940†         1028010.5        1.00 mg/L         0.003        1.00 mg/L         0.003   0.27%
   QC value within limits for Ti 334.940  Recovery = 100.30%
Tl 190.801†            2037.6       0.534 mg/L        0.0048       0.534 mg/L        0.0048   0.91%
   QC value within limits for Tl 190.801  Recovery = 106.73%
V 290.880†           250994.2        1.02 mg/L         0.003        1.02 mg/L         0.003   0.34%
   QC value within limits for V 290.880  Recovery = 102.47%
Zn 206.200†           56727.9       0.985 mg/L        0.0032       0.985 mg/L        0.0032   0.32%
   QC value within limits for Zn 206.200  Recovery = 98.54%
K 766.490†           145531.2        50.3 mg/L          0.34        50.3 mg/L          0.34   0.68%
   QC value within limits for K 766.490  Recovery = 100.58%
Na 589.592†          968583.4        51.4 mg/L          1.00        51.4 mg/L          1.00   1.95%
   QC value within limits for Na 589.592  Recovery = 102.88%
Sr 407.771†         2478604.6        1.01 mg/L         0.023        1.01 mg/L         0.023   2.29%
   QC value within limits for Sr 407.771  Recovery = 101.20%
Li 670.784†          146702.9        1.04 mg/L         0.006        1.04 mg/L         0.006   0.58%
   QC value within limits for Li 670.784  Recovery = 103.70%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 4                                    Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 7/27/2012 3:12:26 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                    193.0 kPa         0.50 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           2475059.8                                                      21351.16   0.86%
YRADIAL              302220.0                                                       3260.12   1.08%
Ga 417.206          1396263.1                                                      22493.52   1.61%
GaRADIAL              84705.7                                                       2563.31   3.03%
Ag 328.068†              -1.8    -0.00017 mg/L      0.000129    -0.00017 mg/L      0.000129  78.08%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              10.0    -0.00346 mg/L      0.001972    -0.00346 mg/L      0.001972  56.96%
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Approved: July 31, 2012

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   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -2.6     0.00105 mg/L      0.000813     0.00105 mg/L      0.000813  77.11%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              36.7    -0.00082 mg/L      0.000074    -0.00082 mg/L      0.000074   9.06%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†             179.8     0.00010 mg/L      0.000027     0.00010 mg/L      0.000027  28.18%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               49.5     0.00111 mg/L      0.000178     0.00111 mg/L      0.000178  16.00%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -8.1      0.0288 mg/L       0.02589      0.0288 mg/L       0.02589  89.87%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -1.3    -0.00002 mg/L      0.000072    -0.00002 mg/L      0.000072 386.61%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              22.0     0.00014 mg/L      0.000067     0.00014 mg/L      0.000067  46.16%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -16.5    -0.00043 mg/L      0.000059    -0.00043 mg/L      0.000059  13.73%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             124.3     0.00009 mg/L      0.000090     0.00009 mg/L      0.000090 105.00%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              14.7     0.00188 mg/L      0.000469     0.00188 mg/L      0.000469  24.89%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               3.7     0.00786 mg/L      0.002854     0.00786 mg/L      0.002854  36.33%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†             -53.3    -0.00068 mg/L      0.000010    -0.00068 mg/L      0.000010   1.40%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.0     0.00075 mg/L      0.000109     0.00075 mg/L      0.000109  14.50%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              17.4    -0.00293 mg/L      0.000065    -0.00293 mg/L      0.000065   2.21%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -6.3    -0.00087 mg/L      0.000304    -0.00087 mg/L      0.000304  34.78%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -1.2    -0.00024 mg/L      0.000556    -0.00024 mg/L      0.000556 230.31%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.9    -0.00266 mg/L      0.001591    -0.00266 mg/L      0.001591  59.85%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -211.4    -0.00974 mg/L      0.000409    -0.00974 mg/L      0.000409   4.20%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.7     0.00027 mg/L      0.000295     0.00027 mg/L      0.000295 107.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             154.5     0.00108 mg/L      0.000159     0.00108 mg/L      0.000159  14.75%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.7    -0.00018 mg/L      0.001550    -0.00018 mg/L      0.001550 870.50%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              216.6     0.00102 mg/L      0.000831     0.00102 mg/L      0.000831  81.59%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -6.7    -0.00083 mg/L      0.000110    -0.00083 mg/L      0.000110  13.26%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               15.2     -0.0740 mg/L       0.00268     -0.0740 mg/L       0.00268   3.62%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              43.2     -0.0117 mg/L       0.00654     -0.0117 mg/L       0.00654  55.76%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             124.9     0.00096 mg/L      0.000019     0.00096 mg/L      0.000019   2.04%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             132.4    -0.00101 mg/L      0.000034    -0.00101 mg/L      0.000034   3.42%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 5                                   Autosampler Location: 57
Sample ID: L1207072510 0.01                       Date Collected: 7/27/2012 3:19:19 PM
Analyst: KHR                                      Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: L1207072510 0.01
Analyte                 Back Pressure    Flow
All                    193.0 kPa         0.50 L/min

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Mean Data: L1207072510 0.01
                  Mean Corrected         Calib.                          Sample
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Approved: July 31, 2012

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2518129.6						23578.28	0.94%
YRADIAL	307481.1						734.67	0.24%
Ga 417.206	1478474.2						22319.47	1.51%
GaRADIAL	88074.4						2846.89	3.23%
Ag 328.068†	-4.8	-0.00018	mg/L	0.000209	-0.00018	mg/L	0.000209	117.60%
Al 396.153†	-32.2	-0.00995	mg/L	0.001487	-0.00995	mg/L	0.001487	14.95%
As 188.979†	-0.7	0.00161	mg/L	0.000430	0.00161	mg/L	0.000430	26.74%
Ba 233.527†	203.9	0.00018	mg/L	0.000050	0.00018	mg/L	0.000050	27.20%
Be 234.861†	326.4	0.00022	mg/L	0.000036	0.00022	mg/L	0.000036	16.42%
B 249.677†	-94.9	-0.00024	mg/L	0.000102	-0.00024	mg/L	0.000102	43.19%
Ca 227.546†	2157.4	4.96	mg/L	0.071	4.96	mg/L	0.071	1.43%
Cd 228.802†	-7.4	-0.00013	mg/L	0.000067	-0.00013	mg/L	0.000067	50.06%
Co 228.616†	14.4	-0.00003	mg/L	0.000188	-0.00003	mg/L	0.000188	662.74%
Cr 267.716†	-16.7	-0.00043	mg/L	0.000091	-0.00043	mg/L	0.000091	21.27%
Cu 327.393†	90.3	-0.00005	mg/L	0.000302	-0.00005	mg/L	0.000302	575.54%
Fe 239.562†	5.3	0.00120	mg/L	0.000707	0.00120	mg/L	0.000707	58.74%
Mg 279.077†	4552.6	1.38	mg/L	0.033	1.38	mg/L	0.033	2.40%
Mn 257.610†	1122.3	0.00078	mg/L	0.000024	0.00078	mg/L	0.000024	3.06%
Mo 202.031†	-4.7	0.00049	mg/L	0.000326	0.00049	mg/L	0.000326	66.68%
Ni 231.604†	36.8	-0.00265	mg/L	0.000213	-0.00265	mg/L	0.000213	8.04%
Pb 220.353†	11.1	0.00045	mg/L	0.001559	0.00045	mg/L	0.001559	348.90%
Sb 206.836†	-7.7	-0.00166	mg/L	0.001025	-0.00166	mg/L	0.001025	61.69%
Se 196.026†	-3.3	-0.00338	mg/L	0.003723	-0.00338	mg/L	0.003723	110.29%
Si 251.611†	7159.3	0.138	mg/L	0.0032	0.138	mg/L	0.0032	2.32%
Sn 189.927†	-70.3	-0.00597	mg/L	0.000769	-0.00597	mg/L	0.000769	12.88%
Ti 334.940†	-783.2	0.00090	mg/L	0.000143	0.00090	mg/L	0.000143	15.85%
Tl 190.801†	15.1	0.00120	mg/L	0.000223	0.00120	mg/L	0.000223	18.62%
V 290.880†	350.4	0.00153	mg/L	0.001159	0.00153	mg/L	0.001159	75.81%
Zn 206.200†	48.6	0.00013	mg/L	0.000037	0.00013	mg/L	0.000037	29.02%
K 766.490†	270.6	0.0139	mg/L	0.00398	0.0139	mg/L	0.00398	28.73%
Na 589.592†	2934.7	0.141	mg/L	0.0038	0.141	mg/L	0.0038	2.74%
Sr 407.771†	39155.1	0.0168	mg/L	0.00037	0.0168	mg/L	0.00037	2.20%
Li 670.784†	-7.8	-0.00200	mg/L	0.000379	-0.00200	mg/L	0.000379	18.96%

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Sequence No.: 6 **Autosampler Location: 58**
Sample ID: L1207072512 0.01 **Date Collected: 7/27/2012 3:26:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207072512 0.01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207072512 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2452863.9						22519.74	0.92%
YRADIAL	303621.1						7843.07	2.58%
Ga 417.206	1436937.5						13434.33	0.93%
GaRADIAL	86882.8						2279.99	2.62%
Ag 328.068†	11.6	-0.00012	mg/L	0.000194	-0.00012	mg/L	0.000194	159.53%
Al 396.153†	-45.0	-0.0119	mg/L	0.00134	-0.0119	mg/L	0.00134	11.25%
As 188.979†	1.0	0.00211	mg/L	0.000921	0.00211	mg/L	0.000921	43.71%
Ba 233.527†	198.1	0.00015	mg/L	0.000081	0.00015	mg/L	0.000081	54.83%
Be 234.861†	304.7	0.00020	mg/L	0.000008	0.00020	mg/L	0.000008	3.82%
B 249.677†	-109.0	-0.00037	mg/L	0.000054	-0.00037	mg/L	0.000054	14.44%
Ca 227.546†	2183.1	5.02	mg/L	0.055	5.02	mg/L	0.055	1.10%
Cd 228.802†	-5.0	-0.00009	mg/L	0.000062	-0.00009	mg/L	0.000062	67.61%
Co 228.616†	16.8	0.00003	mg/L	0.000073	0.00003	mg/L	0.000073	274.84%
Cr 267.716†	-15.0	-0.00041	mg/L	0.000049	-0.00041	mg/L	0.000049	11.71%
Cu 327.393†	128.1	0.00010	mg/L	0.000249	0.00010	mg/L	0.000249	247.27%
Fe 239.562†	11.4	0.00163	mg/L	0.000490	0.00163	mg/L	0.000490	30.10%
Mg 279.077†	4462.7	1.36	mg/L	0.029	1.36	mg/L	0.029	2.17%
Mn 257.610†	1097.1	0.00075	mg/L	0.000009	0.00075	mg/L	0.000009	1.19%
Mo 202.031†	-2.0	0.00056	mg/L	0.000074	0.00056	mg/L	0.000074	13.04%
Ni 231.604†	23.1	-0.00285	mg/L	0.000232	-0.00285	mg/L	0.000232	8.14%
Pb 220.353†	-3.5	-0.00063	mg/L	0.000335	-0.00063	mg/L	0.000335	52.90%

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Sb 206.836†	-4.9	-0.00106	mg/L	0.000495	-0.00106	mg/L	0.000495 46.92%
Se 196.026†	-7.4	-0.00542	mg/L	0.003316	-0.00542	mg/L	0.003316 61.14%
Si 251.611†	7338.5	0.142	mg/L	0.0025	0.142	mg/L	0.0025 1.79%
Sn 189.927†	-65.2	-0.00556	mg/L	0.000311	-0.00556	mg/L	0.000311 5.60%
Ti 334.940†	-893.5	0.00080	mg/L	0.000154	0.00080	mg/L	0.000154 19.12%
Tl 190.801†	7.8	-0.00069	mg/L	0.000210	-0.00069	mg/L	0.000210 30.67%
V 290.880†	707.1	0.00299	mg/L	0.000428	0.00299	mg/L	0.000428 14.32%
Zn 206.200†	37.2	-0.00007	mg/L	0.000116	-0.00007	mg/L	0.000116 169.48%
K 766.490†	198.6	-0.0110	mg/L	0.00934	-0.0110	mg/L	0.00934 85.26%
Na 589.592†	2909.6	0.139	mg/L	0.0090	0.139	mg/L	0.0090 6.43%
Sr 407.771†	38025.7	0.0163	mg/L	0.00035	0.0163	mg/L	0.00035 2.16%
Li 670.784†	8.3	-0.00189	mg/L	0.000163	-0.00189	mg/L	0.000163 8.65%

Sequence No.: 7 **Autosampler Location: 59**
Sample ID: L1207075002 **Date Collected: 7/27/2012 3:33:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075002

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207075002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2285809.4						19043.82	0.83%
YRADIAL	289627.7						3166.50	1.09%
Ga 417.206	1413196.1						10362.70	0.73%
GaRADIAL	83842.9						675.36	0.81%
Ag 328.068†	1170.5	0.00369	mg/L	0.000425	0.00369	mg/L	0.000425	11.52%
Al 396.153†	-32.3	-0.0100	mg/L	0.00381	-0.0100	mg/L	0.00381	38.02%
As 188.979†	-5.5	0.00037	mg/L	0.002079	0.00037	mg/L	0.002079	557.27%
Ba 233.527†	20145.9	0.120	mg/L	0.0016	0.120	mg/L	0.0016	1.35%
Be 234.861†	518.8	0.00023	mg/L	0.000026	0.00023	mg/L	0.000026	10.99%
B 249.677†	40904.6	0.384	mg/L	0.0026	0.384	mg/L	0.0026	0.67%
Ca 227.546†	74994.9	171	mg/L	0.8	171	mg/L	0.8	0.45%
Cd 228.802†	9.9	0.00019	mg/L	0.000105	0.00019	mg/L	0.000105	56.14%
Co 228.616†	26.2	0.00024	mg/L	0.000234	0.00024	mg/L	0.000234	96.25%
Cr 267.716†	173.7	0.00108	mg/L	0.000072	0.00108	mg/L	0.000072	6.64%
Cu 327.393†	12457.8	0.0499	mg/L	0.00059	0.0499	mg/L	0.00059	1.19%
Fe 239.562†	10624.8	0.741	mg/L	0.0147	0.741	mg/L	0.0147	1.98%
Mg 279.077†	79914.8	24.2	mg/L	0.43	24.2	mg/L	0.43	1.79%
Mn 257.610†	167787.9	0.208	mg/L	0.0029	0.208	mg/L	0.0029	1.37%
Mo 202.031†	70.1	0.00261	mg/L	0.000206	0.00261	mg/L	0.000206	7.88%
Ni 231.604†	485.3	0.00392	mg/L	0.000184	0.00392	mg/L	0.000184	4.69%
Pb 220.353†	8.5	0.00135	mg/L	0.001548	0.00135	mg/L	0.001548	114.85%
Sb 206.836†	-8.8	-0.00189	mg/L	0.000751	-0.00189	mg/L	0.000751	39.72%
Se 196.026†	-0.4	-0.00188	mg/L	0.001506	-0.00188	mg/L	0.001506	80.18%
Si 251.611†	528286.8	10.6	mg/L	0.06	10.6	mg/L	0.06	0.58%
Sn 189.927†	-344.5	-0.0285	mg/L	0.00086	-0.0285	mg/L	0.00086	3.02%
Ti 334.940†	-27481.3	-0.00019	mg/L	0.001968	-0.00019	mg/L	0.001968	>999.9%
Tl 190.801†	-20.7	-0.00847	mg/L	0.004074	-0.00847	mg/L	0.004074	48.09%
V 290.880†	2153.0	0.00826	mg/L	0.000263	0.00826	mg/L	0.000263	3.18%
Zn 206.200†	2382.9	0.0405	mg/L	0.00020	0.0405	mg/L	0.00020	0.49%
K 766.490†	23186.6	7.85	mg/L	0.066	7.85	mg/L	0.066	0.83%
Na 589.592†	1272026.8	67.7	mg/L	0.71	67.7	mg/L	0.71	1.05%
Sr 407.771†	2519896.2	1.03	mg/L	0.013	1.03	mg/L	0.013	1.31%
Li 670.784†	6830.9	0.0464	mg/L	0.00078	0.0464	mg/L	0.00078	1.68%

Sequence No.: 8 **Autosampler Location: 60**
Sample ID: L1207075003 **Date Collected: 7/27/2012 3:39:11 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075003

Approved: July 31, 2012
Kim H. Rhoden

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207075003

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2295746.3						38706.28	1.69%
YRADIAL	282660.8						4681.57	1.66%
Ga 417.206	1395558.7						10940.51	0.78%
GaRADIAL	82946.3						895.45	1.08%
Ag 328.068†	443.8	0.00316	mg/L	0.000532	0.00316	mg/L	0.000532	16.84%
Al 396.153†	-144.7	-0.0269	mg/L	0.00820	-0.0269	mg/L	0.00820	30.54%
As 188.979†	10.1	0.00595	mg/L	0.000990	0.00595	mg/L	0.000990	16.66%
Ba 233.527†	33743.4	0.201	mg/L	0.0035	0.201	mg/L	0.0035	1.72%
Be 234.861†	1606.4	0.00017	mg/L	0.000020	0.00017	mg/L	0.000020	12.10%
B 249.677†	28758.1	0.268	mg/L	0.0009	0.268	mg/L	0.0009	0.34%
Ca 227.546†	60651.6	138	mg/L	1.2	138	mg/L	1.2	0.85%
Cd 228.802†	2.7	0.00003	mg/L	0.000133	0.00003	mg/L	0.000133	444.75%
Co 228.616†	43.4	0.00048	mg/L	0.000277	0.00048	mg/L	0.000277	57.20%
Cr 267.716†	74.9	0.00012	mg/L	0.000107	0.00012	mg/L	0.000107	85.81%
Cu 327.393†	1008.1	0.00389	mg/L	0.000629	0.00389	mg/L	0.000629	16.19%
Fe 239.562†	73973.0	5.16	mg/L	0.072	5.16	mg/L	0.072	1.40%
Mg 279.077†	63913.5	19.3	mg/L	0.23	19.3	mg/L	0.23	1.20%
Mn 257.610†	457859.1	0.568	mg/L	0.0152	0.568	mg/L	0.0152	2.68%
Mo 202.031†	90.3	0.00345	mg/L	0.000354	0.00345	mg/L	0.000354	10.25%
Ni 231.604†	164.0	-0.00078	mg/L	0.000458	-0.00078	mg/L	0.000458	58.41%
Pb 220.353†	20.8	0.00143	mg/L	0.001731	0.00143	mg/L	0.001731	120.97%
Sb 206.836†	-13.2	-0.00267	mg/L	0.001032	-0.00267	mg/L	0.001032	38.68%
Se 196.026†	-1.9	-0.00206	mg/L	0.001749	-0.00206	mg/L	0.001749	85.09%
Si 251.611†	507245.6	10.2	mg/L	0.10	10.2	mg/L	0.10	0.99%
Sn 189.927†	-332.4	-0.0275	mg/L	0.00093	-0.0275	mg/L	0.00093	3.39%
Ti 334.940†	-22354.4	-0.00010	mg/L	0.001791	-0.00010	mg/L	0.001791	>999.9%
Tl 190.801†	-19.1	-0.00837	mg/L	0.003869	-0.00837	mg/L	0.003869	46.24%
V 290.880†	1924.3	0.00720	mg/L	0.000963	0.00720	mg/L	0.000963	13.37%
Zn 206.200†	1998.8	0.0338	mg/L	0.00014	0.0338	mg/L	0.00014	0.42%
K 766.490†	8361.1	2.76	mg/L	0.020	2.76	mg/L	0.020	0.73%
Na 589.592†	788857.7	41.8	mg/L	0.82	41.8	mg/L	0.82	1.97%
Sr 407.771†	2092701.4	0.852	mg/L	0.0102	0.852	mg/L	0.0102	1.20%
Li 670.784†	4653.5	0.0310	mg/L	0.00069	0.0310	mg/L	0.00069	2.23%

Sequence No.: 9 **Autosampler Location: 61**
Sample ID: L1207075004 **Date Collected: 7/27/2012 3:45:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075004

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207075004

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318240.1						15726.32	0.68%
YRADIAL	289007.7						3463.01	1.20%
Ga 417.206	1428976.3						34567.16	2.42%
GaRADIAL	84318.7						969.24	1.15%
Ag 328.068†	688.3	0.00242	mg/L	0.000198	0.00242	mg/L	0.000198	8.16%
Al 396.153†	-64.9	-0.0150	mg/L	0.00251	-0.0150	mg/L	0.00251	16.75%
As 188.979†	14.1	0.00624	mg/L	0.002641	0.00624	mg/L	0.002641	42.30%
Ba 233.527†	17621.8	0.105	mg/L	0.0010	0.105	mg/L	0.0010	0.94%
Be 234.861†	758.4	0.00034	mg/L	0.000071	0.00034	mg/L	0.000071	21.07%
B 249.677†	36006.1	0.338	mg/L	0.0101	0.338	mg/L	0.0101	2.98%
Ca 227.546†	49852.0	114	mg/L	3.3	114	mg/L	3.3	2.86%
Cd 228.802†	4.3	0.00006	mg/L	0.000150	0.00006	mg/L	0.000150	239.29%
Co 228.616†	97.5	0.00184	mg/L	0.000441	0.00184	mg/L	0.000441	23.95%
Cr 267.716†	124.9	0.00066	mg/L	0.000104	0.00066	mg/L	0.000104	15.78%
Cu 327.393†	321.1	0.00094	mg/L	0.000196	0.00094	mg/L	0.000196	20.93%

Approved: July 31, 2012

Fe 239.562†	23337.5	1.63	mg/L	0.015	1.63	mg/L	0.015	0.94%
Mg 279.077†	72598.1	22.0	mg/L	0.16	22.0	mg/L	0.16	0.75%
Mn 257.610†	1005766.3	1.25	mg/L	0.005	1.25	mg/L	0.005	0.38%
Mo 202.031†	96.6	0.00360	mg/L	0.000147	0.00360	mg/L	0.000147	4.10%
Ni 231.604†	822.1	0.00884	mg/L	0.000367	0.00884	mg/L	0.000367	4.15%
Pb 220.353†	-7.5	-0.00094	mg/L	0.000652	-0.00094	mg/L	0.000652	69.33%
Sb 206.836†	-13.5	-0.00285	mg/L	0.000595	-0.00285	mg/L	0.000595	20.87%
Se 196.026†	3.1	-0.00032	mg/L	0.000290	-0.00032	mg/L	0.000290	90.83%
Si 251.611†	485581.1	9.75	mg/L	0.129	9.75	mg/L	0.129	1.33%
Sn 189.927†	-309.7	-0.0256	mg/L	0.00098	-0.0256	mg/L	0.00098	3.84%
Ti 334.940†	-18722.6	-0.00026	mg/L	0.001555	-0.00026	mg/L	0.001555	598.32%
Tl 190.801†	-17.8	-0.00867	mg/L	0.001493	-0.00867	mg/L	0.001493	17.22%
V 290.880†	1882.4	0.00716	mg/L	0.001565	0.00716	mg/L	0.001565	21.87%
Zn 206.200†	1453.0	0.0244	mg/L	0.00032	0.0244	mg/L	0.00032	1.30%
K 766.490†	9443.1	3.12	mg/L	0.037	3.12	mg/L	0.037	1.19%
Na 589.592†	997679.3	53.0	mg/L	0.58	53.0	mg/L	0.58	1.10%
Sr 407.771†	1891226.5	0.770	mg/L	0.0028	0.770	mg/L	0.0028	0.37%
Li 670.784†	5160.9	0.0346	mg/L	0.00068	0.0346	mg/L	0.00068	1.98%

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Sequence No.: 10 **Autosampler Location: 62**
Sample ID: L1207075005 **Date Collected: 7/27/2012 3:51:09 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075005

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207075005

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2258290.1						45571.82	2.02%
YRADIAL	286263.6						2396.39	0.84%
Ga 417.206	1362726.4						79864.87	5.86%
GaRADIAL	83021.5						203.58	0.25%
Ag 328.068†	1348.5	0.00421	mg/L	0.000402	0.00421	mg/L	0.000402	9.55%
Al 396.153†	-21.4	-0.00836	mg/L	0.004620	-0.00836	mg/L	0.004620	55.29%
As 188.979†	-8.5	-0.00049	mg/L	0.002897	-0.00049	mg/L	0.002897	586.57%
Ba 233.527†	21057.9	0.125	mg/L	0.0023	0.125	mg/L	0.0023	1.86%
Be 234.861†	478.3	0.00022	mg/L	0.000101	0.00022	mg/L	0.000101	45.45%
B 249.677†	43424.7	0.408	mg/L	0.0145	0.408	mg/L	0.0145	3.56%
Ca 227.546†	78283.8	178	mg/L	2.0	178	mg/L	2.0	1.11%
Cd 228.802†	13.6	0.00026	mg/L	0.000021	0.00026	mg/L	0.000021	7.92%
Co 228.616†	34.6	0.00044	mg/L	0.000213	0.00044	mg/L	0.000213	48.51%
Cr 267.716†	138.8	0.00081	mg/L	0.000157	0.00081	mg/L	0.000157	19.51%
Cu 327.393†	1026.2	0.00373	mg/L	0.001192	0.00373	mg/L	0.001192	31.97%
Fe 239.562†	9170.9	0.640	mg/L	0.0064	0.640	mg/L	0.0064	1.00%
Mg 279.077†	83415.9	25.2	mg/L	0.15	25.2	mg/L	0.15	0.59%
Mn 257.610†	163314.6	0.202	mg/L	0.0047	0.202	mg/L	0.0047	2.32%
Mo 202.031†	80.1	0.00288	mg/L	0.000270	0.00288	mg/L	0.000270	9.38%
Ni 231.604†	744.5	0.00771	mg/L	0.000249	0.00771	mg/L	0.000249	3.24%
Pb 220.353†	-8.3	0.00023	mg/L	0.001157	0.00023	mg/L	0.001157	505.48%
Sb 206.836†	-9.8	-0.00210	mg/L	0.000778	-0.00210	mg/L	0.000778	37.00%
Se 196.026†	4.0	0.00031	mg/L	0.001910	0.00031	mg/L	0.001910	617.54%
Si 251.611†	561445.3	11.3	mg/L	0.52	11.3	mg/L	0.52	4.61%
Sn 189.927†	-341.6	-0.0283	mg/L	0.00114	-0.0283	mg/L	0.00114	4.03%
Ti 334.940†	-27943.0	0.00048	mg/L	0.001363	0.00048	mg/L	0.001363	283.02%
Tl 190.801†	-23.0	-0.00908	mg/L	0.002300	-0.00908	mg/L	0.002300	25.33%
V 290.880†	1836.6	0.00694	mg/L	0.001917	0.00694	mg/L	0.001917	27.63%
Zn 206.200†	2563.0	0.0436	mg/L	0.00236	0.0436	mg/L	0.00236	5.42%
K 766.490†	24326.2	8.24	mg/L	0.123	8.24	mg/L	0.123	1.50%
Na 589.592†	1332797.4	71.0	mg/L	0.33	71.0	mg/L	0.33	0.46%
Sr 407.771†	2637944.6	1.07	mg/L	0.009	1.07	mg/L	0.009	0.86%
Li 670.784†	7088.7	0.0483	mg/L	0.00033	0.0483	mg/L	0.00033	0.68%

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Sequence No.: 11 **Autosampler Location: 63**
Sample ID: L1207075004 0.1 **Date Collected: 7/27/2012 3:57:07 PM**

Approved: July 31, 2012

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

Nebulizer Parameters: L1207075004 0.1

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207075004 0.1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2325310.2						39360.51	1.69%
YRADIAL	292749.7						4545.77	1.55%
Ga 417.206	1204873.1						12942.84	1.07%
GaRADIAL	80785.4						1590.09	1.97%
Ag 328.068†	249.6	0.00069	mg/L	0.000417	0.00069	mg/L	0.000417	60.27%
Al 396.153†	-23.3	-0.00865	mg/L	0.004605	-0.00865	mg/L	0.004605	53.20%
As 188.979†	-7.5	-0.00033	mg/L	0.003831	-0.00033	mg/L	0.003831	>999.9%
Ba 233.527†	1945.9	0.0106	mg/L	0.00009	0.0106	mg/L	0.00009	0.82%
Be 234.861†	143.2	0.00004	mg/L	0.000043	0.00004	mg/L	0.000043	107.24%
B 249.677†	5410.5	0.0514	mg/L	0.00448	0.0514	mg/L	0.00448	8.73%
Ca 227.546†	5353.9	12.3	mg/L	0.29	12.3	mg/L	0.29	2.38%
Cd 228.802†	12.5	0.00024	mg/L	0.000065	0.00024	mg/L	0.000065	27.38%
Co 228.616†	35.8	0.00046	mg/L	0.000073	0.00046	mg/L	0.000073	15.91%
Cr 267.716†	0.4	-0.00029	mg/L	0.000262	-0.00029	mg/L	0.000262	89.28%
Cu 327.393†	46.5	-0.00022	mg/L	0.000130	-0.00022	mg/L	0.000130	58.65%
Fe 239.562†	2402.2	0.168	mg/L	0.0086	0.168	mg/L	0.0086	5.12%
Mg 279.077†	7459.4	2.26	mg/L	0.039	2.26	mg/L	0.039	1.71%
Mn 257.610†	107585.7	0.133	mg/L	0.0018	0.133	mg/L	0.0018	1.37%
Mo 202.031†	49.8	0.00201	mg/L	0.000475	0.00201	mg/L	0.000475	23.59%
Ni 231.604†	123.3	-0.00138	mg/L	0.000523	-0.00138	mg/L	0.000523	37.91%
Pb 220.353†	-37.0	-0.00313	mg/L	0.001201	-0.00313	mg/L	0.001201	38.41%
Sb 206.836†	-11.4	-0.00246	mg/L	0.000818	-0.00246	mg/L	0.000818	33.21%
Se 196.026†	8.1	0.00227	mg/L	0.001600	0.00227	mg/L	0.001600	70.33%
Si 251.611†	58307.7	1.17	mg/L	0.014	1.17	mg/L	0.014	1.22%
Sn 189.927†	-118.7	-0.00995	mg/L	0.000712	-0.00995	mg/L	0.000712	7.15%
Ti 334.940†	-1909.1	0.00090	mg/L	0.000179	0.00090	mg/L	0.000179	19.86%
Tl 190.801†	2.6	-0.00214	mg/L	0.002414	-0.00214	mg/L	0.002414	112.89%
V 290.880†	1616.2	0.00667	mg/L	0.000507	0.00667	mg/L	0.000507	7.60%
Zn 206.200†	212.2	0.00296	mg/L	0.000136	0.00296	mg/L	0.000136	4.61%
K 766.490†	1109.5	0.298	mg/L	0.0116	0.298	mg/L	0.0116	3.89%
Na 589.592†	99873.8	5.25	mg/L	0.006	5.25	mg/L	0.006	0.11%
Sr 407.771†	187603.4	0.0772	mg/L	0.00074	0.0772	mg/L	0.00074	0.95%
Li 670.784†	578.9	0.00215	mg/L	0.000581	0.00215	mg/L	0.000581	26.99%

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Sequence No.: 12 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 4:03:04 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2333988.8						9591.22	0.41%
YRADIAL	288698.4						335.34	0.12%
Ga 417.206	1209157.8						16327.02	1.35%
GaRADIAL	79274.2						359.75	0.45%
Ag 328.068†	125737.6	0.408	mg/L	0.0055	0.408	mg/L	0.0055	1.34%
QC value within limits for Ag 328.068 Recovery = 101.94%								
Al 396.153†	64704.9	9.91	mg/L	0.059	9.91	mg/L	0.059	0.59%
QC value within limits for Al 396.153 Recovery = 99.06%								
As 188.979†	1404.2	0.402	mg/L	0.0045	0.402	mg/L	0.0045	1.12%

Approved: July 31, 2012

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   QC value within limits for As 188.979  Recovery = 100.48%
Ba 233.527†          167296.5        1.00 mg/L         0.005        1.00 mg/L         0.005   0.52%
   QC value within limits for Ba 233.527  Recovery = 100.37%
Be 234.861†           59841.2      0.0503 mg/L       0.00077      0.0503 mg/L       0.00077   1.53%
   QC value within limits for Be 234.861  Recovery = 100.66%
B 249.677†            55347.4       0.516 mg/L        0.0079       0.516 mg/L        0.0079   1.53%
   QC value within limits for B 249.677  Recovery = 103.29%
Ca 227.546†            4335.2        10.4 mg/L          0.20        10.4 mg/L          0.20   1.93%
   QC value within limits for Ca 227.546  Recovery = 104.00%
Cd 228.802†            2818.6      0.0497 mg/L       0.00159      0.0497 mg/L       0.00159   3.20%
   QC value within limits for Cd 228.802  Recovery = 99.36%
Co 228.616†            8753.0       0.199 mg/L        0.0014       0.199 mg/L        0.0014   0.72%
   QC value within limits for Co 228.616  Recovery = 99.69%
Cr 267.716†           62604.2       0.505 mg/L        0.0020       0.505 mg/L        0.0020   0.39%
   QC value within limits for Cr 267.716  Recovery = 100.91%
Cu 327.393†          124718.0       0.505 mg/L        0.0073       0.505 mg/L        0.0073   1.44%
   QC value within limits for Cu 327.393  Recovery = 101.03%
Fe 239.562†           57406.2        4.00 mg/L         0.030        4.00 mg/L         0.030   0.74%
   QC value within limits for Fe 239.562  Recovery = 100.04%
Mg 279.077†           32871.3        9.96 mg/L         0.085        9.96 mg/L         0.085   0.86%
   QC value within limits for Mg 279.077  Recovery = 99.63%
Mn 257.610†          402073.9       0.499 mg/L        0.0047       0.499 mg/L        0.0047   0.95%
   QC value within limits for Mn 257.610  Recovery = 99.90%
Mo 202.031†           36842.7        1.01 mg/L         0.004        1.01 mg/L         0.004   0.41%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Ni 231.604†           35565.0       0.517 mg/L        0.0042       0.517 mg/L        0.0042   0.82%
   QC value within limits for Ni 231.604  Recovery = 103.34%
Pb 220.353†            6815.0       0.502 mg/L        0.0028       0.502 mg/L        0.0028   0.57%
   QC value within limits for Pb 220.353  Recovery = 100.43%
Sb 206.836†            5618.7        1.22 mg/L         0.023        1.22 mg/L         0.023   1.92%
   QC value within limits for Sb 206.836  Recovery = 101.96%
Se 196.026†             836.8       0.416 mg/L        0.0065       0.416 mg/L        0.0065   1.57%
   QC value within limits for Se 196.026  Recovery = 103.88%
Si 251.611†          253648.6        5.08 mg/L         0.047        5.08 mg/L         0.047   0.93%
   QC value within limits for Si 251.611  Recovery = 101.62%
Sn 189.927†           12288.7        1.01 mg/L         0.004        1.01 mg/L         0.004   0.43%
   QC value within limits for Sn 189.927  Recovery = 100.99%
Ti 334.940†         1016561.8       0.992 mg/L        0.0024       0.992 mg/L        0.0024   0.24%
   QC value within limits for Ti 334.940  Recovery = 99.18%
Tl 190.801†            1993.3       0.522 mg/L        0.0053       0.522 mg/L        0.0053   1.02%
   QC value within limits for Tl 190.801  Recovery = 104.43%
V 290.880†           244691.6       0.999 mg/L        0.0021       0.999 mg/L        0.0021   0.21%
   QC value within limits for V 290.880  Recovery = 99.89%
Zn 206.200†           58988.6        1.02 mg/L         0.003        1.02 mg/L         0.003   0.28%
   QC value within limits for Zn 206.200  Recovery = 102.45%
K 766.490†           142354.8        49.2 mg/L          0.06        49.2 mg/L          0.06   0.11%
   QC value within limits for K 766.490  Recovery = 98.36%
Na 589.592†          950959.9        50.5 mg/L          0.51        50.5 mg/L          0.51   1.01%
   QC value within limits for Na 589.592  Recovery = 100.99%
Sr 407.771†         2411532.8       0.985 mg/L        0.0089       0.985 mg/L        0.0089   0.91%
   QC value within limits for Sr 407.771  Recovery = 98.47%
Li 670.784†          140503.1       0.993 mg/L        0.0024       0.993 mg/L        0.0024   0.25%
   QC value within limits for Li 670.784  Recovery = 99.31%
All analyte(s) passed QC.

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Sequence No.: 13                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 7/27/2012 4:09:03 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                    193.0 kPa        0.50 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            2355308.0                                                     17387.19   0.74%
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Approved: July 31, 2012

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YRADIAL              281661.1                                                    3753.07   1.33%
Ga 417.206          1226407.4                                                   11825.20   0.96%
GaRADIAL              78877.7                                                    1775.50   2.25%
Ag 328.068†              91.9     0.00014 mg/L      0.000452     0.00014 mg/L      0.000452 324.69%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              -2.6    -0.00539 mg/L      0.000604    -0.00539 mg/L      0.000604  11.20%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -7.7    -0.00042 mg/L      0.001954    -0.00042 mg/L      0.001954 469.60%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              34.7    -0.00083 mg/L      0.000102    -0.00083 mg/L      0.000102  12.20%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†             -64.1    -0.00011 mg/L      0.000028    -0.00011 mg/L      0.000028  25.04%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              874.4     0.00886 mg/L      0.001683     0.00886 mg/L      0.001683  18.99%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†             -16.9     0.00888 mg/L      0.019215     0.00888 mg/L      0.019215 216.43%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               0.9     0.00003 mg/L      0.000203     0.00003 mg/L      0.000203 755.87%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               9.1    -0.00015 mg/L      0.000105    -0.00015 mg/L      0.000105  69.42%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              12.5    -0.00019 mg/L      0.000076    -0.00019 mg/L      0.000076  39.54%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             220.3     0.00047 mg/L      0.000307     0.00047 mg/L      0.000307  64.79%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              21.8     0.00238 mg/L      0.001010     0.00238 mg/L      0.001010  42.40%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              13.5      0.0108 mg/L       0.00036      0.0108 mg/L       0.00036   3.32%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              -5.6    -0.00062 mg/L      0.000015    -0.00062 mg/L      0.000015   2.46%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.8     0.00080 mg/L      0.000423     0.00080 mg/L      0.000423  52.76%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              18.0    -0.00292 mg/L      0.000353    -0.00292 mg/L      0.000353  12.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†             -15.2    -0.00153 mg/L      0.000766    -0.00153 mg/L      0.000766  50.18%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               1.0     0.00023 mg/L      0.001689     0.00023 mg/L      0.001689 750.34%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.6    -0.00091 mg/L      0.003754    -0.00091 mg/L      0.003754 411.15%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             927.7      0.0132 mg/L       0.01810      0.0132 mg/L       0.01810 137.56%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              17.1     0.00121 mg/L      0.000114     0.00121 mg/L      0.000114   9.39%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             479.1     0.00139 mg/L      0.000482     0.00139 mg/L      0.000482  34.70%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               6.5    -0.00098 mg/L      0.001512    -0.00098 mg/L      0.001512 153.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              578.8     0.00250 mg/L      0.000643     0.00250 mg/L      0.000643  25.73%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -1.3    -0.00073 mg/L      0.000036    -0.00073 mg/L      0.000036   4.96%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               57.2     -0.0595 mg/L       0.00320     -0.0595 mg/L       0.00320   5.38%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             254.5    -0.00058 mg/L      0.002701    -0.00058 mg/L      0.002701 463.21%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             190.7     0.00098 mg/L      0.000015     0.00098 mg/L      0.000015   1.52%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             105.0    -0.00120 mg/L      0.000437    -0.00120 mg/L      0.000437  36.36%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 14                                    Autosampler Location: 64
Sample ID: LLCCV                                    Date Collected: 7/27/2012 4:15:56 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: LLCCV
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Approved: July 31, 2012

Kim H. Rhoden

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2408048.8						28124.71	1.17%
YRADIAL	285647.1						6441.52	2.26%
Ga 417.206	1264574.9						33745.22	2.67%
GaRADIAL	79648.5						1383.01	1.74%
Ag 328.068†	2538.4	0.00808	mg/L	0.000158	0.00808	mg/L	0.000158	1.95%
Al 396.153†	1373.3	0.205	mg/L	0.0040	0.205	mg/L	0.0040	1.96%
As 188.979†	24.9	0.00889	mg/L	0.001316	0.00889	mg/L	0.001316	14.79%
Ba 233.527†	3577.3	0.0204	mg/L	0.00024	0.0204	mg/L	0.00024	1.18%
Be 234.861†	1193.9	0.00095	mg/L	0.000025	0.00095	mg/L	0.000025	2.60%
B 249.677†	1524.1	0.0149	mg/L	0.00126	0.0149	mg/L	0.00126	8.48%
Ca 227.546†	77.6	0.234	mg/L	0.0345	0.234	mg/L	0.0345	14.73%
Cd 228.802†	57.2	0.00101	mg/L	0.000059	0.00101	mg/L	0.000059	5.83%
Co 228.616†	199.3	0.00419	mg/L	0.000148	0.00419	mg/L	0.000148	3.53%
Cr 267.716†	1346.2	0.0106	mg/L	0.00017	0.0106	mg/L	0.00017	1.59%
Cu 327.393†	2776.2	0.0108	mg/L	0.00030	0.0108	mg/L	0.00030	2.73%
Fe 239.562†	1201.4	0.0846	mg/L	0.00173	0.0846	mg/L	0.00173	2.04%
Mg 279.077†	712.7	0.223	mg/L	0.0043	0.223	mg/L	0.0043	1.92%
Mn 257.610†	8770.2	0.0103	mg/L	0.00016	0.0103	mg/L	0.00016	1.53%
Mo 202.031†	767.5	0.0216	mg/L	0.00030	0.0216	mg/L	0.00030	1.41%
Ni 231.604†	793.4	0.00841	mg/L	0.000303	0.00841	mg/L	0.000303	3.60%
Pb 220.353†	140.5	0.00995	mg/L	0.001189	0.00995	mg/L	0.001189	11.94%
Sb 206.836†	108.3	0.0236	mg/L	0.00072	0.0236	mg/L	0.00072	3.05%
Se 196.026†	13.9	0.00522	mg/L	0.002118	0.00522	mg/L	0.002118	40.62%
Si 251.611†	6938.0	0.134	mg/L	0.0627	0.134	mg/L	0.0627	46.87%
Sn 189.927†	270.1	0.0220	mg/L	0.00038	0.0220	mg/L	0.00038	1.74%
Ti 334.940†	21212.9	0.0216	mg/L	0.00011	0.0216	mg/L	0.00011	0.50%
Tl 190.801†	44.4	0.00900	mg/L	0.002457	0.00900	mg/L	0.002457	27.28%
V 290.880†	5154.0	0.0212	mg/L	0.00164	0.0212	mg/L	0.00164	7.77%
Zn 206.200†	1549.2	0.0262	mg/L	0.00017	0.0262	mg/L	0.00017	0.67%
K 766.490†	3341.4	1.07	mg/L	0.021	1.07	mg/L	0.021	1.98%
Na 589.592†	20138.0	1.05	mg/L	0.022	1.05	mg/L	0.022	2.12%
Sr 407.771†	51631.7	0.0220	mg/L	0.00085	0.0220	mg/L	0.00085	3.87%
Li 670.784†	3104.9	0.0200	mg/L	0.00036	0.0200	mg/L	0.00036	1.81%

Sequence No.: 15
Sample ID: L1207064102 WG404092-01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 7/27/2012 4:22:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207064102 WG404092-01

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064102 WG404092-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2337356.8						12143.01	0.52%
YRADIAL	285172.4						5147.37	1.81%
Ga 417.206	1294032.6						14528.40	1.12%
GaRADIAL	81787.7						1154.86	1.41%
Ag 328.068†	-695.8	0.00278	mg/L	0.000558	0.00278	mg/L	0.000558	20.09%
Al 396.153†	-13.6	-0.00583	mg/L	0.002878	-0.00583	mg/L	0.002878	49.35%
As 188.979†	146.2	0.0471	mg/L	0.00078	0.0471	mg/L	0.00078	1.65%
Ba 233.527†	41728.3	0.249	mg/L	0.0033	0.249	mg/L	0.0033	1.32%
Be 234.861†	3718.6	0.00012	mg/L	0.000071	0.00012	mg/L	0.000071	57.72%
B 249.677†	27304.9	0.251	mg/L	0.0033	0.251	mg/L	0.0033	1.31%
Ca 227.546†	50436.6	115	mg/L	2.2	115	mg/L	2.2	1.95%
Cd 228.802†	15.1	0.00005	mg/L	0.000212	0.00005	mg/L	0.000212	447.82%
Co 228.616†	11.2	-0.00049	mg/L	0.000257	-0.00049	mg/L	0.000257	52.75%
Cr 267.716†	88.3	-0.00006	mg/L	0.000061	-0.00006	mg/L	0.000061	100.65%
Cu 327.393†	483.5	0.00216	mg/L	0.000774	0.00216	mg/L	0.000774	35.83%

Approved: July 31, 2012

Kim H. Rhoden

Fe 239.562†	188529.1	13.1	mg/L	0.15	13.1	mg/L	0.15	1.14%
Mg 279.077†	67523.6	20.4	mg/L	0.26	20.4	mg/L	0.26	1.25%
Mn 257.610†	628808.5	0.781	mg/L	0.0109	0.781	mg/L	0.0109	1.40%
Mo 202.031†	164.5	0.00591	mg/L	0.000244	0.00591	mg/L	0.000244	4.13%
Ni 231.604†	704.2	0.00712	mg/L	0.000328	0.00712	mg/L	0.000328	4.61%
Pb 220.353†	41.1	0.00193	mg/L	0.000120	0.00193	mg/L	0.000120	6.23%
Sb 206.836†	-5.8	-0.00072	mg/L	0.000375	-0.00072	mg/L	0.000375	52.14%
Se 196.026†	-8.1	-0.00389	mg/L	0.002020	-0.00389	mg/L	0.002020	51.88%
Si 251.611†	614550.3	12.3	mg/L	0.07	12.3	mg/L	0.07	0.56%
Sn 189.927†	-301.7	-0.0250	mg/L	0.00104	-0.0250	mg/L	0.00104	4.18%
Ti 334.940†	-17022.8	0.00159	mg/L	0.001126	0.00159	mg/L	0.001126	70.62%
Tl 190.801†	-21.7	-0.00920	mg/L	0.000601	-0.00920	mg/L	0.000601	6.54%
V 290.880†	1621.4	0.00549	mg/L	0.001745	0.00549	mg/L	0.001745	31.79%
Zn 206.200†	583.5	0.00914	mg/L	0.000144	0.00914	mg/L	0.000144	1.58%
K 766.490†	4573.9	1.45	mg/L	0.006	1.45	mg/L	0.006	0.40%
Na 589.592†	805231.6	42.7	mg/L	0.57	42.7	mg/L	0.57	1.33%
Sr 407.771†	1837259.9	0.748	mg/L	0.0080	0.748	mg/L	0.0080	1.07%
Li 670.784†	3878.9	0.0255	mg/L	0.00066	0.0255	mg/L	0.00066	2.59%

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Sequence No.: 16 **Autosampler Location: 66**
Sample ID: L1207064102S WG404092-04 **Date Collected: 7/27/2012 4:28:51 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064102S WG404092-04

Analyte	Back Pressure	Flow
All	192.0 kPa	0.50 L/min

Mean Data: L1207064102S WG404092-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2283844.0						12693.53	0.56%
YRADIAL	281241.5						2129.01	0.76%
Ga 417.206	1273595.7						21030.26	1.65%
GaRADIAL	80612.1						982.38	1.22%
Ag 328.068†	61159.1	0.203	mg/L	0.0053	0.203	mg/L	0.0053	2.60%
Al 396.153†	33168.2	5.08	mg/L	0.020	5.08	mg/L	0.020	0.39%
As 188.979†	815.5	0.238	mg/L	0.0039	0.238	mg/L	0.0039	1.64%
Ba 233.527†	125301.7	0.751	mg/L	0.0058	0.751	mg/L	0.0058	0.78%
Be 234.861†	32680.2	0.0245	mg/L	0.00058	0.0245	mg/L	0.00058	2.35%
B 249.677†	132428.7	1.24	mg/L	0.038	1.24	mg/L	0.038	3.05%
Ca 227.546†	52332.4	120	mg/L	4.2	120	mg/L	4.2	3.51%
Cd 228.802†	1342.3	0.0234	mg/L	0.00088	0.0234	mg/L	0.00088	3.76%
Co 228.616†	4334.5	0.0982	mg/L	0.00082	0.0982	mg/L	0.00082	0.83%
Cr 267.716†	31657.2	0.255	mg/L	0.0026	0.255	mg/L	0.0026	1.01%
Cu 327.393†	61871.9	0.251	mg/L	0.0077	0.251	mg/L	0.0077	3.05%
Fe 239.562†	215498.0	15.0	mg/L	0.18	15.0	mg/L	0.18	1.19%
Mg 279.077†	82946.8	25.1	mg/L	0.29	25.1	mg/L	0.29	1.15%
Mn 257.610†	826784.6	1.03	mg/L	0.009	1.03	mg/L	0.009	0.87%
Mo 202.031†	18706.6	0.512	mg/L	0.0038	0.512	mg/L	0.0038	0.75%
Ni 231.604†	17800.2	0.257	mg/L	0.0020	0.257	mg/L	0.0020	0.77%
Pb 220.353†	3469.4	0.255	mg/L	0.0020	0.255	mg/L	0.0020	0.79%
Sb 206.836†	2695.9	0.588	mg/L	0.0138	0.588	mg/L	0.0138	2.35%
Se 196.026†	390.6	0.195	mg/L	0.0052	0.195	mg/L	0.0052	2.65%
Si 251.611†	735164.3	14.8	mg/L	0.09	14.8	mg/L	0.09	0.61%
Sn 189.927†	6182.9	0.508	mg/L	0.0033	0.508	mg/L	0.0033	0.66%
Ti 334.940†	501961.0	0.507	mg/L	0.0010	0.507	mg/L	0.0010	0.20%
Tl 190.801†	978.3	0.254	mg/L	0.0054	0.254	mg/L	0.0054	2.11%
V 290.880†	127589.4	0.520	mg/L	0.0104	0.520	mg/L	0.0104	2.01%
Zn 206.200†	29329.6	0.509	mg/L	0.0051	0.509	mg/L	0.0051	1.01%
K 766.490†	77338.7	26.6	mg/L	0.12	26.6	mg/L	0.12	0.44%
Na 589.592†	1294891.8	69.0	mg/L	1.66	69.0	mg/L	1.66	2.41%
Sr 407.771†	3104620.3	1.27	mg/L	0.015	1.27	mg/L	0.015	1.18%
Li 670.784†	76417.2	0.539	mg/L	0.0045	0.539	mg/L	0.0045	0.84%

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Sequence No.: 17 **Autosampler Location: 67**
Sample ID: L1207064102SD WG404092-05 **Date Collected: 7/27/2012 4:34:55 PM**

Approved: July 31, 2012

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

Nebulizer Parameters: L1207064102SD WG404092-05

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064102SD WG404092-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2239493.4						9303.00	0.42%
YRADIAL	278931.9						2573.21	0.92%
Ga 417.206	1247802.7						914.63	0.07%
GaRADIAL	79905.3						1160.59	1.45%
Ag 328.068†	63360.6	0.211	mg/L	0.0007	0.211	mg/L	0.0007	0.33%
Al 396.153†	34177.4	5.23	mg/L	0.010	5.23	mg/L	0.010	0.20%
As 188.979†	842.3	0.245	mg/L	0.0021	0.245	mg/L	0.0021	0.84%
Ba 233.527†	131056.5	0.785	mg/L	0.0038	0.785	mg/L	0.0038	0.48%
Be 234.861†	33883.0	0.0254	mg/L	0.00021	0.0254	mg/L	0.00021	0.84%
B 249.677†	138964.9	1.30	mg/L	0.003	1.30	mg/L	0.003	0.23%
Ca 227.546†	55857.3	128	mg/L	0.4	128	mg/L	0.4	0.34%
Cd 228.802†	1377.0	0.0240	mg/L	0.00072	0.0240	mg/L	0.00072	2.98%
Co 228.616†	4469.7	0.101	mg/L	0.0003	0.101	mg/L	0.0003	0.28%
Cr 267.716†	32802.9	0.264	mg/L	0.0008	0.264	mg/L	0.0008	0.30%
Cu 327.393†	64576.4	0.262	mg/L	0.0008	0.262	mg/L	0.0008	0.30%
Fe 239.562†	226531.9	15.8	mg/L	0.23	15.8	mg/L	0.23	1.49%
Mg 279.077†	86869.1	26.3	mg/L	0.40	26.3	mg/L	0.40	1.53%
Mn 257.610†	864643.8	1.07	mg/L	0.018	1.07	mg/L	0.018	1.63%
Mo 202.031†	19436.0	0.532	mg/L	0.0038	0.532	mg/L	0.0038	0.71%
Ni 231.604†	18455.5	0.267	mg/L	0.0014	0.267	mg/L	0.0014	0.52%
Pb 220.353†	3572.5	0.262	mg/L	0.0001	0.262	mg/L	0.0001	0.04%
Sb 206.836†	2770.6	0.604	mg/L	0.0046	0.604	mg/L	0.0046	0.76%
Se 196.026†	401.0	0.200	mg/L	0.0057	0.200	mg/L	0.0057	2.86%
Si 251.611†	771481.3	15.5	mg/L	0.11	15.5	mg/L	0.11	0.72%
Sn 189.927†	6353.8	0.522	mg/L	0.0003	0.522	mg/L	0.0003	0.06%
Ti 334.940†	516851.6	0.523	mg/L	0.0029	0.523	mg/L	0.0029	0.55%
Tl 190.801†	1008.7	0.262	mg/L	0.0018	0.262	mg/L	0.0018	0.70%
V 290.880†	132663.9	0.540	mg/L	0.0014	0.540	mg/L	0.0014	0.26%
Zn 206.200†	30098.5	0.522	mg/L	0.0014	0.522	mg/L	0.0014	0.26%
K 766.490†	79631.5	27.4	mg/L	0.24	27.4	mg/L	0.24	0.86%
Na 589.592†	1343455.5	71.6	mg/L	1.04	71.6	mg/L	1.04	1.45%
Sr 407.771†	3202086.2	1.30	mg/L	0.024	1.30	mg/L	0.024	1.85%
Li 670.784†	79429.1	0.561	mg/L	0.0054	0.561	mg/L	0.0054	0.95%

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Sequence No.: 18 **Autosampler Location: 68**
Sample ID: L1207064103 **Date Collected: 7/27/2012 4:40:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064103

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064103

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2327047.9						10491.60	0.45%
YRADIAL	279945.7						1328.37	0.47%
Ga 417.206	1301158.2						30069.35	2.31%
GaRADIAL	81985.2						1228.69	1.50%
Ag 328.068†	914.4	0.00350	mg/L	0.000340	0.00350	mg/L	0.000340	9.70%
Al 396.153†	-62.3	-0.0146	mg/L	0.00244	-0.0146	mg/L	0.00244	16.76%
As 188.979†	-1.1	0.00201	mg/L	0.001744	0.00201	mg/L	0.001744	86.67%
Ba 233.527†	30980.3	0.185	mg/L	0.0011	0.185	mg/L	0.0011	0.58%
Be 234.861†	823.9	0.00019	mg/L	0.000061	0.00019	mg/L	0.000061	31.79%

Approved: July 31, 2012

B 249.677†	25089.8	0.235	mg/L	0.0081	0.235	mg/L	0.0081	3.46%
Ca 227.546†	53978.6	123	mg/L	2.3	123	mg/L	2.3	1.83%
Cd 228.802†	13.0	0.00025	mg/L	0.000093	0.00025	mg/L	0.000093	37.59%
Co 228.616†	60.0	0.00090	mg/L	0.000065	0.00090	mg/L	0.000065	7.15%
Cr 267.716†	115.1	0.00055	mg/L	0.000096	0.00055	mg/L	0.000096	17.45%
Cu 327.393†	4187.8	0.0166	mg/L	0.00084	0.0166	mg/L	0.00084	5.08%
Fe 239.562†	32892.6	2.29	mg/L	0.030	2.29	mg/L	0.030	1.31%
Mg 279.077†	55126.2	16.7	mg/L	0.27	16.7	mg/L	0.27	1.59%
Mn 257.610†	618278.6	0.768	mg/L	0.0029	0.768	mg/L	0.0029	0.38%
Mo 202.031†	138.8	0.00468	mg/L	0.000230	0.00468	mg/L	0.000230	4.92%
Ni 231.604†	19709.7	0.285	mg/L	0.0038	0.285	mg/L	0.0038	1.35%
Pb 220.353†	67.2	0.00490	mg/L	0.000307	0.00490	mg/L	0.000307	6.27%
Sb 206.836†	-11.7	-0.00225	mg/L	0.001249	-0.00225	mg/L	0.001249	55.54%
Se 196.026†	3.6	0.00028	mg/L	0.003015	0.00028	mg/L	0.003015	>999.9%
Si 251.611†	552228.3	11.1	mg/L	0.21	11.1	mg/L	0.21	1.87%
Sn 189.927†	-314.8	-0.0261	mg/L	0.00085	-0.0261	mg/L	0.00085	3.27%
Ti 334.940†	-18618.7	0.00125	mg/L	0.001699	0.00125	mg/L	0.001699	135.76%
Tl 190.801†	-14.1	-0.00726	mg/L	0.001769	-0.00726	mg/L	0.001769	24.38%
V 290.880†	1551.5	0.00590	mg/L	0.000553	0.00590	mg/L	0.000553	9.36%
Zn 206.200†	2485.1	0.0423	mg/L	0.00059	0.0423	mg/L	0.00059	1.39%
K 766.490†	8146.2	2.70	mg/L	0.017	2.70	mg/L	0.017	0.62%
Na 589.592†	588413.5	31.1	mg/L	0.52	31.1	mg/L	0.52	1.68%
Sr 407.771†	1640765.5	0.668	mg/L	0.0035	0.668	mg/L	0.0035	0.52%
Li 670.784†	3920.5	0.0258	mg/L	0.00080	0.0258	mg/L	0.00080	3.08%

Sequence No.: 19 **Autosampler Location: 69**
Sample ID: L1207064104 **Date Collected: 7/27/2012 4:46:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064104

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064104

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2295538.4						9714.89	0.42%
YRADIAL	284857.3						2012.67	0.71%
Ga 417.206	1302651.4						25057.44	1.92%
GaRADIAL	81868.8						841.83	1.03%
Ag 328.068†	-384.5	0.00363	mg/L	0.000316	0.00363	mg/L	0.000316	8.70%
Al 396.153†	-56.3	-0.0123	mg/L	0.01390	-0.0123	mg/L	0.01390	113.29%
As 188.979†	317.0	0.0964	mg/L	0.00231	0.0964	mg/L	0.00231	2.40%
Ba 233.527†	27414.3	0.163	mg/L	0.0006	0.163	mg/L	0.0006	0.37%
Be 234.861†	3584.2	0.00009	mg/L	0.000056	0.00009	mg/L	0.000056	63.76%
B 249.677†	23847.0	0.219	mg/L	0.0064	0.219	mg/L	0.0064	2.93%
Ca 227.546†	74586.1	170	mg/L	3.7	170	mg/L	3.7	2.17%
Cd 228.802†	24.2	-0.00003	mg/L	0.000324	-0.00003	mg/L	0.000324	982.16%
Co 228.616†	28.6	-0.00004	mg/L	0.000270	-0.00004	mg/L	0.000270	752.29%
Cr 267.716†	1853.4	0.0142	mg/L	0.00006	0.0142	mg/L	0.00006	0.42%
Cu 327.393†	70.4	0.00047	mg/L	0.000539	0.00047	mg/L	0.000539	114.93%
Fe 239.562†	184444.2	12.9	mg/L	0.08	12.9	mg/L	0.08	0.64%
Mg 279.077†	47237.6	14.3	mg/L	0.19	14.3	mg/L	0.19	1.34%
Mn 257.610†	739350.0	0.918	mg/L	0.0107	0.918	mg/L	0.0107	1.16%
Mo 202.031†	56.6	0.00298	mg/L	0.000299	0.00298	mg/L	0.000299	10.03%
Ni 231.604†	457.2	0.00351	mg/L	0.000411	0.00351	mg/L	0.000411	11.71%
Pb 220.353†	5.8	-0.00029	mg/L	0.001399	-0.00029	mg/L	0.001399	480.26%
Sb 206.836†	-8.1	-0.00133	mg/L	0.000983	-0.00133	mg/L	0.000983	74.14%
Se 196.026†	0.7	0.00038	mg/L	0.000671	0.00038	mg/L	0.000671	176.50%
Si 251.611†	765525.3	15.4	mg/L	0.21	15.4	mg/L	0.21	1.38%
Sn 189.927†	-345.9	-0.0286	mg/L	0.00040	-0.0286	mg/L	0.00040	1.40%
Ti 334.940†	-25548.3	0.00154	mg/L	0.002065	0.00154	mg/L	0.002065	133.70%
Tl 190.801†	-15.3	-0.00779	mg/L	0.001497	-0.00779	mg/L	0.001497	19.23%
V 290.880†	1304.9	0.00437	mg/L	0.001339	0.00437	mg/L	0.001339	30.67%
Zn 206.200†	347.5	0.00518	mg/L	0.000130	0.00518	mg/L	0.000130	2.51%
K 766.490†	12101.5	4.05	mg/L	0.023	4.05	mg/L	0.023	0.56%
Na 589.592†	806036.5	42.7	mg/L	0.56	42.7	mg/L	0.56	1.31%

Approved: July 31, 2012

Sr 407.771†	1999366.6	0.813	mg/L	0.0010	0.813	mg/L	0.0010	0.12%
Li 670.784†	2884.6	0.0185	mg/L	0.00040	0.0185	mg/L	0.00040	2.17%

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Sequence No.: 20 **Autosampler Location: 70**
Sample ID: L1207064105 **Date Collected: 7/27/2012 4:53:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064105

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207064105

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2342048.4						14671.50	0.63%
YRADIAL	286500.0						3115.58	1.09%
Ga 417.206	1301950.9						13233.87	1.02%
GaRADIAL	82279.0						2436.42	2.96%
Ag 328.068†	1048.8	0.00354	mg/L	0.000300	0.00354	mg/L	0.000300	8.46%
Al 396.153†	-23.6	-0.00859	mg/L	0.009403	-0.00859	mg/L	0.009403	109.44%
As 188.979†	60.4	0.0196	mg/L	0.00035	0.0196	mg/L	0.00035	1.78%
Ba 233.527†	79523.9	0.476	mg/L	0.0020	0.476	mg/L	0.0020	0.43%
Be 234.861†	643.3	0.00033	mg/L	0.000096	0.00033	mg/L	0.000096	29.18%
B 249.677†	31874.1	0.299	mg/L	0.0083	0.299	mg/L	0.0083	2.77%
Ca 227.546†	51753.7	118	mg/L	2.9	118	mg/L	2.9	2.43%
Cd 228.802†	13.0	0.00015	mg/L	0.000254	0.00015	mg/L	0.000254	165.31%
Co 228.616†	106.4	0.00191	mg/L	0.000071	0.00191	mg/L	0.000071	3.72%
Cr 267.716†	293.9	0.00201	mg/L	0.000092	0.00201	mg/L	0.000092	4.59%
Cu 327.393†	426.1	0.00137	mg/L	0.000280	0.00137	mg/L	0.000280	20.40%
Fe 239.562†	25664.6	1.79	mg/L	0.016	1.79	mg/L	0.016	0.89%
Mg 279.077†	45156.9	13.7	mg/L	0.11	13.7	mg/L	0.11	0.84%
Mn 257.610†	2053990.3	2.55	mg/L	0.026	2.55	mg/L	0.026	1.01%
Mo 202.031†	91.3	0.00373	mg/L	0.000220	0.00373	mg/L	0.000220	5.91%
Ni 231.604†	382.5	0.00241	mg/L	0.000483	0.00241	mg/L	0.000483	20.03%
Pb 220.353†	8.0	-0.00056	mg/L	0.000603	-0.00056	mg/L	0.000603	106.90%
Sb 206.836†	-15.8	-0.00336	mg/L	0.000995	-0.00336	mg/L	0.000995	29.65%
Se 196.026†	0.2	-0.00211	mg/L	0.001665	-0.00211	mg/L	0.001665	78.87%
Si 251.611†	683396.8	13.7	mg/L	0.11	13.7	mg/L	0.11	0.80%
Sn 189.927†	-314.9	-0.0261	mg/L	0.00022	-0.0261	mg/L	0.00022	0.84%
Ti 334.940†	-17495.0	0.00158	mg/L	0.001297	0.00158	mg/L	0.001297	81.82%
Tl 190.801†	-21.3	-0.0108	mg/L	0.00340	-0.0108	mg/L	0.00340	31.36%
V 290.880†	2178.6	0.00856	mg/L	0.002276	0.00856	mg/L	0.002276	26.60%
Zn 206.200†	151.8	0.00190	mg/L	0.000158	0.00190	mg/L	0.000158	8.31%
K 766.490†	7098.1	2.30	mg/L	0.012	2.30	mg/L	0.012	0.53%
Na 589.592†	1266292.7	67.4	mg/L	1.47	67.4	mg/L	1.47	2.17%
Sr 407.771†	1183890.9	0.481	mg/L	0.0014	0.481	mg/L	0.0014	0.28%
Li 670.784†	2812.3	0.0180	mg/L	0.00039	0.0180	mg/L	0.00039	2.15%

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Sequence No.: 21 **Autosampler Location: 71**
Sample ID: L1207064106 **Date Collected: 7/27/2012 4:59:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064106

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064106

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2315596.4						17475.62	0.75%
YRADIAL	286519.1						4824.52	1.68%
Ga 417.206	1295549.6						15155.20	1.17%

Approved: July 31, 2012

Kim H. Rhoden

GaRADIAL	81816.9					896.09	1.10%
Ag 328.068†	723.6	0.00297	mg/L	0.000329	0.00297 mg/L	0.000329	11.10%
Al 396.153†	-100.8	-0.0204	mg/L	0.00615	-0.0204 mg/L	0.00615	30.20%
As 188.979†	49.4	0.0167	mg/L	0.00097	0.0167 mg/L	0.00097	5.83%
Ba 233.527†	79187.1	0.474	mg/L	0.0057	0.474 mg/L	0.0057	1.19%
Be 234.861†	869.7	0.00025	mg/L	0.000070	0.00025 mg/L	0.000070	28.23%
B 249.677†	34719.7	0.325	mg/L	0.0042	0.325 mg/L	0.0042	1.29%
Ca 227.546†	47966.1	109	mg/L	1.2	109 mg/L	1.2	1.06%
Cd 228.802†	14.1	0.00018	mg/L	0.000256	0.00018 mg/L	0.000256	139.01%
Co 228.616†	69.0	0.00103	mg/L	0.000143	0.00103 mg/L	0.000143	13.85%
Cr 267.716†	133.1	0.00068	mg/L	0.000065	0.00068 mg/L	0.000065	9.55%
Cu 327.393†	242.8	0.00068	mg/L	0.000113	0.00068 mg/L	0.000113	16.48%
Fe 239.562†	40476.9	2.82	mg/L	0.056	2.82 mg/L	0.056	1.97%
Mg 279.077†	43193.5	13.1	mg/L	0.26	13.1 mg/L	0.26	2.01%
Mn 257.610†	1774526.1	2.20	mg/L	0.020	2.20 mg/L	0.020	0.89%
Mo 202.031†	89.7	0.00366	mg/L	0.000161	0.00366 mg/L	0.000161	4.40%
Ni 231.604†	321.5	0.00152	mg/L	0.000432	0.00152 mg/L	0.000432	28.41%
Pb 220.353†	14.0	-0.00007	mg/L	0.002240	-0.00007 mg/L	0.002240	>999.9%
Sb 206.836†	-12.2	-0.00253	mg/L	0.001044	-0.00253 mg/L	0.001044	41.31%
Se 196.026†	4.2	0.00017	mg/L	0.003635	0.00017 mg/L	0.003635	>999.9%
Si 251.611†	666467.2	13.4	mg/L	0.13	13.4 mg/L	0.13	0.98%
Sn 189.927†	-308.7	-0.0256	mg/L	0.00080	-0.0256 mg/L	0.00080	3.13%
Ti 334.940†	-16573.4	0.00119	mg/L	0.001307	0.00119 mg/L	0.001307	110.06%
Tl 190.801†	-30.3	-0.0128	mg/L	0.00147	-0.0128 mg/L	0.00147	11.48%
V 290.880†	1580.4	0.00607	mg/L	0.000546	0.00607 mg/L	0.000546	8.99%
Zn 206.200†	160.1	0.00201	mg/L	0.000128	0.00201 mg/L	0.000128	6.33%
K 766.490†	6953.3	2.24	mg/L	0.022	2.24 mg/L	0.022	0.96%
Na 589.592†	1355558.9	72.2	mg/L	0.92	72.2 mg/L	0.92	1.27%
Sr 407.771†	1095995.4	0.446	mg/L	0.0018	0.446 mg/L	0.0018	0.40%
Li 670.784†	3014.9	0.0194	mg/L	0.00044	0.0194 mg/L	0.00044	2.29%

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Sequence No.: 22
Sample ID: L1207064107
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 7/27/2012 5:05:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207064107

Analyte	Back Pressure	Flow
All	193.0 kPa	0.50 L/min

Mean Data: L1207064107

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2282738.2						9875.38	0.43%
YRADIAL	282681.3						3039.63	1.08%
Ga 417.206	1279985.1						28822.98	2.25%
GaRADIAL	80113.4						990.53	1.24%
Ag 328.068†	-1016.6	0.00257	mg/L	0.000486	0.00257	mg/L	0.000486	18.93%
Al 396.153†	9179.6	1.41	mg/L	0.007	1.41	mg/L	0.007	0.52%
As 188.979†	568.3	0.169	mg/L	0.0031	0.169	mg/L	0.0031	1.83%
Ba 233.527†	64064.1	0.383	mg/L	0.0022	0.383	mg/L	0.0022	0.58%
Be 234.861†	4138.2	0.00006	mg/L	0.000064	0.00006	mg/L	0.000064	112.31%
B 249.677†	29266.4	0.269	mg/L	0.0083	0.269	mg/L	0.0083	3.09%
Ca 227.546†	55964.4	128	mg/L	4.5	128	mg/L	4.5	3.51%
Cd 228.802†	31.2	-0.00027	mg/L	0.000525	-0.00027	mg/L	0.000525	195.35%
Co 228.616†	67.3	0.00068	mg/L	0.000144	0.00068	mg/L	0.000144	21.16%
Cr 267.716†	271.9	0.00137	mg/L	0.000089	0.00137	mg/L	0.000089	6.46%
Cu 327.393†	12143.8	0.0494	mg/L	0.00133	0.0494	mg/L	0.00133	2.69%
Fe 239.562†	214780.9	15.0	mg/L	0.11	15.0	mg/L	0.11	0.76%
Mg 279.077†	39790.1	12.0	mg/L	0.08	12.0	mg/L	0.08	0.65%
Mn 257.610†	664147.2	0.825	mg/L	0.0014	0.825	mg/L	0.0014	0.16%
Mo 202.031†	97.6	0.00419	mg/L	0.000220	0.00419	mg/L	0.000220	5.25%
Ni 231.604†	338.0	0.00176	mg/L	0.000480	0.00176	mg/L	0.000480	27.25%
Pb 220.353†	66.7	0.00390	mg/L	0.001313	0.00390	mg/L	0.001313	33.64%
Sb 206.836†	-11.5	-0.00181	mg/L	0.001098	-0.00181	mg/L	0.001098	60.51%
Se 196.026†	-8.7	-0.00386	mg/L	0.001677	-0.00386	mg/L	0.001677	43.48%
Si 251.611†	758402.4	15.2	mg/L	0.29	15.2	mg/L	0.29	1.90%
Sn 189.927†	-319.4	-0.0264	mg/L	0.00034	-0.0264	mg/L	0.00034	1.29%

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Ti 334.940†	-6746.4	0.0135	mg/L	0.00165	0.0135	mg/L	0.00165 12.26%
Tl 190.801†	-20.6	-0.00877	mg/L	0.002105	-0.00877	mg/L	0.002105 23.99%
V 290.880†	4204.1	0.0161	mg/L	0.00131	0.0161	mg/L	0.00131 8.11%
Zn 206.200†	2523.7	0.0427	mg/L	0.00045	0.0427	mg/L	0.00045 1.06%
K 766.490†	5521.3	1.77	mg/L	0.027	1.77	mg/L	0.027 1.52%
Na 589.592†	923470.1	49.0	mg/L	0.61	49.0	mg/L	0.61 1.25%
Sr 407.771†	1163994.4	0.473	mg/L	0.0021	0.473	mg/L	0.0021 0.44%
Li 670.784†	2102.2	0.0129	mg/L	0.00028	0.0129	mg/L	0.00028 2.15%

Sequence No.: 23 **Autosampler Location: 73**
Sample ID: L1207064108 **Date Collected: 7/27/2012 5:11:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064108

Analyte	Back Pressure	Flow
All	194.0 kPa	0.50 L/min

Mean Data: L1207064108

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318550.1						18210.22	0.79%
YRADIAL	289250.6						4521.65	1.56%
Ga 417.206	1354593.9						18412.68	1.36%
GaRADIAL	85246.2						1399.14	1.64%
Ag 328.068†	898.5	0.00261	mg/L	0.000371	0.00261	mg/L	0.000371	14.22%
Al 396.153†	-8.9	-0.00650	mg/L	0.002792	-0.00650	mg/L	0.002792	42.95%
As 188.979†	-4.1	0.00064	mg/L	0.002098	0.00064	mg/L	0.002098	328.68%
Ba 233.527†	43998.2	0.263	mg/L	0.0005	0.263	mg/L	0.0005	0.18%
Be 234.861†	171.9	0.00013	mg/L	0.000009	0.00013	mg/L	0.000009	6.79%
B 249.677†	25541.1	0.240	mg/L	0.0043	0.240	mg/L	0.0043	1.79%
Ca 227.546†	46394.9	106	mg/L	1.9	106	mg/L	1.9	1.78%
Cd 228.802†	-1.2	-0.00001	mg/L	0.000178	-0.00001	mg/L	0.000178	>999.9%
Co 228.616†	28.2	0.00024	mg/L	0.000030	0.00024	mg/L	0.000030	12.58%
Cr 267.716†	140.3	0.00083	mg/L	0.000158	0.00083	mg/L	0.000158	18.91%
Cu 327.393†	1818.8	0.00692	mg/L	0.000670	0.00692	mg/L	0.000670	9.68%
Fe 239.562†	2034.7	0.142	mg/L	0.0026	0.142	mg/L	0.0026	1.84%
Mg 279.077†	37318.4	11.3	mg/L	0.16	11.3	mg/L	0.16	1.41%
Mn 257.610†	564683.7	0.701	mg/L	0.0065	0.701	mg/L	0.0065	0.93%
Mo 202.031†	83.7	0.00306	mg/L	0.000187	0.00306	mg/L	0.000187	6.11%
Ni 231.604†	174.6	-0.00063	mg/L	0.000153	-0.00063	mg/L	0.000153	24.39%
Pb 220.353†	45.0	0.00331	mg/L	0.000480	0.00331	mg/L	0.000480	14.49%
Sb 206.836†	-5.8	-0.00126	mg/L	0.000258	-0.00126	mg/L	0.000258	20.57%
Se 196.026†	-0.9	-0.00235	mg/L	0.002598	-0.00235	mg/L	0.002598	110.38%
Si 251.611†	506043.0	10.2	mg/L	0.10	10.2	mg/L	0.10	1.03%
Sn 189.927†	-312.2	-0.0259	mg/L	0.00108	-0.0259	mg/L	0.00108	4.18%
Ti 334.940†	-18840.5	-0.00156	mg/L	0.000551	-0.00156	mg/L	0.000551	35.41%
Tl 190.801†	-24.0	-0.00971	mg/L	0.003184	-0.00971	mg/L	0.003184	32.79%
V 290.880†	1261.6	0.00498	mg/L	0.000405	0.00498	mg/L	0.000405	8.13%
Zn 206.200†	533.8	0.00853	mg/L	0.000092	0.00853	mg/L	0.000092	1.08%
K 766.490†	4956.2	1.59	mg/L	0.015	1.59	mg/L	0.015	0.94%
Na 589.592†	808483.6	42.9	mg/L	0.78	42.9	mg/L	0.78	1.83%
Sr 407.771†	1151398.3	0.468	mg/L	0.0163	0.468	mg/L	0.0163	3.47%
Li 670.784†	2024.5	0.0124	mg/L	0.00005	0.0124	mg/L	0.00005	0.41%

Sequence No.: 24 **Autosampler Location: 74**
Sample ID: L1207064302 0.1 **Date Collected: 7/27/2012 5:17:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064302 0.1

Analyte	Back Pressure	Flow
All	195.0 kPa	0.50 L/min

Approved: July 31, 2012

Mean Data: L1207064302 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2375876.8						10300.08	0.43%
YRADIAL	286804.8						1451.50	0.51%
Ga 417.206	1351980.0						7317.37	0.54%
GaRADIAL	84884.4						2089.00	2.46%
Ag 328.068†	433.6	0.00120	mg/L	0.000586	0.00120	mg/L	0.000586	48.67%
Al 396.153†	-71.9	-0.0165	mg/L	0.00103	-0.0165	mg/L	0.00103	6.28%
As 188.979†	-6.3	-0.00004	mg/L	0.001408	-0.00004	mg/L	0.001408	>999.9%
Ba 233.527†	255.4	0.00050	mg/L	0.000161	0.00050	mg/L	0.000161	32.36%
Be 234.861†	227.6	0.00014	mg/L	0.000007	0.00014	mg/L	0.000007	5.20%
B 249.677†	420.5	0.00461	mg/L	0.000135	0.00461	mg/L	0.000135	2.93%
Ca 227.546†	22795.9	52.0	mg/L	1.52	52.0	mg/L	1.52	2.92%
Cd 228.802†	-8.2	-0.00014	mg/L	0.000145	-0.00014	mg/L	0.000145	104.05%
Co 228.616†	7.5	-0.00016	mg/L	0.000241	-0.00016	mg/L	0.000241	147.08%
Cr 267.716†	90.4	0.00043	mg/L	0.000035	0.00043	mg/L	0.000035	7.97%
Cu 327.393†	39.0	-0.00028	mg/L	0.000513	-0.00028	mg/L	0.000513	185.28%
Fe 239.562†	38.5	0.00329	mg/L	0.000703	0.00329	mg/L	0.000703	21.41%
Mg 279.077†	42871.0	13.0	mg/L	0.12	13.0	mg/L	0.12	0.96%
Mn 257.610†	11484.0	0.0137	mg/L	0.00024	0.0137	mg/L	0.00024	1.75%
Mo 202.031†	209.4	0.00633	mg/L	0.000292	0.00633	mg/L	0.000292	4.62%
Ni 231.604†	3654.6	0.0503	mg/L	0.00124	0.0503	mg/L	0.00124	2.47%
Pb 220.353†	24.8	0.00183	mg/L	0.000482	0.00183	mg/L	0.000482	26.32%
Sb 206.836†	-7.7	-0.00162	mg/L	0.000930	-0.00162	mg/L	0.000930	57.25%
Se 196.026†	51.6	0.0239	mg/L	0.00229	0.0239	mg/L	0.00229	9.59%
Si 251.611†	32088.3	0.639	mg/L	0.0168	0.639	mg/L	0.0168	2.63%
Sn 189.927†	-259.9	-0.0216	mg/L	0.00098	-0.0216	mg/L	0.00098	4.53%
Ti 334.940†	-9346.9	-0.00038	mg/L	0.000295	-0.00038	mg/L	0.000295	77.66%
Tl 190.801†	-7.1	-0.00460	mg/L	0.006533	-0.00460	mg/L	0.006533	141.89%
V 290.880†	70.7	0.00008	mg/L	0.000782	0.00008	mg/L	0.000782	928.28%
Zn 206.200†	1506.9	0.0254	mg/L	0.00064	0.0254	mg/L	0.00064	2.51%
K 766.490†	1314.0	0.372	mg/L	0.0245	0.372	mg/L	0.0245	6.59%
Na 589.592†	24104.3	1.26	mg/L	0.038	1.26	mg/L	0.038	3.00%
Sr 407.771†	366749.7	0.149	mg/L	0.0027	0.149	mg/L	0.0027	1.81%
Li 670.784†	177.9	-0.00069	mg/L	0.000960	-0.00069	mg/L	0.000960	139.95%

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Sequence No.: 25 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 5:24:51 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	195.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2342086.8						7311.19	0.31%
YRADIAL	289053.5						3069.00	1.06%
Ga 417.206	1231203.0						25761.52	2.09%
GaRADIAL	80303.3						588.38	0.73%
Ag 328.068†	126773.6	0.411	mg/L	0.0098	0.411	mg/L	0.0098	2.38%
QC value within limits for Ag 328.068 Recovery = 102.78%								
Al 396.153†	66028.6	10.1	mg/L	0.03	10.1	mg/L	0.03	0.31%
QC value within limits for Al 396.153 Recovery = 101.10%								
As 188.979†	1383.6	0.396	mg/L	0.0087	0.396	mg/L	0.0087	2.20%
QC value within limits for As 188.979 Recovery = 98.99%								
Ba 233.527†	168763.7	1.01	mg/L	0.002	1.01	mg/L	0.002	0.19%
QC value within limits for Ba 233.527 Recovery = 101.25%								
Be 234.861†	59967.8	0.0504	mg/L	0.00122	0.0504	mg/L	0.00122	2.42%
QC value within limits for Be 234.861 Recovery = 100.86%								
B 249.677†	53780.1	0.502	mg/L	0.0122	0.502	mg/L	0.0122	2.44%
QC value within limits for B 249.677 Recovery = 100.34%								
Ca 227.546†	4398.5	10.5	mg/L	0.29	10.5	mg/L	0.29	2.74%
QC value within limits for Ca 227.546 Recovery = 105.48%								
Cd 228.802†	2819.8	0.0497	mg/L	0.00195	0.0497	mg/L	0.00195	3.91%

Approved: July 31, 2012

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   QC value within limits for Cd 228.802  Recovery = 99.48%
Co 228.616†            8839.5       0.201 mg/L        0.0012       0.201 mg/L        0.0012   0.60%
   QC value within limits for Co 228.616  Recovery = 100.66%
Cr 267.716†           62963.7       0.507 mg/L        0.0027       0.507 mg/L        0.0027   0.53%
   QC value within limits for Cr 267.716  Recovery = 101.49%
Cu 327.393†          126465.7       0.512 mg/L        0.0112       0.512 mg/L        0.0112   2.18%
   QC value within limits for Cu 327.393  Recovery = 102.45%
Fe 239.562†           58013.1        4.04 mg/L         0.007        4.04 mg/L         0.007   0.18%
   QC value within limits for Fe 239.562  Recovery = 101.10%
Mg 279.077†           33390.4        10.1 mg/L          0.04        10.1 mg/L          0.04   0.38%
   QC value within limits for Mg 279.077  Recovery = 101.20%
Mn 257.610†          407785.7       0.507 mg/L        0.0022       0.507 mg/L        0.0022   0.44%
   QC value within limits for Mn 257.610  Recovery = 101.32%
Mo 202.031†           36860.3        1.01 mg/L         0.004        1.01 mg/L         0.004   0.42%
   QC value within limits for Mo 202.031  Recovery = 100.66%
Ni 231.604†           35816.8       0.520 mg/L        0.0020       0.520 mg/L        0.0020   0.38%
   QC value within limits for Ni 231.604  Recovery = 104.08%
Pb 220.353†            6878.8       0.507 mg/L        0.0022       0.507 mg/L        0.0022   0.44%
   QC value within limits for Pb 220.353  Recovery = 101.37%
Sb 206.836†            5586.7        1.22 mg/L         0.032        1.22 mg/L         0.032   2.65%
   QC value within limits for Sb 206.836  Recovery = 101.38%
Se 196.026†             819.1       0.407 mg/L        0.0127       0.407 mg/L        0.0127   3.13%
   QC value within limits for Se 196.026  Recovery = 101.68%
Si 251.611†          253794.5        5.08 mg/L         0.109        5.08 mg/L         0.109   2.15%
   QC value within limits for Si 251.611  Recovery = 101.67%
Sn 189.927†           12323.5        1.01 mg/L         0.003        1.01 mg/L         0.003   0.32%
   QC value within limits for Sn 189.927  Recovery = 101.27%
Ti 334.940†         1033501.8        1.01 mg/L         0.001        1.01 mg/L         0.001   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.83%
Tl 190.801†            2011.0       0.527 mg/L        0.0025       0.527 mg/L        0.0025   0.48%
   QC value within limits for Tl 190.801  Recovery = 105.38%
V 290.880†           247615.7        1.01 mg/L         0.002        1.01 mg/L         0.002   0.18%
   QC value within limits for V 290.880  Recovery = 101.09%
Zn 206.200†           58321.0        1.01 mg/L         0.008        1.01 mg/L         0.008   0.79%
   QC value within limits for Zn 206.200  Recovery = 101.30%
K 766.490†           145112.8        50.1 mg/L          0.26        50.1 mg/L          0.26   0.51%
   QC value within limits for K 766.490  Recovery = 100.28%
Na 589.592†          978678.7        52.0 mg/L          0.85        52.0 mg/L          0.85   1.64%
   QC value within limits for Na 589.592  Recovery = 103.96%
Sr 407.771†         2502824.5        1.02 mg/L         0.017        1.02 mg/L         0.017   1.68%
   QC value within limits for Sr 407.771  Recovery = 102.19%
Li 670.784†          144202.8        1.02 mg/L         0.006        1.02 mg/L         0.006   0.62%
   QC value within limits for Li 670.784  Recovery = 101.93%
All analyte(s) passed QC.

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Sequence No.: 26                                  Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 7/27/2012 5:30:50 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                    195.0 kPa         0.50 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            2368617.2                                                      11666.75   0.49%
YRADIAL               282896.6                                                       6263.76   2.21%
Ga 417.206           1251052.1                                                      14073.68   1.12%
GaRADIAL               79968.2                                                       1516.04   1.90%
Ag 328.068†               18.6    -0.00010 mg/L      0.000111    -0.00010 mg/L      0.000111 113.95%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†                8.3    -0.00374 mg/L      0.001902    -0.00374 mg/L      0.001902  50.86%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -3.0     0.00093 mg/L      0.002188     0.00093 mg/L      0.002188 236.05%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               26.9    -0.00088 mg/L      0.000127    -0.00088 mg/L      0.000127  14.41%
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Approved: July 31, 2012

Kim H. Rhoden

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   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              -13.1    -0.00007 mg/L      0.000035    -0.00007 mg/L      0.000035  51.53%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               406.0     0.00446 mg/L      0.000345     0.00446 mg/L      0.000345   7.73%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -13.2      0.0171 mg/L       0.00672      0.0171 mg/L       0.00672  39.32%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -2.5    -0.00004 mg/L      0.000104    -0.00004 mg/L      0.000104 246.05%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                3.8    -0.00027 mg/L      0.000260    -0.00027 mg/L      0.000260  95.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               12.5    -0.00019 mg/L      0.000014    -0.00019 mg/L      0.000014   7.35%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              271.9     0.00068 mg/L      0.000203     0.00068 mg/L      0.000203  29.80%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               24.0     0.00253 mg/L      0.000332     0.00253 mg/L      0.000332  13.10%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               10.6     0.00994 mg/L      0.001498     0.00994 mg/L      0.001498  15.07%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               32.6    -0.00057 mg/L      0.000011    -0.00057 mg/L      0.000011   1.92%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               13.7     0.00099 mg/L      0.000150     0.00099 mg/L      0.000150  15.13%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               -2.3    -0.00322 mg/L      0.000197    -0.00322 mg/L      0.000197   6.11%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              -11.6    -0.00127 mg/L      0.001881    -0.00127 mg/L      0.001881 148.68%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -3.1    -0.00066 mg/L      0.000689    -0.00066 mg/L      0.000689 103.82%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.1    -0.00169 mg/L      0.000967    -0.00169 mg/L      0.000967  57.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              123.0    -0.00302 mg/L      0.002954    -0.00302 mg/L      0.002954  97.84%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               14.2     0.00097 mg/L      0.000116     0.00097 mg/L      0.000116  12.01%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              265.5     0.00118 mg/L      0.000121     0.00118 mg/L      0.000121  10.27%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                6.8    -0.00093 mg/L      0.000918    -0.00093 mg/L      0.000918  98.55%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               443.5     0.00195 mg/L      0.000571     0.00195 mg/L      0.000571  29.37%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               -4.5    -0.00079 mg/L      0.000119    -0.00079 mg/L      0.000119  15.05%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                96.8     -0.0459 mg/L       0.01986     -0.0459 mg/L       0.01986  43.30%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              415.7     0.00791 mg/L      0.006832     0.00791 mg/L      0.006832  86.40%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              325.1     0.00104 mg/L      0.000021     0.00104 mg/L      0.000021   2.06%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              104.8    -0.00120 mg/L      0.000368    -0.00120 mg/L      0.000368  30.57%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 27                                    Autosampler Location: 75
Sample ID: L1207064304 0.1                          Date Collected: 7/27/2012 5:37:43 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: L1207064304 0.1
Analyte                 Back Pressure    Flow
All                    196.0 kPa         0.50 L/min

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Mean Data: L1207064304 0.1
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2384208.0                                                    19613.13   0.82%
YRADIAL               287498.5                                                     7654.47   2.66%
Ga 417.206           1348100.3                                                     4197.79   0.31%
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GaRADIAL	84546.5					324.99	0.38%
Ag 328.068†	385.0	0.00105	mg/L	0.000534	0.00105 mg/L	0.000534	50.96%
Al 396.153†	-53.9	-0.0134	mg/L	0.00147	-0.0134 mg/L	0.00147	10.98%
As 188.979†	-7.0	-0.00022	mg/L	0.000323	-0.00022 mg/L	0.000323	144.17%
Ba 233.527†	1076.2	0.00542	mg/L	0.000112	0.00542 mg/L	0.000112	2.06%
Be 234.861†	214.3	0.00013	mg/L	0.000016	0.00013 mg/L	0.000016	12.51%
B 249.677†	342.0	0.00386	mg/L	0.000101	0.00386 mg/L	0.000101	2.61%
Ca 227.546†	21630.5	49.3	mg/L	0.73	49.3 mg/L	0.73	1.49%
Cd 228.802†	-6.9	-0.00012	mg/L	0.000081	-0.00012 mg/L	0.000081	70.20%
Co 228.616†	19.7	0.00011	mg/L	0.000096	0.00011 mg/L	0.000096	87.47%
Cr 267.716†	47.1	0.00008	mg/L	0.000166	0.00008 mg/L	0.000166	195.67%
Cu 327.393†	18.9	-0.00035	mg/L	0.000106	-0.00035 mg/L	0.000106	30.42%
Fe 239.562†	47.4	0.00390	mg/L	0.000690	0.00390 mg/L	0.000690	17.70%
Mg 279.077†	45040.7	13.6	mg/L	0.17	13.6 mg/L	0.17	1.22%
Mn 257.610†	12230.9	0.0146	mg/L	0.00003	0.0146 mg/L	0.00003	0.18%
Mo 202.031†	33.3	0.00153	mg/L	0.000211	0.00153 mg/L	0.000211	13.79%
Ni 231.604†	73.4	-0.00211	mg/L	0.000097	-0.00211 mg/L	0.000097	4.61%
Pb 220.353†	19.9	0.00144	mg/L	0.000120	0.00144 mg/L	0.000120	8.32%
Sb 206.836†	-7.8	-0.00170	mg/L	0.000228	-0.00170 mg/L	0.000228	13.44%
Se 196.026†	-3.1	-0.00327	mg/L	0.002353	-0.00327 mg/L	0.002353	71.88%
Si 251.611†	64243.0	1.29	mg/L	0.012	1.29 mg/L	0.012	0.92%
Sn 189.927†	-263.2	-0.0218	mg/L	0.00032	-0.0218 mg/L	0.00032	1.48%
Ti 334.940†	-8768.0	-0.00021	mg/L	0.000395	-0.00021 mg/L	0.000395	184.38%
Tl 190.801†	-14.4	-0.00646	mg/L	0.003774	-0.00646 mg/L	0.003774	58.42%
V 290.880†	373.1	0.00130	mg/L	0.001028	0.00130 mg/L	0.001028	78.88%
Zn 206.200†	55.5	0.00025	mg/L	0.000120	0.00025 mg/L	0.000120	47.49%
K 766.490†	1644.6	0.486	mg/L	0.0043	0.486 mg/L	0.0043	0.88%
Na 589.592†	28544.4	1.49	mg/L	0.059	1.49 mg/L	0.059	3.94%
Sr 407.771†	376023.2	0.153	mg/L	0.0031	0.153 mg/L	0.0031	2.05%
Li 670.784†	118.6	-0.00111	mg/L	0.000744	-0.00111 mg/L	0.000744	67.25%

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Sequence No.: 28 **Autosampler Location: 76**
Sample ID: L1207064306 0.1 **Date Collected: 7/27/2012 5:44:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064306 0.1

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207064306 0.1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2389160.7						19162.26	0.80%
YRADIAL	287609.8						3626.31	1.26%
Ga 417.206	1362934.6						3625.61	0.27%
GaRADIAL	84917.3						1413.16	1.66%
Ag 328.068†	504.7	0.00143	mg/L	0.000412	0.00143	mg/L	0.000412	28.72%
Al 396.153†	-61.6	-0.0146	mg/L	0.00342	-0.0146	mg/L	0.00342	23.47%
As 188.979†	-5.1	0.00034	mg/L	0.001617	0.00034	mg/L	0.001617	476.80%
Ba 233.527†	1931.3	0.0106	mg/L	0.00037	0.0106	mg/L	0.00037	3.47%
Be 234.861†	221.4	0.00013	mg/L	0.000022	0.00013	mg/L	0.000022	16.62%
B 249.677†	281.7	0.00329	mg/L	0.000125	0.00329	mg/L	0.000125	3.80%
Ca 227.546†	20342.0	46.4	mg/L	1.57	46.4	mg/L	1.57	3.38%
Cd 228.802†	-7.8	-0.00013	mg/L	0.000079	-0.00013	mg/L	0.000079	59.21%
Co 228.616†	14.6	-0.00001	mg/L	0.000127	-0.00001	mg/L	0.000127	>999.9%
Cr 267.716†	63.4	0.00021	mg/L	0.000122	0.00021	mg/L	0.000122	56.61%
Cu 327.393†	120.2	0.00006	mg/L	0.000195	0.00006	mg/L	0.000195	322.41%
Fe 239.562†	249.5	0.0180	mg/L	0.00065	0.0180	mg/L	0.00065	3.63%
Mg 279.077†	46042.2	13.9	mg/L	0.17	13.9	mg/L	0.17	1.20%
Mn 257.610†	10412.5	0.0123	mg/L	0.00029	0.0123	mg/L	0.00029	2.34%
Mo 202.031†	33.1	0.00152	mg/L	0.000139	0.00152	mg/L	0.000139	9.13%
Ni 231.604†	34.1	-0.00268	mg/L	0.000059	-0.00268	mg/L	0.000059	2.18%
Pb 220.353†	16.8	0.00118	mg/L	0.000543	0.00118	mg/L	0.000543	45.83%
Sb 206.836†	-9.3	-0.00202	mg/L	0.000972	-0.00202	mg/L	0.000972	48.20%
Se 196.026†	-1.4	-0.00244	mg/L	0.002321	-0.00244	mg/L	0.002321	94.99%
Si 251.611†	72739.6	1.46	mg/L	0.035	1.46	mg/L	0.035	2.39%
Sn 189.927†	-253.1	-0.0210	mg/L	0.00003	-0.0210	mg/L	0.00003	0.12%

Approved: July 31, 2012

Ti 334.940†	-8401.2	-0.00030 mg/L	0.000063	-0.00030 mg/L	0.000063	21.04%
Tl 190.801†	-7.9	-0.00479 mg/L	0.000849	-0.00479 mg/L	0.000849	17.71%
V 290.880†	-181.2	-0.00097 mg/L	0.001724	-0.00097 mg/L	0.001724	177.71%
Zn 206.200†	31.3	-0.00017 mg/L	0.000124	-0.00017 mg/L	0.000124	74.51%
K 766.490†	1597.4	0.470 mg/L	0.0046	0.470 mg/L	0.0046	0.97%
Na 589.592†	28270.9	1.48 mg/L	0.061	1.48 mg/L	0.061	4.10%
Sr 407.771†	384307.5	0.157 mg/L	0.0024	0.157 mg/L	0.0024	1.51%
Li 670.784†	174.8	-0.00071 mg/L	0.000163	-0.00071 mg/L	0.000163	23.01%

Sequence No.: 29 **Autosampler Location: 77**
Sample ID: L1207064308 0.1 **Date Collected: 7/27/2012 5:51:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064308 0.1

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207064308 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2353910.3						25655.74	1.09%
YRADIAL	283807.1						4432.60	1.56%
Ga 417.206	1354218.9						17045.21	1.26%
GaRADIAL	84264.2						2433.34	2.89%
Ag 328.068†	361.7	0.00098	mg/L	0.000252	0.00098	mg/L	0.000252	25.77%
Al 396.153†	-69.7	-0.0159	mg/L	0.00074	-0.0159	mg/L	0.00074	4.68%
As 188.979†	-13.1	-0.00197	mg/L	0.001395	-0.00197	mg/L	0.001395	70.83%
Ba 233.527†	1685.7	0.00908	mg/L	0.000119	0.00908	mg/L	0.000119	1.31%
Be 234.861†	214.8	0.00013	mg/L	0.000019	0.00013	mg/L	0.000019	15.12%
B 249.677†	579.9	0.00609	mg/L	0.000136	0.00609	mg/L	0.000136	2.24%
Ca 227.546†	20587.0	47.0	mg/L	1.08	47.0	mg/L	1.08	2.30%
Cd 228.802†	-5.0	-0.00007	mg/L	0.000111	-0.00007	mg/L	0.000111	155.99%
Co 228.616†	17.2	0.00005	mg/L	0.000200	0.00005	mg/L	0.000200	370.27%
Cr 267.716†	67.6	0.00025	mg/L	0.000190	0.00025	mg/L	0.000190	76.15%
Cu 327.393†	58.2	-0.00019	mg/L	0.000902	-0.00019	mg/L	0.000902	475.71%
Fe 239.562†	223.5	0.0162	mg/L	0.00009	0.0162	mg/L	0.00009	0.53%
Mg 279.077†	45201.0	13.7	mg/L	0.06	13.7	mg/L	0.06	0.41%
Mn 257.610†	12217.0	0.0146	mg/L	0.00011	0.0146	mg/L	0.00011	0.75%
Mo 202.031†	78.9	0.00277	mg/L	0.000152	0.00277	mg/L	0.000152	5.48%
Ni 231.604†	86.2	-0.00192	mg/L	0.000126	-0.00192	mg/L	0.000126	6.58%
Pb 220.353†	20.5	0.00146	mg/L	0.000674	0.00146	mg/L	0.000674	46.18%
Sb 206.836†	-9.3	-0.00203	mg/L	0.000099	-0.00203	mg/L	0.000099	4.89%
Se 196.026†	-6.1	-0.00474	mg/L	0.000474	-0.00474	mg/L	0.000474	9.99%
Si 251.611†	89847.5	1.80	mg/L	0.018	1.80	mg/L	0.018	1.01%
Sn 189.927†	-256.7	-0.0213	mg/L	0.00046	-0.0213	mg/L	0.00046	2.18%
Ti 334.940†	-8528.2	-0.00034	mg/L	0.000285	-0.00034	mg/L	0.000285	84.54%
Tl 190.801†	-10.2	-0.00540	mg/L	0.002484	-0.00540	mg/L	0.002484	45.97%
V 290.880†	346.2	0.00119	mg/L	0.001775	0.00119	mg/L	0.001775	149.02%
Zn 206.200†	39.4	-0.00003	mg/L	0.000082	-0.00003	mg/L	0.000082	314.30%
K 766.490†	1802.1	0.540	mg/L	0.0242	0.540	mg/L	0.0242	4.48%
Na 589.592†	28130.2	1.47	mg/L	0.048	1.47	mg/L	0.048	3.29%
Sr 407.771†	383895.1	0.157	mg/L	0.0037	0.157	mg/L	0.0037	2.38%
Li 670.784†	152.9	-0.00086	mg/L	0.000309	-0.00086	mg/L	0.000309	35.80%

Sequence No.: 30 **Autosampler Location: 78**
Sample ID: L1207064310 0.1 **Date Collected: 7/27/2012 5:58:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064310 0.1

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Approved: July 31, 2012

Kim H. Rhoden

Mean Data: L1207064310 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2384360.3						15687.65	0.66%
YRADIAL	288167.8						5428.28	1.88%
Ga 417.206	1347997.6						9514.05	0.71%
GaRADIAL	85080.8						1401.88	1.65%
Ag 328.068†	474.0	0.00133	mg/L	0.000061	0.00133	mg/L	0.000061	4.55%
Al 396.153†	-58.3	-0.0140	mg/L	0.00126	-0.0140	mg/L	0.00126	8.98%
As 188.979†	-9.5	-0.00095	mg/L	0.000369	-0.00095	mg/L	0.000369	39.07%
Ba 233.527†	1595.4	0.00854	mg/L	0.000184	0.00854	mg/L	0.000184	2.16%
Be 234.861†	203.0	0.00012	mg/L	0.000007	0.00012	mg/L	0.000007	6.21%
B 249.677†	278.2	0.00327	mg/L	0.000112	0.00327	mg/L	0.000112	3.45%
Ca 227.546†	20882.9	47.6	mg/L	1.04	47.6	mg/L	1.04	2.18%
Cd 228.802†	-7.3	-0.00012	mg/L	0.000087	-0.00012	mg/L	0.000087	72.98%
Co 228.616†	14.8	0.00000	mg/L	0.000193	0.00000	mg/L	0.000193	>999.9%
Cr 267.716†	69.3	0.00026	mg/L	0.000070	0.00026	mg/L	0.000070	26.62%
Cu 327.393†	-12.6	-0.00048	mg/L	0.000301	-0.00048	mg/L	0.000301	63.19%
Fe 239.562†	37.8	0.00323	mg/L	0.000336	0.00323	mg/L	0.000336	10.43%
Mg 279.077†	44644.3	13.5	mg/L	0.08	13.5	mg/L	0.08	0.59%
Mn 257.610†	11783.7	0.0140	mg/L	0.00016	0.0140	mg/L	0.00016	1.13%
Mo 202.031†	29.7	0.00143	mg/L	0.000312	0.00143	mg/L	0.000312	21.82%
Ni 231.604†	43.9	-0.00254	mg/L	0.000333	-0.00254	mg/L	0.000333	13.12%
Pb 220.353†	16.4	0.00117	mg/L	0.001384	0.00117	mg/L	0.001384	118.45%
Sb 206.836†	-6.1	-0.00132	mg/L	0.000971	-0.00132	mg/L	0.000971	73.63%
Se 196.026†	-3.6	-0.00353	mg/L	0.001823	-0.00353	mg/L	0.001823	51.58%
Si 251.611†	73979.9	1.48	mg/L	0.025	1.48	mg/L	0.025	1.70%
Sn 189.927†	-253.8	-0.0211	mg/L	0.00135	-0.0211	mg/L	0.00135	6.42%
Ti 334.940†	-8497.0	-0.00021	mg/L	0.000459	-0.00021	mg/L	0.000459	222.58%
Tl 190.801†	-7.7	-0.00477	mg/L	0.000470	-0.00477	mg/L	0.000470	9.85%
V 290.880†	1.3	-0.00021	mg/L	0.000248	-0.00021	mg/L	0.000248	116.89%
Zn 206.200†	51.1	0.00018	mg/L	0.000119	0.00018	mg/L	0.000119	67.33%
K 766.490†	1667.7	0.494	mg/L	0.0352	0.494	mg/L	0.0352	7.14%
Na 589.592†	28160.5	1.47	mg/L	0.058	1.47	mg/L	0.058	3.93%
Sr 407.771†	377254.9	0.154	mg/L	0.0017	0.154	mg/L	0.0017	1.09%
Li 670.784†	228.4	-0.00033	mg/L	0.000698	-0.00033	mg/L	0.000698	212.66%

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Sequence No.: 31 **Autosampler Location: 79**
Sample ID: L1207064312 0.1 **Date Collected: 7/27/2012 6:05:25 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064312 0.1

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 L/min

Mean Data: L1207064312 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2394367.8						13209.00	0.55%
YRADIAL	287919.5						7122.62	2.47%
Ga 417.206	1355159.7						1796.47	0.13%
GaRADIAL	85018.1						1038.52	1.22%
Ag 328.068†	468.6	0.00132	mg/L	0.000197	0.00132	mg/L	0.000197	14.90%
Al 396.153†	-56.7	-0.0138	mg/L	0.00103	-0.0138	mg/L	0.00103	7.45%
As 188.979†	-4.0	0.00064	mg/L	0.000349	0.00064	mg/L	0.000349	54.73%
Ba 233.527†	1579.0	0.00844	mg/L	0.000256	0.00844	mg/L	0.000256	3.03%
Be 234.861†	235.9	0.00014	mg/L	0.000010	0.00014	mg/L	0.000010	6.77%
B 249.677†	271.0	0.00319	mg/L	0.000165	0.00319	mg/L	0.000165	5.17%
Ca 227.546†	21231.8	48.4	mg/L	1.10	48.4	mg/L	1.10	2.28%
Cd 228.802†	-8.3	-0.00014	mg/L	0.000036	-0.00014	mg/L	0.000036	25.26%
Co 228.616†	30.8	0.00036	mg/L	0.000266	0.00036	mg/L	0.000266	73.20%
Cr 267.716†	60.4	0.00019	mg/L	0.000068	0.00019	mg/L	0.000068	35.42%
Cu 327.393†	-29.0	-0.00054	mg/L	0.000481	-0.00054	mg/L	0.000481	88.65%
Fe 239.562†	149.5	0.0110	mg/L	0.00032	0.0110	mg/L	0.00032	2.87%
Mg 279.077†	45759.6	13.8	mg/L	0.08	13.8	mg/L	0.08	0.59%
Mn 257.610†	11580.0	0.0138	mg/L	0.00029	0.0138	mg/L	0.00029	2.09%
Mo 202.031†	32.3	0.00150	mg/L	0.000128	0.00150	mg/L	0.000128	8.52%

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Ni 231.604†	67.9	-0.00219 mg/L	0.000105	-0.00219 mg/L	0.000105	4.78%
Pb 220.353†	17.6	0.00126 mg/L	0.000873	0.00126 mg/L	0.000873	69.04%
Sb 206.836†	-4.6	-0.00100 mg/L	0.000045	-0.00100 mg/L	0.000045	4.50%
Se 196.026†	2.0	-0.00072 mg/L	0.002071	-0.00072 mg/L	0.002071	289.13%
Si 251.611†	73795.2	1.48 mg/L	0.014	1.48 mg/L	0.014	0.97%
Sn 189.927†	-257.4	-0.0214 mg/L	0.00030	-0.0214 mg/L	0.00030	1.42%
Ti 334.940†	-8632.4	-0.00022 mg/L	0.000091	-0.00022 mg/L	0.000091	41.50%
Tl 190.801†	-15.5	-0.00674 mg/L	0.000483	-0.00674 mg/L	0.000483	7.16%
V 290.880†	225.3	0.00069 mg/L	0.001123	0.00069 mg/L	0.001123	162.02%
Zn 206.200†	174.3	0.00231 mg/L	0.000547	0.00231 mg/L	0.000547	23.71%
K 766.490†	1686.5	0.500 mg/L	0.0102	0.500 mg/L	0.0102	2.04%
Na 589.592†	28609.7	1.49 mg/L	0.058	1.49 mg/L	0.058	3.87%
Sr 407.771†	381806.3	0.156 mg/L	0.0035	0.156 mg/L	0.0035	2.23%
Li 670.784†	213.1	-0.00044 mg/L	0.000515	-0.00044 mg/L	0.000515	117.82%

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Sequence No.: 32 **Autosampler Location: 80**
Sample ID: L1207064312PS WG404481-03 **Date Collected: 7/27/2012 6:12:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207064312PS WG404481-03

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207064312PS WG404481-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2402247.0						31673.92	1.32%
YRADIAL	291224.8						4116.33	1.41%
Ga 417.206	1298797.0						25846.81	1.99%
GaRADIAL	82673.2						895.75	1.08%
Ag 328.068†	61088.8	0.198	mg/L	0.0056	0.198	mg/L	0.0056	2.84%
Al 396.153†	31573.9	4.83	mg/L	0.003	4.83	mg/L	0.003	0.07%
As 188.979†	649.4	0.187	mg/L	0.0040	0.187	mg/L	0.0040	2.14%
Ba 233.527†	82089.6	0.492	mg/L	0.0067	0.492	mg/L	0.0067	1.37%
Be 234.861†	28809.5	0.0242	mg/L	0.00049	0.0242	mg/L	0.00049	2.01%
B 249.677†	103599.2	0.972	mg/L	0.0290	0.972	mg/L	0.0290	2.98%
Ca 227.546†	23846.8	54.6	mg/L	1.66	54.6	mg/L	1.66	3.03%
Cd 228.802†	1310.8	0.0231	mg/L	0.00113	0.0231	mg/L	0.00113	4.87%
Co 228.616†	4170.6	0.0948	mg/L	0.00119	0.0948	mg/L	0.00119	1.25%
Cr 267.716†	29700.2	0.239	mg/L	0.0043	0.239	mg/L	0.0043	1.80%
Cu 327.393†	57016.4	0.231	mg/L	0.0057	0.231	mg/L	0.0057	2.45%
Fe 239.562†	27646.1	1.93	mg/L	0.014	1.93	mg/L	0.014	0.72%
Mg 279.077†	58559.4	17.7	mg/L	0.12	17.7	mg/L	0.12	0.69%
Mn 257.610†	208942.1	0.259	mg/L	0.0047	0.259	mg/L	0.0047	1.82%
Mo 202.031†	17497.8	0.478	mg/L	0.0036	0.478	mg/L	0.0036	0.76%
Ni 231.604†	16646.8	0.240	mg/L	0.0037	0.240	mg/L	0.0037	1.54%
Pb 220.353†	3311.6	0.244	mg/L	0.0025	0.244	mg/L	0.0025	1.03%
Sb 206.836†	2660.7	0.579	mg/L	0.0174	0.579	mg/L	0.0174	3.00%
Se 196.026†	401.0	0.198	mg/L	0.0109	0.198	mg/L	0.0109	5.51%
Si 251.611†	199077.0	3.99	mg/L	0.064	3.99	mg/L	0.064	1.59%
Sn 189.927†	-263.2	-0.0218	mg/L	0.00082	-0.0218	mg/L	0.00082	3.76%
Ti 334.940†	481894.1	0.478	mg/L	0.0023	0.478	mg/L	0.0023	0.48%
Tl 190.801†	968.7	0.252	mg/L	0.0041	0.252	mg/L	0.0041	1.61%
V 290.880†	119598.6	0.488	mg/L	0.0066	0.488	mg/L	0.0066	1.35%
Zn 206.200†	28632.3	0.497	mg/L	0.0071	0.497	mg/L	0.0071	1.43%
K 766.490†	71465.8	24.6	mg/L	0.25	24.6	mg/L	0.25	1.00%
Na 589.592†	508859.0	26.9	mg/L	0.27	26.9	mg/L	0.27	0.99%
Sr 407.771†	1569414.0	0.640	mg/L	0.0113	0.640	mg/L	0.0113	1.77%
Li 670.784†	70008.6	0.494	mg/L	0.0013	0.494	mg/L	0.0013	0.27%

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Sequence No.: 33 **Autosampler Location: 81**
Sample ID: L1207064312DL WG404481-04 **Date Collected: 7/27/2012 6:18:21 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 31, 2012

Kim H. Rhoden

Nebulizer Parameters: L1207064312DL WG404481-04

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207064312DL WG404481-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2462581.0						9442.61	0.38%
YRADIAL	299726.2						6142.58	2.05%
Ga 417.206	1349674.8						13096.81	0.97%
GaRADIAL	85580.3						2326.17	2.72%
Ag 328.068†	86.8	0.00011	mg/L	0.000066	0.00011	mg/L	0.000066	59.10%
Al 396.153†	-40.5	-0.0112	mg/L	0.00084	-0.0112	mg/L	0.00084	7.49%
As 188.979†	-0.5	0.00167	mg/L	0.001697	0.00167	mg/L	0.001697	101.56%
Ba 233.527†	343.8	0.00102	mg/L	0.000069	0.00102	mg/L	0.000069	6.73%
Be 234.861†	197.5	0.00011	mg/L	0.000025	0.00011	mg/L	0.000025	22.81%
B 249.677†	438.4	0.00477	mg/L	0.000508	0.00477	mg/L	0.000508	10.65%
Ca 227.546†	4093.4	9.37	mg/L	0.151	9.37	mg/L	0.151	1.61%
Cd 228.802†	-5.6	-0.00010	mg/L	0.000058	-0.00010	mg/L	0.000058	57.55%
Co 228.616†	15.4	0.00000	mg/L	0.000132	0.00000	mg/L	0.000132	>999.9%
Cr 267.716†	10.4	-0.00021	mg/L	0.000046	-0.00021	mg/L	0.000046	21.95%
Cu 327.393†	204.6	0.00041	mg/L	0.000150	0.00041	mg/L	0.000150	36.84%
Fe 239.562†	37.1	0.00340	mg/L	0.000306	0.00340	mg/L	0.000306	9.02%
Mg 279.077†	8764.8	2.66	mg/L	0.074	2.66	mg/L	0.074	2.80%
Mn 257.610†	2219.2	0.00215	mg/L	0.000007	0.00215	mg/L	0.000007	0.31%
Mo 202.031†	6.5	0.00079	mg/L	0.000205	0.00079	mg/L	0.000205	25.77%
Ni 231.604†	36.5	-0.00265	mg/L	0.000191	-0.00265	mg/L	0.000191	7.22%
Pb 220.353†	9.4	0.00035	mg/L	0.000677	0.00035	mg/L	0.000677	191.86%
Sb 206.836†	-7.4	-0.00161	mg/L	0.000026	-0.00161	mg/L	0.000026	1.62%
Se 196.026†	-6.0	-0.00469	mg/L	0.002375	-0.00469	mg/L	0.002375	50.69%
Si 251.611†	14200.6	0.280	mg/L	0.0037	0.280	mg/L	0.0037	1.32%
Sn 189.927†	-105.4	-0.00886	mg/L	0.000231	-0.00886	mg/L	0.000231	2.60%
Ti 334.940†	-1543.6	0.00082	mg/L	0.000179	0.00082	mg/L	0.000179	21.70%
Tl 190.801†	8.7	-0.00046	mg/L	0.001067	-0.00046	mg/L	0.001067	234.32%
V 290.880†	-72.4	-0.00023	mg/L	0.000944	-0.00023	mg/L	0.000944	407.97%
Zn 206.200†	53.0	0.00021	mg/L	0.000103	0.00021	mg/L	0.000103	49.73%
K 766.490†	294.8	0.0220	mg/L	0.01828	0.0220	mg/L	0.01828	82.89%
Na 589.592†	5629.6	0.283	mg/L	0.0155	0.283	mg/L	0.0155	5.47%
Sr 407.771†	72126.0	0.0301	mg/L	0.00029	0.0301	mg/L	0.00029	0.97%
Li 670.784†	46.2	-0.00162	mg/L	0.000461	-0.00162	mg/L	0.000461	28.45%

Sequence No.: 34 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 6:25:18 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 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	2308081.3						20139.74	0.87%
YRADIAL	288106.6						4491.57	1.56%
Ga 417.206	1224051.3						6948.91	0.57%
GaRADIAL	80069.2						1308.54	1.63%
Ag 328.068†	128904.4	0.418	mg/L	0.0048	0.418	mg/L	0.0048	1.15%
QC value within limits for Ag 328.068 Recovery = 104.51%								
Al 396.153†	66260.1	10.1	mg/L	0.23	10.1	mg/L	0.23	2.27%
QC value within limits for Al 396.153 Recovery = 101.44%								
As 188.979†	1390.0	0.398	mg/L	0.0030	0.398	mg/L	0.0030	0.76%
QC value within limits for As 188.979 Recovery = 99.42%								
Ba 233.527†	173357.4	1.04	mg/L	0.009	1.04	mg/L	0.009	0.87%
QC value within limits for Ba 233.527 Recovery = 104.01%								
Be 234.861†	60867.1	0.0512	mg/L	0.00044	0.0512	mg/L	0.00044	0.86%

Approved: July 31, 2012

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   QC value within limits for Be 234.861  Recovery = 102.41%
B 249.677†            54980.3       0.513 mg/L        0.0065       0.513 mg/L        0.0065   1.26%
   QC value within limits for B 249.677  Recovery = 102.59%
Ca 227.546†            4449.4        10.7 mg/L          0.16        10.7 mg/L          0.16   1.49%
   QC value within limits for Ca 227.546  Recovery = 106.71%
Cd 228.802†            2835.5      0.0500 mg/L       0.00111      0.0500 mg/L       0.00111   2.22%
   QC value within limits for Cd 228.802  Recovery = 100.05%
Co 228.616†            8984.6       0.205 mg/L        0.0026       0.205 mg/L        0.0026   1.26%
   QC value within limits for Co 228.616  Recovery = 102.32%
Cr 267.716†           64467.9       0.520 mg/L        0.0015       0.520 mg/L        0.0015   0.28%
   QC value within limits for Cr 267.716  Recovery = 103.91%
Cu 327.393†          128749.7       0.522 mg/L        0.0079       0.522 mg/L        0.0079   1.51%
   QC value within limits for Cu 327.393  Recovery = 104.30%
Fe 239.562†           58111.4        4.05 mg/L         0.082        4.05 mg/L         0.082   2.02%
   QC value within limits for Fe 239.562  Recovery = 101.27%
Mg 279.077†           33287.6        10.1 mg/L          0.21        10.1 mg/L          0.21   2.13%
   QC value within limits for Mg 279.077  Recovery = 100.89%
Mn 257.610†          418546.5       0.520 mg/L        0.0052       0.520 mg/L        0.0052   0.99%
   QC value within limits for Mn 257.610  Recovery = 104.00%
Mo 202.031†           37832.0        1.03 mg/L         0.007        1.03 mg/L         0.007   0.66%
   QC value within limits for Mo 202.031  Recovery = 103.31%
Ni 231.604†           36503.5       0.530 mg/L        0.0063       0.530 mg/L        0.0063   1.19%
   QC value within limits for Ni 231.604  Recovery = 106.09%
Pb 220.353†            6993.9       0.515 mg/L        0.0051       0.515 mg/L        0.0051   0.98%
   QC value within limits for Pb 220.353  Recovery = 103.07%
Sb 206.836†            5635.3        1.23 mg/L         0.015        1.23 mg/L         0.015   1.22%
   QC value within limits for Sb 206.836  Recovery = 102.26%
Se 196.026†             827.5       0.411 mg/L        0.0059       0.411 mg/L        0.0059   1.44%
   QC value within limits for Se 196.026  Recovery = 102.73%
Si 251.611†          258186.7        5.17 mg/L         0.019        5.17 mg/L         0.019   0.37%
   QC value within limits for Si 251.611  Recovery = 103.43%
Sn 189.927†           12502.1        1.03 mg/L         0.011        1.03 mg/L         0.011   1.04%
   QC value within limits for Sn 189.927  Recovery = 102.74%
Ti 334.940†         1063116.7        1.04 mg/L         0.002        1.04 mg/L         0.002   0.18%
   QC value within limits for Ti 334.940  Recovery = 103.72%
Tl 190.801†            2040.0       0.535 mg/L        0.0024       0.535 mg/L        0.0024   0.45%
   QC value within limits for Tl 190.801  Recovery = 106.94%
V 290.880†           254331.0        1.04 mg/L         0.001        1.04 mg/L         0.001   0.05%
   QC value within limits for V 290.880  Recovery = 103.83%
Zn 206.200†           59509.4        1.03 mg/L         0.011        1.03 mg/L         0.011   1.05%
   QC value within limits for Zn 206.200  Recovery = 103.36%
K 766.490†           145740.5        50.4 mg/L          0.95        50.4 mg/L          0.95   1.89%
   QC value within limits for K 766.490  Recovery = 100.72%
Na 589.592†          962860.0        51.1 mg/L          1.67        51.1 mg/L          1.67   3.27%
   QC value within limits for Na 589.592  Recovery = 102.26%
Sr 407.771†         2456458.0        1.00 mg/L         0.042        1.00 mg/L         0.042   4.19%
   QC value within limits for Sr 407.771  Recovery = 100.30%
Li 670.784†          145169.2        1.03 mg/L         0.019        1.03 mg/L         0.019   1.82%
   QC value within limits for Li 670.784  Recovery = 102.62%
All analyte(s) passed QC.

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Sequence No.: 35                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/27/2012 6:31:17 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                    198.0 kPa        0.50 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            2432254.8                                                      2140.32   0.09%
YRADIAL               292543.6                                                      5663.82   1.94%
Ga 417.206           1272354.2                                                      8871.00   0.70%
GaRADIAL               82059.3                                                      1191.61   1.45%
Ag 328.068†              -60.5    -0.00035 mg/L      0.000331    -0.00035 mg/L      0.000331  93.80%
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Approved: July 31, 2012

Kim H. Rhoden

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   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               15.8    -0.00259 mg/L      0.000641    -0.00259 mg/L      0.000641  24.75%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -9.6    -0.00098 mg/L      0.000965    -0.00098 mg/L      0.000965  98.69%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               41.2    -0.00079 mg/L      0.000122    -0.00079 mg/L      0.000122  15.30%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               26.4    -0.00003 mg/L      0.000013    -0.00003 mg/L      0.000013  38.22%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               310.4     0.00356 mg/L      0.000329     0.00356 mg/L      0.000329   9.23%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                0.1      0.0477 mg/L       0.01655      0.0477 mg/L       0.01655  34.70%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                0.9     0.00003 mg/L      0.000096     0.00003 mg/L      0.000096 315.65%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               18.4     0.00006 mg/L      0.000085     0.00006 mg/L      0.000085 132.60%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                7.4    -0.00024 mg/L      0.000031    -0.00024 mg/L      0.000031  13.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              213.4     0.00045 mg/L      0.000169     0.00045 mg/L      0.000169  37.88%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               29.0     0.00289 mg/L      0.000193     0.00289 mg/L      0.000193   6.69%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               14.2      0.0110 mg/L       0.00086      0.0110 mg/L       0.00086   7.75%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               26.6    -0.00058 mg/L      0.000024    -0.00058 mg/L      0.000024   4.15%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               18.3     0.00112 mg/L      0.000198     0.00112 mg/L      0.000198  17.74%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               21.2    -0.00287 mg/L      0.000127    -0.00287 mg/L      0.000127   4.41%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               -6.4    -0.00088 mg/L      0.001206    -0.00088 mg/L      0.001206 137.32%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -6.1    -0.00132 mg/L      0.001335    -0.00132 mg/L      0.001335 101.23%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.2     0.00187 mg/L      0.001813     0.00187 mg/L      0.001813  96.76%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -63.8    -0.00677 mg/L      0.000724    -0.00677 mg/L      0.000724  10.69%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               10.1     0.00064 mg/L      0.000776     0.00064 mg/L      0.000776 122.03%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              298.0     0.00122 mg/L      0.000136     0.00122 mg/L      0.000136  11.20%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.9    -0.00243 mg/L      0.000846    -0.00243 mg/L      0.000846  34.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               272.4     0.00125 mg/L      0.000495     0.00125 mg/L      0.000495  39.74%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†               -5.3    -0.00080 mg/L      0.000178    -0.00080 mg/L      0.000178  22.18%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                 2.0     -0.0785 mg/L       0.02783     -0.0785 mg/L       0.02783  35.43%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              243.4    -0.00117 mg/L      0.002464    -0.00117 mg/L      0.002464 210.87%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              504.8     0.00111 mg/L      0.000017     0.00111 mg/L      0.000017   1.50%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              120.5    -0.00109 mg/L      0.000223    -0.00109 mg/L      0.000223  20.38%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 36                                    Autosampler Location: 82
Sample ID: LLCCV                                    Date Collected: 7/27/2012 6:38:10 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: LLCCV
Analyte                 Back Pressure    Flow
All                   198.0 kPa         0.50 L/min

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Approved: July 31, 2012

Kim H. Rhoden

Mean Data: LLCCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2368053.6						32017.34	1.35%
YRADIAL	283686.2						3793.56	1.34%
Ga 417.206	1243938.9						10229.83	0.82%
GaRADIAL	80659.9						2688.07	3.33%
Ag 328.068†	2608.1	0.00830	mg/L	0.000368	0.00830	mg/L	0.000368	4.43%
Al 396.153†	1404.4	0.210	mg/L	0.0042	0.210	mg/L	0.0042	1.98%
As 188.979†	23.6	0.00851	mg/L	0.001274	0.00851	mg/L	0.001274	14.97%
Ba 233.527†	3625.3	0.0207	mg/L	0.00018	0.0207	mg/L	0.00018	0.85%
Be 234.861†	1206.3	0.00096	mg/L	0.000020	0.00096	mg/L	0.000020	2.07%
B 249.677†	1126.3	0.0111	mg/L	0.00045	0.0111	mg/L	0.00045	4.04%
Ca 227.546†	75.9	0.230	mg/L	0.0045	0.230	mg/L	0.0045	1.94%
Cd 228.802†	59.9	0.00106	mg/L	0.000041	0.00106	mg/L	0.000041	3.83%
Co 228.616†	203.5	0.00429	mg/L	0.000060	0.00429	mg/L	0.000060	1.41%
Cr 267.716†	1374.1	0.0108	mg/L	0.00023	0.0108	mg/L	0.00023	2.10%
Cu 327.393†	2858.7	0.0112	mg/L	0.00039	0.0112	mg/L	0.00039	3.49%
Fe 239.562†	1220.8	0.0859	mg/L	0.00189	0.0859	mg/L	0.00189	2.19%
Mg 279.077†	708.8	0.221	mg/L	0.0038	0.221	mg/L	0.0038	1.71%
Mn 257.610†	8922.6	0.0105	mg/L	0.00010	0.0105	mg/L	0.00010	0.93%
Mo 202.031†	773.2	0.0217	mg/L	0.00040	0.0217	mg/L	0.00040	1.86%
Ni 231.604†	767.6	0.00804	mg/L	0.000134	0.00804	mg/L	0.000134	1.67%
Pb 220.353†	135.2	0.00956	mg/L	0.000496	0.00956	mg/L	0.000496	5.19%
Sb 206.836†	107.8	0.0235	mg/L	0.00140	0.0235	mg/L	0.00140	5.96%
Se 196.026†	18.0	0.00727	mg/L	0.002201	0.00727	mg/L	0.002201	30.26%
Si 251.611†	5108.1	0.0969	mg/L	0.00086	0.0969	mg/L	0.00086	0.89%
Sn 189.927†	267.3	0.0218	mg/L	0.00018	0.0218	mg/L	0.00018	0.80%
Ti 334.940†	21576.2	0.0220	mg/L	0.00026	0.0220	mg/L	0.00026	1.18%
Tl 190.801†	44.6	0.00905	mg/L	0.001790	0.00905	mg/L	0.001790	19.77%
V 290.880†	5368.7	0.0220	mg/L	0.00124	0.0220	mg/L	0.00124	5.63%
Zn 206.200†	1334.4	0.0225	mg/L	0.00042	0.0225	mg/L	0.00042	1.85%
K 766.490†	3367.1	1.08	mg/L	0.015	1.08	mg/L	0.015	1.38%
Na 589.592†	20368.1	1.06	mg/L	0.020	1.06	mg/L	0.020	1.89%
Sr 407.771†	54332.6	0.0231	mg/L	0.00058	0.0231	mg/L	0.00058	2.50%
Li 670.784†	3155.5	0.0204	mg/L	0.00073	0.0204	mg/L	0.00073	3.59%

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Sequence No.: 37 **Autosampler Location: 83**
Sample ID: PBW 76 WG404676-02 **Date Collected: 7/27/2012 6:45:07 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 76 WG404676-02

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: PBW 76 WG404676-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2389920.0						30689.58	1.28%
YRADIAL	292812.5						1549.74	0.53%
Ga 417.206	1209365.7						13107.76	1.08%
GaRADIAL	82752.3						2458.19	2.97%
Ag 328.068†	-3.4	-0.00015	mg/L	0.000298	-0.00015	mg/L	0.000298	194.08%
Al 396.153†	-13.7	-0.00715	mg/L	0.001333	-0.00715	mg/L	0.001333	18.65%
As 188.979†	-16.4	-0.00291	mg/L	0.001001	-0.00291	mg/L	0.001001	34.44%
Ba 233.527†	-1.9	-0.00106	mg/L	0.000232	-0.00106	mg/L	0.000232	22.01%
Be 234.861†	-290.4	-0.00031	mg/L	0.000037	-0.00031	mg/L	0.000037	11.81%
B 249.677†	29.6	0.00091	mg/L	0.000085	0.00091	mg/L	0.000085	9.31%
Ca 227.546†	-7.4	0.0455	mg/L	0.02366	0.0455	mg/L	0.02366	52.03%
Cd 228.802†	7.5	0.00016	mg/L	0.000133	0.00016	mg/L	0.000133	83.32%
Co 228.616†	5.6	-0.00023	mg/L	0.000179	-0.00023	mg/L	0.000179	76.62%
Cr 267.716†	30.7	-0.00005	mg/L	0.000032	-0.00005	mg/L	0.000032	65.85%
Cu 327.393†	326.7	0.00090	mg/L	0.000055	0.00090	mg/L	0.000055	6.06%
Fe 239.562†	593.0	0.0422	mg/L	0.00057	0.0422	mg/L	0.00057	1.34%
Mg 279.077†	88.7	0.0335	mg/L	0.00326	0.0335	mg/L	0.00326	9.73%
Mn 257.610†	84.9	-0.00050	mg/L	0.000018	-0.00050	mg/L	0.000018	3.57%
Mo 202.031†	22.7	0.00124	mg/L	0.000192	0.00124	mg/L	0.000192	15.54%

Approved: July 31, 2012

Ni 231.604†	1168.2	0.0139	mg/L	0.00016	0.0139	mg/L	0.00016	1.18%
Pb 220.353†	-9.2	-0.00109	mg/L	0.000688	-0.00109	mg/L	0.000688	63.27%
Sb 206.836†	-1.8	-0.00038	mg/L	0.000266	-0.00038	mg/L	0.000266	69.48%
Se 196.026†	8.8	0.00266	mg/L	0.001608	0.00266	mg/L	0.001608	60.37%
Si 251.611†	-156.0	-0.00863	mg/L	0.000359	-0.00863	mg/L	0.000359	4.17%
Sn 189.927†	27.8	0.00209	mg/L	0.001081	0.00209	mg/L	0.001081	51.69%
Ti 334.940†	132.9	0.00106	mg/L	0.000060	0.00106	mg/L	0.000060	5.65%
Tl 190.801†	-11.6	-0.00564	mg/L	0.002088	-0.00564	mg/L	0.002088	37.04%
V 290.880†	236.4	0.00110	mg/L	0.000722	0.00110	mg/L	0.000722	65.85%
Zn 206.200†	66.0	0.00043	mg/L	0.000083	0.00043	mg/L	0.000083	19.10%
K 766.490†	37.7	-0.0662	mg/L	0.02535	-0.0662	mg/L	0.02535	38.27%
Na 589.592†	271.4	0.00030	mg/L	0.007952	0.00030	mg/L	0.007952	>999.9%
Sr 407.771†	723.1	0.00120	mg/L	0.000019	0.00120	mg/L	0.000019	1.58%
Li 670.784†	-74.1	-0.00247	mg/L	0.000468	-0.00247	mg/L	0.000468	18.95%

Sequence No.: 38 **Autosampler Location: 84**
Sample ID: LCSW 76 WG404676-03 **Date Collected: 7/27/2012 6:52:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 76 WG404676-03

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: LCSW 76 WG404676-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2341684.3						17025.27	0.73%
YRADIAL	281130.7						5212.55	1.85%
Ga 417.206	1206712.5						31208.96	2.59%
GaRADIAL	78433.7						1604.28	2.05%
Ag 328.068†	64470.0	0.209	mg/L	0.0043	0.209	mg/L	0.0043	2.05%
Al 396.153†	33202.1	5.08	mg/L	0.034	5.08	mg/L	0.034	0.67%
As 188.979†	661.2	0.190	mg/L	0.0062	0.190	mg/L	0.0062	3.24%
Ba 233.527†	84558.4	0.507	mg/L	0.0062	0.507	mg/L	0.0062	1.23%
Be 234.861†	28722.6	0.0241	mg/L	0.00078	0.0241	mg/L	0.00078	3.22%
B 249.677†	103489.2	0.970	mg/L	0.0232	0.970	mg/L	0.0232	2.39%
Ca 227.546†	2159.6	5.20	mg/L	0.163	5.20	mg/L	0.163	3.13%
Cd 228.802†	1376.2	0.0243	mg/L	0.00115	0.0243	mg/L	0.00115	4.75%
Co 228.616†	4365.9	0.0993	mg/L	0.00099	0.0993	mg/L	0.00099	0.99%
Cr 267.716†	31867.3	0.257	mg/L	0.0038	0.257	mg/L	0.0038	1.49%
Cu 327.393†	65282.3	0.264	mg/L	0.0058	0.264	mg/L	0.0058	2.19%
Fe 239.562†	28675.5	2.00	mg/L	0.022	2.00	mg/L	0.022	1.12%
Mg 279.077†	16827.8	5.10	mg/L	0.063	5.10	mg/L	0.063	1.23%
Mn 257.610†	206727.1	0.257	mg/L	0.0035	0.257	mg/L	0.0035	1.38%
Mo 202.031†	18553.7	0.507	mg/L	0.0054	0.507	mg/L	0.0054	1.07%
Ni 231.604†	17309.1	0.250	mg/L	0.0029	0.250	mg/L	0.0029	1.14%
Pb 220.353†	3330.0	0.245	mg/L	0.0023	0.245	mg/L	0.0023	0.93%
Sb 206.836†	2776.0	0.604	mg/L	0.0195	0.604	mg/L	0.0195	3.22%
Se 196.026†	399.2	0.197	mg/L	0.0057	0.197	mg/L	0.0057	2.87%
Si 251.611†	130316.2	2.61	mg/L	0.045	2.61	mg/L	0.045	1.72%
Sn 189.927†	-40.4	-0.00351	mg/L	0.001118	-0.00351	mg/L	0.001118	31.79%
Ti 334.940†	515359.3	0.503	mg/L	0.0019	0.503	mg/L	0.0019	0.37%
Tl 190.801†	964.1	0.252	mg/L	0.0035	0.252	mg/L	0.0035	1.40%
V 290.880†	126161.0	0.515	mg/L	0.0047	0.515	mg/L	0.0047	0.92%
Zn 206.200†	28362.8	0.492	mg/L	0.0090	0.492	mg/L	0.0090	1.83%
K 766.490†	72299.0	24.9	mg/L	0.19	24.9	mg/L	0.19	0.77%
Na 589.592†	497742.9	26.3	mg/L	0.53	26.3	mg/L	0.53	2.01%
Sr 407.771†	1268390.7	0.518	mg/L	0.0108	0.518	mg/L	0.0108	2.09%
Li 670.784†	73654.7	0.520	mg/L	0.0028	0.520	mg/L	0.0028	0.54%

Sequence No.: 39 **Autosampler Location: 85**
Sample ID: FBLK1 WG404620-01 **Date Collected: 7/27/2012 6:58:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 31, 2012
Kim H. Rhoden

Nebulizer Parameters: FBLK1 WG404620-01

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 L/min

Mean Data: FBLK1 WG404620-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2306946.5						9525.14	0.41%
YRADIAL	281285.3						4346.01	1.55%
Ga 417.206	1233121.9						9777.04	0.79%
GaRADIAL	78512.3						1322.68	1.68%
Ag 328.068†	-103.5	-0.00048	mg/L	0.000349	-0.00048	mg/L	0.000349	72.26%
Al 396.153†	-31.0	-0.00983	mg/L	0.000664	-0.00983	mg/L	0.000664	6.76%
As 188.979†	-10.3	-0.00117	mg/L	0.000644	-0.00117	mg/L	0.000644	54.99%
Ba 233.527†	5.5	-0.00101	mg/L	0.000109	-0.00101	mg/L	0.000109	10.83%
Be 234.861†	-259.0	-0.00028	mg/L	0.000015	-0.00028	mg/L	0.000015	5.50%
B 249.677†	444.6	0.00482	mg/L	0.000573	0.00482	mg/L	0.000573	11.90%
Ca 227.546†	-26.6	-0.00390	mg/L	0.013832	-0.00390	mg/L	0.013832	354.92%
Cd 228.802†	5.2	0.00011	mg/L	0.000058	0.00011	mg/L	0.000058	53.41%
Co 228.616†	5.0	-0.00024	mg/L	0.000336	-0.00024	mg/L	0.000336	138.16%
Cr 267.716†	38.5	0.00002	mg/L	0.000060	0.00002	mg/L	0.000060	361.27%
Cu 327.393†	572.0	0.00189	mg/L	0.000226	0.00189	mg/L	0.000226	11.93%
Fe 239.562†	209.1	0.0154	mg/L	0.00046	0.0154	mg/L	0.00046	2.99%
Mg 279.077†	10.7	0.00996	mg/L	0.001886	0.00996	mg/L	0.001886	18.93%
Mn 257.610†	74.8	-0.00052	mg/L	0.000009	-0.00052	mg/L	0.000009	1.73%
Mo 202.031†	30.9	0.00146	mg/L	0.000236	0.00146	mg/L	0.000236	16.13%
Ni 231.604†	756.4	0.00788	mg/L	0.000254	0.00788	mg/L	0.000254	3.22%
Pb 220.353†	-8.4	-0.00103	mg/L	0.000477	-0.00103	mg/L	0.000477	46.51%
Sb 206.836†	-2.7	-0.00057	mg/L	0.001282	-0.00057	mg/L	0.001282	225.33%
Se 196.026†	11.0	0.00374	mg/L	0.001633	0.00374	mg/L	0.001633	43.63%
Si 251.611†	333.9	0.00122	mg/L	0.000337	0.00122	mg/L	0.000337	27.71%
Sn 189.927†	20.7	0.00151	mg/L	0.000208	0.00151	mg/L	0.000208	13.80%
Ti 334.940†	107.4	0.00102	mg/L	0.000016	0.00102	mg/L	0.000016	1.52%
Tl 190.801†	-14.8	-0.00644	mg/L	0.001354	-0.00644	mg/L	0.001354	21.02%
V 290.880†	752.9	0.00321	mg/L	0.000750	0.00321	mg/L	0.000750	23.39%
Zn 206.200†	123.9	0.00144	mg/L	0.000089	0.00144	mg/L	0.000089	6.18%
K 766.490†	4.8	-0.224	mg/L	0.0131	-0.224	mg/L	0.0131	5.85%
Na 589.592†	2711688.7	146	mg/L	3.3	146	mg/L	3.3	2.24%
Sr 407.771†	293.9	0.00103	mg/L	0.000014	0.00103	mg/L	0.000014	1.36%
Li 670.784†	21.7	-0.00179	mg/L	0.000249	-0.00179	mg/L	0.000249	13.89%

Sequence No.: 40 **Autosampler Location: 86**
Sample ID: FBLK2 WG404620-02 **Date Collected: 7/27/2012 7:04:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: FBLK2 WG404620-02

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: FBLK2 WG404620-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2419300.5						51816.79	2.14%
YRADIAL	291377.7						4740.31	1.63%
Ga 417.206	1224032.1						14052.86	1.15%
GaRADIAL	82055.7						2142.01	2.61%
Ag 328.068†	-29.4	-0.00025	mg/L	0.000467	-0.00025	mg/L	0.000467	185.97%
Al 396.153†	-21.5	-0.00836	mg/L	0.000604	-0.00836	mg/L	0.000604	7.22%
As 188.979†	-18.9	-0.00366	mg/L	0.001357	-0.00366	mg/L	0.001357	37.04%
Ba 233.527†	-6.0	-0.00108	mg/L	0.000106	-0.00108	mg/L	0.000106	9.83%
Be 234.861†	-268.9	-0.00029	mg/L	0.000027	-0.00029	mg/L	0.000027	9.46%
B 249.677†	68.9	0.00130	mg/L	0.000171	0.00130	mg/L	0.000171	13.20%
Ca 227.546†	-23.6	-0.00672	mg/L	0.020974	-0.00672	mg/L	0.020974	312.26%
Cd 228.802†	4.5	0.00011	mg/L	0.000101	0.00011	mg/L	0.000101	93.12%
Co 228.616†	9.5	-0.00014	mg/L	0.000073	-0.00014	mg/L	0.000073	52.29%

Approved: July 31, 2012

Cr 267.716†	29.8	-0.00005 mg/L	0.000141	-0.00005 mg/L	0.000141	262.26%
Cu 327.393†	332.2	0.00093 mg/L	0.000629	0.00093 mg/L	0.000629	67.94%
Fe 239.562†	56.8	0.00482 mg/L	0.000431	0.00482 mg/L	0.000431	8.94%
Mg 279.077†	21.9	0.0134 mg/L	0.00327	0.0134 mg/L	0.00327	24.44%
Mn 257.610†	55.4	-0.00054 mg/L	0.000018	-0.00054 mg/L	0.000018	3.32%
Mo 202.031†	27.4	0.00136 mg/L	0.000220	0.00136 mg/L	0.000220	16.13%
Ni 231.604†	-12.1	-0.00336 mg/L	0.000215	-0.00336 mg/L	0.000215	6.40%
Pb 220.353†	0.1	-0.00041 mg/L	0.000442	-0.00041 mg/L	0.000442	108.95%
Sb 206.836†	2.8	0.00062 mg/L	0.000579	0.00062 mg/L	0.000579	93.55%
Se 196.026†	9.2	0.00285 mg/L	0.002784	0.00285 mg/L	0.002784	97.77%
Si 251.611†	-199.5	-0.00950 mg/L	0.000240	-0.00950 mg/L	0.000240	2.52%
Sn 189.927†	19.7	0.00143 mg/L	0.000649	0.00143 mg/L	0.000649	45.49%
Ti 334.940†	232.2	0.00115 mg/L	0.000079	0.00115 mg/L	0.000079	6.87%
Tl 190.801†	-14.6	-0.00641 mg/L	0.002620	-0.00641 mg/L	0.002620	40.89%
V 290.880†	455.7	0.00200 mg/L	0.000765	0.00200 mg/L	0.000765	38.34%
Zn 206.200†	342.4	0.00521 mg/L	0.000090	0.00521 mg/L	0.000090	1.73%
K 766.490†	-18.6	-0.0857 mg/L	0.04101	-0.0857 mg/L	0.04101	47.88%
Na 589.592†	417.1	0.00798 mg/L	0.007577	0.00798 mg/L	0.007577	94.91%
Sr 407.771†	160.5	0.00097 mg/L	0.000010	0.00097 mg/L	0.000010	1.03%
Li 670.784†	-39.7	-0.00223 mg/L	0.000455	-0.00223 mg/L	0.000455	20.44%

Sequence No.: 41 **Autosampler Location: 87**
Sample ID: L1207070601 **Date Collected: 7/27/2012 7:11:54 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207070601

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207070601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2320028.8						22957.15	0.99%
YRADIAL	291812.5						7297.50	2.50%
Ga 417.206	1266961.3						4296.71	0.34%
GaRADIAL	82043.8						1459.15	1.78%
Ag 328.068†	67.9	0.00007	mg/L	0.000389	0.00007	mg/L	0.000389	521.88%
Al 396.153†	525.0	0.0759	mg/L	0.00284	0.0759	mg/L	0.00284	3.74%
As 188.979†	-17.9	-0.00337	mg/L	0.000479	-0.00337	mg/L	0.000479	14.22%
Ba 233.527†	3500.6	0.0200	mg/L	0.00017	0.0200	mg/L	0.00017	0.85%
Be 234.861†	-214.6	-0.00025	mg/L	0.000032	-0.00025	mg/L	0.000032	12.89%
B 249.677†	1530.5	0.0150	mg/L	0.00061	0.0150	mg/L	0.00061	4.08%
Ca 227.546†	3326.1	7.63	mg/L	0.018	7.63	mg/L	0.018	0.23%
Cd 228.802†	9.9	0.00020	mg/L	0.000105	0.00020	mg/L	0.000105	51.62%
Co 228.616†	10.3	-0.00013	mg/L	0.000359	-0.00013	mg/L	0.000359	270.09%
Cr 267.716†	71.6	0.00028	mg/L	0.000176	0.00028	mg/L	0.000176	62.27%
Cu 327.393†	265.8	0.00066	mg/L	0.000610	0.00066	mg/L	0.000610	92.13%
Fe 239.562†	609.1	0.0433	mg/L	0.00041	0.0433	mg/L	0.00041	0.96%
Mg 279.077†	8791.4	2.67	mg/L	0.054	2.67	mg/L	0.054	2.01%
Mn 257.610†	21611.7	0.0262	mg/L	0.00024	0.0262	mg/L	0.00024	0.92%
Mo 202.031†	42.3	0.00178	mg/L	0.000208	0.00178	mg/L	0.000208	11.72%
Ni 231.604†	-7.0	-0.00328	mg/L	0.000082	-0.00328	mg/L	0.000082	2.50%
Pb 220.353†	8.1	0.00024	mg/L	0.001690	0.00024	mg/L	0.001690	715.32%
Sb 206.836†	-1.3	-0.00028	mg/L	0.000644	-0.00028	mg/L	0.000644	227.93%
Se 196.026†	9.3	0.00289	mg/L	0.003370	0.00289	mg/L	0.003370	116.44%
Si 251.611†	20100.4	0.398	mg/L	0.0040	0.398	mg/L	0.0040	0.99%
Sn 189.927†	-67.7	-0.00576	mg/L	0.000565	-0.00576	mg/L	0.000565	9.81%
Ti 334.940†	2388.2	0.00439	mg/L	0.000101	0.00439	mg/L	0.000101	2.31%
Tl 190.801†	-20.8	-0.00797	mg/L	0.002015	-0.00797	mg/L	0.002015	25.28%
V 290.880†	655.4	0.00274	mg/L	0.000639	0.00274	mg/L	0.000639	23.34%
Zn 206.200†	404.9	0.00630	mg/L	0.000285	0.00630	mg/L	0.000285	4.53%
K 766.490†	1384.1	0.252	mg/L	0.0071	0.252	mg/L	0.0071	2.81%
Na 589.592†	2697976.3	145	mg/L	3.6	145	mg/L	3.6	2.48%
Sr 407.771†	17927.1	0.00805	mg/L	0.000251	0.00805	mg/L	0.000251	3.12%
Li 670.784†	101.6	-0.00123	mg/L	0.000189	-0.00123	mg/L	0.000189	15.44%

Approved: July 31, 2012

Kim H. Rhoden

Sequence No.: 42
Sample ID: L1207073901
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 88
Date Collected: 7/27/2012 7:18:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207073901

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207073901

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2300319.0						16783.78	0.73%
YRADIAL	287567.3						1339.23	0.47%
Ga 417.206	1245835.7						10879.50	0.87%
GaRADIAL	80303.2						2537.03	3.16%
Ag 328.068†	-134.7	-0.00058	mg/L	0.000386	-0.00058	mg/L	0.000386	66.04%
Al 396.153†	424.4	0.0604	mg/L	0.00118	0.0604	mg/L	0.00118	1.95%
As 188.979†	-12.2	-0.00171	mg/L	0.001183	-0.00171	mg/L	0.001183	69.31%
Ba 233.527†	1772.1	0.00960	mg/L	0.000019	0.00960	mg/L	0.000019	0.20%
Be 234.861†	-192.7	-0.00022	mg/L	0.000008	-0.00022	mg/L	0.000008	3.63%
B 249.677†	15754.9	0.149	mg/L	0.0017	0.149	mg/L	0.0017	1.11%
Ca 227.546†	1157.4	2.68	mg/L	0.032	2.68	mg/L	0.032	1.21%
Cd 228.802†	5.1	0.00011	mg/L	0.000075	0.00011	mg/L	0.000075	68.79%
Co 228.616†	10.9	-0.00012	mg/L	0.000210	-0.00012	mg/L	0.000210	181.08%
Cr 267.716†	114.8	0.00063	mg/L	0.000096	0.00063	mg/L	0.000096	15.14%
Cu 327.393†	214.9	0.00046	mg/L	0.000144	0.00046	mg/L	0.000144	31.66%
Fe 239.562†	396.7	0.0285	mg/L	0.00063	0.0285	mg/L	0.00063	2.22%
Mg 279.077†	1094.2	0.338	mg/L	0.0020	0.338	mg/L	0.0020	0.60%
Mn 257.610†	34598.0	0.0424	mg/L	0.00025	0.0424	mg/L	0.00025	0.58%
Mo 202.031†	37.6	0.00165	mg/L	0.000126	0.00165	mg/L	0.000126	7.65%
Ni 231.604†	11.5	-0.00301	mg/L	0.000045	-0.00301	mg/L	0.000045	1.50%
Pb 220.353†	2.0	-0.00026	mg/L	0.001666	-0.00026	mg/L	0.001666	649.61%
Sb 206.836†	0.2	0.00004	mg/L	0.000685	0.00004	mg/L	0.000685	>999.9%
Se 196.026†	12.1	0.00428	mg/L	0.001395	0.00428	mg/L	0.001395	32.57%
Si 251.611†	26505.6	0.527	mg/L	0.0247	0.527	mg/L	0.0247	4.68%
Sn 189.927†	-21.7	-0.00198	mg/L	0.000238	-0.00198	mg/L	0.000238	12.00%
Ti 334.940†	1682.6	0.00296	mg/L	0.000173	0.00296	mg/L	0.000173	5.83%
Tl 190.801†	-22.6	-0.00847	mg/L	0.001608	-0.00847	mg/L	0.001608	18.98%
V 290.880†	717.7	0.00306	mg/L	0.000863	0.00306	mg/L	0.000863	28.25%
Zn 206.200†	523.9	0.00836	mg/L	0.000045	0.00836	mg/L	0.000045	0.54%
K 766.490†	1094.3	0.140	mg/L	0.0381	0.140	mg/L	0.0381	27.20%
Na 589.592†	2920085.5	158	mg/L	5.5	158	mg/L	5.5	3.51%
Sr 407.771†	15529.7	0.00718	mg/L	0.000251	0.00718	mg/L	0.000251	3.50%
Li 670.784†	36.6	-0.00169	mg/L	0.000215	-0.00169	mg/L	0.000215	12.75%

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Sequence No.: 43
Sample ID: L1207073902
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 89
Date Collected: 7/27/2012 7:25:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207073902

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 L/min

Mean Data: L1207073902

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2350469.1						14597.24	0.62%
YRADIAL	288397.5						2831.13	0.98%
Ga 417.206	1251173.6						18753.83	1.50%
GaRADIAL	80429.3						214.17	0.27%
Ag 328.068†	45.2	0.00019	mg/L	0.000349	0.00019	mg/L	0.000349	179.31%
Al 396.153†	2171.1	0.330	mg/L	0.0053	0.330	mg/L	0.0053	1.60%
As 188.979†	-19.6	-0.00377	mg/L	0.001436	-0.00377	mg/L	0.001436	38.11%

Approved: July 31, 2012

Ba 233.527†	3330.2	0.0189	mg/L	0.00007	0.0189	mg/L	0.00007	0.35%
Be 234.861†	72.6	-0.00011	mg/L	0.000072	-0.00011	mg/L	0.000072	68.09%
B 249.677†	22600.2	0.213	mg/L	0.0051	0.213	mg/L	0.0051	2.41%
Ca 227.546†	2733.9	6.29	mg/L	0.112	6.29	mg/L	0.112	1.77%
Cd 228.802†	18.6	0.00037	mg/L	0.000082	0.00037	mg/L	0.000082	22.24%
Co 228.616†	45.8	0.00066	mg/L	0.000278	0.00066	mg/L	0.000278	42.05%
Cr 267.716†	214.9	0.00143	mg/L	0.000113	0.00143	mg/L	0.000113	7.88%
Cu 327.393†	458.1	0.00147	mg/L	0.000587	0.00147	mg/L	0.000587	39.84%
Fe 239.562†	7485.4	0.523	mg/L	0.0069	0.523	mg/L	0.0069	1.32%
Mg 279.077†	2188.0	0.668	mg/L	0.0037	0.668	mg/L	0.0037	0.56%
Mn 257.610†	81411.6	0.101	mg/L	0.0016	0.101	mg/L	0.0016	1.58%
Mo 202.031†	55.7	0.00219	mg/L	0.000236	0.00219	mg/L	0.000236	10.78%
Ni 231.604†	85.3	-0.00193	mg/L	0.000437	-0.00193	mg/L	0.000437	22.60%
Pb 220.353†	26.1	0.00150	mg/L	0.001488	0.00150	mg/L	0.001488	98.94%
Sb 206.836†	-5.7	-0.00122	mg/L	0.000394	-0.00122	mg/L	0.000394	32.39%
Se 196.026†	12.5	0.00456	mg/L	0.001805	0.00456	mg/L	0.001805	39.59%
Si 251.611†	63390.6	1.27	mg/L	0.017	1.27	mg/L	0.017	1.36%
Sn 189.927†	-58.3	-0.00498	mg/L	0.000379	-0.00498	mg/L	0.000379	7.61%
Ti 334.940†	5636.4	0.00735	mg/L	0.000236	0.00735	mg/L	0.000236	3.22%
Tl 190.801†	-17.1	-0.00707	mg/L	0.001065	-0.00707	mg/L	0.001065	15.08%
V 290.880†	1431.3	0.00593	mg/L	0.001207	0.00593	mg/L	0.001207	20.34%
Zn 206.200†	6314.1	0.109	mg/L	0.0007	0.109	mg/L	0.0007	0.68%
K 766.490†	1520.5	0.290	mg/L	0.0188	0.290	mg/L	0.0188	6.49%
Na 589.592†	2856346.2	154	mg/L	0.5	154	mg/L	0.5	0.31%
Sr 407.771†	36514.9	0.0157	mg/L	0.00013	0.0157	mg/L	0.00013	0.82%
Li 670.784†	281.3	0.00005	mg/L	0.000541	0.00005	mg/L	0.000541	>999.9%

Sequence No.: 44
Sample ID: L1207074601
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 90
Date Collected: 7/27/2012 7:31:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207074601

Analyte	Back Pressure	Flow
All	200.0 kPa	0.50 L/min

Mean Data: L1207074601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2138533.7						14736.26	0.69%
YRADIAL	276774.8						4529.09	1.64%
Ga 417.206	1190750.7						15406.61	1.29%
GaRADIAL	78956.2						2111.80	2.67%
Ag 328.068†	1884.1	0.00591	mg/L	0.000256	0.00591	mg/L	0.000256	4.33%
Al 396.153†	1057.1	0.158	mg/L	0.0015	0.158	mg/L	0.0015	0.92%
As 188.979†	-34.6	-0.00817	mg/L	0.000827	-0.00817	mg/L	0.000827	10.13%
Ba 233.527†	74900.4	0.449	mg/L	0.0030	0.449	mg/L	0.0030	0.67%
Be 234.861†	-134.8	-0.00021	mg/L	0.000023	-0.00021	mg/L	0.000023	10.78%
B 249.677†	2540.0	0.0244	mg/L	0.00041	0.0244	mg/L	0.00041	1.69%
Ca 227.546†	110394.1	252	mg/L	3.1	252	mg/L	3.1	1.22%
Cd 228.802†	7.7	0.00019	mg/L	0.000050	0.00019	mg/L	0.000050	26.60%
Co 228.616†	-10.0	-0.00065	mg/L	0.000219	-0.00065	mg/L	0.000219	33.69%
Cr 267.716†	726.1	0.00556	mg/L	0.000042	0.00556	mg/L	0.000042	0.75%
Cu 327.393†	889.8	0.00315	mg/L	0.000158	0.00315	mg/L	0.000158	5.03%
Fe 239.562†	2726.5	0.191	mg/L	0.0042	0.191	mg/L	0.0042	2.18%
Mg 279.077†	314.3	0.102	mg/L	0.0071	0.102	mg/L	0.0071	6.96%
Mn 257.610†	2435.1	0.00242	mg/L	0.000028	0.00242	mg/L	0.000028	1.17%
Mo 202.031†	245.9	0.00733	mg/L	0.000188	0.00733	mg/L	0.000188	2.57%
Ni 231.604†	1748.8	0.0224	mg/L	0.00018	0.0224	mg/L	0.00018	0.78%
Pb 220.353†	443.9	0.0343	mg/L	0.00046	0.0343	mg/L	0.00046	1.34%
Sb 206.836†	-3.4	-0.00076	mg/L	0.001041	-0.00076	mg/L	0.001041	137.71%
Se 196.026†	36.5	0.0164	mg/L	0.00165	0.0164	mg/L	0.00165	10.06%
Si 251.611†	14612.4	0.288	mg/L	0.0053	0.288	mg/L	0.0053	1.84%
Sn 189.927†	-368.3	-0.0305	mg/L	0.00030	-0.0305	mg/L	0.00030	0.99%
Ti 334.940†	-38420.1	0.00126	mg/L	0.001042	0.00126	mg/L	0.001042	83.00%
Tl 190.801†	-49.5	-0.0158	mg/L	0.00089	-0.0158	mg/L	0.00089	5.64%
V 290.880†	1607.2	0.00667	mg/L	0.000776	0.00667	mg/L	0.000776	11.64%
Zn 206.200†	6152.7	0.106	mg/L	0.0008	0.106	mg/L	0.0008	0.75%

Approved: July 31, 2012

K 766.490†	733612.8	260	mg/L	3.4	260	mg/L	3.4	1.29%
Na 589.592†	5860836.1	325	mg/L	5.8	325	mg/L	5.8	1.78%
Sr 407.771†	1053814.7	0.425	mg/L	0.0163	0.425	mg/L	0.0163	3.83%
Li 670.784†	8198.9	0.0561	mg/L	0.00039	0.0561	mg/L	0.00039	0.70%

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Sequence No.: 45 **Autosampler Location: 91**
Sample ID: L1207074601PS WG404736-01 **Date Collected: 7/27/2012 7:38:56 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207074601PS WG404736-01

Analyte	Back Pressure	Flow
All	198.0 kPa	0.50 L/min

Mean Data: L1207074601PS WG404736-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2159900.5						21261.37	0.98%
YRADIAL	278675.9						1647.51	0.59%
Ga 417.206	1202781.3						22273.21	1.85%
GaRADIAL	78507.0						1101.31	1.40%
Ag 328.068†	65842.7	0.213	mg/L	0.0057	0.213	mg/L	0.0057	2.67%
Al 396.153†	35594.5	5.45	mg/L	0.036	5.45	mg/L	0.036	0.66%
As 188.979†	654.7	0.188	mg/L	0.0026	0.188	mg/L	0.0026	1.36%
Ba 233.527†	151865.7	0.911	mg/L	0.0078	0.911	mg/L	0.0078	0.86%
Be 234.861†	29135.2	0.0245	mg/L	0.00072	0.0245	mg/L	0.00072	2.93%
B 249.677†	104855.4	0.983	mg/L	0.0285	0.983	mg/L	0.0285	2.90%
Ca 227.546†	103950.8	237	mg/L	7.0	237	mg/L	7.0	2.94%
Cd 228.802†	1359.9	0.0240	mg/L	0.00104	0.0240	mg/L	0.00104	4.35%
Co 228.616†	4292.8	0.0975	mg/L	0.00101	0.0975	mg/L	0.00101	1.04%
Cr 267.716†	31936.2	0.257	mg/L	0.0028	0.257	mg/L	0.0028	1.10%
Cu 327.393†	65263.6	0.264	mg/L	0.0076	0.264	mg/L	0.0076	2.89%
Fe 239.562†	29590.0	2.06	mg/L	0.006	2.06	mg/L	0.006	0.27%
Mg 279.077†	16891.4	5.12	mg/L	0.012	5.12	mg/L	0.012	0.23%
Mn 257.610†	207642.0	0.258	mg/L	0.0022	0.258	mg/L	0.0022	0.87%
Mo 202.031†	19066.9	0.521	mg/L	0.0075	0.521	mg/L	0.0075	1.44%
Ni 231.604†	18436.6	0.266	mg/L	0.0012	0.266	mg/L	0.0012	0.44%
Pb 220.353†	3714.2	0.275	mg/L	0.0047	0.275	mg/L	0.0047	1.70%
Sb 206.836†	2751.3	0.599	mg/L	0.0183	0.599	mg/L	0.0183	3.06%
Se 196.026†	428.5	0.212	mg/L	0.0112	0.212	mg/L	0.0112	5.27%
Si 251.611†	148385.7	2.97	mg/L	0.059	2.97	mg/L	0.059	1.97%
Sn 189.927†	-359.1	-0.0297	mg/L	0.00035	-0.0297	mg/L	0.00035	1.16%
Ti 334.940†	498609.6	0.522	mg/L	0.0025	0.522	mg/L	0.0025	0.48%
Tl 190.801†	866.6	0.226	mg/L	0.0038	0.226	mg/L	0.0038	1.68%
V 290.880†	130865.0	0.534	mg/L	0.0042	0.534	mg/L	0.0042	0.79%
Zn 206.200†	34042.2	0.591	mg/L	0.0119	0.591	mg/L	0.0119	2.01%
K 766.490†	725406.9	257	mg/L	3.3	257	mg/L	3.3	1.27%
Na 589.592†	5784337.8	321	mg/L	11.2	321	mg/L	11.2	3.50%
Sr 407.771†	2188764.7	0.889	mg/L	0.0197	0.889	mg/L	0.0197	2.21%
Li 670.784†	81638.5	0.576	mg/L	0.0037	0.576	mg/L	0.0037	0.64%

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Sequence No.: 46 **Autosampler Location: 92**
Sample ID: L1207074601DL WG404736-02 **Date Collected: 7/27/2012 7:45:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207074601DL WG404736-02

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207074601DL WG404736-02

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2323650.8						2848.75	0.12%

Approved: July 31, 2012

Kim H. Rhoden

YRADIAL	280683.4				3144.79	1.12%
Ga 417.206	1282243.3				2920.02	0.23%
GaRADIAL	81159.4				1871.69	2.31%
Ag 328.068†	494.4	0.00143 mg/L	0.000584	0.00143 mg/L	0.000584	40.79%
Al 396.153†	220.4	0.0289 mg/L	0.00059	0.0289 mg/L	0.00059	2.04%
As 188.979†	-19.9	-0.00396 mg/L	0.000843	-0.00396 mg/L	0.000843	21.32%
Ba 233.527†	15063.9	0.0894 mg/L	0.00042	0.0894 mg/L	0.00042	0.46%
Be 234.861†	34.0	-0.00003 mg/L	0.000009	-0.00003 mg/L	0.000009	26.90%
B 249.677†	748.6	0.00766 mg/L	0.000182	0.00766 mg/L	0.000182	2.37%
Ca 227.546†	21234.4	48.4 mg/L	0.12	48.4 mg/L	0.12	0.25%
Cd 228.802†	5.1	0.00012 mg/L	0.000146	0.00012 mg/L	0.000146	120.58%
Co 228.616†	5.6	-0.00024 mg/L	0.000114	-0.00024 mg/L	0.000114	47.05%
Cr 267.716†	80.6	0.00036 mg/L	0.000043	0.00036 mg/L	0.000043	11.98%
Cu 327.393†	2201.4	0.00847 mg/L	0.000488	0.00847 mg/L	0.000488	5.75%
Fe 239.562†	508.3	0.0363 mg/L	0.00069	0.0363 mg/L	0.00069	1.91%
Mg 279.077†	70.0	0.0279 mg/L	0.00097	0.0279 mg/L	0.00097	3.47%
Mn 257.610†	832.3	0.00043 mg/L	0.000016	0.00043 mg/L	0.000016	3.68%
Mo 202.031†	79.6	0.00279 mg/L	0.000470	0.00279 mg/L	0.000470	16.85%
Ni 231.604†	1200.5	0.0144 mg/L	0.00023	0.0144 mg/L	0.00023	1.59%
Pb 220.353†	112.1	0.00822 mg/L	0.001071	0.00822 mg/L	0.001071	13.03%
Sb 206.836†	-4.8	-0.00103 mg/L	0.000854	-0.00103 mg/L	0.000854	82.69%
Se 196.026†	5.0	0.00078 mg/L	0.000542	0.00078 mg/L	0.000542	69.04%
Si 251.611†	2768.0	0.0501 mg/L	0.00006	0.0501 mg/L	0.00006	0.12%
Sn 189.927†	-253.2	-0.0210 mg/L	0.00060	-0.0210 mg/L	0.00060	2.86%
Ti 334.940†	-7871.3	0.00052 mg/L	0.000176	0.00052 mg/L	0.000176	33.69%
Tl 190.801†	-16.4	-0.00694 mg/L	0.004744	-0.00694 mg/L	0.004744	68.35%
V 290.880†	843.7	0.00357 mg/L	0.000047	0.00357 mg/L	0.000047	1.31%
Zn 206.200†	1297.7	0.0217 mg/L	0.00013	0.0217 mg/L	0.00013	0.60%
K 766.490†	146188.3	50.5 mg/L	0.63	50.5 mg/L	0.63	1.25%
Na 589.592†	1186233.2	63.1 mg/L	2.40	63.1 mg/L	2.40	3.80%
Sr 407.771†	216877.0	0.0883 mg/L	0.00171	0.0883 mg/L	0.00171	1.93%
Li 670.784†	1806.4	0.0108 mg/L	0.00054	0.0108 mg/L	0.00054	4.95%

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Sequence No.: 47 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 7:51:57 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2353549.2						14049.31	0.60%
YRADIAL	291170.9						1057.73	0.36%
Ga 417.206	1250072.4						22252.70	1.78%
GaRADIAL	81112.3						523.43	0.65%
Ag 328.068†	126841.2	0.411	mg/L	0.0094	0.411	mg/L	0.0094	2.29%
QC value within limits for Ag 328.068 Recovery = 102.84%								
Al 396.153†	66608.5	10.2	mg/L	0.05	10.2	mg/L	0.05	0.50%
QC value within limits for Al 396.153 Recovery = 101.99%								
As 188.979†	1376.1	0.394	mg/L	0.0067	0.394	mg/L	0.0067	1.71%
QC value within limits for As 188.979 Recovery = 98.45%								
Ba 233.527†	168830.2	1.01	mg/L	0.004	1.01	mg/L	0.004	0.41%
QC value within limits for Ba 233.527 Recovery = 101.29%								
Be 234.861†	59680.9	0.0502	mg/L	0.00108	0.0502	mg/L	0.00108	2.14%
QC value within limits for Be 234.861 Recovery = 100.37%								
B 249.677†	53661.5	0.501	mg/L	0.0143	0.501	mg/L	0.0143	2.86%
QC value within limits for B 249.677 Recovery = 100.12%								
Ca 227.546†	4410.2	10.6	mg/L	0.26	10.6	mg/L	0.26	2.49%
QC value within limits for Ca 227.546 Recovery = 105.74%								
Cd 228.802†	2801.6	0.0494	mg/L	0.00170	0.0494	mg/L	0.00170	3.44%
QC value within limits for Cd 228.802 Recovery = 98.84%								
Co 228.616†	8817.3	0.201	mg/L	0.0017	0.201	mg/L	0.0017	0.84%
QC value within limits for Co 228.616 Recovery = 100.41%								
Cr 267.716†	63266.1	0.510	mg/L	0.0028	0.510	mg/L	0.0028	0.54%

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   QC value within limits for Cr 267.716  Recovery = 101.97%
Cu 327.393†          126991.2       0.514 mg/L        0.0116       0.514 mg/L        0.0116   2.26%
   QC value within limits for Cu 327.393  Recovery = 102.87%
Fe 239.562†           57971.2        4.04 mg/L         0.031        4.04 mg/L         0.031   0.78%
   QC value within limits for Fe 239.562  Recovery = 101.02%
Mg 279.077†           33313.4        10.1 mg/L          0.05        10.1 mg/L          0.05   0.54%
   QC value within limits for Mg 279.077  Recovery = 100.96%
Mn 257.610†          408193.5       0.507 mg/L        0.0038       0.507 mg/L        0.0038   0.74%
   QC value within limits for Mn 257.610  Recovery = 101.42%
Mo 202.031†           36919.6        1.01 mg/L         0.002        1.01 mg/L         0.002   0.15%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Ni 231.604†           35816.6       0.520 mg/L        0.0047       0.520 mg/L        0.0047   0.90%
   QC value within limits for Ni 231.604  Recovery = 104.08%
Pb 220.353†            6877.8       0.507 mg/L        0.0032       0.507 mg/L        0.0032   0.63%
   QC value within limits for Pb 220.353  Recovery = 101.36%
Sb 206.836†            5557.2        1.21 mg/L         0.029        1.21 mg/L         0.029   2.40%
   QC value within limits for Sb 206.836  Recovery = 100.84%
Se 196.026†             812.6       0.404 mg/L        0.0122       0.404 mg/L        0.0122   3.02%
   QC value within limits for Se 196.026  Recovery = 100.88%
Si 251.611†          252067.6        5.05 mg/L         0.081        5.05 mg/L         0.081   1.61%
   QC value within limits for Si 251.611  Recovery = 100.98%
Sn 189.927†           12277.9        1.01 mg/L         0.008        1.01 mg/L         0.008   0.77%
   QC value within limits for Sn 189.927  Recovery = 100.90%
Ti 334.940†         1038791.1        1.01 mg/L         0.005        1.01 mg/L         0.005   0.48%
   QC value within limits for Ti 334.940  Recovery = 101.35%
Tl 190.801†            2018.0       0.529 mg/L        0.0082       0.529 mg/L        0.0082   1.55%
   QC value within limits for Tl 190.801  Recovery = 105.75%
V 290.880†           247862.1        1.01 mg/L         0.009        1.01 mg/L         0.009   0.85%
   QC value within limits for V 290.880  Recovery = 101.19%
Zn 206.200†           58075.3        1.01 mg/L         0.002        1.01 mg/L         0.002   0.23%
   QC value within limits for Zn 206.200  Recovery = 100.87%
K 766.490†           146552.9        50.6 mg/L          0.29        50.6 mg/L          0.29   0.56%
   QC value within limits for K 766.490  Recovery = 101.29%
Na 589.592†          984797.1        52.3 mg/L          0.68        52.3 mg/L          0.68   1.29%
   QC value within limits for Na 589.592  Recovery = 104.61%
Sr 407.771†         2506298.6        1.02 mg/L         0.004        1.02 mg/L         0.004   0.41%
   QC value within limits for Sr 407.771  Recovery = 102.33%
Li 670.784†          146135.1        1.03 mg/L         0.003        1.03 mg/L         0.003   0.33%
   QC value within limits for Li 670.784  Recovery = 103.30%
All analyte(s) passed QC.

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Sequence No.: 48                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/27/2012 7:57:57 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                    197.0 kPa         0.50 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            2418937.5                                                      4714.36   0.19%
YRADIAL               294542.1                                                      7614.38   2.59%
Ga 417.206           1294697.4                                                      9004.16   0.70%
GaRADIAL               82579.1                                                      1763.14   2.14%
Ag 328.068†               -6.3    -0.00018 mg/L      0.000263    -0.00018 mg/L      0.000263 147.43%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               19.6    -0.00199 mg/L      0.000484    -0.00199 mg/L      0.000484  24.32%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -3.6     0.00076 mg/L      0.001493     0.00076 mg/L      0.001493 196.29%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               55.9    -0.00071 mg/L      0.000070    -0.00071 mg/L      0.000070   9.86%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               61.1     0.00000 mg/L      0.000013     0.00000 mg/L      0.000013 286.67%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               204.4     0.00257 mg/L      0.000356     0.00257 mg/L      0.000356  13.85%
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   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -19.3     0.00323 mg/L      0.017466     0.00323 mg/L      0.017466 540.55%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                3.7     0.00007 mg/L      0.000093     0.00007 mg/L      0.000093 128.29%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               15.4    -0.00001 mg/L      0.000065    -0.00001 mg/L      0.000065 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -0.7    -0.00030 mg/L      0.000077    -0.00030 mg/L      0.000077  25.80%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              266.6     0.00066 mg/L      0.000507     0.00066 mg/L      0.000507  76.70%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               24.6     0.00257 mg/L      0.000239     0.00257 mg/L      0.000239   9.29%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               16.3      0.0117 mg/L       0.00339      0.0117 mg/L       0.00339  29.02%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†               28.4    -0.00057 mg/L      0.000002    -0.00057 mg/L      0.000002   0.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.8     0.00094 mg/L      0.000277     0.00094 mg/L      0.000277  29.49%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                4.3    -0.00312 mg/L      0.000135    -0.00312 mg/L      0.000135   4.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               -4.2    -0.00072 mg/L      0.000250    -0.00072 mg/L      0.000250  34.66%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -1.3    -0.00027 mg/L      0.000555    -0.00027 mg/L      0.000555 207.92%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.5    -0.00245 mg/L      0.000527    -0.00245 mg/L      0.000527  21.48%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -161.0    -0.00873 mg/L      0.000548    -0.00873 mg/L      0.000548   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               10.6     0.00068 mg/L      0.000756     0.00068 mg/L      0.000756 111.61%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              238.8     0.00115 mg/L      0.000074     0.00115 mg/L      0.000074   6.39%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               10.5     0.00003 mg/L      0.002951     0.00003 mg/L      0.002951 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               412.4     0.00182 mg/L      0.000046     0.00182 mg/L      0.000046   2.52%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                6.2    -0.00060 mg/L      0.000053    -0.00060 mg/L      0.000053   8.80%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               146.3     -0.0288 mg/L       0.02286     -0.0288 mg/L       0.02286  79.26%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              463.4      0.0104 mg/L       0.00294      0.0104 mg/L       0.00294  28.20%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              565.1     0.00114 mg/L      0.000017     0.00114 mg/L      0.000017   1.48%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              121.6    -0.00109 mg/L      0.000365    -0.00109 mg/L      0.000365  33.67%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 49                                    Autosampler Location: 93
Sample ID: L1207077401 WG404676-01                  Date Collected: 7/27/2012 8:04:50 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1207077401 WG404676-01
Analyte                 Back Pressure    Flow
All                    198.0 kPa         0.50 L/min

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Mean Data: L1207077401 WG404676-01
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2194247.2                                                      21278.75   0.97%
YRADIAL               283287.7                                                       5728.32   2.02%
Ga 417.206           1278563.5                                                      45809.92   3.58%
GaRADIAL               79902.1                                                        955.71   1.20%
Ag 328.068†             -131.2    -0.00054 mg/L      0.000103    -0.00054 mg/L      0.000103  19.05%
Al 396.153†              255.7      0.0344 mg/L       0.00200      0.0344 mg/L       0.00200   5.83%
As 188.979†              -12.6    -0.00183 mg/L      0.000353    -0.00183 mg/L      0.000353  19.36%
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Ba 233.527†	1866.6	0.0102	mg/L	0.00017	0.0102	mg/L	0.00017	1.70%
Be 234.861†	-165.8	-0.00021	mg/L	0.000038	-0.00021	mg/L	0.000038	17.81%
B 249.677†	1338.2	0.0132	mg/L	0.00067	0.0132	mg/L	0.00067	5.04%
Ca 227.546†	243.1	0.610	mg/L	0.0084	0.610	mg/L	0.0084	1.38%
Cd 228.802†	6.1	0.00013	mg/L	0.000097	0.00013	mg/L	0.000097	76.39%
Co 228.616†	0.4	-0.00036	mg/L	0.000170	-0.00036	mg/L	0.000170	47.39%
Cr 267.716†	136.2	0.00081	mg/L	0.000109	0.00081	mg/L	0.000109	13.54%
Cu 327.393†	1834.9	0.00701	mg/L	0.000114	0.00701	mg/L	0.000114	1.62%
Fe 239.562†	1033.8	0.0729	mg/L	0.00090	0.0729	mg/L	0.00090	1.24%
Mg 279.077†	2655.7	0.810	mg/L	0.0130	0.810	mg/L	0.0130	1.61%
Mn 257.610†	1293.8	0.00100	mg/L	0.000018	0.00100	mg/L	0.000018	1.81%
Mo 202.031†	41.1	0.00175	mg/L	0.000102	0.00175	mg/L	0.000102	5.86%
Ni 231.604†	613.2	0.00579	mg/L	0.000219	0.00579	mg/L	0.000219	3.79%
Pb 220.353†	-17.4	-0.00169	mg/L	0.000979	-0.00169	mg/L	0.000979	57.92%
Sb 206.836†	4.3	0.00095	mg/L	0.001126	0.00095	mg/L	0.001126	117.97%
Se 196.026†	10.2	0.00336	mg/L	0.003505	0.00336	mg/L	0.003505	104.19%
Si 251.611†	126861.1	2.54	mg/L	0.079	2.54	mg/L	0.079	3.09%
Sn 189.927†	13.1	0.00088	mg/L	0.001023	0.00088	mg/L	0.001023	115.75%
Ti 334.940†	2327.1	0.00328	mg/L	0.000150	0.00328	mg/L	0.000150	4.58%
Tl 190.801†	-16.6	-0.00688	mg/L	0.001519	-0.00688	mg/L	0.001519	22.08%
V 290.880†	1662.2	0.00690	mg/L	0.001324	0.00690	mg/L	0.001324	19.19%
Zn 206.200†	2148.7	0.0365	mg/L	0.00052	0.0365	mg/L	0.00052	1.44%
K 766.490†	1634.1	0.484	mg/L	0.0043	0.484	mg/L	0.0043	0.89%
Na 589.592†	Saturated2							
Sr 407.771†	19432.7	0.00882	mg/L	0.000233	0.00882	mg/L	0.000233	2.64%
Li 670.784†	234.2	-0.00029	mg/L	0.000054	-0.00029	mg/L	0.000054	18.67%

Sequence No.: 50 **Autosampler Location: 94**
Sample ID: L1207077402S WG404676-04 **Date Collected: 7/27/2012 8:11:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207077402S WG404676-04

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 L/min

Mean Data: L1207077402S WG404676-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2233365.3						8837.04	0.40%
YRADIAL	288024.8						1483.82	0.52%
Ga 417.206	1268872.0						25700.74	2.03%
GaRADIAL	79997.5						1435.36	1.79%
Ag 328.068†	60452.4	0.196	mg/L	0.0046	0.196	mg/L	0.0046	2.32%
Al 396.153†	33715.5	5.16	mg/L	0.008	5.16	mg/L	0.008	0.16%
As 188.979†	624.5	0.180	mg/L	0.0047	0.180	mg/L	0.0047	2.60%
Ba 233.527†	85276.0	0.511	mg/L	0.0048	0.511	mg/L	0.0048	0.94%
Be 234.861†	27085.6	0.0227	mg/L	0.00055	0.0227	mg/L	0.00055	2.44%
B 249.677†	97429.3	0.914	mg/L	0.0205	0.914	mg/L	0.0205	2.25%
Ca 227.546†	2367.2	5.68	mg/L	0.116	5.68	mg/L	0.116	2.04%
Cd 228.802†	1289.1	0.0228	mg/L	0.00100	0.0228	mg/L	0.00100	4.41%
Co 228.616†	4293.1	0.0976	mg/L	0.00069	0.0976	mg/L	0.00069	0.70%
Cr 267.716†	31060.9	0.250	mg/L	0.0029	0.250	mg/L	0.0029	1.17%
Cu 327.393†	63334.7	0.256	mg/L	0.0050	0.256	mg/L	0.0050	1.93%
Fe 239.562†	28366.6	1.98	mg/L	0.003	1.98	mg/L	0.003	0.17%
Mg 279.077†	18842.9	5.71	mg/L	0.018	5.71	mg/L	0.018	0.31%
Mn 257.610†	203337.5	0.252	mg/L	0.0022	0.252	mg/L	0.0022	0.89%
Mo 202.031†	18202.3	0.497	mg/L	0.0036	0.497	mg/L	0.0036	0.72%
Ni 231.604†	17538.6	0.253	mg/L	0.0012	0.253	mg/L	0.0012	0.46%
Pb 220.353†	3231.9	0.238	mg/L	0.0035	0.238	mg/L	0.0035	1.48%
Sb 206.836†	2598.3	0.566	mg/L	0.0131	0.566	mg/L	0.0131	2.31%
Se 196.026†	388.2	0.192	mg/L	0.0045	0.192	mg/L	0.0045	2.36%
Si 251.611†	282145.4	5.66	mg/L	0.075	5.66	mg/L	0.075	1.32%
Sn 189.927†	-48.1	-0.00415	mg/L	0.000545	-0.00415	mg/L	0.000545	13.13%
Ti 334.940†	517640.1	0.506	mg/L	0.0006	0.506	mg/L	0.0006	0.11%
Tl 190.801†	863.7	0.226	mg/L	0.0036	0.226	mg/L	0.0036	1.59%
V 290.880†	125656.4	0.513	mg/L	0.0042	0.513	mg/L	0.0042	0.82%
Zn 206.200†	31057.2	0.539	mg/L	0.0111	0.539	mg/L	0.0111	2.05%

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K 766.490†	74079.9	25.1	mg/L	0.21	25.1	mg/L	0.21	0.82%
Na 589.592†	8053427.7	457	mg/L	5.0	457	mg/L	5.0	1.10%
Sr 407.771†	1250004.9	0.511	mg/L	0.0043	0.511	mg/L	0.0043	0.84%
Li 670.784†	73135.6	0.516	mg/L	0.0051	0.516	mg/L	0.0051	0.99%

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Sequence No.: 51 **Autosampler Location: 95**
Sample ID: L1207077403SD WG404676-05 **Date Collected: 7/27/2012 8:17:53 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207077403SD WG404676-05

Analyte	Back Pressure	Flow
All	199.0 kPa	0.50 L/min

Mean Data: L1207077403SD WG404676-05

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2241907.5						17475.45	0.78%
YRADIAL	286134.5						3613.57	1.26%
Ga 417.206	1270261.2						20811.78	1.64%
GaRADIAL	80341.7						634.68	0.79%
Ag 328.068†	60614.4	0.197	mg/L	0.0036	0.197	mg/L	0.0036	1.81%
Al 396.153†	34457.5	5.28	mg/L	0.063	5.28	mg/L	0.063	1.20%
As 188.979†	632.0	0.182	mg/L	0.0018	0.182	mg/L	0.0018	0.99%
Ba 233.527†	85521.0	0.513	mg/L	0.0041	0.513	mg/L	0.0041	0.80%
Be 234.861†	27383.5	0.0229	mg/L	0.00041	0.0229	mg/L	0.00041	1.81%
B 249.677†	98181.5	0.920	mg/L	0.0175	0.920	mg/L	0.0175	1.90%
Ca 227.546†	2466.6	5.91	mg/L	0.152	5.91	mg/L	0.152	2.57%
Cd 228.802†	1293.9	0.0228	mg/L	0.00106	0.0228	mg/L	0.00106	4.63%
Co 228.616†	4278.6	0.0972	mg/L	0.00038	0.0972	mg/L	0.00038	0.39%
Cr 267.716†	31065.7	0.250	mg/L	0.0033	0.250	mg/L	0.0033	1.31%
Cu 327.393†	64740.3	0.262	mg/L	0.0024	0.262	mg/L	0.0024	0.93%
Fe 239.562†	33960.6	2.37	mg/L	0.030	2.37	mg/L	0.030	1.27%
Mg 279.077†	19200.6	5.82	mg/L	0.048	5.82	mg/L	0.048	0.83%
Mn 257.610†	217855.6	0.270	mg/L	0.0015	0.270	mg/L	0.0015	0.54%
Mo 202.031†	18336.2	0.501	mg/L	0.0062	0.501	mg/L	0.0062	1.23%
Ni 231.604†	17454.4	0.252	mg/L	0.0020	0.252	mg/L	0.0020	0.77%
Pb 220.353†	3261.2	0.240	mg/L	0.0018	0.240	mg/L	0.0018	0.74%
Sb 206.836†	2594.3	0.565	mg/L	0.0121	0.565	mg/L	0.0121	2.14%
Se 196.026†	381.7	0.189	mg/L	0.0045	0.189	mg/L	0.0045	2.39%
Si 251.611†	290158.8	5.82	mg/L	0.032	5.82	mg/L	0.032	0.56%
Sn 189.927†	-50.0	-0.00431	mg/L	0.000749	-0.00431	mg/L	0.000749	17.38%
Ti 334.940†	512905.5	0.501	mg/L	0.0035	0.501	mg/L	0.0035	0.70%
Tl 190.801†	859.4	0.225	mg/L	0.0064	0.225	mg/L	0.0064	2.83%
V 290.880†	126326.9	0.516	mg/L	0.0068	0.516	mg/L	0.0068	1.32%
Zn 206.200†	31274.7	0.543	mg/L	0.0085	0.543	mg/L	0.0085	1.57%
K 766.490†	72047.4	24.3	mg/L	0.35	24.3	mg/L	0.35	1.45%
Na 589.592†	8331889.6	474	mg/L	3.0	474	mg/L	3.0	0.63%
Sr 407.771†	1236060.7	0.505	mg/L	0.0146	0.505	mg/L	0.0146	2.90%
Li 670.784†	71530.6	0.505	mg/L	0.0059	0.505	mg/L	0.0059	1.18%

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Sequence No.: 52 **Autosampler Location: 96**
Sample ID: L1207077404 **Date Collected: 7/27/2012 8:23:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207077404

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207077404

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2245049.7						17689.17	0.79%

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YRADIAL	292495.5						626.42	0.21%
Ga 417.206	1277086.1						22467.72	1.76%
GaRADIAL	81335.2						291.98	0.36%
Ag 328.068†	31.1	0.00015	mg/L	0.000630	0.00015	mg/L	0.000630	418.53%
Al 396.153†	1649.6	0.249	mg/L	0.0041	0.249	mg/L	0.0041	1.63%
As 188.979†	-19.8	-0.00382	mg/L	0.000313	-0.00382	mg/L	0.000313	8.21%
Ba 233.527†	5365.0	0.0311	mg/L	0.00014	0.0311	mg/L	0.00014	0.46%
Be 234.861†	224.2	0.00002	mg/L	0.000020	0.00002	mg/L	0.000020	84.41%
B 249.677†	1945.5	0.0187	mg/L	0.00082	0.0187	mg/L	0.00082	4.37%
Ca 227.546†	425.9	1.03	mg/L	0.037	1.03	mg/L	0.037	3.63%
Cd 228.802†	12.4	0.00025	mg/L	0.000162	0.00025	mg/L	0.000162	63.96%
Co 228.616†	32.0	0.00035	mg/L	0.000053	0.00035	mg/L	0.000053	15.35%
Cr 267.716†	142.2	0.00084	mg/L	0.000123	0.00084	mg/L	0.000123	14.66%
Cu 327.393†	2341.3	0.00908	mg/L	0.000689	0.00908	mg/L	0.000689	7.59%
Fe 239.562†	6937.2	0.484	mg/L	0.0075	0.484	mg/L	0.0075	1.56%
Mg 279.077†	3232.4	0.984	mg/L	0.0240	0.984	mg/L	0.0240	2.44%
Mn 257.610†	8492.0	0.00995	mg/L	0.000159	0.00995	mg/L	0.000159	1.60%
Mo 202.031†	80.4	0.00284	mg/L	0.000239	0.00284	mg/L	0.000239	8.43%
Ni 231.604†	64.2	-0.00224	mg/L	0.000503	-0.00224	mg/L	0.000503	22.46%
Pb 220.353†	-32.9	-0.00284	mg/L	0.002327	-0.00284	mg/L	0.002327	81.97%
Sb 206.836†	-5.7	-0.00122	mg/L	0.001403	-0.00122	mg/L	0.001403	114.61%
Se 196.026†	13.7	0.00518	mg/L	0.002448	0.00518	mg/L	0.002448	47.27%
Si 251.611†	133485.7	2.68	mg/L	0.041	2.68	mg/L	0.041	1.54%
Sn 189.927†	3.4	0.00009	mg/L	0.000803	0.00009	mg/L	0.000803	926.92%
Ti 334.940†	3074.7	0.00407	mg/L	0.000214	0.00407	mg/L	0.000214	5.25%
Tl 190.801†	-19.8	-0.00768	mg/L	0.001915	-0.00768	mg/L	0.001915	24.93%
V 290.880†	2022.1	0.00834	mg/L	0.000293	0.00834	mg/L	0.000293	3.51%
Zn 206.200†	2326.6	0.0395	mg/L	0.00030	0.0395	mg/L	0.00030	0.76%
K 766.490†	1443.0	-0.0408	mg/L	0.01866	-0.0408	mg/L	0.01866	45.69%
Na 589.592†	8081810.4	459	mg/L	3.8	459	mg/L	3.8	0.84%
Sr 407.771†	23907.7	0.0106	mg/L	0.00011	0.0106	mg/L	0.00011	1.03%
Li 670.784†	272.7	-0.00001	mg/L	0.000344	-0.00001	mg/L	0.000344	>999.9%

Sequence No.: 53
Sample ID: L1207077405
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 97
Date Collected: 7/27/2012 8:30:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207077405

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207077405

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2447373.7						11150.89	0.46%
YRADIAL	294515.2						6692.07	2.27%
Ga 417.206	1278739.0						8842.35	0.69%
GaRADIAL	83672.6						495.09	0.59%
Ag 328.068†	128207.1	0.412	mg/L	0.0052	0.412	mg/L	0.0052	1.26%
Al 396.153†	11.1	-0.00337	mg/L	0.001104	-0.00337	mg/L	0.001104	32.76%
As 188.979†	1141.4	0.331	mg/L	0.0042	0.331	mg/L	0.0042	1.26%
Ba 233.527†	166898.7	1.00	mg/L	0.012	1.00	mg/L	0.012	1.20%
Be 234.861†	107347.0	0.0912	mg/L	0.00094	0.0912	mg/L	0.00094	1.03%
B 249.677†	54.2	-0.00230	mg/L	0.000376	-0.00230	mg/L	0.000376	16.38%
Ca 227.546†	-102.2	-0.0208	mg/L	0.01989	-0.0208	mg/L	0.01989	95.86%
Cd 228.802†	5158.8	0.0919	mg/L	0.00105	0.0919	mg/L	0.00105	1.15%
Co 228.616†	-24.8	-0.00113	mg/L	0.000321	-0.00113	mg/L	0.000321	28.43%
Cr 267.716†	99796.2	0.804	mg/L	0.0145	0.804	mg/L	0.0145	1.81%
Cu 327.393†	182.1	0.00031	mg/L	0.000230	0.00031	mg/L	0.000230	74.51%
Fe 239.562†	117.6	0.00906	mg/L	0.000022	0.00906	mg/L	0.000022	0.24%
Mg 279.077†	37.3	0.0180	mg/L	0.00239	0.0180	mg/L	0.00239	13.25%
Mn 257.610†	70.0	-0.00042	mg/L	0.000021	-0.00042	mg/L	0.000021	4.97%
Mo 202.031†	15.6	0.00104	mg/L	0.000228	0.00104	mg/L	0.000228	21.85%
Ni 231.604†	13822.7	0.199	mg/L	0.0024	0.199	mg/L	0.0024	1.19%
Pb 220.353†	10982.9	0.808	mg/L	0.0037	0.808	mg/L	0.0037	0.46%
Sb 206.836†	1810.7	0.388	mg/L	0.0061	0.388	mg/L	0.0061	1.56%
Se 196.026†	724.4	0.358	mg/L	0.0038	0.358	mg/L	0.0038	1.06%

Approved: July 31, 2012

Si 251.611†	1144.5	0.0175	mg/L	0.00075	0.0175	mg/L	0.00075	4.26%
Sn 189.927†	12.7	0.00085	mg/L	0.000312	0.00085	mg/L	0.000312	36.89%
Ti 334.940†	517.4	0.00116	mg/L	0.000033	0.00116	mg/L	0.000033	2.86%
Tl 190.801†	790.5	0.200	mg/L	0.0020	0.200	mg/L	0.0020	0.98%
V 290.880†	378.3	0.00157	mg/L	0.001332	0.00157	mg/L	0.001332	84.77%
Zn 206.200†	10460.2	0.187	mg/L	0.0021	0.187	mg/L	0.0021	1.14%
K 766.490†	83.0	-0.0507	mg/L	0.02257	-0.0507	mg/L	0.02257	44.55%
Na 589.592†	966.3	0.0369	mg/L	0.00688	0.0369	mg/L	0.00688	18.63%
Sr 407.771†	1646.8	0.00158	mg/L	0.000025	0.00158	mg/L	0.000025	1.60%
Li 670.784†	1.7	-0.00193	mg/L	0.000710	-0.00193	mg/L	0.000710	36.69%

Sequence No.: 54 **Autosampler Location: 98**
Sample ID: L1207077601 **Date Collected: 7/27/2012 8:36:57 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207077601

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207077601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2336607.9						11655.19	0.50%
YRADIAL	290430.8						4388.53	1.51%
Ga 417.206	1310533.5						3271.81	0.25%
GaRADIAL	81958.5						1856.18	2.26%
Ag 328.068†	-685.2	-0.00049	mg/L	0.000178	-0.00049	mg/L	0.000178	36.07%
Al 396.153†	3126.2	0.478	mg/L	0.0058	0.478	mg/L	0.0058	1.22%
As 188.979†	-20.6	-0.00308	mg/L	0.000334	-0.00308	mg/L	0.000334	10.84%
Ba 233.527†	1067.6	0.00510	mg/L	0.000116	0.00510	mg/L	0.000116	2.27%
Be 234.861†	1288.1	-0.00001	mg/L	0.000009	-0.00001	mg/L	0.000009	68.80%
B 249.677†	1619.8	0.0139	mg/L	0.00018	0.0139	mg/L	0.00018	1.27%
Ca 227.546†	235.3	0.708	mg/L	0.0269	0.708	mg/L	0.0269	3.81%
Cd 228.802†	7.7	0.00018	mg/L	0.000152	0.00018	mg/L	0.000152	83.00%
Co 228.616†	240.1	0.00501	mg/L	0.000178	0.00501	mg/L	0.000178	3.55%
Cr 267.716†	1601.1	0.0124	mg/L	0.00021	0.0124	mg/L	0.00021	1.68%
Cu 327.393†	1322.0	0.00515	mg/L	0.000414	0.00515	mg/L	0.000414	8.03%
Fe 239.562†	65111.4	4.54	mg/L	0.013	4.54	mg/L	0.013	0.29%
Mg 279.077†	675.1	0.208	mg/L	0.0019	0.208	mg/L	0.0019	0.92%
Mn 257.610†	38456.7	0.0472	mg/L	0.00037	0.0472	mg/L	0.00037	0.78%
Mo 202.031†	52.5	0.00228	mg/L	0.000168	0.00228	mg/L	0.000168	7.36%
Ni 231.604†	1338.0	0.0164	mg/L	0.00018	0.0164	mg/L	0.00018	1.11%
Pb 220.353†	39.1	0.00212	mg/L	0.001179	0.00212	mg/L	0.001179	55.66%
Sb 206.836†	2.3	0.00057	mg/L	0.000236	0.00057	mg/L	0.000236	41.25%
Se 196.026†	3.8	0.00089	mg/L	0.001871	0.00089	mg/L	0.001871	210.06%
Si 251.611†	25282.6	0.503	mg/L	0.0157	0.503	mg/L	0.0157	3.13%
Sn 189.927†	5.4	0.00025	mg/L	0.000814	0.00025	mg/L	0.000814	322.58%
Ti 334.940†	5298.1	0.00616	mg/L	0.000532	0.00616	mg/L	0.000532	8.63%
Tl 190.801†	-16.7	-0.00691	mg/L	0.003658	-0.00691	mg/L	0.003658	52.95%
V 290.880†	1269.3	0.00507	mg/L	0.000926	0.00507	mg/L	0.000926	18.27%
Zn 206.200†	1433.3	0.0241	mg/L	0.00007	0.0241	mg/L	0.00007	0.27%
K 766.490†	738.8	0.0341	mg/L	0.01105	0.0341	mg/L	0.01105	32.42%
Na 589.592†	2620769.0	141	mg/L	2.4	141	mg/L	2.4	1.71%
Sr 407.771†	6363.9	0.00349	mg/L	0.000077	0.00349	mg/L	0.000077	2.20%
Li 670.784†	187.7	-0.00062	mg/L	0.000119	-0.00062	mg/L	0.000119	19.26%

Sequence No.: 55 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 8:43:56 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Approved: July 31, 2012

Kim H. Rhoden

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2359608.9						20851.00	0.88%
YRADIAL	296784.1						2279.66	0.77%
Ga 417.206	1301228.1						12566.17	0.97%
GaRADIAL	82217.0						121.43	0.15%
Ag 328.068†	122715.7	0.398	mg/L	0.0062	0.398	mg/L	0.0062	1.55%
QC value within limits for Ag 328.068 Recovery = 99.51%								
Al 396.153†	66309.7	10.2	mg/L	0.02	10.2	mg/L	0.02	0.22%
QC value within limits for Al 396.153 Recovery = 101.54%								
As 188.979†	1320.4	0.378	mg/L	0.0044	0.378	mg/L	0.0044	1.17%
QC value within limits for As 188.979 Recovery = 94.44%								
Ba 233.527†	167307.7	1.00	mg/L	0.008	1.00	mg/L	0.008	0.83%
QC value within limits for Ba 233.527 Recovery = 100.38%								
Be 234.861†	57382.9	0.0482	mg/L	0.00089	0.0482	mg/L	0.00089	1.85%
QC value within limits for Be 234.861 Recovery = 96.48%								
B 249.677†	51631.6	0.482	mg/L	0.0088	0.482	mg/L	0.0088	1.82%
QC value within limits for B 249.677 Recovery = 96.32%								
Ca 227.546†	4299.9	10.3	mg/L	0.21	10.3	mg/L	0.21	2.02%
QC value within limits for Ca 227.546 Recovery = 103.19%								
Cd 228.802†	2700.6	0.0477	mg/L	0.00160	0.0477	mg/L	0.00160	3.36%
QC value within limits for Cd 228.802 Recovery = 95.33%								
Co 228.616†	8753.5	0.199	mg/L	0.0021	0.199	mg/L	0.0021	1.06%
QC value within limits for Co 228.616 Recovery = 99.67%								
Cr 267.716†	62509.7	0.504	mg/L	0.0044	0.504	mg/L	0.0044	0.88%
QC value within limits for Cr 267.716 Recovery = 100.76%								
Cu 327.393†	124412.9	0.504	mg/L	0.0088	0.504	mg/L	0.0088	1.74%
QC value within limits for Cu 327.393 Recovery = 100.79%								
Fe 239.562†	57226.5	3.99	mg/L	0.034	3.99	mg/L	0.034	0.86%
QC value within limits for Fe 239.562 Recovery = 99.73%								
Mg 279.077†	32759.9	9.93	mg/L	0.079	9.93	mg/L	0.079	0.79%
QC value within limits for Mg 279.077 Recovery = 99.29%								
Mn 257.610†	405130.7	0.503	mg/L	0.0049	0.503	mg/L	0.0049	0.98%
QC value within limits for Mn 257.610 Recovery = 100.66%								
Mo 202.031†	36651.0	1.00	mg/L	0.007	1.00	mg/L	0.007	0.70%
QC value within limits for Mo 202.031 Recovery = 100.09%								
Ni 231.604†	35550.3	0.516	mg/L	0.0051	0.516	mg/L	0.0051	0.98%
QC value within limits for Ni 231.604 Recovery = 103.30%								
Pb 220.353†	6842.3	0.504	mg/L	0.0035	0.504	mg/L	0.0035	0.69%
QC value within limits for Pb 220.353 Recovery = 100.84%								
Sb 206.836†	5337.3	1.16	mg/L	0.021	1.16	mg/L	0.021	1.81%
QC value within limits for Sb 206.836 Recovery = 96.85%								
Se 196.026†	777.7	0.386	mg/L	0.0088	0.386	mg/L	0.0088	2.28%
QC value within limits for Se 196.026 Recovery = 96.54%								
Si 251.611†	244412.1	4.90	mg/L	0.046	4.90	mg/L	0.046	0.95%
QC value within limits for Si 251.611 Recovery = 97.90%								
Sn 189.927†	12193.0	1.00	mg/L	0.008	1.00	mg/L	0.008	0.76%
QC value within limits for Sn 189.927 Recovery = 100.20%								
Ti 334.940†	1038019.7	1.01	mg/L	0.003	1.01	mg/L	0.003	0.27%
QC value within limits for Ti 334.940 Recovery = 101.27%								
Tl 190.801†	2018.2	0.529	mg/L	0.0047	0.529	mg/L	0.0047	0.89%
QC value within limits for Tl 190.801 Recovery = 105.76%								
V 290.880†	247588.3	1.01	mg/L	0.004	1.01	mg/L	0.004	0.38%
QC value within limits for V 290.880 Recovery = 101.08%								
Zn 206.200†	56532.7	0.982	mg/L	0.0079	0.982	mg/L	0.0079	0.81%
QC value within limits for Zn 206.200 Recovery = 98.20%								
K 766.490†	144760.5	50.0	mg/L	0.33	50.0	mg/L	0.33	0.65%
QC value within limits for K 766.490 Recovery = 100.04%								
Na 589.592†	968981.6	51.5	mg/L	0.18	51.5	mg/L	0.18	0.35%
QC value within limits for Na 589.592 Recovery = 102.92%								
Sr 407.771†	2450593.1	1.00	mg/L	0.014	1.00	mg/L	0.014	1.41%
QC value within limits for Sr 407.771 Recovery = 100.06%								
Li 670.784†	146238.7	1.03	mg/L	0.003	1.03	mg/L	0.003	0.31%
QC value within limits for Li 670.784 Recovery = 103.38%								

All analyte(s) passed QC.

Sequence No.: 56 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/27/2012 8:49:56 PM**

Approved: July 31, 2012

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

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2490172.1						14641.03	0.59%
YRADIAL	301875.6						5263.93	1.74%
Ga 417.206	1360948.1						10762.54	0.79%
GaRADIAL	84990.5						1519.34	1.79%
Ag 328.068†	29.4	-0.00007	mg/L	0.000199	-0.00007	mg/L	0.000199	296.14%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	24.8	-0.00118	mg/L	0.001553	-0.00118	mg/L	0.001553	131.67%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-3.9	0.00069	mg/L	0.000745	0.00069	mg/L	0.000745	108.02%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	83.9	-0.00054	mg/L	0.000129	-0.00054	mg/L	0.000129	24.04%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	142.0	0.00006	mg/L	0.000027	0.00006	mg/L	0.000027	42.62%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	123.4	0.00181	mg/L	0.000081	0.00181	mg/L	0.000081	4.49%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-11.6	0.0210	mg/L	0.02481	0.0210	mg/L	0.02481	117.93%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-2.9	-0.00005	mg/L	0.000025	-0.00005	mg/L	0.000025	52.19%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	9.2	-0.00015	mg/L	0.000305	-0.00015	mg/L	0.000305	206.42%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	13.0	-0.00019	mg/L	0.000068	-0.00019	mg/L	0.000068	35.90%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	273.6	0.00069	mg/L	0.000414	0.00069	mg/L	0.000414	60.15%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	31.7	0.00307	mg/L	0.000514	0.00307	mg/L	0.000514	16.72%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	12.8	0.0106	mg/L	0.00265	0.0106	mg/L	0.00265	24.97%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	55.2	-0.00054	mg/L	0.000010	-0.00054	mg/L	0.000010	1.84%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	11.3	0.00092	mg/L	0.000178	0.00092	mg/L	0.000178	19.27%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	24.9	-0.00282	mg/L	0.000067	-0.00282	mg/L	0.000067	2.37%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-0.7	-0.00046	mg/L	0.000448	-0.00046	mg/L	0.000448	96.78%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.8	0.00062	mg/L	0.000691	0.00062	mg/L	0.000691	111.36%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	0.7	-0.00138	mg/L	0.000825	-0.00138	mg/L	0.000825	59.63%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	14.0	-0.00521	mg/L	0.000394	-0.00521	mg/L	0.000394	7.57%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	8.9	0.00054	mg/L	0.000123	0.00054	mg/L	0.000123	22.88%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	339.9	0.00126	mg/L	0.000062	0.00126	mg/L	0.000062	4.91%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	11.9	0.00038	mg/L	0.001914	0.00038	mg/L	0.001914	508.60%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	-85.2	-0.00021	mg/L	0.000359	-0.00021	mg/L	0.000359	167.20%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	4.9	-0.00062	mg/L	0.000220	-0.00062	mg/L	0.000220	35.18%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	133.1	-0.0334	mg/L	0.00943	-0.0334	mg/L	0.00943	28.24%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	711.5	0.0235	mg/L	0.00793	0.0235	mg/L	0.00793	33.74%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	730.1	0.00120	mg/L	0.000008	0.00120	mg/L	0.000008	0.65%

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QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	113.9	-0.00114 mg/L	0.000691	-0.00114 mg/L	0.000691	60.62%

QC value within limits for Li 670.784 Recovery = Not calculated

All analyte(s) passed QC.

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Sequence No.: 57 **Autosampler Location: 99**
Sample ID: PBW 8B WG404662-02 **Date Collected: 7/27/2012 8:56:49 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 8B WG404662-02

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: PBW 8B WG404662-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2442546.7						25149.55	1.03%
YRADIAL	303306.1						4315.51	1.42%
Ga 417.206	1363419.0						20228.18	1.48%
GaRADIAL	85797.9						1507.64	1.76%
Ag 328.068†	47.7	0.00000	mg/L	0.000407	0.00000	mg/L	0.000407	>999.9%
Al 396.153†	-21.1	-0.00825	mg/L	0.001408	-0.00825	mg/L	0.001408	17.07%
As 188.979†	-4.8	0.00043	mg/L	0.001326	0.00043	mg/L	0.001326	309.06%
Ba 233.527†	42.9	-0.00078	mg/L	0.000076	-0.00078	mg/L	0.000076	9.68%
Be 234.861†	142.0	0.00006	mg/L	0.000015	0.00006	mg/L	0.000015	22.89%
B 249.677†	-30.2	0.00037	mg/L	0.000163	0.00037	mg/L	0.000163	44.15%
Ca 227.546†	-8.1	0.0289	mg/L	0.01199	0.0289	mg/L	0.01199	41.53%
Cd 228.802†	-2.0	-0.00003	mg/L	0.000012	-0.00003	mg/L	0.000012	37.81%
Co 228.616†	8.5	-0.00016	mg/L	0.000038	-0.00016	mg/L	0.000038	23.28%
Cr 267.716†	-1.7	-0.00031	mg/L	0.000016	-0.00031	mg/L	0.000016	5.15%
Cu 327.393†	222.0	0.00048	mg/L	0.000322	0.00048	mg/L	0.000322	66.85%
Fe 239.562†	14.8	0.00190	mg/L	0.000481	0.00190	mg/L	0.000481	25.33%
Mg 279.077†	-3.7	0.00561	mg/L	0.002877	0.00561	mg/L	0.002877	51.29%
Mn 257.610†	447.6	-0.00005	mg/L	0.000019	-0.00005	mg/L	0.000019	34.87%
Mo 202.031†	5.3	0.00076	mg/L	0.000239	0.00076	mg/L	0.000239	31.32%
Ni 231.604†	22.8	-0.00285	mg/L	0.000204	-0.00285	mg/L	0.000204	7.17%
Pb 220.353†	-3.0	-0.00063	mg/L	0.000174	-0.00063	mg/L	0.000174	27.54%
Sb 206.836†	-5.3	-0.00114	mg/L	0.000374	-0.00114	mg/L	0.000374	32.67%
Se 196.026†	-1.6	-0.00254	mg/L	0.001312	-0.00254	mg/L	0.001312	51.61%
Si 251.611†	168.7	-0.00210	mg/L	0.000496	-0.00210	mg/L	0.000496	23.67%
Sn 189.927†	3.9	0.00012	mg/L	0.000188	0.00012	mg/L	0.000188	154.68%
Ti 334.940†	177.4	0.00110	mg/L	0.000091	0.00110	mg/L	0.000091	8.32%
Tl 190.801†	9.6	-0.00021	mg/L	0.002268	-0.00021	mg/L	0.002268	>999.9%
V 290.880†	711.6	0.00304	mg/L	0.001565	0.00304	mg/L	0.001565	51.46%
Zn 206.200†	278.5	0.00411	mg/L	0.000060	0.00411	mg/L	0.000060	1.46%
K 766.490†	150.7	-0.0273	mg/L	0.02625	-0.0273	mg/L	0.02625	96.00%
Na 589.592†	978.8	0.0376	mg/L	0.00473	0.0376	mg/L	0.00473	12.58%
Sr 407.771†	61.6	0.00093	mg/L	0.000030	0.00093	mg/L	0.000030	3.23%
Li 670.784†	89.3	-0.00131	mg/L	0.000287	-0.00131	mg/L	0.000287	21.84%

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Sequence No.: 58 **Autosampler Location: 100**
Sample ID: LCSW 8B WG404662-03 **Date Collected: 7/27/2012 9:03:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 8B WG404662-03

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: LCSW 8B WG404662-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2382655.2						20046.30	0.84%

Approved: July 31, 2012

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YRADIAL	301932.1					2773.07	0.92%
Ga 417.206	1348535.5					18855.17	1.40%
GaRADIAL	83780.6					1192.17	1.42%
Ag 328.068†	62115.6	0.201	mg/L	0.0048	0.201 mg/L	0.0048	2.37%
Al 396.153†	33472.2	5.12	mg/L	0.020	5.12 mg/L	0.020	0.38%
As 188.979†	637.9	0.183	mg/L	0.0022	0.183 mg/L	0.0022	1.19%
Ba 233.527†	85233.7	0.511	mg/L	0.0061	0.511 mg/L	0.0061	1.20%
Be 234.861†	28242.1	0.0237	mg/L	0.00056	0.0237 mg/L	0.00056	2.38%
B 249.677†	102240.6	0.959	mg/L	0.0278	0.959 mg/L	0.0278	2.90%
Ca 227.546†	2139.9	5.16	mg/L	0.111	5.16 mg/L	0.111	2.15%
Cd 228.802†	1320.3	0.0233	mg/L	0.00082	0.0233 mg/L	0.00082	3.53%
Co 228.616†	4456.7	0.101	mg/L	0.0009	0.101 mg/L	0.0009	0.93%
Cr 267.716†	31520.4	0.254	mg/L	0.0029	0.254 mg/L	0.0029	1.14%
Cu 327.393†	63065.3	0.255	mg/L	0.0069	0.255 mg/L	0.0069	2.70%
Fe 239.562†	28246.8	1.97	mg/L	0.029	1.97 mg/L	0.029	1.45%
Mg 279.077†	16620.8	5.04	mg/L	0.066	5.04 mg/L	0.066	1.30%
Mn 257.610†	208175.2	0.258	mg/L	0.0034	0.258 mg/L	0.0034	1.32%
Mo 202.031†	18510.0	0.506	mg/L	0.0045	0.506 mg/L	0.0045	0.88%
Ni 231.604†	17663.7	0.255	mg/L	0.0033	0.255 mg/L	0.0033	1.30%
Pb 220.353†	3473.6	0.256	mg/L	0.0011	0.256 mg/L	0.0011	0.43%
Sb 206.836†	2628.4	0.572	mg/L	0.0136	0.572 mg/L	0.0136	2.37%
Se 196.026†	394.2	0.195	mg/L	0.0053	0.195 mg/L	0.0053	2.70%
Si 251.611†	125996.1	2.52	mg/L	0.035	2.52 mg/L	0.035	1.38%
Sn 189.927†	6355.7	0.522	mg/L	0.0026	0.522 mg/L	0.0026	0.49%
Ti 334.940†	521388.7	0.509	mg/L	0.0017	0.509 mg/L	0.0017	0.34%
Tl 190.801†	1057.1	0.275	mg/L	0.0018	0.275 mg/L	0.0018	0.64%
V 290.880†	127419.6	0.520	mg/L	0.0051	0.520 mg/L	0.0051	0.98%
Zn 206.200†	28805.3	0.500	mg/L	0.0051	0.500 mg/L	0.0051	1.03%
K 766.490†	73882.3	25.4	mg/L	0.15	25.4 mg/L	0.15	0.58%
Na 589.592†	507012.7	26.8	mg/L	0.63	26.8 mg/L	0.63	2.36%
Sr 407.771†	1265826.4	0.517	mg/L	0.0069	0.517 mg/L	0.0069	1.34%
Li 670.784†	76685.9	0.541	mg/L	0.0042	0.541 mg/L	0.0042	0.78%

Sequence No.: 59 **Autosampler Location: 101**
Sample ID: FLT BLK WG404662-04 **Date Collected: 7/27/2012 9:09:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: FLT BLK WG404662-04

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: FLT BLK WG404662-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2464031.5						19908.66	0.81%
YRADIAL	304491.8						7935.80	2.61%
Ga 417.206	1430828.8						11899.72	0.83%
GaRADIAL	86398.0						1672.23	1.94%
Ag 328.068†	13.0	-0.00011	mg/L	0.000320	-0.00011	mg/L	0.000320	285.85%
Al 396.153†	-19.3	-0.00797	mg/L	0.001839	-0.00797	mg/L	0.001839	23.09%
As 188.979†	-3.1	0.00090	mg/L	0.002227	0.00090	mg/L	0.002227	246.86%
Ba 233.527†	46.5	-0.00076	mg/L	0.000070	-0.00076	mg/L	0.000070	9.14%
Be 234.861†	168.4	0.00009	mg/L	0.000015	0.00009	mg/L	0.000015	16.95%
B 249.677†	115.4	0.00173	mg/L	0.000113	0.00173	mg/L	0.000113	6.51%
Ca 227.546†	-9.6	0.0258	mg/L	0.00759	0.0258	mg/L	0.00759	29.41%
Cd 228.802†	-3.1	-0.00005	mg/L	0.000116	-0.00005	mg/L	0.000116	220.77%
Co 228.616†	13.6	-0.00005	mg/L	0.000194	-0.00005	mg/L	0.000194	400.61%
Cr 267.716†	41.1	0.00004	mg/L	0.000105	0.00004	mg/L	0.000105	279.36%
Cu 327.393†	133.8	0.00013	mg/L	0.000319	0.00013	mg/L	0.000319	254.88%
Fe 239.562†	48.2	0.00422	mg/L	0.000369	0.00422	mg/L	0.000369	8.74%
Mg 279.077†	-4.3	0.00543	mg/L	0.001889	0.00543	mg/L	0.001889	34.82%
Mn 257.610†	63.3	-0.00053	mg/L	0.000029	-0.00053	mg/L	0.000029	5.38%
Mo 202.031†	-0.9	0.00059	mg/L	0.000254	0.00059	mg/L	0.000254	42.72%
Ni 231.604†	34.5	-0.00268	mg/L	0.000219	-0.00268	mg/L	0.000219	8.19%
Pb 220.353†	-3.5	-0.00067	mg/L	0.000948	-0.00067	mg/L	0.000948	142.22%
Sb 206.836†	-5.5	-0.00120	mg/L	0.000327	-0.00120	mg/L	0.000327	27.28%
Se 196.026†	2.6	-0.00044	mg/L	0.001357	-0.00044	mg/L	0.001357	308.56%

Approved: July 31, 2012

Si 251.611†	12117.8	0.238	mg/L	0.0018	0.238	mg/L	0.0018	0.74%
Sn 189.927†	7.7	0.00044	mg/L	0.000151	0.00044	mg/L	0.000151	34.69%
Ti 334.940†	140.7	0.00106	mg/L	0.000023	0.00106	mg/L	0.000023	2.15%
Tl 190.801†	9.1	-0.00033	mg/L	0.000916	-0.00033	mg/L	0.000916	278.17%
V 290.880†	780.6	0.00332	mg/L	0.001306	0.00332	mg/L	0.001306	39.32%
Zn 206.200†	207.5	0.00288	mg/L	0.000136	0.00288	mg/L	0.000136	4.74%
K 766.490†	71.2	-0.0547	mg/L	0.02150	-0.0547	mg/L	0.02150	39.30%
Na 589.592†	434.2	0.00888	mg/L	0.005013	0.00888	mg/L	0.005013	56.44%
Sr 407.771†	-100.3	0.00086	mg/L	0.000039	0.00086	mg/L	0.000039	4.46%
Li 670.784†	29.5	-0.00174	mg/L	0.000045	-0.00174	mg/L	0.000045	2.57%

Sequence No.: 60 **Autosampler Location: 102**
Sample ID: L1207082501 **Date Collected: 7/27/2012 9:16:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207082501

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207082501

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2363375.4						20088.07	0.85%
YRADIAL	294104.8						1998.29	0.68%
Ga 417.206	1397343.7						4229.22	0.30%
GaRADIAL	86479.3						2352.30	2.72%
Ag 328.068†	400.3	0.00114	mg/L	0.000085	0.00114	mg/L	0.000085	7.43%
Al 396.153†	1198.9	0.180	mg/L	0.0012	0.180	mg/L	0.0012	0.68%
As 188.979†	-1.8	0.00130	mg/L	0.000259	0.00130	mg/L	0.000259	19.87%
Ba 233.527†	10379.2	0.0613	mg/L	0.00046	0.0613	mg/L	0.00046	0.75%
Be 234.861†	271.1	0.00014	mg/L	0.000004	0.00014	mg/L	0.000004	3.20%
B 249.677†	2577.0	0.0248	mg/L	0.00012	0.0248	mg/L	0.00012	0.47%
Ca 227.546†	17283.4	39.4	mg/L	0.15	39.4	mg/L	0.15	0.38%
Cd 228.802†	3.9	0.00007	mg/L	0.000172	0.00007	mg/L	0.000172	239.33%
Co 228.616†	1.4	-0.00034	mg/L	0.000304	-0.00034	mg/L	0.000304	89.11%
Cr 267.716†	85.7	0.00039	mg/L	0.000070	0.00039	mg/L	0.000070	17.86%
Cu 327.393†	849.3	0.00302	mg/L	0.000517	0.00302	mg/L	0.000517	17.11%
Fe 239.562†	2369.5	0.166	mg/L	0.0008	0.166	mg/L	0.0008	0.46%
Mg 279.077†	24772.7	7.50	mg/L	0.048	7.50	mg/L	0.048	0.63%
Mn 257.610†	3772.0	0.00408	mg/L	0.000046	0.00408	mg/L	0.000046	1.14%
Mo 202.031†	47.5	0.00192	mg/L	0.000077	0.00192	mg/L	0.000077	4.02%
Ni 231.604†	137.9	-0.00117	mg/L	0.000384	-0.00117	mg/L	0.000384	32.97%
Pb 220.353†	55.5	0.00400	mg/L	0.000734	0.00400	mg/L	0.000734	18.35%
Sb 206.836†	-5.7	-0.00122	mg/L	0.000666	-0.00122	mg/L	0.000666	54.40%
Se 196.026†	-1.9	-0.00262	mg/L	0.001759	-0.00262	mg/L	0.001759	67.13%
Si 251.611†	239387.8	4.81	mg/L	0.076	4.81	mg/L	0.076	1.58%
Sn 189.927†	-232.7	-0.0193	mg/L	0.00077	-0.0193	mg/L	0.00077	3.98%
Ti 334.940†	-3882.0	0.00306	mg/L	0.000456	0.00306	mg/L	0.000456	14.92%
Tl 190.801†	-10.3	-0.00534	mg/L	0.002970	-0.00534	mg/L	0.002970	55.67%
V 290.880†	1078.3	0.00433	mg/L	0.000884	0.00433	mg/L	0.000884	20.39%
Zn 206.200†	594.4	0.00957	mg/L	0.000241	0.00957	mg/L	0.000241	2.52%
K 766.490†	11501.5	3.88	mg/L	0.001	3.88	mg/L	0.001	0.03%
Na 589.592†	151480.8	7.98	mg/L	0.169	7.98	mg/L	0.169	2.12%
Sr 407.771†	766182.9	0.313	mg/L	0.0127	0.313	mg/L	0.0127	4.06%
Li 670.784†	325.2	0.00036	mg/L	0.000024	0.00036	mg/L	0.000024	6.79%

Sequence No.: 61 **Autosampler Location: 103**
Sample ID: L1207082501 0.1 **Date Collected: 7/27/2012 9:23:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207082501 0.1

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Approved: July 31, 2012

Kim H. Rhoden

Mean Data: L1207082501 0.1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2372105.3						14811.26	0.62%
YRADIAL	296682.2						9041.82	3.05%
Ga 417.206	1298670.8						8541.09	0.66%
GaRADIAL	83423.6						1229.00	1.47%
Ag 328.068†	-48.5	-0.00030	mg/L	0.000140	-0.00030	mg/L	0.000140	45.99%
Al 396.153†	130.3	0.0151	mg/L	0.00141	0.0151	mg/L	0.00141	9.32%
As 188.979†	-5.7	0.00018	mg/L	0.001486	0.00018	mg/L	0.001486	838.01%
Ba 233.527†	1059.1	0.00531	mg/L	0.000129	0.00531	mg/L	0.000129	2.44%
Be 234.861†	61.1	-0.00001	mg/L	0.000024	-0.00001	mg/L	0.000024	220.95%
B 249.677†	277.0	0.00324	mg/L	0.000090	0.00324	mg/L	0.000090	2.78%
Ca 227.546†	1798.4	4.15	mg/L	0.031	4.15	mg/L	0.031	0.76%
Cd 228.802†	-4.7	-0.00008	mg/L	0.000088	-0.00008	mg/L	0.000088	113.76%
Co 228.616†	15.1	-0.00002	mg/L	0.000087	-0.00002	mg/L	0.000087	498.23%
Cr 267.716†	15.1	-0.00017	mg/L	0.000079	-0.00017	mg/L	0.000079	45.88%
Cu 327.393†	796.8	0.00281	mg/L	0.000053	0.00281	mg/L	0.000053	1.87%
Fe 239.562†	409.2	0.0294	mg/L	0.00043	0.0294	mg/L	0.00043	1.46%
Mg 279.077†	2429.2	0.741	mg/L	0.0195	0.741	mg/L	0.0195	2.63%
Mn 257.610†	658.3	0.00021	mg/L	0.000015	0.00021	mg/L	0.000015	7.40%
Mo 202.031†	2.7	0.00069	mg/L	0.000235	0.00069	mg/L	0.000235	33.99%
Ni 231.604†	344.6	0.00186	mg/L	0.000067	0.00186	mg/L	0.000067	3.61%
Pb 220.353†	8.7	0.00026	mg/L	0.000907	0.00026	mg/L	0.000907	350.78%
Sb 206.836†	-3.8	-0.00081	mg/L	0.000430	-0.00081	mg/L	0.000430	52.92%
Se 196.026†	-0.7	-0.00206	mg/L	0.000729	-0.00206	mg/L	0.000729	35.35%
Si 251.611†	24747.7	0.492	mg/L	0.0018	0.492	mg/L	0.0018	0.37%
Sn 189.927†	-47.1	-0.00407	mg/L	0.000527	-0.00407	mg/L	0.000527	12.97%
Ti 334.940†	414.8	0.00195	mg/L	0.001281	0.00195	mg/L	0.001281	65.80%
Tl 190.801†	-0.9	-0.00289	mg/L	0.000036	-0.00289	mg/L	0.000036	1.24%
V 290.880†	1017.1	0.00427	mg/L	0.001232	0.00427	mg/L	0.001232	28.86%
Zn 206.200†	139.8	0.00171	mg/L	0.000091	0.00171	mg/L	0.000091	5.33%
K 766.490†	1146.5	0.315	mg/L	0.0392	0.315	mg/L	0.0392	12.46%
Na 589.592†	15708.1	0.814	mg/L	0.0150	0.814	mg/L	0.0150	1.84%
Sr 407.771†	75995.0	0.0318	mg/L	0.00077	0.0318	mg/L	0.00077	2.43%
Li 670.784†	38.7	-0.00167	mg/L	0.000479	-0.00167	mg/L	0.000479	28.67%

Sequence No.: 62 **Autosampler Location: 104**
Sample ID: L1207075702 **Date Collected: 7/27/2012 9:30:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075702

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207075702

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2276711.7						29925.66	1.31%
YRADIAL	285761.1						6698.98	2.34%
Ga 417.206	1369690.1						14700.91	1.07%
GaRADIAL	84045.7						805.30	0.96%
Ag 328.068†	682.5	0.00162	mg/L	0.000366	0.00162	mg/L	0.000366	22.56%
Al 396.153†	-74.1	-0.0165	mg/L	0.00188	-0.0165	mg/L	0.00188	11.36%
As 188.979†	-8.9	-0.00077	mg/L	0.000342	-0.00077	mg/L	0.000342	44.38%
Ba 233.527†	16953.2	0.101	mg/L	0.0013	0.101	mg/L	0.0013	1.28%
Be 234.861†	199.3	0.00011	mg/L	0.000023	0.00011	mg/L	0.000023	20.91%
B 249.677†	6950.7	0.0659	mg/L	0.00152	0.0659	mg/L	0.00152	2.31%
Ca 227.546†	37480.2	85.4	mg/L	1.27	85.4	mg/L	1.27	1.49%
Cd 228.802†	-6.5	-0.00011	mg/L	0.000055	-0.00011	mg/L	0.000055	51.46%
Co 228.616†	4.1	-0.00026	mg/L	0.000033	-0.00026	mg/L	0.000033	12.61%
Cr 267.716†	115.8	0.00064	mg/L	0.000007	0.00064	mg/L	0.000007	1.14%
Cu 327.393†	49.5	-0.00023	mg/L	0.000432	-0.00023	mg/L	0.000432	191.11%
Fe 239.562†	228.0	0.0164	mg/L	0.00029	0.0164	mg/L	0.00029	1.77%
Mg 279.077†	52849.8	16.0	mg/L	0.29	16.0	mg/L	0.29	1.79%

Approved: July 31, 2012

Mn 257.610†	771.4	0.00035 mg/L	0.000018	0.00035 mg/L	0.000018	5.00%
Mo 202.031†	46.3	0.00188 mg/L	0.000064	0.00188 mg/L	0.000064	3.40%
Ni 231.604†	68.8	-0.00218 mg/L	0.000236	-0.00218 mg/L	0.000236	10.85%
Pb 220.353†	20.6	0.00179 mg/L	0.001039	0.00179 mg/L	0.001039	58.12%
Sb 206.836†	-4.6	-0.00100 mg/L	0.001722	-0.00100 mg/L	0.001722	171.89%
Se 196.026†	-0.2	-0.00184 mg/L	0.002264	-0.00184 mg/L	0.002264	123.18%
Si 251.611†	176827.1	3.55 mg/L	0.049	3.55 mg/L	0.049	1.39%
Sn 189.927†	-296.3	-0.0245 mg/L	0.00060	-0.0245 mg/L	0.00060	2.45%
Ti 334.940†	-15834.1	-0.00168 mg/L	0.000441	-0.00168 mg/L	0.000441	26.33%
Tl 190.801†	-15.5	-0.00680 mg/L	0.003976	-0.00680 mg/L	0.003976	58.43%
V 290.880†	1345.0	0.00521 mg/L	0.000814	0.00521 mg/L	0.000814	15.63%
Zn 206.200†	5282.3	0.0907 mg/L	0.00078	0.0907 mg/L	0.00078	0.86%
K 766.490†	5476.9	1.76 mg/L	0.020	1.76 mg/L	0.020	1.16%
Na 589.592†	876039.2	46.5 mg/L	0.20	46.5 mg/L	0.20	0.42%
Sr 407.771†	5246750.1	2.14 mg/L	0.136	2.14 mg/L	0.136	6.35%
Li 670.784†	1163.0	0.00629 mg/L	0.000245	0.00629 mg/L	0.000245	3.89%

Sequence No.: 63 **Autosampler Location: 105**
Sample ID: L1207075703 **Date Collected: 7/27/2012 9:37:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075703

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207075703

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2239371.4						15592.48	0.70%
YRADIAL	290836.7						7398.75	2.54%
Ga 417.206	1347298.6						7547.54	0.56%
GaRADIAL	85297.7						950.18	1.11%
Ag 328.068†	680.9	0.00163	mg/L	0.000371	0.00163	mg/L	0.000371	22.77%
Al 396.153†	-53.1	-0.0133	mg/L	0.00198	-0.0133	mg/L	0.00198	14.90%
As 188.979†	-10.6	-0.00127	mg/L	0.000348	-0.00127	mg/L	0.000348	27.52%
Ba 233.527†	16541.8	0.0983	mg/L	0.00065	0.0983	mg/L	0.00065	0.66%
Be 234.861†	126.7	0.00005	mg/L	0.000027	0.00005	mg/L	0.000027	51.72%
B 249.677†	6765.5	0.0642	mg/L	0.00099	0.0642	mg/L	0.00099	1.54%
Ca 227.546†	37283.8	85.0	mg/L	0.48	85.0	mg/L	0.48	0.56%
Cd 228.802†	-6.3	-0.00010	mg/L	0.000206	-0.00010	mg/L	0.000206	203.19%
Co 228.616†	2.6	-0.00030	mg/L	0.000022	-0.00030	mg/L	0.000022	7.56%
Cr 267.716†	164.5	0.00104	mg/L	0.000124	0.00104	mg/L	0.000124	11.92%
Cu 327.393†	-89.1	-0.00078	mg/L	0.000541	-0.00078	mg/L	0.000541	69.05%
Fe 239.562†	43.3	0.00358	mg/L	0.000622	0.00358	mg/L	0.000622	17.40%
Mg 279.077†	50958.8	15.4	mg/L	0.20	15.4	mg/L	0.20	1.31%
Mn 257.610†	956.5	0.00059	mg/L	0.000027	0.00059	mg/L	0.000027	4.56%
Mo 202.031†	52.7	0.00206	mg/L	0.000231	0.00206	mg/L	0.000231	11.25%
Ni 231.604†	97.9	-0.00175	mg/L	0.000270	-0.00175	mg/L	0.000270	15.47%
Pb 220.353†	21.9	0.00188	mg/L	0.000553	0.00188	mg/L	0.000553	29.35%
Sb 206.836†	-7.1	-0.00154	mg/L	0.000866	-0.00154	mg/L	0.000866	56.14%
Se 196.026†	4.4	0.00045	mg/L	0.000707	0.00045	mg/L	0.000707	157.52%
Si 251.611†	180447.5	3.62	mg/L	0.023	3.62	mg/L	0.023	0.62%
Sn 189.927†	-298.4	-0.0247	mg/L	0.00074	-0.0247	mg/L	0.00074	2.98%
Ti 334.940†	-15801.0	-0.00171	mg/L	0.000483	-0.00171	mg/L	0.000483	28.24%
Tl 190.801†	-26.9	-0.00972	mg/L	0.002562	-0.00972	mg/L	0.002562	26.36%
V 290.880†	1791.3	0.00705	mg/L	0.000446	0.00705	mg/L	0.000446	6.32%
Zn 206.200†	6978.3	0.120	mg/L	0.0010	0.120	mg/L	0.0010	0.80%
K 766.490†	5280.2	1.69	mg/L	0.036	1.69	mg/L	0.036	2.14%
Na 589.592†	851612.1	45.2	mg/L	0.27	45.2	mg/L	0.27	0.61%
Sr 407.771†	5072950.9	2.07	mg/L	0.106	2.07	mg/L	0.106	5.12%
Li 670.784†	1180.5	0.00641	mg/L	0.000406	0.00641	mg/L	0.000406	6.34%

Sequence No.: 64 **Autosampler Location: 106**
Sample ID: L1207075704 **Date Collected: 7/27/2012 9:44:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: July 31, 2012

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075704

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: L1207075704

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2259921.7						4927.95	0.22%
YRADIAL	284335.3						7035.69	2.47%
Ga 417.206	1309132.4						5300.86	0.40%
GaRADIAL	82092.3						1524.94	1.86%
Ag 328.068†	719.8	0.00196	mg/L	0.000214	0.00196	mg/L	0.000214	10.94%
Al 396.153†	-114.0	-0.0226	mg/L	0.01179	-0.0226	mg/L	0.01179	52.18%
As 188.979†	-5.1	0.00045	mg/L	0.003109	0.00045	mg/L	0.003109	684.93%
Ba 233.527†	18720.5	0.111	mg/L	0.0004	0.111	mg/L	0.0004	0.40%
Be 234.861†	496.2	0.00025	mg/L	0.000088	0.00025	mg/L	0.000088	35.11%
B 249.677†	7409.9	0.0700	mg/L	0.00147	0.0700	mg/L	0.00147	2.11%
Ca 227.546†	40147.8	91.5	mg/L	1.47	91.5	mg/L	1.47	1.61%
Cd 228.802†	6.2	0.00012	mg/L	0.000035	0.00012	mg/L	0.000035	29.53%
Co 228.616†	14.4	-0.00005	mg/L	0.000220	-0.00005	mg/L	0.000220	466.18%
Cr 267.716†	165.9	0.00103	mg/L	0.000050	0.00103	mg/L	0.000050	4.89%
Cu 327.393†	119.6	0.00008	mg/L	0.000208	0.00008	mg/L	0.000208	255.79%
Fe 239.562†	8275.2	0.577	mg/L	0.0178	0.577	mg/L	0.0178	3.09%
Mg 279.077†	54468.4	16.5	mg/L	0.52	16.5	mg/L	0.52	3.17%
Mn 257.610†	154962.0	0.192	mg/L	0.0004	0.192	mg/L	0.0004	0.20%
Mo 202.031†	42.8	0.00186	mg/L	0.000254	0.00186	mg/L	0.000254	13.69%
Ni 231.604†	280.2	0.00092	mg/L	0.000393	0.00092	mg/L	0.000393	42.81%
Pb 220.353†	7.3	0.00069	mg/L	0.001237	0.00069	mg/L	0.001237	178.47%
Sb 206.836†	-11.8	-0.00254	mg/L	0.000355	-0.00254	mg/L	0.000355	13.99%
Se 196.026†	1.2	-0.00108	mg/L	0.002635	-0.00108	mg/L	0.002635	243.56%
Si 251.611†	186938.2	3.75	mg/L	0.007	3.75	mg/L	0.007	0.20%
Sn 189.927†	-299.2	-0.0248	mg/L	0.00019	-0.0248	mg/L	0.00019	0.78%
Ti 334.940†	-14739.5	0.00030	mg/L	0.000944	0.00030	mg/L	0.000944	313.82%
Tl 190.801†	-21.4	-0.00850	mg/L	0.001414	-0.00850	mg/L	0.001414	16.65%
V 290.880†	2181.3	0.00858	mg/L	0.002018	0.00858	mg/L	0.002018	23.52%
Zn 206.200†	75.5	0.00060	mg/L	0.000174	0.00060	mg/L	0.000174	29.20%
K 766.490†	5635.8	1.81	mg/L	0.014	1.81	mg/L	0.014	0.79%
Na 589.592†	912861.4	48.5	mg/L	1.44	48.5	mg/L	1.44	2.98%
Sr 407.771†	5254794.9	2.14	mg/L	0.075	2.14	mg/L	0.075	3.49%
Li 670.784†	1212.3	0.00664	mg/L	0.000679	0.00664	mg/L	0.000679	10.23%

Sequence No.: 65 **Autosampler Location: 107**
Sample ID: L1207075704PS WG404772-01 **Date Collected: 7/27/2012 9:50:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075704PS WG404772-01

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207075704PS WG404772-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2256518.8						7166.91	0.32%
YRADIAL	289851.1						6880.46	2.37%
Ga 417.206	1273572.2						16394.35	1.29%
GaRADIAL	83170.7						1318.28	1.59%
Ag 328.068†	61728.4	0.200	mg/L	0.0028	0.200	mg/L	0.0028	1.40%
Al 396.153†	32913.7	5.04	mg/L	0.012	5.04	mg/L	0.012	0.25%
As 188.979†	643.6	0.185	mg/L	0.0022	0.185	mg/L	0.0022	1.20%
Ba 233.527†	98170.4	0.589	mg/L	0.0030	0.589	mg/L	0.0030	0.51%
Be 234.861†	28276.8	0.0237	mg/L	0.00040	0.0237	mg/L	0.00040	1.67%
B 249.677†	109558.5	1.03	mg/L	0.014	1.03	mg/L	0.014	1.34%
Ca 227.546†	38768.9	88.6	mg/L	1.38	88.6	mg/L	1.38	1.55%

Approved: July 31, 2012

Cd 228.802†	1280.3	0.0226 mg/L	0.00086	0.0226 mg/L	0.00086	3.81%
Co 228.616†	4176.9	0.0949 mg/L	0.00022	0.0949 mg/L	0.00022	0.23%
Cr 267.716†	30611.3	0.247 mg/L	0.0018	0.247 mg/L	0.0018	0.74%
Cu 327.393†	61570.3	0.249 mg/L	0.0031	0.249 mg/L	0.0031	1.26%
Fe 239.562†	34440.7	2.40 mg/L	0.018	2.40 mg/L	0.018	0.73%
Mg 279.077†	63499.7	19.2 mg/L	0.32	19.2 mg/L	0.32	1.69%
Mn 257.610†	339922.3	0.422 mg/L	0.0038	0.422 mg/L	0.0038	0.91%
Mo 202.031†	18105.3	0.495 mg/L	0.0034	0.495 mg/L	0.0034	0.69%
Ni 231.604†	17287.6	0.250 mg/L	0.0006	0.250 mg/L	0.0006	0.26%
Pb 220.353†	3318.9	0.245 mg/L	0.0009	0.245 mg/L	0.0009	0.36%
Sb 206.836†	2657.7	0.579 mg/L	0.0126	0.579 mg/L	0.0126	2.18%
Se 196.026†	385.5	0.191 mg/L	0.0045	0.191 mg/L	0.0045	2.36%
Si 251.611†	296586.3	5.95 mg/L	0.035	5.95 mg/L	0.035	0.59%
Sn 189.927†	-289.8	-0.0240 mg/L	0.00031	-0.0240 mg/L	0.00031	1.30%
Ti 334.940†	504598.1	0.505 mg/L	0.0024	0.505 mg/L	0.0024	0.47%
Tl 190.801†	956.5	0.249 mg/L	0.0041	0.249 mg/L	0.0041	1.65%
V 290.880†	126023.9	0.514 mg/L	0.0025	0.514 mg/L	0.0025	0.48%
Zn 206.200†	26903.5	0.467 mg/L	0.0044	0.467 mg/L	0.0044	0.94%
K 766.490†	76945.3	26.4 mg/L	0.21	26.4 mg/L	0.21	0.78%
Na 589.592†	1304889.9	69.5 mg/L	0.93	69.5 mg/L	0.93	1.33%
Sr 407.771†	5835437.5	2.38 mg/L	0.060	2.38 mg/L	0.060	2.54%
Li 670.784†	76583.6	0.540 mg/L	0.0103	0.540 mg/L	0.0103	1.91%

Sequence No.: 66 **Autosampler Location: 108**
Sample ID: L1207075704DL WG404772-02 **Date Collected: 7/27/2012 9:56:48 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075704DL WG404772-02

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207075704DL WG404772-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2302802.9						3945.99	0.17%
YRADIAL	284411.4						2900.12	1.02%
Ga 417.206	1255765.7						12136.65	0.97%
GaRADIAL	82757.8						2372.81	2.87%
Ag 328.068†	95.3	0.00011	mg/L	0.000371	0.00011	mg/L	0.000371	322.78%
Al 396.153†	1.0	-0.00486	mg/L	0.001754	-0.00486	mg/L	0.001754	36.10%
As 188.979†	-7.8	-0.00042	mg/L	0.000808	-0.00042	mg/L	0.000808	190.53%
Ba 233.527†	3839.3	0.0220	mg/L	0.00017	0.0220	mg/L	0.00017	0.75%
Be 234.861†	75.1	-0.00002	mg/L	0.000023	-0.00002	mg/L	0.000023	127.32%
B 249.677†	1629.1	0.0159	mg/L	0.00100	0.0159	mg/L	0.00100	6.29%
Ca 227.546†	7817.7	17.9	mg/L	0.33	17.9	mg/L	0.33	1.87%
Cd 228.802†	3.6	0.00008	mg/L	0.000023	0.00008	mg/L	0.000023	30.91%
Co 228.616†	14.4	-0.00003	mg/L	0.000177	-0.00003	mg/L	0.000177	567.51%
Cr 267.716†	55.9	0.00015	mg/L	0.000072	0.00015	mg/L	0.000072	46.64%
Cu 327.393†	677.4	0.00232	mg/L	0.000259	0.00232	mg/L	0.000259	11.13%
Fe 239.562†	1852.2	0.130	mg/L	0.0015	0.130	mg/L	0.0015	1.14%
Mg 279.077†	11012.8	3.34	mg/L	0.035	3.34	mg/L	0.035	1.06%
Mn 257.610†	31443.8	0.0385	mg/L	0.00021	0.0385	mg/L	0.00021	0.55%
Mo 202.031†	26.4	0.00135	mg/L	0.000207	0.00135	mg/L	0.000207	15.31%
Ni 231.604†	347.2	0.00190	mg/L	0.000217	0.00190	mg/L	0.000217	11.42%
Pb 220.353†	5.1	0.00007	mg/L	0.000694	0.00007	mg/L	0.000694	965.07%
Sb 206.836†	-1.6	-0.00033	mg/L	0.000866	-0.00033	mg/L	0.000866	258.61%
Se 196.026†	0.4	-0.00152	mg/L	0.002869	-0.00152	mg/L	0.002869	188.29%
Si 251.611†	38384.8	0.766	mg/L	0.0107	0.766	mg/L	0.0107	1.40%
Sn 189.927†	-165.5	-0.0138	mg/L	0.00078	-0.0138	mg/L	0.00078	5.66%
Ti 334.940†	-3271.9	0.00042	mg/L	0.000205	0.00042	mg/L	0.000205	49.46%
Tl 190.801†	-9.5	-0.00517	mg/L	0.000747	-0.00517	mg/L	0.000747	14.45%
V 290.880†	1269.9	0.00523	mg/L	0.001404	0.00523	mg/L	0.001404	26.87%
Zn 206.200†	111.5	0.00122	mg/L	0.000122	0.00122	mg/L	0.000122	9.96%
K 766.490†	1393.8	0.391	mg/L	0.0064	0.391	mg/L	0.0064	1.64%
Na 589.592†	180960.9	9.54	mg/L	0.244	9.54	mg/L	0.244	2.56%
Sr 407.771†	1085011.5	0.443	mg/L	0.0142	0.443	mg/L	0.0142	3.20%
Li 670.784†	372.4	0.00069	mg/L	0.000119	0.00069	mg/L	0.000119	17.18%

Approved: July 31, 2012

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Sequence No.: 67 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 10:03:44 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2269133.9						21772.51	0.96%
YRADIAL	292901.3						2612.02	0.89%
Ga 417.206	1181001.5						6114.96	0.52%
GaRADIAL	81493.1						435.97	0.53%
Ag 328.068†	128661.0	0.417	mg/L	0.0042	0.417	mg/L	0.0042	1.01%
QC value within limits for Ag 328.068 Recovery = 104.28%								
Al 396.153†	65708.2	10.1	mg/L	0.02	10.1	mg/L	0.02	0.21%
QC value within limits for Al 396.153 Recovery = 100.60%								
As 188.979†	1370.5	0.392	mg/L	0.0035	0.392	mg/L	0.0035	0.89%
QC value within limits for As 188.979 Recovery = 98.02%								
Ba 233.527†	163982.9	0.984	mg/L	0.0089	0.984	mg/L	0.0089	0.90%
QC value within limits for Ba 233.527 Recovery = 98.39%								
Be 234.861†	59916.0	0.0504	mg/L	0.00055	0.0504	mg/L	0.00055	1.09%
QC value within limits for Be 234.861 Recovery = 100.86%								
B 249.677†	54001.3	0.504	mg/L	0.0086	0.504	mg/L	0.0086	1.70%
QC value within limits for B 249.677 Recovery = 100.78%								
Ca 227.546†	4496.5	10.8	mg/L	0.14	10.8	mg/L	0.14	1.28%
QC value within limits for Ca 227.546 Recovery = 107.55%								
Cd 228.802†	2796.7	0.0493	mg/L	0.00100	0.0493	mg/L	0.00100	2.03%
QC value within limits for Cd 228.802 Recovery = 98.63%								
Co 228.616†	8568.3	0.195	mg/L	0.0022	0.195	mg/L	0.0022	1.11%
QC value within limits for Co 228.616 Recovery = 97.58%								
Cr 267.716†	61602.2	0.496	mg/L	0.0056	0.496	mg/L	0.0056	1.12%
QC value within limits for Cr 267.716 Recovery = 99.29%								
Cu 327.393†	131086.9	0.531	mg/L	0.0092	0.531	mg/L	0.0092	1.72%
QC value within limits for Cu 327.393 Recovery = 106.18%								
Fe 239.562†	55497.5	3.87	mg/L	0.069	3.87	mg/L	0.069	1.77%
QC value within limits for Fe 239.562 Recovery = 96.71%								
Mg 279.077†	31837.3	9.65	mg/L	0.081	9.65	mg/L	0.081	0.84%
QC value within limits for Mg 279.077 Recovery = 96.50%								
Mn 257.610†	398855.8	0.495	mg/L	0.0065	0.495	mg/L	0.0065	1.31%
QC value within limits for Mn 257.610 Recovery = 99.10%								
Mo 202.031†	37268.0	1.02	mg/L	0.006	1.02	mg/L	0.006	0.64%
QC value within limits for Mo 202.031 Recovery = 101.77%								
Ni 231.604†	34739.7	0.505	mg/L	0.0051	0.505	mg/L	0.0051	1.00%
QC value within limits for Ni 231.604 Recovery = 100.93%								
Pb 220.353†	6650.5	0.490	mg/L	0.0038	0.490	mg/L	0.0038	0.77%
QC value within limits for Pb 220.353 Recovery = 98.01%								
Sb 206.836†	5594.6	1.22	mg/L	0.011	1.22	mg/L	0.011	0.88%
QC value within limits for Sb 206.836 Recovery = 101.53%								
Se 196.026†	822.4	0.408	mg/L	0.0108	0.408	mg/L	0.0108	2.64%
QC value within limits for Se 196.026 Recovery = 102.08%								
Si 251.611†	250751.4	5.02	mg/L	0.033	5.02	mg/L	0.033	0.65%
QC value within limits for Si 251.611 Recovery = 100.45%								
Sn 189.927†	11735.8	0.964	mg/L	0.0080	0.964	mg/L	0.0080	0.83%
QC value within limits for Sn 189.927 Recovery = 96.44%								
Ti 334.940†	1030403.0	1.01	mg/L	0.005	1.01	mg/L	0.005	0.45%
QC value within limits for Ti 334.940 Recovery = 100.54%								
Tl 190.801†	1961.7	0.514	mg/L	0.0019	0.514	mg/L	0.0019	0.37%
QC value within limits for Tl 190.801 Recovery = 102.84%								
V 290.880†	245062.1	1.00	mg/L	0.000	1.00	mg/L	0.000	0.03%
QC value within limits for V 290.880 Recovery = 100.05%								
Zn 206.200†	55107.1	0.957	mg/L	0.0115	0.957	mg/L	0.0115	1.20%
QC value within limits for Zn 206.200 Recovery = 95.73%								
K 766.490†	143319.2	49.5	mg/L	0.34	49.5	mg/L	0.34	0.69%

Approved: July 31, 2012

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   QC value within limits for K 766.490  Recovery = 99.03%
Na 589.592†          974279.7        51.7 mg/L          0.56        51.7 mg/L          0.56   1.09%
   QC value within limits for Na 589.592  Recovery = 103.49%
Sr 407.771†         2462493.4        1.01 mg/L         0.014        1.01 mg/L         0.014   1.36%
   QC value within limits for Sr 407.771  Recovery = 100.54%
Li 670.784†          148536.4        1.05 mg/L         0.012        1.05 mg/L         0.012   1.17%
   QC value within limits for Li 670.784  Recovery = 105.00%
All analyte(s) passed QC.
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Sequence No.: 68 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/27/2012 10:09:44 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	196.0 kPa	0.50 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2362878.7						4741.06	0.20%
YRADIAL	291408.0						3266.27	1.12%
Ga 417.206	1195318.0						5394.26	0.45%
GaRADIAL	81714.1						2523.59	3.09%
Ag 328.068†	91.9	0.00014	mg/L	0.000236	0.00014	mg/L	0.000236	166.47%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	27.1	-0.00083	mg/L	0.000796	-0.00083	mg/L	0.000796	95.81%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-4.7	0.00044	mg/L	0.002146	0.00044	mg/L	0.002146	489.01%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	87.5	-0.00052	mg/L	0.000086	-0.00052	mg/L	0.000086	16.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	-42.9	-0.00009	mg/L	0.000018	-0.00009	mg/L	0.000018	19.07%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	226.4	0.00277	mg/L	0.000286	0.00277	mg/L	0.000286	10.33%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-8.9	0.0270	mg/L	0.02146	0.0270	mg/L	0.02146	79.34%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	6.2	0.00012	mg/L	0.000047	0.00012	mg/L	0.000047	39.25%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	17.8	0.00005	mg/L	0.000097	0.00005	mg/L	0.000097	200.86%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	11.7	-0.00020	mg/L	0.000085	-0.00020	mg/L	0.000085	42.80%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	145.5	0.00017	mg/L	0.000395	0.00017	mg/L	0.000395	229.68%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	34.4	0.00326	mg/L	0.000261	0.00326	mg/L	0.000261	8.01%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	9.2	0.00951	mg/L	0.002290	0.00951	mg/L	0.002290	24.07%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	93.1	-0.00049	mg/L	0.000004	-0.00049	mg/L	0.000004	0.76%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	13.8	0.00099	mg/L	0.000074	0.00099	mg/L	0.000074	7.49%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	23.2	-0.00285	mg/L	0.000160	-0.00285	mg/L	0.000160	5.62%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-7.4	-0.00095	mg/L	0.001161	-0.00095	mg/L	0.001161	121.75%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	2.9	0.00064	mg/L	0.001487	0.00064	mg/L	0.001487	232.38%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	3.6	0.00006	mg/L	0.002842	0.00006	mg/L	0.002842	>999.9%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	-3.4	-0.00556	mg/L	0.000091	-0.00556	mg/L	0.000091	1.63%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	5.7	0.00027	mg/L	0.000762	0.00027	mg/L	0.000762	282.08%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	398.3	0.00131	mg/L	0.000107	0.00131	mg/L	0.000107	8.17%

Approved: July 31, 2012

QC value within limits for Ti 334.940 Recovery = Not calculated

Tl 190.801†	8.8	-0.00041 mg/L	0.001538	-0.00041 mg/L	0.001538	378.73%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 290.880†	859.7	0.00365 mg/L	0.000270	0.00365 mg/L	0.000270	7.41%

QC value within limits for V 290.880 Recovery = Not calculated

Zn 206.200†	9.6	-0.00054 mg/L	0.000110	-0.00054 mg/L	0.000110	20.15%

QC value within limits for Zn 206.200 Recovery = Not calculated

K 766.490†	104.9	-0.0431 mg/L	0.01844	-0.0431 mg/L	0.01844	42.79%

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	621.6	0.0188 mg/L	0.00735	0.0188 mg/L	0.00735	39.18%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	917.8	0.00128 mg/L	0.000046	0.00128 mg/L	0.000046	3.59%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	143.4	-0.00093 mg/L	0.000237	-0.00093 mg/L	0.000237	25.45%

QC value within limits for Li 670.784 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 69 **Autosampler Location: 109**
Sample ID: L1207075705 **Date Collected: 7/27/2012 10:16:37 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207075705

Analyte	Back Pressure	Flow
All	197.0 kPa	0.50 L/min

Mean Data: L1207075705

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2240181.1						18004.86	0.80%
YRADIAL	288156.5						5823.06	2.02%
Ga 417.206	1297173.5						13805.15	1.06%
GaRADIAL	84432.6						934.05	1.11%
Ag 328.068†	670.3	0.00157	mg/L	0.000236	0.00157	mg/L	0.000236	15.08%
Al 396.153†	-56.4	-0.0138	mg/L	0.00107	-0.0138	mg/L	0.00107	7.73%
As 188.979†	-4.3	0.00057	mg/L	0.000887	0.00057	mg/L	0.000887	154.46%
Ba 233.527†	17993.3	0.107	mg/L	0.0013	0.107	mg/L	0.0013	1.19%
Be 234.861†	105.5	0.00005	mg/L	0.000005	0.00005	mg/L	0.000005	11.19%
B 249.677†	7228.9	0.0685	mg/L	0.00154	0.0685	mg/L	0.00154	2.25%
Ca 227.546†	38575.0	87.9	mg/L	2.04	87.9	mg/L	2.04	2.32%
Cd 228.802†	-2.5	-0.00004	mg/L	0.000111	-0.00004	mg/L	0.000111	279.33%
Co 228.616†	14.4	-0.00003	mg/L	0.000230	-0.00003	mg/L	0.000230	804.63%
Cr 267.716†	110.2	0.00060	mg/L	0.000108	0.00060	mg/L	0.000108	18.20%
Cu 327.393†	3.3	-0.00042	mg/L	0.000327	-0.00042	mg/L	0.000327	78.28%
Fe 239.562†	308.0	0.0220	mg/L	0.00057	0.0220	mg/L	0.00057	2.61%
Mg 279.077†	52416.9	15.9	mg/L	0.22	15.9	mg/L	0.22	1.39%
Mn 257.610†	151436.2	0.188	mg/L	0.0024	0.188	mg/L	0.0024	1.30%
Mo 202.031†	65.3	0.00244	mg/L	0.000132	0.00244	mg/L	0.000132	5.42%
Ni 231.604†	183.8	-0.00049	mg/L	0.000190	-0.00049	mg/L	0.000190	38.53%
Pb 220.353†	10.9	0.00098	mg/L	0.000169	0.00098	mg/L	0.000169	17.27%
Sb 206.836†	-4.7	-0.00101	mg/L	0.001000	-0.00101	mg/L	0.001000	99.28%
Se 196.026†	4.7	0.00054	mg/L	0.000244	0.00054	mg/L	0.000244	44.85%
Si 251.611†	189338.5	3.80	mg/L	0.064	3.80	mg/L	0.064	1.68%
Sn 189.927†	-294.1	-0.0244	mg/L	0.00082	-0.0244	mg/L	0.00082	3.35%
Ti 334.940†	-15594.8	-0.00107	mg/L	0.000448	-0.00107	mg/L	0.000448	41.92%
Tl 190.801†	-18.0	-0.00763	mg/L	0.000887	-0.00763	mg/L	0.000887	11.63%
V 290.880†	1334.0	0.00517	mg/L	0.000962	0.00517	mg/L	0.000962	18.63%
Zn 206.200†	225.9	0.00320	mg/L	0.000240	0.00320	mg/L	0.000240	7.50%
K 766.490†	5470.5	1.76	mg/L	0.027	1.76	mg/L	0.027	1.55%
Na 589.592†	877904.8	46.6	mg/L	0.53	46.6	mg/L	0.53	1.14%
Sr 407.771†	5201172.5	2.12	mg/L	0.118	2.12	mg/L	0.118	5.58%
Li 670.784†	1125.5	0.00602	mg/L	0.000263	0.00602	mg/L	0.000263	4.37%

Sequence No.: 70 **Autosampler Location: 110**
Sample ID: L1207078601 **Date Collected: 7/27/2012 10:23:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: July 31, 2012

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207078601

Analyte	Back Pressure	Flow
All	212.0 kPa	0.50 L/min

Mean Data: L1207078601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	1537060.2						13120.00	0.85%
YRADIAL	225708.0						2820.59	1.25%
Ga 417.206	1005622.5						13310.97	1.32%
GaRADIAL	68301.2						953.24	1.40%
Ag 328.068†	-1187.9	0.00798	mg/L	0.000536	0.00798	mg/L	0.000536	6.71%
Al 396.153†	158573.1	24.5	mg/L	0.08	24.5	mg/L	0.08	0.31%
As 188.979†	64.3	0.0260	mg/L	0.00419	0.0260	mg/L	0.00419	16.15%
Ba 233.527†	412934.5	2.48	mg/L	0.023	2.48	mg/L	0.023	0.92%
Be 234.861†	8867.7	0.00084	mg/L	0.000112	0.00084	mg/L	0.000112	13.36%
B 249.677†	68765.9	0.632	mg/L	0.0144	0.632	mg/L	0.0144	2.28%
Ca 227.546†	214629.3	490	mg/L	14.8	490	mg/L	14.8	3.03%
Cd 228.802†	1241.2	0.0225	mg/L	0.00050	0.0225	mg/L	0.00050	2.24%
Co 228.616†	1493.5	0.0308	mg/L	0.00046	0.0308	mg/L	0.00046	1.48%
Cr 267.716†	5737.9	0.0452	mg/L	0.00016	0.0452	mg/L	0.00016	0.36%
Cu 327.393†	85396.4	0.347	mg/L	0.0089	0.347	mg/L	0.0089	2.58%
Fe 239.562†	437627.3	30.5	mg/L	0.09	30.5	mg/L	0.09	0.29%
Mg 279.077†	49943.4	15.1	mg/L	0.03	15.1	mg/L	0.03	0.20%
Mn 257.610†	3689452.2	4.58	mg/L	0.066	4.58	mg/L	0.066	1.45%
Mo 202.031†	484.2	0.0163	mg/L	0.00027	0.0163	mg/L	0.00027	1.67%
Ni 231.604†	3598.9	0.0494	mg/L	0.00027	0.0494	mg/L	0.00027	0.54%
Pb 220.353†	2221.6	0.165	mg/L	0.0024	0.165	mg/L	0.0024	1.48%
Sb 206.836†	-21.5	-0.00384	mg/L	0.000751	-0.00384	mg/L	0.000751	19.56%
Se 196.026†	11.2	0.00833	mg/L	0.004037	0.00833	mg/L	0.004037	48.47%
Si 251.611†	2024785.1	40.7	mg/L	0.42	40.7	mg/L	0.42	1.03%
Sn 189.927†	5843.6	0.480	mg/L	0.0049	0.480	mg/L	0.0049	1.01%
Ti 334.940†	657500.9	0.714	mg/L	0.0029	0.714	mg/L	0.0029	0.41%
Tl 190.801†	-132.8	-0.0327	mg/L	0.00612	-0.0327	mg/L	0.00612	18.69%
V 290.880†	19489.8	0.0776	mg/L	0.00119	0.0776	mg/L	0.00119	1.53%
Zn 206.200†	148718.5	2.57	mg/L	0.029	2.57	mg/L	0.029	1.12%
K 766.490†	35324.9	12.1	mg/L	0.12	12.1	mg/L	0.12	1.00%
Na 589.592†	Saturated3							
Sr 407.771†	1818275.8	0.732	mg/L	0.0121	0.732	mg/L	0.0121	1.66%
Li 670.784†	6208.6	0.0420	mg/L	0.00103	0.0420	mg/L	0.00103	2.45%

Sequence No.: 71 **Autosampler Location: 111**
Sample ID: L1207080301 WG404662-01 **Date Collected: 7/27/2012 10:29:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080301 WG404662-01

Analyte	Back Pressure	Flow
All	202.0 kPa	0.50 L/min

Mean Data: L1207080301 WG404662-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311709.5						27163.30	1.18%
YRADIAL	295958.6						2587.56	0.87%
Ga 417.206	1315036.1						11436.49	0.87%
GaRADIAL	85843.5						606.77	0.71%
Ag 328.068†	918.7	0.00276	mg/L	0.000175	0.00276	mg/L	0.000175	6.33%
Al 396.153†	484.2	0.0696	mg/L	0.00338	0.0696	mg/L	0.00338	4.86%
As 188.979†	-14.7	-0.00240	mg/L	0.001833	-0.00240	mg/L	0.001833	76.47%
Ba 233.527†	11149.4	0.0659	mg/L	0.00049	0.0659	mg/L	0.00049	0.75%
Be 234.861†	318.4	0.00016	mg/L	0.000045	0.00016	mg/L	0.000045	28.40%
B 249.677†	4188.6	0.0399	mg/L	0.00085	0.0399	mg/L	0.00085	2.14%
Ca 227.546†	42853.5	97.7	mg/L	1.56	97.7	mg/L	1.56	1.60%

Approved: July 31, 2012

Cd 228.802†	10.9	0.00022 mg/L	0.000081	0.00022 mg/L	0.000081	36.94%
Co 228.616†	20.5	0.00011 mg/L	0.000389	0.00011 mg/L	0.000389	339.63%
Cr 267.716†	382.3	0.00278 mg/L	0.000058	0.00278 mg/L	0.000058	2.10%
Cu 327.393†	44.3	-0.00024 mg/L	0.000542	-0.00024 mg/L	0.000542	229.72%
Fe 239.562†	3495.1	0.244 mg/L	0.0059	0.244 mg/L	0.0059	2.40%
Mg 279.077†	60876.5	18.4 mg/L	0.29	18.4 mg/L	0.29	1.60%
Mn 257.610†	1880.9	0.00173 mg/L	0.000613	0.00173 mg/L	0.000613	35.45%
Mo 202.031†	88.0	0.00304 mg/L	0.000242	0.00304 mg/L	0.000242	7.97%
Ni 231.604†	136.1	-0.00119 mg/L	0.000309	-0.00119 mg/L	0.000309	25.93%
Pb 220.353†	-8.1	-0.00023 mg/L	0.000801	-0.00023 mg/L	0.000801	345.14%
Sb 206.836†	-13.4	-0.00292 mg/L	0.000499	-0.00292 mg/L	0.000499	17.11%
Se 196.026†	4.2	0.00038 mg/L	0.000227	0.00038 mg/L	0.000227	60.12%
Si 251.611†	870185.1	17.5 mg/L	0.21	17.5 mg/L	0.21	1.23%
Sn 189.927†	-297.3	-0.0246 mg/L	0.00052	-0.0246 mg/L	0.00052	2.11%
Ti 334.940†	-12263.6	0.00364 mg/L	0.001379	0.00364 mg/L	0.001379	37.93%
Tl 190.801†	-15.3	-0.00671 mg/L	0.001853	-0.00671 mg/L	0.001853	27.61%
V 290.880†	2629.8	0.0104 mg/L	0.00193	0.0104 mg/L	0.00193	18.61%
Zn 206.200†	150.5	0.00191 mg/L	0.000387	0.00191 mg/L	0.000387	20.20%
K 766.490†	9396.2	3.12 mg/L	0.044	3.12 mg/L	0.044	1.42%
Na 589.592†	686063.9	36.3 mg/L	0.36	36.3 mg/L	0.36	0.98%
Sr 407.771†	1906411.1	0.777 mg/L	0.0070	0.777 mg/L	0.0070	0.90%
Li 670.784†	1869.1	0.0113 mg/L	0.00058	0.0113 mg/L	0.00058	5.15%

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Sequence No.: 72 **Autosampler Location: 112**
Sample ID: L1207080302S WG404662-05 **Date Collected: 7/27/2012 10:35:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080302S WG404662-05

Analyte	Back Pressure	Flow
All	201.0 kPa	0.50 L/min

Mean Data: L1207080302S WG404662-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2315669.8						33389.31	1.44%
YRADIAL	301217.6						2124.41	0.71%
Ga 417.206	1352188.7						19966.03	1.48%
GaRADIAL	85945.3						1161.38	1.35%
Ag 328.068†	60103.7	0.195	mg/L	0.0026	0.195	mg/L	0.0026	1.35%
Al 396.153†	34076.1	5.22	mg/L	0.027	5.22	mg/L	0.027	0.51%
As 188.979†	628.4	0.181	mg/L	0.0045	0.181	mg/L	0.0045	2.49%
Ba 233.527†	93361.0	0.560	mg/L	0.0111	0.560	mg/L	0.0111	1.98%
Be 234.861†	27499.5	0.0230	mg/L	0.00030	0.0230	mg/L	0.00030	1.31%
B 249.677†	105029.7	0.985	mg/L	0.0101	0.985	mg/L	0.0101	1.03%
Ca 227.546†	45698.1	104	mg/L	0.6	104	mg/L	0.6	0.56%
Cd 228.802†	1254.2	0.0221	mg/L	0.00060	0.0221	mg/L	0.00060	2.69%
Co 228.616†	4188.9	0.0952	mg/L	0.00143	0.0952	mg/L	0.00143	1.51%
Cr 267.716†	31080.0	0.250	mg/L	0.0056	0.250	mg/L	0.0056	2.24%
Cu 327.393†	59255.3	0.240	mg/L	0.0029	0.240	mg/L	0.0029	1.20%
Fe 239.562†	31430.0	2.19	mg/L	0.012	2.19	mg/L	0.012	0.56%
Mg 279.077†	76537.0	23.2	mg/L	0.06	23.2	mg/L	0.06	0.24%
Mn 257.610†	203041.0	0.252	mg/L	0.0045	0.252	mg/L	0.0045	1.80%
Mo 202.031†	18212.0	0.498	mg/L	0.0090	0.498	mg/L	0.0090	1.80%
Ni 231.604†	16576.5	0.239	mg/L	0.0029	0.239	mg/L	0.0029	1.23%
Pb 220.353†	3355.1	0.248	mg/L	0.0037	0.248	mg/L	0.0037	1.50%
Sb 206.836†	2568.5	0.559	mg/L	0.0079	0.559	mg/L	0.0079	1.42%
Se 196.026†	383.2	0.189	mg/L	0.0015	0.189	mg/L	0.0015	0.77%
Si 251.611†	993437.5	20.0	mg/L	0.11	20.0	mg/L	0.11	0.54%
Sn 189.927†	6047.0	0.497	mg/L	0.0091	0.497	mg/L	0.0091	1.83%
Ti 334.940†	501452.4	0.505	mg/L	0.0026	0.505	mg/L	0.0026	0.52%
Tl 190.801†	968.2	0.252	mg/L	0.0072	0.252	mg/L	0.0072	2.87%
V 290.880†	125985.5	0.514	mg/L	0.0115	0.514	mg/L	0.0115	2.24%
Zn 206.200†	27202.8	0.472	mg/L	0.0133	0.472	mg/L	0.0133	2.81%
K 766.490†	81301.6	28.0	mg/L	0.20	28.0	mg/L	0.20	0.73%
Na 589.592†	1157224.3	61.6	mg/L	1.35	61.6	mg/L	1.35	2.19%
Sr 407.771†	3138777.1	1.28	mg/L	0.004	1.28	mg/L	0.004	0.27%
Li 670.784†	76994.1	0.543	mg/L	0.0049	0.543	mg/L	0.0049	0.91%

Approved: July 31, 2012

Kim H. Rhoden

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Sequence No.: 73 **Autosampler Location: 113**
Sample ID: L1207080303SD WG404662-06 **Date Collected: 7/27/2012 10:41:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080303SD WG404662-06

Analyte	Back Pressure	Flow
All	202.0 kPa	0.50 L/min

Mean Data: L1207080303SD WG404662-06

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2215013.0						16084.42	0.73%
YRADIAL	290601.3						1871.30	0.64%
Ga 417.206	1295383.4						29455.96	2.27%
GaRADIAL	82861.7						655.45	0.79%
Ag 328.068†	64435.2	0.209	mg/L	0.0059	0.209	mg/L	0.0059	2.81%
Al 396.153†	36208.0	5.54	mg/L	0.017	5.54	mg/L	0.017	0.31%
As 188.979†	673.5	0.193	mg/L	0.0051	0.193	mg/L	0.0051	2.65%
Ba 233.527†	101191.4	0.607	mg/L	0.0040	0.607	mg/L	0.0040	0.65%
Be 234.861†	29642.5	0.0248	mg/L	0.00081	0.0248	mg/L	0.00081	3.26%
B 249.677†	113313.6	1.06	mg/L	0.032	1.06	mg/L	0.032	2.97%
Ca 227.546†	48621.3	111	mg/L	3.8	111	mg/L	3.8	3.38%
Cd 228.802†	1357.2	0.0239	mg/L	0.00105	0.0239	mg/L	0.00105	4.38%
Co 228.616†	4541.9	0.103	mg/L	0.0009	0.103	mg/L	0.0009	0.83%
Cr 267.716†	33672.2	0.271	mg/L	0.0022	0.271	mg/L	0.0022	0.82%
Cu 327.393†	63223.1	0.256	mg/L	0.0069	0.256	mg/L	0.0069	2.69%
Fe 239.562†	33357.9	2.33	mg/L	0.018	2.33	mg/L	0.018	0.75%
Mg 279.077†	81193.9	24.6	mg/L	0.12	24.6	mg/L	0.12	0.50%
Mn 257.610†	220153.9	0.273	mg/L	0.0011	0.273	mg/L	0.0011	0.39%
Mo 202.031†	19665.9	0.537	mg/L	0.0051	0.537	mg/L	0.0051	0.95%
Ni 231.604†	17992.4	0.260	mg/L	0.0020	0.260	mg/L	0.0020	0.77%
Pb 220.353†	3617.3	0.267	mg/L	0.0012	0.267	mg/L	0.0012	0.44%
Sb 206.836†	2777.5	0.605	mg/L	0.0184	0.605	mg/L	0.0184	3.05%
Se 196.026†	417.3	0.206	mg/L	0.0091	0.206	mg/L	0.0091	4.39%
Si 251.611†	1070436.2	21.5	mg/L	0.37	21.5	mg/L	0.37	1.74%
Sn 189.927†	6574.2	0.540	mg/L	0.0039	0.540	mg/L	0.0039	0.73%
Ti 334.940†	541097.4	0.544	mg/L	0.0050	0.544	mg/L	0.0050	0.92%
Tl 190.801†	1041.1	0.272	mg/L	0.0027	0.272	mg/L	0.0027	1.00%
V 290.880†	136959.2	0.559	mg/L	0.0062	0.559	mg/L	0.0062	1.12%
Zn 206.200†	29489.3	0.512	mg/L	0.0089	0.512	mg/L	0.0089	1.74%
K 766.490†	85109.9	29.3	mg/L	0.26	29.3	mg/L	0.26	0.90%
Na 589.592†	1248889.2	66.5	mg/L	1.76	66.5	mg/L	1.76	2.64%
Sr 407.771†	3360697.9	1.37	mg/L	0.019	1.37	mg/L	0.019	1.38%
Li 670.784†	80351.2	0.567	mg/L	0.0094	0.567	mg/L	0.0094	1.66%

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Sequence No.: 74 **Autosampler Location: 114**
Sample ID: L1207080304 **Date Collected: 7/27/2012 10:47:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080304

Analyte	Back Pressure	Flow
All	202.0 kPa	0.50 L/min

Mean Data: L1207080304

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2317001.7						8630.97	0.37%
YRADIAL	290906.6						977.77	0.34%
Ga 417.206	1328042.2						22168.20	1.67%
GaRADIAL	82839.8						924.35	1.12%
Ag 328.068†	529.9	0.00167	mg/L	0.000451	0.00167	mg/L	0.000451	27.02%

Approved: July 31, 2012

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Al 396.153†	3296.3	0.503	mg/L	0.0031	0.503	mg/L	0.0031	0.61%
As 188.979†	-8.1	-0.00049	mg/L	0.003166	-0.00049	mg/L	0.003166	640.28%
Ba 233.527†	19729.4	0.117	mg/L	0.0011	0.117	mg/L	0.0011	0.97%
Be 234.861†	389.8	0.00017	mg/L	0.000040	0.00017	mg/L	0.000040	22.80%
B 249.677†	2492.2	0.0239	mg/L	0.00104	0.0239	mg/L	0.00104	4.35%
Ca 227.546†	19935.2	45.5	mg/L	0.91	45.5	mg/L	0.91	2.00%
Cd 228.802†	10.9	0.00021	mg/L	0.000034	0.00021	mg/L	0.000034	16.41%
Co 228.616†	13.7	-0.00010	mg/L	0.000241	-0.00010	mg/L	0.000241	230.65%
Cr 267.716†	626.8	0.00475	mg/L	0.000112	0.00475	mg/L	0.000112	2.36%
Cu 327.393†	325.8	0.00093	mg/L	0.000689	0.00093	mg/L	0.000689	73.84%
Fe 239.562†	6329.4	0.442	mg/L	0.0082	0.442	mg/L	0.0082	1.84%
Mg 279.077†	26751.3	8.10	mg/L	0.031	8.10	mg/L	0.031	0.38%
Mn 257.610†	3445.7	0.00368	mg/L	0.000090	0.00368	mg/L	0.000090	2.45%
Mo 202.031†	149.3	0.00472	mg/L	0.000383	0.00472	mg/L	0.000383	8.12%
Ni 231.604†	77.2	-0.00205	mg/L	0.000463	-0.00205	mg/L	0.000463	22.55%
Pb 220.353†	6.3	0.00046	mg/L	0.002034	0.00046	mg/L	0.002034	443.22%
Sb 206.836†	-12.0	-0.00261	mg/L	0.001064	-0.00261	mg/L	0.001064	40.76%
Se 196.026†	8.8	0.00275	mg/L	0.000864	0.00275	mg/L	0.000864	31.43%
Si 251.611†	915903.8	18.4	mg/L	0.24	18.4	mg/L	0.24	1.32%
Sn 189.927†	-244.7	-0.0203	mg/L	0.00065	-0.0203	mg/L	0.00065	3.18%
Ti 334.940†	7834.8	0.0154	mg/L	0.00084	0.0154	mg/L	0.00084	5.49%
Tl 190.801†	-9.5	-0.00498	mg/L	0.002556	-0.00498	mg/L	0.002556	51.36%
V 290.880†	2987.4	0.0121	mg/L	0.00157	0.0121	mg/L	0.00157	12.94%
Zn 206.200†	346.1	0.00531	mg/L	0.000175	0.00531	mg/L	0.000175	3.30%
K 766.490†	7436.8	2.46	mg/L	0.027	2.46	mg/L	0.027	1.09%
Na 589.592†	486765.0	25.7	mg/L	0.41	25.7	mg/L	0.41	1.59%
Sr 407.771†	991146.5	0.404	mg/L	0.0019	0.404	mg/L	0.0019	0.47%
Li 670.784†	1422.7	0.00813	mg/L	0.000497	0.00813	mg/L	0.000497	6.11%

Sequence No.: 75
Sample ID: L1207080305
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 115
Date Collected: 7/27/2012 10:53:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207080305

Analyte	Back Pressure	Flow
All	203.0 kPa	0.50 L/min

Mean Data: L1207080305

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2333871.5						36868.89	1.58%
YRADIAL	292919.0						3871.37	1.32%
Ga 417.206	1324904.0						20005.83	1.51%
GaRADIAL	84672.1						1635.77	1.93%
Ag 328.068†	576.4	0.00169	mg/L	0.000152	0.00169	mg/L	0.000152	9.00%
Al 396.153†	128.6	0.0147	mg/L	0.00356	0.0147	mg/L	0.00356	24.24%
As 188.979†	-14.9	-0.00247	mg/L	0.001605	-0.00247	mg/L	0.001605	65.05%
Ba 233.527†	11224.6	0.0663	mg/L	0.00087	0.0663	mg/L	0.00087	1.31%
Be 234.861†	288.5	0.00015	mg/L	0.000044	0.00015	mg/L	0.000044	30.14%
B 249.677†	2649.5	0.0254	mg/L	0.00086	0.0254	mg/L	0.00086	3.39%
Ca 227.546†	27786.8	63.4	mg/L	2.17	63.4	mg/L	2.17	3.43%
Cd 228.802†	13.7	0.00027	mg/L	0.000222	0.00027	mg/L	0.000222	82.83%
Co 228.616†	17.0	0.00003	mg/L	0.000179	0.00003	mg/L	0.000179	637.74%
Cr 267.716†	376.3	0.00274	mg/L	0.000109	0.00274	mg/L	0.000109	3.99%
Cu 327.393†	64.7	-0.00015	mg/L	0.000564	-0.00015	mg/L	0.000564	367.37%
Fe 239.562†	2675.8	0.187	mg/L	0.0034	0.187	mg/L	0.0034	1.79%
Mg 279.077†	37685.4	11.4	mg/L	0.16	11.4	mg/L	0.16	1.41%
Mn 257.610†	356.8	-0.00016	mg/L	0.000024	-0.00016	mg/L	0.000024	14.72%
Mo 202.031†	101.3	0.00339	mg/L	0.000166	0.00339	mg/L	0.000166	4.91%
Ni 231.604†	116.4	-0.00148	mg/L	0.000488	-0.00148	mg/L	0.000488	32.99%
Pb 220.353†	3.5	0.00034	mg/L	0.001139	0.00034	mg/L	0.001139	330.90%
Sb 206.836†	-10.8	-0.00236	mg/L	0.000717	-0.00236	mg/L	0.000717	30.34%
Se 196.026†	9.6	0.00308	mg/L	0.001078	0.00308	mg/L	0.001078	35.05%
Si 251.611†	895635.6	18.0	mg/L	0.20	18.0	mg/L	0.20	1.10%
Sn 189.927†	-269.4	-0.0223	mg/L	0.00113	-0.0223	mg/L	0.00113	5.05%
Ti 334.940†	-8955.7	0.00171	mg/L	0.001039	0.00171	mg/L	0.001039	60.91%
Tl 190.801†	-18.2	-0.00741	mg/L	0.001966	-0.00741	mg/L	0.001966	26.52%

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V 290.880†	2395.7	0.00961 mg/L	0.001753	0.00961 mg/L	0.001753	18.24%
Zn 206.200†	124.7	0.00147 mg/L	0.000145	0.00147 mg/L	0.000145	9.87%
K 766.490†	7787.8	2.57 mg/L	0.052	2.57 mg/L	0.052	2.02%
Na 589.592†	582653.0	30.8 mg/L	0.18	30.8 mg/L	0.18	0.58%
Sr 407.771†	1233572.5	0.503 mg/L	0.0033	0.503 mg/L	0.0033	0.65%
Li 670.784†	1587.2	0.00930 mg/L	0.000427	0.00930 mg/L	0.000427	4.59%

==========

Sequence No.: 76 **Autosampler Location: 116**
Sample ID: L1207080306 **Date Collected: 7/27/2012 10:59:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080306

Analyte	Back Pressure	Flow
All	204.0 kPa	0.50 L/min

Mean Data: L1207080306

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2262646.7						25385.63	1.12%
YRADIAL	284971.8						3458.03	1.21%
Ga 417.206	1297456.7						42466.54	3.27%
GaRADIAL	83046.6						712.30	0.86%
Ag 328.068†	676.2	0.00207	mg/L	0.000614	0.00207	mg/L	0.000614	29.67%
Al 396.153†	1799.2	0.272	mg/L	0.0063	0.272	mg/L	0.0063	2.32%
As 188.979†	-10.8	-0.00125	mg/L	0.001380	-0.00125	mg/L	0.001380	110.50%
Ba 233.527†	9006.5	0.0530	mg/L	0.00100	0.0530	mg/L	0.00100	1.88%
Be 234.861†	336.5	0.00014	mg/L	0.000010	0.00014	mg/L	0.000010	6.86%
B 249.677†	4316.0	0.0410	mg/L	0.00102	0.0410	mg/L	0.00102	2.48%
Ca 227.546†	37469.2	85.4	mg/L	3.67	85.4	mg/L	3.67	4.30%
Cd 228.802†	11.8	0.00023	mg/L	0.000083	0.00023	mg/L	0.000083	36.27%
Co 228.616†	26.4	0.00023	mg/L	0.000263	0.00023	mg/L	0.000263	113.07%
Cr 267.716†	445.8	0.00329	mg/L	0.000065	0.00329	mg/L	0.000065	1.97%
Cu 327.393†	48.0	-0.00020	mg/L	0.000497	-0.00020	mg/L	0.000497	243.42%
Fe 239.562†	5663.3	0.395	mg/L	0.0083	0.395	mg/L	0.0083	2.10%
Mg 279.077†	51327.2	15.5	mg/L	0.34	15.5	mg/L	0.34	2.17%
Mn 257.610†	5696.1	0.00647	mg/L	0.000051	0.00647	mg/L	0.000051	0.79%
Mo 202.031†	93.3	0.00319	mg/L	0.000126	0.00319	mg/L	0.000126	3.95%
Ni 231.604†	146.2	-0.00104	mg/L	0.000368	-0.00104	mg/L	0.000368	35.28%
Pb 220.353†	4.7	0.00063	mg/L	0.002146	0.00063	mg/L	0.002146	342.00%
Sb 206.836†	-14.4	-0.00314	mg/L	0.000922	-0.00314	mg/L	0.000922	29.40%
Se 196.026†	4.9	0.00076	mg/L	0.005068	0.00076	mg/L	0.005068	667.37%
Si 251.611†	967640.8	19.4	mg/L	0.42	19.4	mg/L	0.42	2.17%
Sn 189.927†	-290.6	-0.0241	mg/L	0.00078	-0.0241	mg/L	0.00078	3.24%
Ti 334.940†	-4293.1	0.00955	mg/L	0.000930	0.00955	mg/L	0.000930	9.74%
Tl 190.801†	-15.7	-0.00670	mg/L	0.001308	-0.00670	mg/L	0.001308	19.51%
V 290.880†	2879.2	0.0115	mg/L	0.00109	0.0115	mg/L	0.00109	9.51%
Zn 206.200†	1517.7	0.0256	mg/L	0.00031	0.0256	mg/L	0.00031	1.23%
K 766.490†	9132.9	3.03	mg/L	0.083	3.03	mg/L	0.083	2.73%
Na 589.592†	711060.1	37.7	mg/L	0.24	37.7	mg/L	0.24	0.62%
Sr 407.771†	1611971.4	0.657	mg/L	0.0096	0.657	mg/L	0.0096	1.47%
Li 670.784†	1948.2	0.0119	mg/L	0.00060	0.0119	mg/L	0.00060	5.06%

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Sequence No.: 77 **Autosampler Location: 117**
Sample ID: L1207080307 **Date Collected: 7/27/2012 11:05:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207080307

Analyte	Back Pressure	Flow
All	205.0 kPa	0.50 L/min

Mean Data: L1207080307

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

Approved: July 31, 2012

Kim H. Rhoden

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2297438.9						18594.02	0.81%
YRADIAL	295153.4						499.99	0.17%
Ga 417.206	1314475.3						21936.17	1.67%
GaRADIAL	85638.5						447.14	0.52%
Ag 328.068†	611.7	0.00186	mg/L	0.000144	0.00186	mg/L	0.000144	7.76%
Al 396.153†	1701.9	0.257	mg/L	0.0047	0.257	mg/L	0.0047	1.83%
As 188.979†	-14.5	-0.00233	mg/L	0.001619	-0.00233	mg/L	0.001619	69.38%
Ba 233.527†	8526.1	0.0501	mg/L	0.00010	0.0501	mg/L	0.00010	0.19%
Be 234.861†	329.0	0.00014	mg/L	0.000035	0.00014	mg/L	0.000035	24.90%
B 249.677†	4161.7	0.0396	mg/L	0.00119	0.0396	mg/L	0.00119	3.00%
Ca 227.546†	35099.9	80.0	mg/L	2.53	80.0	mg/L	2.53	3.17%
Cd 228.802†	11.2	0.00022	mg/L	0.000078	0.00022	mg/L	0.000078	35.01%
Co 228.616†	27.2	0.00025	mg/L	0.000140	0.00025	mg/L	0.000140	55.79%
Cr 267.716†	419.8	0.00308	mg/L	0.000043	0.00308	mg/L	0.000043	1.41%
Cu 327.393†	63.9	-0.00014	mg/L	0.000181	-0.00014	mg/L	0.000181	129.25%
Fe 239.562†	5339.4	0.373	mg/L	0.0017	0.373	mg/L	0.0017	0.47%
Mg 279.077†	47176.6	14.3	mg/L	0.01	14.3	mg/L	0.01	0.09%
Mn 257.610†	5607.8	0.00636	mg/L	0.000092	0.00636	mg/L	0.000092	1.45%
Mo 202.031†	89.7	0.00309	mg/L	0.000166	0.00309	mg/L	0.000166	5.38%
Ni 231.604†	145.1	-0.00106	mg/L	0.000363	-0.00106	mg/L	0.000363	34.23%
Pb 220.353†	3.9	0.00053	mg/L	0.001497	0.00053	mg/L	0.001497	284.68%
Sb 206.836†	-16.4	-0.00356	mg/L	0.000331	-0.00356	mg/L	0.000331	9.30%
Se 196.026†	3.6	0.00014	mg/L	0.002005	0.00014	mg/L	0.002005	>999.9%
Si 251.611†	917393.9	18.4	mg/L	0.28	18.4	mg/L	0.28	1.54%
Sn 189.927†	-287.6	-0.0238	mg/L	0.00040	-0.0238	mg/L	0.00040	1.66%
Ti 334.940†	-3599.5	0.00942	mg/L	0.000821	0.00942	mg/L	0.000821	8.72%
Tl 190.801†	-11.8	-0.00571	mg/L	0.001161	-0.00571	mg/L	0.001161	20.32%
V 290.880†	2764.5	0.0110	mg/L	0.00085	0.0110	mg/L	0.00085	7.69%
Zn 206.200†	1713.1	0.0289	mg/L	0.00038	0.0289	mg/L	0.00038	1.31%
K 766.490†	8420.5	2.79	mg/L	0.039	2.79	mg/L	0.039	1.40%
Na 589.592†	670478.3	35.5	mg/L	0.17	35.5	mg/L	0.17	0.49%
Sr 407.771†	1506561.6	0.614	mg/L	0.0048	0.614	mg/L	0.0048	0.79%
Li 670.784†	1813.1	0.0109	mg/L	0.00066	0.0109	mg/L	0.00066	6.07%

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Sequence No.: 78 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/27/2012 11:11:47 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	205.0 kPa	0.50 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2326551.7						21928.19	0.94%
YRADIAL	298285.8						950.53	0.32%
Ga 417.206	1250793.8						11214.91	0.90%
GaRADIAL	82966.6						500.42	0.60%
Ag 328.068†	125288.8	0.406	mg/L	0.0046	0.406	mg/L	0.0046	1.13%
QC value within limits for Ag 328.068 Recovery = 101.57%								
Al 396.153†	66400.4	10.2	mg/L	0.04	10.2	mg/L	0.04	0.36%
QC value within limits for Al 396.153 Recovery = 101.68%								
As 188.979†	1342.3	0.384	mg/L	0.0042	0.384	mg/L	0.0042	1.09%
QC value within limits for As 188.979 Recovery = 96.02%								
Ba 233.527†	166046.6	0.996	mg/L	0.0062	0.996	mg/L	0.0062	0.62%
QC value within limits for Ba 233.527 Recovery = 99.62%								
Be 234.861†	58445.8	0.0492	mg/L	0.00082	0.0492	mg/L	0.00082	1.67%
QC value within limits for Be 234.861 Recovery = 98.34%								
B 249.677†	52877.2	0.493	mg/L	0.0084	0.493	mg/L	0.0084	1.71%
QC value within limits for B 249.677 Recovery = 98.67%								
Ca 227.546†	4372.8	10.5	mg/L	0.18	10.5	mg/L	0.18	1.75%
QC value within limits for Ca 227.546 Recovery = 104.76%								
Cd 228.802†	2729.1	0.0481	mg/L	0.00147	0.0481	mg/L	0.00147	3.05%
QC value within limits for Cd 228.802 Recovery = 96.28%								
Co 228.616†	8623.8	0.196	mg/L	0.0026	0.196	mg/L	0.0026	1.30%

Approved: July 31, 2012

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   QC value within limits for Co 228.616  Recovery = 98.19%
Cr 267.716†            62226.7       0.502 mg/L        0.0037       0.502 mg/L        0.0037   0.73%
   QC value within limits for Cr 267.716  Recovery = 100.30%
Cu 327.393†           127752.2       0.517 mg/L        0.0065       0.517 mg/L        0.0065   1.25%
   QC value within limits for Cu 327.393  Recovery = 103.49%
Fe 239.562†            55573.8        3.87 mg/L         0.010        3.87 mg/L         0.010   0.25%
   QC value within limits for Fe 239.562  Recovery = 96.85%
Mg 279.077†            32378.8        9.81 mg/L         0.014        9.81 mg/L         0.014   0.14%
   QC value within limits for Mg 279.077  Recovery = 98.14%
Mn 257.610†           403536.8       0.501 mg/L        0.0038       0.501 mg/L        0.0038   0.76%
   QC value within limits for Mn 257.610  Recovery = 100.26%
Mo 202.031†            36532.6       0.998 mg/L        0.0120       0.998 mg/L        0.0120   1.20%
   QC value within limits for Mo 202.031  Recovery = 99.77%
Ni 231.604†            34974.2       0.508 mg/L        0.0050       0.508 mg/L        0.0050   0.98%
   QC value within limits for Ni 231.604  Recovery = 101.61%
Pb 220.353†             6727.7       0.496 mg/L        0.0034       0.496 mg/L        0.0034   0.69%
   QC value within limits for Pb 220.353  Recovery = 99.15%
Sb 206.836†             5432.9        1.18 mg/L         0.020        1.18 mg/L         0.020   1.72%
   QC value within limits for Sb 206.836  Recovery = 98.59%
Se 196.026†              789.3       0.392 mg/L        0.0113       0.392 mg/L        0.0113   2.87%
   QC value within limits for Se 196.026  Recovery = 97.98%
Si 251.611†           249548.4        5.00 mg/L         0.040        5.00 mg/L         0.040   0.80%
   QC value within limits for Si 251.611  Recovery = 99.97%
Sn 189.927†            11972.7       0.984 mg/L        0.0072       0.984 mg/L        0.0072   0.73%
   QC value within limits for Sn 189.927  Recovery = 98.39%
Ti 334.940†          1038094.4        1.01 mg/L         0.003        1.01 mg/L         0.003   0.31%
   QC value within limits for Ti 334.940  Recovery = 101.28%
Tl 190.801†             1992.4       0.522 mg/L        0.0060       0.522 mg/L        0.0060   1.15%
   QC value within limits for Tl 190.801  Recovery = 104.44%
V 290.880†            247944.1        1.01 mg/L         0.005        1.01 mg/L         0.005   0.50%
   QC value within limits for V 290.880  Recovery = 101.22%
Zn 206.200†            55957.0       0.972 mg/L        0.0100       0.972 mg/L        0.0100   1.03%
   QC value within limits for Zn 206.200  Recovery = 97.20%
K 766.490†            143702.4        49.7 mg/L          0.17        49.7 mg/L          0.17   0.34%
   QC value within limits for K 766.490  Recovery = 99.30%
Na 589.592†           972194.1        51.6 mg/L          0.48        51.6 mg/L          0.48   0.94%
   QC value within limits for Na 589.592  Recovery = 103.26%
Sr 407.771†          2474432.2        1.01 mg/L         0.016        1.01 mg/L         0.016   1.58%
   QC value within limits for Sr 407.771  Recovery = 101.03%
Li 670.784†           146958.8        1.04 mg/L         0.002        1.04 mg/L         0.002   0.16%
   QC value within limits for Li 670.784  Recovery = 103.89%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 79                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/27/2012 11:17:46 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                    204.0 kPa         0.50 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            2333321.3                                                     18714.67   0.80%
YRADIAL               293815.9                                                      5029.75   1.71%
Ga 417.206           1236994.7                                                      4849.41   0.39%
GaRADIAL               82957.7                                                      1442.09   1.74%
Ag 328.068†              -56.8    -0.00033 mg/L      0.000470    -0.00033 mg/L      0.000470 140.64%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               40.1     0.00115 mg/L      0.001270     0.00115 mg/L      0.001270 110.31%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -9.3    -0.00089 mg/L      0.000450    -0.00089 mg/L      0.000450  50.79%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               77.1    -0.00058 mg/L      0.000116    -0.00058 mg/L      0.000116  20.02%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†                5.8    -0.00005 mg/L      0.000022    -0.00005 mg/L      0.000022  42.39%
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Approved: July 31, 2012

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   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               313.3     0.00359 mg/L      0.000321     0.00359 mg/L      0.000321   8.94%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -15.8      0.0114 mg/L       0.00538      0.0114 mg/L       0.00538  47.33%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -0.4     0.00001 mg/L      0.000058     0.00001 mg/L      0.000058 957.62%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               13.1    -0.00006 mg/L      0.000160    -0.00006 mg/L      0.000160 278.57%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               24.4    -0.00010 mg/L      0.000131    -0.00010 mg/L      0.000131 136.75%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              117.0     0.00006 mg/L      0.000312     0.00006 mg/L      0.000312 540.22%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               40.5     0.00368 mg/L      0.000105     0.00368 mg/L      0.000105   2.85%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               21.2      0.0132 mg/L       0.00225      0.0132 mg/L       0.00225  17.11%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†              125.2    -0.00045 mg/L      0.000029    -0.00045 mg/L      0.000029   6.37%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               27.3     0.00136 mg/L      0.000329     0.00136 mg/L      0.000329  24.13%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               13.6    -0.00298 mg/L      0.000198    -0.00298 mg/L      0.000198   6.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               -5.3    -0.00080 mg/L      0.001099    -0.00080 mg/L      0.001099 137.11%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -5.2    -0.00113 mg/L      0.000503    -0.00113 mg/L      0.000503  44.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                3.9     0.00023 mg/L      0.000413     0.00023 mg/L      0.000413 183.10%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              199.7    -0.00148 mg/L      0.000320    -0.00148 mg/L      0.000320  21.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                7.6     0.00043 mg/L      0.000252     0.00043 mg/L      0.000252  58.67%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              472.0     0.00138 mg/L      0.000162     0.00138 mg/L      0.000162  11.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -4.4    -0.00377 mg/L      0.001595    -0.00377 mg/L      0.001595  42.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               1154.2     0.00485 mg/L      0.000419     0.00485 mg/L      0.000419   8.63%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†                9.8    -0.00054 mg/L      0.000143    -0.00054 mg/L      0.000143  26.49%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                59.4     -0.0588 mg/L       0.01201     -0.0588 mg/L       0.01201  20.42%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              1460.2      0.0630 mg/L       0.00854      0.0630 mg/L       0.00854  13.56%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              1063.9     0.00134 mg/L      0.000042     0.00134 mg/L      0.000042   3.10%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               133.2    -0.00100 mg/L      0.000639    -0.00100 mg/L      0.000639  63.74%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
```

Approved: July 31, 2012

Kim H. Rhoden

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L12070640
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: WG404829 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50835
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL21-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:04
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	NI.072912.120407
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00262		0.00100	0.000500
Barium, Total	7440-39-3	0.0541		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00393		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00197		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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL22-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:07
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	NI.072912.120717
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00821		0.00100	0.000500
Barium, Total	7440-39-3	0.0880		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3		U	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8	0.00215		0.00200	0.00100
Lead, Total	7439-92-1	0.000804	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0145		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00224		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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL25-0712-1	**Prep Method:**	3015	**Prep Date:**	07/23/2012 07:39
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/29/2012 08:49
Workgroup #:	WG404829	**Analyst:**	JYH	**Run Date:**	07/29/2012 12:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	NI.072912.121026
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.000924	J	0.00100	0.000500
Barium, Total	7440-39-3	0.0664		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00141	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00522		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00362		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: WG404095
Analyst: REK
Spike Analyst: REK
Run Date: 07/23/2012 07:39
Method: 3015
Balance: BAL016
Instrument: MW-2

SOP: ME407 Revison 13
Spike Solution: STD52132
Spike Witness: BRG
HNO3 Lot #: COA16174
MS WG# 401311 SYRINGE FI COA16241
Digestion Tubes Lot #: COA16262

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG404095-03	BLANK	1	40 mL	100 mL	205.498 g	205.484 g		
2	WG404095-04	LCS	1	40 mL	100 mL	206.446 g	206.423 g	.25 mL	
3	L12070620-01	SAMP	1	40 mL	100 mL	207.946 g	207.921 g		07/31/12
4	L12070627-65	SAMP	1	40 mL	100 mL	207.473 g	207.45 g		07/27/12
5	L12070627-66	SAMP	1	40 mL	100 mL	206.131 g	206.108 g		07/27/12
6	L12070636-01	SAMP	2	40 mL	100 mL	207.026 g	207.005 g		07/31/12
7	WG404095-01	REF	2	40 mL	100 mL	205.789 g	205.771 g		
8	L12070636-02	SAMP	2	40 mL	100 mL	205.789 g	205.771 g		07/31/12
9	L12070639-01	SAMP	1	40 mL	100 mL	206.702 g	206.675 g		07/31/12
10	WG404095-02	REF	1	40 mL	100 mL	206.806 g	206.785 g		
11	L12070639-02	SAMP	1	40 mL	100 mL	206.806 g	206.785 g		07/31/12
12	L12070639-03	SAMP	1	40 mL	100 mL	205.794 g	205.77 g		07/31/12
13	L12070640-01	SAMP	1	40 mL	100 mL	205.992 g	205.963 g		07/31/12
14	L12070640-02	SAMP	1	40 mL	100 mL	209.989 g	209.961 g		07/31/12
15	L12070640-03	SAMP	1	40 mL	100 mL	206.916 g	206.886 g		07/31/12
16	L12070641-02	SAMP	1	40 mL	100 mL	206.684 g	206.656 g		07/31/12
17	L12070641-03	SAMP	1	40 mL	100 mL	207.968 g	207.945 g		07/31/12
18	L12070641-04	SAMP	1	40 mL	100 mL	206.577 g	206.551 g		07/31/12
19	L12070641-05	SAMP	1	40 mL	100 mL	205.712 g	205.697 g		07/31/12
20	L12070641-06	SAMP	1	40 mL	100 mL	205.446 g	205.421 g		07/31/12
21	L12070641-07	SAMP	1	40 mL	100 mL	208.012 g	207.984 g		07/31/12
22	L12070641-08	SAMP	1	40 mL	100 mL	208.606 g	208.58 g		07/31/12
23	WG404095-05	DUP	1	40 mL	100 mL	207.104 g	207.08 g		
24	WG404095-06	MS	1	40 mL	100 mL	207.005 g	206.978 g	.25 mL	
25	WG404095-07	MS	1	40 mL	100 mL	206.757 g	206.731 g	.25 mL	
26	WG404095-08	MSD	1	40 mL	100 mL	207.756 g	207.731 g	.25 mL	

Analyst: [signature]

Reviewer: Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 2509128
Report generated: 07/23/2012 08:41

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.072912.083710	Blank	Blank		1		07/29/12 08:37
2	NI.072912.084021	WG404857-01	Calibration Point		1		07/29/12 08:40
3	NI.072912.084332	WG404857-02	Calibration Point		1		07/29/12 08:43
4	NI.072912.084642	WG404857-03	Calibration Point		1		07/29/12 08:46
5	NI.072912.084953	WG404857-04	Calibration Point		1		07/29/12 08:49
6	NI.072912.085306	WG404857-05	Initial Calibration Verification		1		07/29/12 08:53
7	NI.072912.085619	WG404857-06	Initial Calib Blank		1		07/29/12 08:56
8	NI.072912.085931	WG404857-07	Low Level Initial Calibration V		1		07/29/12 08:59
9	NI.072912.090242	WG404857-08	Interference Check		1		07/29/12 09:02
10	NI.072912.090551	WG404857-09	Interference Check		1		07/29/12 09:05
11	NI.072912.090902	WG404857-10	CCV		1		07/29/12 09:09
12	NI.072912.091212	WG404857-11	QC Std 7		1		07/29/12 09:12
13	NI.072912.091627	WG404857-12	CCB		1		07/29/12 09:16
14	NI.072912.092141	WG404305-02	Method/Prep Blank	40/100	1		07/29/12 09:21
15	NI.072912.092513	WG404305-03	Laboratory Control S	40/100	1		07/29/12 09:25
16	NI.072912.092823	L12070666-08	116-BH06-1-RB	40/100	1		07/29/12 09:28
17	NI.072912.093133	L12070666-18	125-BH04-1-RB	40/100	1		07/29/12 09:31
18	NI.072912.093442	WG404305-01	Reference Sample		5	L12070658-20	07/29/12 09:34
19	NI.072912.093751	WG404305-04	Matrix Spike	40/100	5	L12070658-20	07/29/12 09:37
20	NI.072912.094059	WG404305-05	Matrix Spike Duplica	40/100	5	L12070658-20	07/29/12 09:40
21	NI.072912.094407	L12070658-12	MW3-3	40/100	5		07/29/12 09:44
22	NI.072912.094717	WG404831-01	Post Digestion Spike		5	L12070658-12	07/29/12 09:47
23	NI.072912.095026	WG404831-02	Serial Dilution		25	L12070658-12	07/29/12 09:50
24	NI.072912.095338	WG404857-13	CCV		1		07/29/12 09:53
25	NI.072912.095648	WG404857-14	CCB		1		07/29/12 09:56
26	NI.072912.095959	L12070649-01	TC-GW-14	40/100	5		07/29/12 09:59
27	NI.072912.100309	L12070649-02	TC-GW-14F	40/100	5		07/29/12 10:03
28	NI.072912.100618	L12070649-03	TC-GW-15	40/100	5		07/29/12 10:06
29	NI.072912.100927	L12070649-04	TC-GW-15F	40/100	5		07/29/12 10:09
30	NI.072912.101236	L12070649-06	TC-GW-16	40/100	5		07/29/12 10:12
31	NI.072912.101546	L12070649-07	TC-GW-16F	40/100	5		07/29/12 10:15
32	NI.072912.101856	L12070649-08	TC-GW-17	40/100	5		07/29/12 10:18
33	NI.072912.102204	L12070649-09	TC-GW-17F	40/100	5		07/29/12 10:22
34	NI.072912.102514	L12070649-10	TC-GW-17D	40/100	5		07/29/12 10:25

Page: 1 Approved: July 30, 2012

Maren Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.072912.102822	L12070649-11	TC-GW-17DF	40/100	5		07/29/12 10:28
36	NI.072912.103135	WG404857-15	CCV		1		07/29/12 10:31
37	NI.072912.103445	WG404857-16	CCB		1		07/29/12 10:34
38	NI.072912.103756	L12070658-14	35B WW05	40/100	5		07/29/12 10:37
39	NI.072912.104105	L12070658-15	MW1-1	40/100	5		07/29/12 10:41
40	NI.072912.104416	L12070658-16	MW1-2	40/100	5		07/29/12 10:44
41	NI.072912.104726	L12070658-17	MW1-3	40/100	5		07/29/12 10:47
42	NI.072912.105037	L12070658-18	35B WW08	40/100	5		07/29/12 10:50
43	NI.072912.105346	L12070658-19	35B WW09	40/100	5		07/29/12 10:53
44	NI.072912.105658	WG404857-17	CCV		1		07/29/12 10:56
45	NI.072912.110008	WG404857-18	CCB		1		07/29/12 11:00
46	NI.072912.110321	WG404857-19	Low Level Continuing Calibra		1		07/29/12 11:03
47	NI.072912.111018	WG404095-03	Method/Prep Blank	40/100	1		07/29/12 11:10
48	NI.072912.111327	WG404095-04	Laboratory Control S	40/100	1		07/29/12 11:13
49	NI.072912.111637	WG404095-01	Reference Sample		1	L12070636-02	07/29/12 11:16
50	NI.072912.111947	WG404095-05	Duplicate	40/100	1	L12070636-02	07/29/12 11:19
51	NI.072912.112257	WG404095-06	Matrix Spike	40/100	1	L12070636-02	07/29/12 11:22
52	NI.072912.112606	L12070639-01	MPL24-0712-1	40/100	1		07/29/12 11:26
53	NI.072912.112916	WG404829-01	Post Digestion Spike		1	L12070639-01	07/29/12 11:29
54	NI.072912.113225	WG404829-02	Serial Dilution		5	L12070639-01	07/29/12 11:32
55	NI.072912.113537	WG404857-20	CCV		1		07/29/12 11:35
56	NI.072912.113847	WG404857-21	CCB		1		07/29/12 11:38
57	NI.072912.114200	L12070627-65	ERB 1	40/100	1		07/29/12 11:42
58	NI.072912.114509	L12070627-66	ERB 2	40/100	1		07/29/12 11:45
59	NI.072912.114817	L12070636-01	1213PWT009-EFF	40/100	1		07/29/12 11:48
60	NI.072912.115126	WG404095-02	Reference Sample		1	L12070639-02	07/29/12 11:51
61	NI.072912.115436	WG404095-07	Matrix Spike	40/100	1	L12070639-02	07/29/12 11:54
62	NI.072912.115746	WG404095-08	Matrix Spike Duplica	40/100	1	L12070639-02	07/29/12 11:57
63	NI.072912.120057	L12070639-03	SMW4-0712-1	40/100	1		07/29/12 12:00
64	NI.072912.120407	L12070640-01	MPL21-0712-1	40/100	1		07/29/12 12:04
65	NI.072912.120717	L12070640-02	MPL22-0712-1	40/100	1		07/29/12 12:07
66	NI.072912.121026	L12070640-03	MPL25-0712-1	40/100	1		07/29/12 12:10
67	NI.072912.121338	WG404857-22	CCV		1		07/29/12 12:13
68	NI.072912.121648	WG404857-23	CCB		1		07/29/12 12:16

Page: 2 Approved: July 30, 2012

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	NI.072912.122105	L12070803-04	MPL1-0712-1	40/100	1		07/29/12 12:21
70	NI.072912.122414	L12070803-05	MPL2-0712-1	40/100	1		07/29/12 12:24
71	NI.072912.122724	L12070803-06	MPL3-0712-1	40/100	1		07/29/12 12:27
72	NI.072912.123033	L12070803-07	MPL3-0712-2	40/100	1		07/29/12 12:30
73	NI.072912.123343	WG404095-01	Reference Sample		1	L12070636-02	07/29/12 12:33
74	NI.072912.123652	WG404095-05	Duplicate	40/100	10	L12070636-02	07/29/12 12:36
75	NI.072912.124001	WG404095-06	Matrix Spike	40/100	10	L12070636-02	07/29/12 12:40
76	NI.072912.124312	L12070636-01	1213PWT009-EFF	40/100	10		07/29/12 12:43
77	NI.072912.124624	WG404857-24	CCV		1		07/29/12 12:46
78	NI.072912.124935	WG404857-25	CCB		1		07/29/12 12:49
79	NI.072912.130820	WG403906-02	Method/Prep Blank	40/100	1		07/29/12 13:08
80	NI.072912.131131	WG403906-03	Laboratory Control S	40/100	1		07/29/12 13:11
81	NI.072912.131442	WG403906-01	Reference Sample		5	L12070491-12	07/29/12 13:14
82	NI.072912.131751	WG403906-04	Matrix Spike	40/100	5	L12070491-12	07/29/12 13:17
83	NI.072912.132101	WG403906-05	Matrix Spike Duplica	40/100	5	L12070491-12	07/29/12 13:21
84	NI.072912.132410	L12070491-07	BEF-BC1-T1-W211-U	40/100	1		07/29/12 13:24
85	NI.072912.132719	L12070491-08	BEF-BC1-T1-W211-F	40/100	1		07/29/12 13:27
86	NI.072912.133029	WG404852-01	Post Digestion Spike		1	L12070491-08	07/29/12 13:30
87	NI.072912.133338	WG404852-02	Serial Dilution		5	L12070491-08	07/29/12 13:33
88	NI.072912.133650	WG404857-26	CCV		1		07/29/12 13:36
89	NI.072912.134000	WG404857-27	CCB		1		07/29/12 13:40
90	NI.072912.134450	L12070491-09	BEF-BC2-T1-W211-U	40/100	5		07/29/12 13:44
91	NI.072912.134759	L12070491-10	BEF-BC2-T1-W211-F	40/100	5		07/29/12 13:47
92	NI.072912.135108	L12070491-11	BEF-BC3-T1-W211-U	40/100	5		07/29/12 13:51
93	NI.072912.135419	L12070537-01	TC-GW-02	40/100	5		07/29/12 13:54
94	NI.072912.135729	L12070537-02	TC-GW-02F	40/100	5		07/29/12 13:57
95	NI.072912.140039	L12070537-03	TC-GW-03	40/100	5		07/29/12 14:00
96	NI.072912.140349	L12070537-04	TC-GW-03F	40/100	5		07/29/12 14:03
97	NI.072912.140658	L12070537-05	TC-GW01	40/100	5		07/29/12 14:06
98	NI.072912.141008	L12070537-06	TC-GW01F	40/100	5		07/29/12 14:10
99	NI.072912.141317	L12070537-07	TC-GW-07	40/100	5		07/29/12 14:13
100	NI.072912.141629	WG404857-28	CCV		1		07/29/12 14:16
101	NI.072912.141939	WG404857-29	CCB		1		07/29/12 14:19
102	NI.072912.142251	L12070537-08	TC-GW-07F	40/100	5		07/29/12 14:22

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Marcu Berry

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Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	NI.072912.142601	L12070537-09	TC-GW-08	40/100	5		07/29/12 14:26
104	NI.072912.142911	L12070537-10	TC-GW-08F	40/100	5		07/29/12 14:29
105	NI.072912.143220	L12070537-11	TC-GW11	40/100	5		07/29/12 14:32
106	NI.072912.143613	L12070537-12	TC-GW11F	40/100	5		07/29/12 14:36
107	NI.072912.143924	WG404857-30	CCV		1		07/29/12 14:39
108	NI.072912.144234	WG404857-31	CCB		1		07/29/12 14:42
109	NI.072912.144547	WG404857-32	Low Level Continuing Calibra		1		07/29/12 14:45
110	NI.072912.150313	WG403907-02	Method/Prep Blank	40/100	1		07/29/12 15:03
111	NI.072912.150623	WG403907-03	Laboratory Control S	40/100	1		07/29/12 15:06
112	NI.072912.150932	WG403907-01	Reference Sample		5	L12070590-13	07/29/12 15:09
113	NI.072912.151242	WG403907-04	Matrix Spike	40/100	5	L12070590-13	07/29/12 15:12
114	NI.072912.151551	WG403907-05	Matrix Spike Duplica	40/100	5	L12070590-13	07/29/12 15:15
115	NI.072912.151902	L12070590-01	TC-GW-09	40/100	5		07/29/12 15:19
116	NI.072912.152211	L12070590-02	TC-GW-09F	40/100	5		07/29/12 15:22
117	NI.072912.152527	WG404853-01	Post Digestion Spike		5	L12070590-02	07/29/12 15:25
118	NI.072912.152836	WG404853-02	Serial Dilution		25	L12070590-02	07/29/12 15:28
119	NI.072912.153148	WG404857-33	CCV		1		07/29/12 15:31
120	NI.072912.153458	WG404857-34	CCB		1		07/29/12 15:34
121	NI.072912.153810	L12070590-03	TC-GW-10	40/100	5		07/29/12 15:38
122	NI.072912.154119	L12070590-04	TC-GW-10F	40/100	5		07/29/12 15:41
123	NI.072912.154428	L12070590-05	TC-GW-10D	40/100	5		07/29/12 15:44
124	NI.072912.154738	L12070590-06	TC-GW-10DF	40/100	5		07/29/12 15:47
125	NI.072912.155049	L12070590-07	TC-GW-12	40/100	5		07/29/12 15:50
126	NI.072912.155359	L12070590-08	TC-GW-12F	40/100	5		07/29/12 15:53
127	NI.072912.155709	L12070590-12	TC-GW-13	40/100	5		07/29/12 15:57
128	NI.072912.160022	WG404857-35	CCV		1		07/29/12 16:00
129	NI.072912.160331	WG404857-36	CCB		1		07/29/12 16:03
130	NI.072912.160643	WG404188-02	Method/Prep Blank	40/100	1		07/29/12 16:06
131	NI.072912.160952	WG404188-03	Laboratory Control S	40/100	1		07/29/12 16:09
132	NI.072912.161301	L12070658-01	MW-3-1	40/100	5		07/29/12 16:13
133	NI.072912.161612	L12070658-02	MW-3-2		5	WG404188-01	07/29/12 16:16
134	NI.072912.161920	L12070658-03	MW-3-2MS	40/100	5	WG404188-04	07/29/12 16:19
135	NI.072912.162230	L12070658-04	MW-3-2MSD	40/100	5	WG404188-05	07/29/12 16:22
136	NI.072912.162539	L12070658-06	FIELD BLANK 15JULY2012	40/100	5		07/29/12 16:25

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Maren Berry

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Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	NI.072912.162848	WG404837-01	Post Digestion Spike		5	L12070658-06	07/29/12 16:28
138	NI.072912.163157	WG404837-02	Serial Dilution		25	L12070658-06	07/29/12 16:31
139	NI.072912.163509	WG404857-48	CCV		1		07/29/12 16:35
140	NI.072912.163820	WG404857-49	CCB		1		07/29/12 16:38
141	NI.072912.164131	L12070658-07	MW-3-1-D	40/100	5		07/29/12 16:41
142	NI.072912.164442	L12070658-08	MW-58	40/100	5		07/29/12 16:44
143	NI.072912.164751	L12070658-09	WW-03	40/100	5		07/29/12 16:47
144	NI.072912.165101	L12070658-10	35B WW06	40/100	5		07/29/12 16:51
145	NI.072912.165411	L12070658-11	FIELD BLANK 16JULY2012	40/100	5		07/29/12 16:54
146	NI.072912.165724	WG404857-50	CCV		1		07/29/12 16:57
147	NI.072912.170035	WG404857-51	CCB		1		07/29/12 17:00
148	NI.072912.170348	L12070643-01	BIF-PND-T1-W212-U	40/100	5		07/29/12 17:03
149	NI.072912.170657	L12070643-02	BIF-PND-T1-W212-F	40/100	5		07/29/12 17:06
150	NI.072912.171006	L12070643-03	BEF-BC1-T1-W212-U	40/100	5		07/29/12 17:10
151	NI.072912.171315	L12070643-04	BEF-BC1-T1-W212-F	40/100	5		07/29/12 17:13
152	NI.072912.171624	L12070643-05	BEF-BC2-T1-W212-U	40/100	5		07/29/12 17:16
153	NI.072912.171934	L12070643-01	BIF-PND-T1-W212-U		50		07/29/12 17:19
154	NI.072912.172243	L12070643-02	BIF-PND-T1-W212-F		50		07/29/12 17:22
155	NI.072912.172554	L12070643-03	BEF-BC1-T1-W212-U		50		07/29/12 17:25
156	NI.072912.172904	L12070643-04	BEF-BC1-T1-W212-F		50		07/29/12 17:29
157	NI.072912.173213	L12070643-05	BEF-BC2-T1-W212-U		50		07/29/12 17:32
158	NI.072912.173525	WG404857-52	CCV		1		07/29/12 17:35
159	NI.072912.173835	WG404857-53	CCB		1		07/29/12 17:38
160	NI.072912.174147	L12070643-06	BEF-BC2-T1-W212-F	40/100	5		07/29/12 17:41
161	NI.072912.174457	L12070643-07	BEF-BC3-T1-W212-U	40/100	5		07/29/12 17:44
162	NI.072912.174806	L12070643-08	BEF-BC3-T1-W212-F	40/100	5		07/29/12 17:48
163	NI.072912.175115	L12070643-09	BEF-SMF-T1-W212-U	40/100	5		07/29/12 17:51
164	NI.072912.175423	L12070643-10	BEF-SMF-T1-W212-F	40/100	5		07/29/12 17:54
165	NI.072912.175732	L12070643-06	BEF-BC2-T1-W212-F		50		07/29/12 17:57
166	NI.072912.180040	L12070643-07	BEF-BC3-T1-W212-U		50		07/29/12 18:00
167	NI.072912.180348	L12070643-08	BEF-BC3-T1-W212-F		50		07/29/12 18:03
168	NI.072912.180659	L12070643-09	BEF-SMF-T1-W212-U		50		07/29/12 18:06
169	NI.072912.181008	L12070643-10	BEF-SMF-T1-W212-F		50		07/29/12 18:10
170	NI.072912.181319	WG404857-54	CCV		1		07/29/12 18:13

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Marcu Berry

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Instrument Run Log

Instrument: ICP-MS2 Dataset: 072912A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42656

Calibration Std: STD52815 ICV Std: STD52584 Post Spike: STD47984
ICSA: STD52753 ICSAB: STD52589 Int. Std: RGT17307
CCV: STD52697 LLCCV: STD52696

Workgroups: 404831,404829,404669,404852,404853,404837

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	NI.072912.181629	WG404857-55	CCB		1		07/29/12 18:16
172	NI.072912.181941	L12070643-11	BEF-CBE-T1-W212-U	40/100	5		07/29/12 18:19
173	NI.072912.182251	L12070643-12	BEF-CBE-T1-W212-F	40/100	5		07/29/12 18:22
174	NI.072912.182601	L12070643-11	BEF-CBE-T1-W212-U		50		07/29/12 18:26
175	NI.072912.182910	L12070643-12	BEF-CBE-T1-W212-F		50		07/29/12 18:29
176	NI.072912.183221	WG404857-56	CCV		1		07/29/12 18:32
177	NI.072912.183532	WG404857-57	CCB		1		07/29/12 18:35
178	NI.072912.183844	WG404857-58	Low Level Continuing Calibra		1		07/29/12 18:38

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Maren Berry

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Data Checklist

Date: 29-JUL-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ICP-MS2
Curve Workgroup: 404857
Runlog ID: 48117
Analytical Workgroups: 404831,404829,404669,404852,404853,404837

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	649,658,491,537,643
Client Forms	X
Level X	
Level 3	658,636
Level 4	649,639,640,803,491,537,643
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	MMB
Comments	

Primary Reviewer: Secondary Reviewer:
30-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-30-2012 16:39:02

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG404829

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/23/2012	3.9	180		07/29/12	10	180	
MPL22-0712-1	02	07/19/12					07/23/2012	3.8	180		07/29/12	10	180	
MPL25-0712-1	03	07/19/12					07/23/2012	3.7	180		07/29/12	9.9	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2523627
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: NI.072912.111018
Prep Date: 07/23/12 07:39
Analyzed Date: 07/29/12 11:10
Analyst: JYH

Work Group: WG404829
Blank Sample ID: WG404095-03
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	WG404095-04	NI.072812.183302	07/28/12 18:33	01
DUP	WG404095-05	NI.072812.183922	07/28/12 18:39	01
LCS	WG404095-04	NI.072912.111327	07/29/12 11:13	02
DUP	WG404095-05	NI.072912.111947	07/29/12 11:19	02
MPL21-0712-1	L12070640-01	NI.072912.120407	07/29/12 12:04	02
MPL22-0712-1	L12070640-02	NI.072912.120717	07/29/12 12:07	02
MPL25-0712-1	L12070640-03	NI.072912.121026	07/29/12 12:10	02
DUP	WG404095-05	NI.072912.123652	07/29/12 12:36	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2523628
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/23/12 07:39 Sample ID: WG404095-03
Instrument ID: ICP-MS2 Run Date: 07/29/12 11:10 Prep Method: 3015
File ID: NI.072912.111018 Analyst: JYH Method: 6020
Workgroup (AAB#): WG404829 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-29-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00100	0.000500	1	U
Arsenic, Total	0.000500	0.00100	0.000500	1	U
Barium, Total	0.00150	0.00300	0.00150	1	U
Cadmium, Total	0.000300	0.000600	0.000300	1	U
Chromium, Total	0.00100	0.00200	0.00100	1	U
Cobalt, Total	0.000500	0.00100	0.000500	1	U
Copper, Total	0.00100	0.00200	0.00100	1	U
Lead, Total	0.000500	0.00100	0.000500	1	U
Manganese, Total	0.00100	0.00200	0.00100	1	U
Nickel, Total	0.00200	0.00400	0.00200	1	U
Selenium, Total	0.000500	0.00100	0.000500	1	U
Silver, Total	0.000500	0.00100	0.000500	1	U
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: 2523629
30-JUL-2012 17:13

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/29/2012 Sample ID: WG404095-04
Instrument ID: ICP-MS2 Run Time: 11:13 Prep Method: 3015
File ID: NI.072912.111327 Analyst: JYH Method: 6020
Workgroup (AAB#): WG404829 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52132 Cal ID: ICP-MS-29-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0604	96.6	80 - 120	
Arsenic, Total	0.0625	0.0605	96.8	80 - 120	
Barium, Total	0.0625	0.0592	94.7	80 - 120	
Cadmium, Total	0.0625	0.0642	103	80 - 120	
Chromium, Total	0.0625	0.0613	98.1	80 - 120	
Cobalt, Total	0.0625	0.0648	104	80 - 120	
Copper, Total	0.0625	0.0635	102	80 - 120	
Lead, Total	0.0625	0.0617	98.7	80 - 120	
Manganese, Total	0.0625	0.0648	104	80 - 120	
Nickel, Total	0.0625	0.0619	99.0	80 - 120	
Selenium, Total	0.0625	0.0587	93.9	80 - 120	
Silver, Total	0.0625	0.0570	91.2	80 - 120	
Thallium, Total	0.0625	0.0611	97.8	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2523703
Report generated: 07/30/2012 17:13

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12070640 **Worknum:** WG404829
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG404829-02 **File ID:** NI.072912.113225 **Dil:** 5 **Units:** ug/L
Sample: L12070639-01 **File ID:** NI.072912.112606 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	0.285	F	1.06	F	273.00	
Arsenic	0.639	X	ND	U		
Barium	36.5	X	ND	U		
Cadmium	ND	U	ND	U		
Chromium	0.818	X	ND	U		
Cobalt	ND	U	ND	U		
Copper	0.430	F	ND	U		
Lead	ND	U	ND	U		
Manganese	1.18	X	ND	U		
Nickel	ND	U	ND	U		
Selenium	2.68	X	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: 2523625
07/30/2012 17:13

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070640 **Worknum:** WG404829
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG404829-01 **File ID:** NI.072912.112916 **Dil:** 1 **Units:** ug/L
Sample ID: L12070639-01 **File ID:** NI.072912.112606 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	49.4		0.285	F	50	98.3	75 - 125	
ARSENIC	49.1		0.639		50	96.9	75 - 125	
BARIUM	80.4		36.5		50	87.8	75 - 125	
CADMIUM	53.7		0	U	50	107.4	75 - 125	
CHROMIUM	48.7		0.818		50	95.7	75 - 125	
COBALT	51.8		0	U	50	103.5	75 - 125	
COPPER	48.2		0.430	F	50	95.5	75 - 125	
LEAD	48.9		0	U	50	97.7	75 - 125	
MANGANESE	53.8		1.18		50	105.1	75 - 125	
NICKEL	48.2		0	U	50	96.4	75 - 125	
SELENIUM	50.7		2.68		50	96.0	75 - 125	
SILVER	50.8		0	U	50	101.7	75 - 125	
THALLIUM	48.6		0	U	50	97.2	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: 2523626
Report generated: 07/30/2012 17:13

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12070640**	Workgroup (AAB#):	**WG404829**
Analytical Method:	**6020**	Instrument ID:	**ICP-MS2**
ICAL Worknum:	**WG404857**	Initial Calibration Date:	**29-JUL-2012 08:49**

	WG404857-01		WG404857-02		WG404857-03		WG404857-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	21.7	.4	404	50	416000	100	824000	.999906	
ARSENIC	0	-188	.4	-123	50	50300	100	98800	.999987	
BARIUM	0	31.0	.4	266	50	216000	100	423000	.999977	
CADMIUM	0	53.3	.4	216	50	159000	100	309000	.999999	
CHROMIUM	0	8320	.4	8830	50	402000	100	779000	.999984	
COBALT	0	126	.4	524	50	419000	100	819000	.999977	
COPPER	0	127	.4	254	50	109000	100	211000	.999913	
LEAD	0	1510	.4	4060	50	2470000	100	4820000	.999964	
MANGANESE	0	1080	.4	1770	50	670000	100	1290000	.999913	
NICKEL	0	65.7	.4	184	50	117000	100	230000	.999984	
SELENIUM	0	25.0	.4	29.2	50	5050	100	9840	.999976	
SILVER	0	40.3	.4	364	50	310000	100	604000	.999985	
THALLIUM	0	5.70	.4	864	50	815000	100	1590000	.999962	

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: 2523634
Report generated: 30-JUL-2012 17:13

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070640
Instrument ID: ICP-MS2
File ID: NI.072912.085619
Workgroup (AAB#): WG404829
Matrix: WATER

Run Date: 07/29/2012
Run Time: 08:56
Analyst: JYH
Cal ID: ICP-MS2 - 29-JUL-12

Sample ID: WG404857-06
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	.269	F
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: 2523636
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-12
Instrument ID: ICP-MS2
Run Time: 09:16
Method: 6020
File ID: NI.072912.091627
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.200	U
Arsenic	0.200	0.400	0.200	U
Barium	0.600	1.20	0.600	U
Cadmium	0.120	0.240	0.120	U
Chromium	0.400	0.800	0.400	U
Cobalt	0.200	0.400	0.200	U
Copper	0.400	0.800	0.400	U
Lead	0.200	0.400	0.200	U
Manganese	0.400	0.800	0.400	U
Nickel	0.800	1.60	0.800	U
Selenium	0.200	0.400	0.200	U
Silver	0.200	0.400	0.200	U
Thallium	0.0400	0.0800	0.0400	U

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

CCB - Modified 03/05/2008
PDF File ID: 2523639
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-18
Instrument ID: ICP-MS2
Run Time: 11:00
Method: 6020
File ID: NI.072912.110008
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.263	F
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: 2523639
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-21
Instrument ID: ICP-MS2
Run Time: 11:38
Method: 6020
File ID: NI.072912.113847
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.275	F
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: 2523639
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-23
Instrument ID: ICP-MS2
Run Time: 12:16
Method: 6020
File ID: NI.072912.121648
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.278	F
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: 2523639
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-25
Instrument ID: ICP-MS2
Run Time: 12:49
Method: 6020
File ID: NI.072912.124935
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.400	0.271	F
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: 2523639
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12070640 Run Date: 07/29/2012 Sample ID: WG404857-05
Instrument ID: ICP-MS2 Run Time: 08:53 Method: 6020
File ID: NI.072912.085306 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG404829 Cal ID: ICP-MS - 29-JUL-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	50.0	100	90 - 110	
Arsenic		50	49.7	99.5	90 - 110	
Barium		50	50.5	101	90 - 110	
Cadmium		50	50.6	101	90 - 110	
Chromium		50	50.0	99.9	90 - 110	
Cobalt		50	50.0	100	90 - 110	
Copper		50	50.5	101	90 - 110	
Lead		50	49.8	99.5	90 - 110	
Manganese		50	50.1	100	90 - 110	
Nickel		50	50.0	100	90 - 110	
Selenium		50	50.2	100	90 - 110	
Silver		50	50.9	102	90 - 110	
Thallium		50	49.7	99.3	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2523635
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-10
Instrument ID: ICP-MS2
Run Time: 09:09
Method: 6020
File ID: NI.072912.090902
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.7	ug/L	101	90 - 110		
Arsenic		50.0	49.1	ug/L	98.2	90 - 110		
Barium		50.0	48.0	ug/L	95.9	90 - 110		
Cadmium		50.0	52.6	ug/L	105	90 - 110		
Chromium		50.0	48.3	ug/L	96.7	90 - 110		
Cobalt		50.0	50.4	ug/L	101	90 - 110		
Copper		50.0	50.3	ug/L	101	90 - 110		
Lead		50.0	49.4	ug/L	98.8	90 - 110		
Manganese		50.0	51.3	ug/L	103	90 - 110		
Nickel		50.0	49.9	ug/L	99.8	90 - 110		
Selenium		50.0	49.8	ug/L	99.6	90 - 110		
Silver		50.0	49.7	ug/L	99.4	90 - 110		
Thallium		50.0	49.2	ug/L	98.3	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2523638
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640 Run Date: 07/29/2012 Sample ID: WG404857-17
Instrument ID: ICP-MS2 Run Time: 10:56 Method: 6020
File ID: NI.072912.105658 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG404829 Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.7	ug/L	101	90 - 110		
Arsenic		50.0	50.1	ug/L	100	90 - 110		
Barium		50.0	50.7	ug/L	101	90 - 110		
Cadmium		50.0	53.3	ug/L	107	90 - 110		
Chromium		50.0	48.1	ug/L	96.1	90 - 110		
Cobalt		50.0	51.3	ug/L	103	90 - 110		
Copper		50.0	49.2	ug/L	98.4	90 - 110		
Lead		50.0	49.5	ug/L	98.9	90 - 110		
Manganese		50.0	51.6	ug/L	103	90 - 110		
Nickel		50.0	48.9	ug/L	97.7	90 - 110		
Selenium		50.0	50.9	ug/L	102	90 - 110		
Silver		50.0	48.0	ug/L	95.9	90 - 110		
Thallium		50.0	49.1	ug/L	98.2	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2523638
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-20
Instrument ID: ICP-MS2
Run Time: 11:35
Method: 6020
File ID: NI.072912.113537
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.9	ug/L	102	90 - 110		
Arsenic		50.0	48.9	ug/L	97.8	90 - 110		
Barium		50.0	48.7	ug/L	97.4	90 - 110		
Cadmium		50.0	54.3	ug/L	109	90 - 110		
Chromium		50.0	47.1	ug/L	94.3	90 - 110		
Cobalt		50.0	51.6	ug/L	103	90 - 110		
Copper		50.0	47.5	ug/L	94.9	90 - 110		
Lead		50.0	48.3	ug/L	96.6	90 - 110		
Manganese		50.0	52.3	ug/L	105	90 - 110		
Nickel		50.0	46.9	ug/L	93.9	90 - 110		
Selenium		50.0	49.7	ug/L	99.3	90 - 110		
Silver		50.0	46.6	ug/L	93.3	90 - 110		
Thallium		50.0	47.8	ug/L	95.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2523638
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/29/2012
Sample ID: WG404857-22
Instrument ID: ICP-MS2
Run Time: 12:13
Method: 6020
File ID: NI.072912.121338
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG404829
Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.1	ug/L	100	90 - 110		
Arsenic		50.0	49.5	ug/L	98.9	90 - 110		
Barium		50.0	48.3	ug/L	96.5	90 - 110		
Cadmium		50.0	54.5	ug/L	109	90 - 110		
Chromium		50.0	47.1	ug/L	94.2	90 - 110		
Cobalt		50.0	51.7	ug/L	103	90 - 110		
Copper		50.0	48.3	ug/L	96.7	90 - 110		
Lead		50.0	48.4	ug/L	96.8	90 - 110		
Manganese		50.0	52.7	ug/L	105	90 - 110		
Nickel		50.0	47.6	ug/L	95.3	90 - 110		
Selenium		50.0	50.1	ug/L	100	90 - 110		
Silver		50.0	46.6	ug/L	93.2	90 - 110		
Thallium		50.0	48.3	ug/L	96.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2523638
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640 Run Date: 07/29/2012 Sample ID: WG404857-24
Instrument ID: ICP-MS2 Run Time: 12:46 Method: 6020
File ID: NI.072912.124624 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG404829 Cal ID: ICP-MS - 29-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.9	ug/L	102	90 - 110		
Arsenic		50.0	50.4	ug/L	101	90 - 110		
Barium		50.0	49.1	ug/L	98.3	90 - 110		
Cadmium		50.0	53.5	ug/L	107	90 - 110		
Chromium		50.0	48.3	ug/L	96.7	90 - 110		
Cobalt		50.0	51.9	ug/L	104	90 - 110		
Copper		50.0	48.4	ug/L	96.8	90 - 110		
Lead		50.0	48.2	ug/L	96.4	90 - 110		
Manganese		50.0	52.6	ug/L	105	90 - 110		
Nickel		50.0	47.6	ug/L	95.3	90 - 110		
Selenium		50.0	51.3	ug/L	103	90 - 110		
Silver		50.0	46.6	ug/L	93.1	90 - 110		
Thallium		50.0	48.1	ug/L	96.1	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2523638
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070640
Instrument ID: ICP-MS2
Sol. A : WG404857-08 **File ID:** NI.072912.090242
Sol. AB : WG404857-09 **File ID:** NI.072912.090551

Workgroup (AAB#): WG404829
Method: 6020
Units: ug/L
Matrix: Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0708	NS	100	103	103	
Arsenic	NS	-0.00100	NS	100	102	102	
Barium	NS	0.00390	NS	100	96.0	96.0	
Cadmium	NS	-0.0449	NS	100	105	105	
Chromium	NS	-0.00400	NS	100	96.9	96.9	
Cobalt	NS	0.0245	NS	100	102	102	
Copper	NS	0.0706	NS	100	98.1	98.1	
Lead	NS	0.0144	NS	100	101	101	
Manganese	NS	0.000200	NS	100	103	103	
Nickel	NS	0.320	NS	100	97.2	97.2	
Selenium	NS	0.0389	NS	100	102	102	
Silver	NS	0.0142	NS	100	91.0	91.0	
Thallium	NS	0.0112	NS	100	98.0	98.0	

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: 2523637
Report generated 07/30/2012 17:13

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12070640 **Analytical Method:** 6020
Analytical Workgroup: WG404829 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 29-JUL-2012 08:40

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12070639-01	SAMP	29-JUL-2012 11:26	114.108	109.666	**126.487**	
L12070640-01	SAMP	29-JUL-2012 12:04	103.881	101.756	111.864	
L12070640-02	SAMP	29-JUL-2012 12:07	104.812	101.826	112.572	
L12070640-03	SAMP	29-JUL-2012 12:10	103.27	102.141	111.613	
WG404095-01	REF	29-JUL-2012 11:16	100.649	104.373	118.441	
WG404095-01	REF	29-JUL-2012 12:33	100.07	92.201	103.204	
WG404095-02	REF	29-JUL-2012 11:51	106.377	102.638	114.85	
WG404095-03	BLANK	29-JUL-2012 11:10	99.634	97.806	101.519	
WG404095-04	LCS	29-JUL-2012 11:13	104.081	103.658	109.848	
WG404095-05	DUP	29-JUL-2012 11:19	99.208	99.032	115.511	
WG404095-05	DUP	29-JUL-2012 12:36	94.038	82.68	94.916	
WG404095-06	MS	29-JUL-2012 11:22	100.166	101.587	118.096	
WG404095-06	MS	29-JUL-2012 12:40	95.041	83.66	94.414	
WG404095-07	MS	29-JUL-2012 11:54	107.197	105.656	116.67	
WG404095-08	MSD	29-JUL-2012 11:57	103.317	100.116	111.357	
WG404829-01	PSPK	29-JUL-2012 11:29	112.495	112.687	**127.573**	
WG404829-02	SERIAL	29-JUL-2012 11:32	110.976	103.805	117.972	
WG404857-05	ICV	29-JUL-2012 08:53	97.5	100.128	97.821	
WG404857-06	ICB	29-JUL-2012 08:56	101.149	101.08	99.621	
WG404857-07	LLICV	29-JUL-2012 08:59	100.971	100.663	99.857	
WG404857-08	ICS	29-JUL-2012 09:02	91.038	86.75	87.912	
WG404857-09	ICS	29-JUL-2012 09:05	98.561	99.24	102.785	
WG404857-10	CCV	29-JUL-2012 09:09	111.073	115.332	117.92	
WG404857-12	CCB	29-JUL-2012 09:16	111.822	113.253	116.904	
WG404857-17	CCV	29-JUL-2012 10:56	104.607	104.715	110.345	
WG404857-18	CCB	29-JUL-2012 11:00	104.716	102.213	109.179	
WG404857-19	LLCCV	29-JUL-2012 11:03	101.673	98.993	103.286	
WG404857-20	CCV	29-JUL-2012 11:35	105.866	101.811	111.164	
WG404857-21	CCB	29-JUL-2012 11:38	108.553	102.801	114.471	
WG404857-22	CCV	29-JUL-2012 12:13	104.674	101.599	111.599	
WG404857-23	CCB	29-JUL-2012 12:16	105.41	99.617	110.959	
WG404857-24	CCV	29-JUL-2012 12:46	101.737	95.116	106.175	
WG404857-25	CCB	29-JUL-2012 12:49	101.968	94.026	105.118	
WG404857-32	LLCCV	29-JUL-2012 14:45	95.305	93.49	91.797	

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: 2523633
Report generated: 07/30/2012 17:13

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12070640 **Date:** 06/11/2012
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: 2523631
Report generated: 07/30/2012 17:13

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: Sunday, July 29, 2012 08:13:13

Mass Calibration and Resolution

Analyte	E Mass	Meas Mass	Mass C DAC Val	Res DAC Value	Meas Peak WCustom Res
Li	7.016	7.025	1340	2021	0.715
Mg	23.985	24.025	4714	2020	0.714
In	114.904	114.925	22873	2023	0.680
U	238.050	238.025	47467	2034	0.681

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	6.279
5.575	4.089
5.625	3.286
5.675	2.030
5.725	2.198
5.775	2.475
5.825	4.092
5.875	2.259
5.925	3.906
5.975	3.386
6.025	3.822
6.075	2.308
6.125	2.211
6.175	3.259
6.225	6.137
6.275	64.358
6.325	136.931
6.375	37.268
6.425	22.122
6.475	8.892
6.525	10.608
6.575	4.668
6.625	4.368
6.675	1.405
6.725	4.036
6.775	1.115
6.825	1.291
6.875	2.904

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6.925	2.496
6.975	1.098
7.025	2.612
7.075	1.348
7.125	4.720
7.175	2.969
7.225	3.213
7.275	51.349
7.325	136.931
7.375	223.607
7.425	223.607
7.475	136.931
7.525	223.607
7.575	136.931
7.625	223.607
7.675	136.931
7.725	
7.775	
7.825	
7.875	223.607
7.925	223.607
7.975	223.607
8.025	223.607
8.075	91.287
8.125	223.607
8.175	223.607
8.225	136.931
8.275	223.607
8.325	
8.375	
8.425	34.233
8.475	24.686
22.525	10.469
22.575	2.293
22.625	2.137
22.675	1.139
22.725	2.997
22.775	2.669
22.825	1.600
22.875	1.166
22.925	1.588
22.975	1.541
23.025	1.343
23.075	1.247
23.125	1.761
23.175	0.967
23.225	2.060

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23.275	1.775
23.325	5.646
23.375	100.000
23.425	
23.475	223.607
23.525	18.807
23.575	2.038
23.625	3.311
23.675	5.152
23.725	2.553
23.775	2.514
23.825	2.737
23.875	1.416
23.925	2.657
23.975	1.746
24.025	0.551
24.075	1.512
24.125	1.109
24.175	2.169
24.225	1.532
24.275	1.523
24.325	14.987
24.375	223.607
24.425	223.607
24.475	122.475
24.525	81.441
24.575	22.886
24.625	7.511
24.675	9.251
24.725	7.760
24.775	5.425
24.825	5.859
24.875	4.678
24.925	6.079
24.975	5.470
25.025	7.029
25.075	3.181
25.125	6.685
25.175	4.992
25.225	4.243
25.275	4.288
25.325	26.716
25.375	104.583
25.425	223.607
25.475	149.071
113.525	28.445
113.575	12.509

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113.625	5.954
113.675	3.874
113.725	4.128
113.775	3.036
113.825	2.149
113.875	1.096
113.925	1.710
113.975	2.621
114.025	3.161
114.075	2.289
114.125	3.412
114.175	5.211
114.225	5.358
114.275	19.485
114.325	91.287
114.375	42.492
114.425	22.080
114.475	8.587
114.525	1.977
114.575	3.217
114.625	1.783
114.675	1.589
114.725	1.674
114.775	0.972
114.825	2.256
114.875	2.013
114.925	1.534
114.975	1.964
115.025	1.785
115.075	2.112
115.125	0.774
115.175	1.647
115.225	1.594
115.275	11.058
115.325	105.409
115.375	223.607
115.425	74.689
115.475	31.566
115.525	14.302
115.575	6.780
115.625	10.227
115.675	5.327
115.725	6.260
115.775	3.857
115.825	5.547
115.875	2.187
115.925	2.132

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115.975	1.512
116.025	5.209
116.075	4.523
116.125	4.995
116.175	5.462
116.225	12.293
116.275	49.496
116.325	63.888
116.375	
116.425	104.583
116.475	136.931
236.525	223.607
236.575	
236.625	
236.675	223.607
236.725	223.607
236.775	
236.825	
236.875	
236.925	
236.975	
237.025	
237.075	
237.125	
237.175	223.607
237.225	
237.275	149.071
237.325	
237.375	
237.425	223.607
237.475	59.266
237.525	33.912
237.575	11.592
237.625	9.204
237.675	3.388
237.725	3.067
237.775	2.489
237.825	1.911
237.875	2.102
237.925	2.269
237.975	1.577
238.025	1.747
238.075	1.604
238.125	1.462
238.175	1.806
238.225	2.680
238.275	2.203

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238.325	2.526
238.375	3.399
238.425	6.729
238.475	7.308
238.525	37.499
238.575	91.287
238.625	136.931
238.675	
238.725	
238.775	136.931
238.825	
238.875	223.607
238.925	223.607
238.975	
239.025	223.607
239.075	223.607
239.125	136.931
239.175	
239.225	
239.275	
239.325	
239.375	
239.425	
239.475	223.607

Approved: July 30, 2012

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Sunday, July 29, 2012 08:16:54
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\072012\Daily Performance Check.878
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): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	2225.4	2225.430	59.428	2.7	Standard
	Mg	24.0	32655.2	32655.158	474.735	1.5	Standard
	In	114.9	68508.0	68507.953	916.459	1.3	Standard
	U	238.1	60250.0	60249.969	743.741	1.2	Standard
⌈	CeO	155.9	1512.6	0.016	0.000	2.1	Standard
| >	Ce	139.9	95992.3	95992.260	561.639	0.6	Standard
⌊	Ce++	70.0	1229.9	0.013	0.000	2.1	Standard
	Bkgd	220.0	0.4	0.400	0.279	69.7	Standard

Current Conditions File Data

Current Value	Description
0.99	Nebulizer Gas Flow STD/KED [NEB]
1.00	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-8.75	Deflector Voltage
1600.00	ICP RF Power
-1975.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.00	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
Report Date/Time: Sunday, July 29, 2012 08:19:13
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SmartTune Wizard - Summary

```
Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Start Time: 7/29/2012 8:16:53 AM
End Time: 7/29/2012 8:19:13 AM

Daily Performance Check - [Passed]  Optimum value(s): N/A
        Obtained Intensity (Be 9.0122): 2225.43
        Obtained Intensity (Mg 23.985): 32655.16
        Obtained Intensity (In 114.904): 68507.95
        Obtained Intensity (U 238.05): 60249.97
        Obtained Intensity (Bkgd 220): 0.40
        Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1512.61 / 95992.26)
        Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=1229.92 / 95992.26)
```

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SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Optimization Status

Start Time: 7/29/2012 8:16:53 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 <= 1
                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): 2225.43
                Obtained Intensity (Mg 23.985): 32655.16
                Obtained Intensity (In 114.904): 68507.95
                Obtained Intensity (U 238.05): 60249.97
                Obtained Intensity (Bkgd 220): 0.40
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1512.61 / 95992.26)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=1229.92 / 95992.26)
[Passed]  Optimum value(s): N/A

End Time: 7/29/2012 8:19:13 AM
```


Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Sunday, July 29, 2012 08:37:10
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: JYH 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	7	9464.6	3.1				ug/L		Standard
	Be	9	10.0	50.0				ug/L		Standard
	Al	27	7870.4	3.1				ug/L		Standard
>	**Sc**	45	330667.8	2.8				ug/L		Standard
	Ti	47	52.7	12.2				ug/L		Standard
	V	51	2686.8	1.7				ug/L		Standard
	Cr	52	8407.7	1.0				ug/L		Standard
	Cr	53	287.5	2.6				ug/L		Standard
	Mn	55	1080.4	0.5				ug/L		Standard
	Co	59	116.7	15.1				ug/L		Standard
	Ni	60	68.3	15.6				ug/L		Standard
	Cu	65	141.0	8.2				ug/L		Standard
	Zn	66	138.3	4.9				ug/L		Standard
>	**Ge**	72	283229.8	0.5				ug/L		Standard
	As	75	-197.9	12.1				ug/L		Standard
	Se	82	21.4	7.8				ug/L		Standard
	Se-1	77	131.3	8.7				ug/L		Standard
>	**Ga**	71	606.7	9.9				mg/L		Standard
	Rb	85	30.0	16.7				ug/L		Standard
	Y	89	251555.1	2.4				ug/L		Standard
>	**Rh**	103	335.0	9.1				ug/L		Standard
	Mo	98	12.6	8.1				ug/L		Standard
	Ag	107	36.0	9.6				ug/L		Standard
	Cd	111	48.6	9.3				mg/L		Standard
	Cd	114	170.4	8.0				ug/L		Standard
>	**In**	115	727801.9	0.9				ug/L		Standard
	Sn	118	471.3	3.4				ug/L		Standard
	Sb	123	39.1	34.8				ug/L		Standard
	Ba	135	25.3	16.0				ug/L		Standard
	Ce	140	24.7	13.0				ug/L		Standard
>	**Tb**	159	1071746.7	0.7				ug/L		Standard
	Ho	165	13.3	45.2				ug/L		Standard
	Tl	203	4.7	44.6				ug/L		Standard
	Tl	205	10.0	20.0				ug/L		Standard
	Pb	206	382.0	4.6				ug/L		Standard
	Pb	207	305.7	4.1				ug/L		Standard
	Pb	208	1442.7	2.1				ug/L		Standard
	U	238	4.7	32.7				ug/L		Standard
>	**Bi**	209	561075.2	1.3				ug/L		Standard

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Na	23	288.3	8.0	mg/L	Standard
Mg	24	218.3	9.3	mg/L	Standard
K	39	125.0	18.3	mg/L	Standard
Ca	43	3.3	86.6	mg/L	Standard
Fe	54	549.6	1.3	mg/L	Standard
Fe	57	1771.8	3.8	mg/L	Standard
Sc-1	45	330667.8	2.8	mg/L	Standard
Cl	35	4.7	44.6	ug/L	Standard
Kr	83	38.0	8.5	ug/L	Standard
Br	81	344.2	3.3	ug/L	Standard
P	31	311.7	5.8	ug/L	Standard
S	34	5593.5	0.7	ug/L	Standard
Sr	88	55.0	18.2	ug/L	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	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

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Sunday, July 29, 2012 08:39:41
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Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Sunday, July 29, 2012 08:40:21
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexION Data\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9184.5	2.6				ug/L	9465	Standard
	Be	9	3.3	86.6				ug/L	10	Standard
	Al	27	8110.5	3.4				ug/L	7870	Standard
>	**Sc**	45	333287.5	0.5				ug/L	330668	Standard
	Ti	47	56.3	7.4				ug/L	53	Standard
	V	51	2676.7	2.1				ug/L	2687	Standard
	Cr	52	8324.6	0.8				ug/L	8408	Standard
	Cr	53	260.0	8.4				ug/L	288	Standard
	Mn	55	1079.4	6.9				ug/L	1080	Standard
	Co	59	125.7	4.4				ug/L	117	Standard
	Ni	60	65.7	11.5				ug/L	68	Standard
	Cu	65	127.3	7.9				ug/L	141	Standard
	Zn	66	154.3	4.4				ug/L	138	Standard
>	**Ge**	72	289612.8	0.6				ug/L	283230	Standard
	As	75	-187.6	22.6				ug/L	-198	Standard
	Se	82	25.0	24.6				ug/L	21	Standard
	Se-1	77	128.3	9.7				ug/L	131	Standard
>	**Ga**	71	583.3	4.4				mg/L	607	Standard
	Rb	85	40.0	43.3				ug/L	30	Standard
	Y	89	249653.8	1.8				ug/L	251555	Standard
>	**Rh**	103	373.3	10.4				ug/L	335	Standard
	Mo	98	10.5	66.4				ug/L	13	Standard
	Ag	107	40.3	20.0				ug/L	36	Standard
	Cd	111	53.3	10.3				mg/L	49	Standard
	Cd	114	169.7	6.4				ug/L	170	Standard
>	**In**	115	729266.5	1.6				ug/L	727802	Standard
	Sn	118	472.3	5.3				ug/L	471	Standard
	Sb	123	21.7	7.0				ug/L	39	Standard
	Ba	135	31.0	39.2				ug/L	25	Standard
	Ce	140	33.3	3.5				ug/L	25	Standard
>	**Tb**	159	1085426.6	0.7				ug/L	1071747	Standard
	Ho	165	9.7	23.9				ug/L	13	Standard
	Tl	203	5.7	20.4				ug/L	5	Standard
	Tl	205	11.7	27.6				ug/L	10	Standard
	Pb	206	382.7	3.3				ug/L	382	Standard
	Pb	207	323.3	4.6				ug/L	306	Standard
	Pb	208	1508.4	1.3				ug/L	1443	Standard
	U	238	2.7	57.3				ug/L	5	Standard
>	**Bi**	209	571440.7	0.9				ug/L	561075	Standard

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Na	23	350.0	16.2	mg/L	288	Standard
Mg	24	221.7	13.8	mg/L	218	Standard
K	39	116.7	43.8	mg/L	125	Standard
Ca	43	8.3	69.3	mg/L	3	Standard
Fe	54	556.6	17.5	mg/L	550	Standard
Fe	57	1676.8	4.1	mg/L	1772	Standard
Sc-1	45	333287.5	0.5	mg/L	330668	Standard
Cl	35	3.3	75.5	ug/L	5	Standard
Kr	83	38.6	16.3	ug/L	38	Standard
Br	81	325.8	6.4	ug/L	344	Standard
P	31	347.5	13.7	ug/L	312	Standard
S	34	5613.5	2.1	ug/L	5594	Standard
Sr	88	41.7	48.5	ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: Standard 1
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	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

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 1
Report Date/Time: Sunday, July 29, 2012 08:42:52
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Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Sunday, July 29, 2012 08:43:32
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: JYH 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	7	9006.0	3.4				ug/L	9465	Standard
	Be	9	118.3	23.3				ug/L	10	Standard
	Al	27	8889.3	3.5				ug/L	7870	Standard
>	**Sc**	45	330177.5	1.3				ug/L	330668	Standard
	Ti	47	167.0	5.7				ug/L	53	Standard
	V	51	3262.4	2.2				ug/L	2687	Standard
	Cr	52	8831.2	0.9				ug/L	8408	Standard
	Cr	53	325.8	1.9				ug/L	288	Standard
	Mn	55	1769.8	1.9				ug/L	1080	Standard
	Co	59	524.3	0.4				ug/L	117	Standard
	Ni	60	184.3	7.2				ug/L	68	Standard
	Cu	65	253.7	3.3				ug/L	141	Standard
	Zn	66	205.0	4.2				ug/L	138	Standard
>	**Ge**	72	285259.6	0.4				ug/L	283230	Standard
	As	75	-123.0	28.3				ug/L	-198	Standard
	Se	82	29.2	5.3				ug/L	21	Standard
	Se-1	77	133.7	10.4				ug/L	131	Standard
>	**Ga**	71	545.0	7.3				mg/L	607	Standard
	Rb	85	16.7	75.5				ug/L	30	Standard
	Y	89	246034.2	2.9				ug/L	251555	Standard
>	**Rh**	103	356.7	25.1				ug/L	335	Standard
	Mo	98	376.3	4.7				ug/L	13	Standard
	Ag	107	364.3	2.8				ug/L	36	Standard
	Cd	111	216.4	6.8				mg/L	49	Standard
	Cd	114	676.9	3.8				ug/L	170	Standard
>	**In**	115	720600.3	0.4				ug/L	727802	Standard
	Sn	118	1109.0	4.5				ug/L	471	Standard
	Sb	123	403.5	8.1				ug/L	39	Standard
	Ba	135	266.0	5.6				ug/L	25	Standard
	Ce	140	31.3	11.2				ug/L	25	Standard
>	**Tb**	159	1089761.4	0.2				ug/L	1071747	Standard
	Ho	165	12.3	16.9				ug/L	13	Standard
	Tl	203	863.7	1.7				ug/L	5	Standard
	Tl	205	1971.8	1.0				ug/L	10	Standard
	Pb	206	1071.4	2.7				ug/L	382	Standard
	Pb	207	857.0	1.5				ug/L	306	Standard
	Pb	208	4056.5	0.3				ug/L	1443	Standard
	U	238	777.0	1.9				ug/L	5	Standard
>	**Bi**	209	570214.0	0.3				ug/L	561075	Standard

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Na	23	703.3	13.6	mg/L	288	Standard
Mg	24	3132.0	4.1	mg/L	218	Standard
K	39	128.3	9.8	mg/L	125	Standard
Ca	43	5.0	0.0	mg/L	3	Standard
Fe	54	527.6	16.5	mg/L	550	Standard
Fe	57	2003.5	6.2	mg/L	1772	Standard
Sc-1	45	330177.5	1.3	mg/L	330668	Standard
Cl	35	5.0	69.3	ug/L	5	Standard
Kr	83	38.2	4.0	ug/L	38	Standard
Br	81	350.0	4.5	ug/L	344	Standard
P	31	320.8	10.8	ug/L	312	Standard
S	34	5600.2	0.8	ug/L	5594	Standard
Sr	88	68.3	18.4	ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	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

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 2
Report Date/Time: Sunday, July 29, 2012 08:46:02
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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Sunday, July 29, 2012 08:46:42
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: JYH 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	7	9299.5	5.3	**50.0000**	87.875	175.7	ug/L	9465	Standard
	Be	9	83744.2	2.5	**50.0000**	1.804	3.6	ug/L	10	Standard
	Al	27	719338.6	2.3	**50.0000**	1.430	2.9	ug/L	7870	Standard
>	**Sc**	45	330775.4	1.4				ug/L	330668	Standard
	Ti	47	117581.2	0.9	**100.0000**	1.802	1.8	ug/L	53	Standard
	V	51	500658.9	0.5	**50.0000**	0.687	1.4	ug/L	2687	Standard
	Cr	52	401500.7	0.9	**50.0000**	0.927	1.9	ug/L	8408	Standard
	Cr	53	66693.1	1.1	**50.0000**	1.049	2.1	ug/L	288	Standard
	Mn	55	670241.4	0.7	**50.0000**	0.919	1.8	ug/L	1080	Standard
	Co	59	419231.4	0.9	**50.0000**	0.860	1.7	ug/L	117	Standard
	Ni	60	117302.4	1.6	**50.0000**	1.310	2.6	ug/L	68	Standard
	Cu	65	109432.1	0.9	**50.0000**	0.950	1.9	ug/L	141	Standard
	Zn	66	51596.7	1.3	**50.0000**	1.150	2.3	ug/L	138	Standard
>	**Ge**	72	285886.5	1.1				ug/L	283230	Standard
	As	75	50287.5	0.4	**50.0000**	0.621	1.2	ug/L	-198	Standard
	Se	82	5047.2	1.9	**50.0000**	1.313	2.6	ug/L	21	Standard
	Se-1	77	3662.8	2.8	**50.0000**	0.917	1.8	ug/L	131	Standard
>	**Ga**	71	676.7	10.8				mg/L	607	Standard
	Rb	85	650.0	8.0				ug/L	30	Standard
	Y	89	256674.5	1.6				ug/L	251555	Standard
>	**Rh**	103	415.0	10.5				ug/L	335	Standard
	Mo	98	351994.9	0.4	**100.0000**	0.687	0.7	ug/L	13	Standard
	Ag	107	309597.9	0.7	**50.0000**	0.351	0.7	ug/L	36	Standard
	Cd	111	159499.6	1.0	**50.0000**	0.627	1.3	mg/L	49	Standard
	Cd	114	484132.9	0.8	**50.0000**	0.471	0.9	ug/L	170	Standard
>	**In**	115	725912.7	0.3				ug/L	727802	Standard
	Sn	118	571959.4	0.6	**50.0000**	0.463	0.9	ug/L	471	Standard
	Sb	123	415800.5	1.3	**50.0000**	0.788	1.6	ug/L	39	Standard
	Ba	135	216417.8	1.2	**50.0000**	0.783	1.6	ug/L	25	Standard
	Ce	140	885.4	3.5				ug/L	25	Standard
>	**Tb**	159	1101783.5	0.7				ug/L	1071747	Standard
	Ho	165	19.7	26.1				ug/L	13	Standard
	Tl	203	815318.8	0.5	**50.0000**	0.907	1.8	ug/L	5	Standard
	Tl	205	1865115.5	0.8	**50.0000**	0.606	1.2	ug/L	10	Standard
	Pb	206	629232.4	1.0	**50.0000**	0.856	1.7	ug/L	382	Standard
	Pb	207	533061.7	1.7	**50.0000**	0.671	1.3	ug/L	306	Standard
	Pb	208	2470534.3	1.4	**50.0000**	0.747	1.5	ug/L	1443	Standard
	U	238	754979.5	0.5	**50.0000**	0.456	0.9	ug/L	5	Standard
>	**Bi**	209	554535.6	1.3				ug/L	561075	Standard

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Na	23	106887.4	0.6	**5.0000**	0.098	2.0	mg/L	288	Standard
Mg	24	3280414.2	1.2	**5.0000**	0.117	2.3	mg/L	218	Standard
K	39	5662.7	3.4	**5.0000**	0.244	4.9	mg/L	125	Standard
Ca	43	8.3	91.7	**5.0000**	11.532	230.6	mg/L	3	Standard
Fe	54	21151.7	2.3	**5.0000**	0.127	2.5	mg/L	550	Standard
Fe	57	247840.6	0.6	**5.0000**	0.065	1.3	mg/L	1772	Standard
Sc-1	45	330775.4	1.4				mg/L	330668	Standard
Cl	35	4.7	49.5				ug/L	5	Standard
Kr	83	36.1	2.1				ug/L	38	Standard
Br	81	343.3	3.0				ug/L	344	Standard
P	31	383.3	5.8				ug/L	312	Standard
S	34	5786.1	1.3				ug/L	5594	Standard
Sr	88	30.0	33.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	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

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 3
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Method 6020 - Summary Report

Sample ID: Standard 4
Sample Date/Time: Sunday, July 29, 2012 08:49:53
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: JYH 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	7	9302.9	2.2	**89.9853**	43.989	48.9	ug/L	9465	Standard
	Be	9	162050.4	1.1	**99.2725**	1.250	1.3	ug/L	10	Standard
	Al	27	1382811.7	1.0	**99.2203**	1.260	1.3	ug/L	7870	Standard
>	**Sc**	45	324723.2	1.3				ug/L	330668	Standard
	Ti	47	230631.4	0.3	**198.9897**	0.504	0.3	ug/L	53	Standard
	V	51	978514.4	1.1	**99.4426**	0.707	0.7	ug/L	2687	Standard
	Cr	52	778586.0	0.9	**99.4379**	1.282	1.3	ug/L	8408	Standard
	Cr	53	130445.8	0.3	**99.4386**	0.735	0.7	ug/L	288	Standard
	Mn	55	1292761.3	0.6	**98.6850**	0.768	0.8	ug/L	1080	Standard
	Co	59	819481.8	0.4	**99.3199**	0.757	0.8	ug/L	117	Standard
	Ni	60	229791.1	0.7	**99.4316**	0.701	0.7	ug/L	68	Standard
	Cu	65	211097.1	0.4	**98.6835**	0.868	0.9	ug/L	141	Standard
	Zn	66	100051.9	0.1	**98.9832**	0.505	0.5	ug/L	138	Standard
>	**Ge**	72	283254.2	0.5				ug/L	283230	Standard
	As	75	98809.4	0.6	**99.4887**	0.858	0.9	ug/L	-198	Standard
	Se	82	9841.4	1.5	**99.3067**	1.788	1.8	ug/L	21	Standard
	Se-1	77	7060.3	3.2	**99.5148**	3.174	3.2	ug/L	131	Standard
>	**Ga**	71	646.7	13.2				mg/L	607	Standard
	Rb	85	5167.5	3.2				ug/L	30	Standard
	Y	89	242495.7	2.0				ug/L	251555	Standard
>	**Rh**	103	425.0	10.3				ug/L	335	Standard
	Mo	98	685858.8	0.7	**201.0317**	0.782	0.4	ug/L	13	Standard
	Ag	107	603623.1	0.7	**100.5504**	0.571	0.6	ug/L	36	Standard
	Cd	111	308568.5	0.4	**100.1662**	0.643	0.6	mg/L	49	Standard
	Cd	114	939922.6	0.9	**100.3472**	1.599	1.6	ug/L	170	Standard
>	**In**	115	699985.1	1.0				ug/L	727802	Standard
	Sn	118	1110205.7	0.9	**100.3460**	0.447	0.4	ug/L	471	Standard
	Sb	123	824238.4	0.9	**101.3735**	1.206	1.2	ug/L	39	Standard
	Ba	135	422965.2	0.6	**100.6707**	0.654	0.6	ug/L	25	Standard
	Ce	140	320.0	8.1				ug/L	25	Standard
>	**Tb**	159	1083206.9	1.1				ug/L	1071747	Standard
	Ho	165	30.0	8.8				ug/L	13	Standard
	Tl	203	1592439.1	1.7	**100.8741**	0.629	0.6	ug/L	5	Standard
	Tl	205	3784126.9	0.6	**102.7826**	0.734	0.7	ug/L	10	Standard
	Pb	206	1228891.1	0.6	**100.8919**	0.646	0.6	ug/L	382	Standard
	Pb	207	1011454.7	0.3	**99.4541**	1.158	1.2	ug/L	306	Standard
	Pb	208	4820070.6	0.2	**100.8443**	1.045	1.0	ug/L	1443	Standard
	U	238	1437969.4	0.3	**99.6278**	1.417	1.4	ug/L	5	Standard
>	**Bi**	209	532060.5	1.1				ug/L	561075	Standard

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⌈	**Na**	23	127322.7	0.1	**7.5570**	0.094	1.2	mg/L	288	Standard
|	**Mg**	24	6637292.2	1.1	**10.1501**	0.248	2.4	mg/L	218	Standard
|	**K**	39	11422.6	0.7	**10.1899**	0.148	1.5	mg/L	125	Standard
|	**Ca**	43	16.7	34.6	**12.8394**	6.362	49.5	mg/L	3	Standard
|	**Fe**	54	42240.0	1.1	**10.1473**	0.217	2.1	mg/L	550	Standard
|	**Fe**	57	508503.9	2.5	**10.2395**	0.384	3.7	mg/L	1772	Standard
⌊>	**Sc-1**	45	324723.2	1.3				mg/L	330668	Standard
	Cl	35	4.0	50.0				ug/L	5	Standard
	Kr	83	38.4	2.2				ug/L	38	Standard
	Br	81	362.5	10.2				ug/L	344	Standard
	P	31	401.7	1.4				ug/L	312	Standard
	S	34	5315.1	3.5				ug/L	5594	Standard
	Sr	88	46.7	59.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	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

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

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Sunday, July 29, 2012 08:53:06
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: JYH 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	7	8662.5	3.8	**-93.8641**	75.144	80.1	ug/L	9465	Standard
	Be	9	80719.5	0.9	**47.8705**	0.961	2.0	ug/L	10	Standard
	Al	27	719267.8	1.1	**49.6777**	0.217	0.4	ug/L	7870	Standard
>	**Sc**	45	335392.0	1.5				ug/L	330668	Standard
	Ti	47	117860.7	1.0	**101.5507**	1.353	1.3	ug/L	53	Standard
	V	51	490920.4	1.6	**49.6931**	0.902	1.8	ug/L	2687	Standard
	Cr	52	395834.4	0.6	**49.9612**	0.511	1.0	ug/L	8408	Standard
	Cr	53	66234.5	1.3	**50.3315**	0.540	1.1	ug/L	288	Standard
	Mn	55	657011.1	1.4	**50.0539**	0.883	1.8	ug/L	1080	Standard
	Co	59	413344.9	2.1	**50.0317**	1.190	2.4	ug/L	117	Standard
	Ni	60	115729.7	1.1	**50.0043**	0.775	1.6	ug/L	68	Standard
	Cu	65	108230.9	0.2	**50.5018**	0.320	0.6	ug/L	141	Standard
	Zn	66	52082.0	1.4	**51.3929**	0.888	1.7	ug/L	138	Standard
>	**Ge**	72	283592.1	0.4				ug/L	283230	Standard
	As	75	49370.5	0.2	**49.7369**	0.293	0.6	ug/L	-198	Standard
	Se	82	4993.1	0.6	**50.2025**	0.407	0.8	ug/L	21	Standard
	Se-1	77	3607.1	2.1	**49.8747**	1.209	2.4	ug/L	131	Standard
>	**Ga**	71	668.3	4.3				mg/L	607	Standard
	Rb	85	721.7	5.2				ug/L	30	Standard
	Y	89	253461.1	1.5				ug/L	251555	Standard
>	**Rh**	103	310.0	18.3				ug/L	335	Standard
	Mo	98	353380.3	0.7	**101.8434**	1.466	1.4	ug/L	13	Standard
	Ag	107	310628.4	2.0	**50.8660**	0.520	1.0	ug/L	36	Standard
	Cd	111	158698.6	1.1	**50.6419**	0.589	1.2	mg/L	49	Standard
	Cd	114	480160.3	1.5	**50.3867**	0.505	1.0	ug/L	170	Standard
>	**In**	115	711943.8	1.1				ug/L	727802	Standard
	Sn	118	574044.8	1.9	**50.9925**	1.037	2.0	ug/L	471	Standard
	Sb	123	413912.5	1.7	**50.0497**	0.483	1.0	ug/L	39	Standard
	Ba	135	215701.3	0.9	**50.4736**	0.706	1.4	ug/L	25	Standard
	Ce	140	888.4	3.3				ug/L	25	Standard
>	**Tb**	159	1080786.6	1.0				ug/L	1071747	Standard
	Ho	165	15.3	21.0				ug/L	13	Standard
	Tl	203	805840.2	0.9	**49.6528**	0.467	0.9	ug/L	5	Standard
	Tl	205	1853810.0	1.9	**48.9745**	0.941	1.9	ug/L	10	Standard
	Pb	206	621790.8	2.3	**49.6345**	1.112	2.2	ug/L	382	Standard
	Pb	207	531403.8	2.3	**50.8050**	1.162	2.3	ug/L	306	Standard
	Pb	208	2446190.5	1.7	**49.7608**	0.799	1.6	ug/L	1443	Standard
	U	238	746377.8	0.6	**50.2965**	0.759	1.5	ug/L	5	Standard
>	**Bi**	209	547047.5	1.5				ug/L	561075	Standard

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Na	23	105274.5	1.5	**6.0424**	0.112	1.9	mg/L	288	Standard
Mg	24	3239886.4	2.8	**4.7975**	0.180	3.7	mg/L	218	Standard
K	39	5949.5	4.8	**5.0827**	0.183	3.6	mg/L	125	Standard
Ca	43	8.3	69.3	**3.3993**	5.967	175.5	mg/L	3	Standard
Fe	54	22037.4	2.8	**5.0661**	0.185	3.7	mg/L	550	Standard
Fe	57	257731.1	5.5	**5.0064**	0.290	5.8	mg/L	1772	Standard
> **Sc-1**	45	335392.0	1.5				mg/L	330668	Standard
Cl	35	4.3	74.2				ug/L	5	Standard
Kr	83	38.9	7.3				ug/L	38	Standard
Br	81	358.3	12.5				ug/L	344	Standard
P	31	368.3	7.3				ug/L	312	Standard
S	34	5062.5	1.0				ug/L	5594	Standard
Sr	88	43.3	26.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9	95.741		
Al	27	99.355		
> Sc	45			
Ti	47	101.551		
V	51	99.386		
Cr	52	99.922		
Cr	53	100.663		
Mn	55	100.108		
Co	59	100.063		
Ni	60	100.009		
Cu	65	101.004		
Zn	66	102.786		
> Ge	72		100.128	
As	75	99.474		
Se	82	100.405		
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98	101.843		
Ag	107	101.732		

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	Cd	111	101.284	
	Cd	114		
>	In	115		97.821
	Sn	118	101.985	
	Sb	123	100.099	
	Ba	135	100.947	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.306	
	Tl	205		
	Pb	206	99.269	
	Pb	207	101.610	
	Pb	208	99.522	
	U	238	100.593	
>	Bi	209		97.500
	Na	23	120.849	
	Mg	24	95.949	
	K	39	101.654	
	Ca	43	67.986	
	Fe	54	101.322	
	Fe	57	100.127	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	
QC Std 1	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Sunday, July 29, 2012 08:56:19
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: JYH 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	7	8427.3	4.3	**-89.0158**	28.841	32.4	ug/L	9465	Standard
	Be	9	25.0	52.9	**-0.0058**	0.008	146.8	ug/L	10	Standard
	Al	27	8265.6	4.9	**0.0149**	0.031	204.8	ug/L	7870	Standard
>	**Sc**	45	325191.2	2.9				ug/L	330668	Standard
	Ti	47	81.7	18.4	**0.0266**	0.013	47.8	ug/L	53	Standard
	V	51	2452.7	3.1	**-0.0328**	0.004	13.6	ug/L	2687	Standard
	Cr	52	7555.9	0.8	**-0.1169**	0.009	7.3	ug/L	8408	Standard
	Cr	53	254.2	21.0	**-0.0046**	0.044	955.6	ug/L	288	Standard
	Mn	55	1078.4	4.0	**-0.0028**	0.002	76.4	ug/L	1080	Standard
	Co	59	178.0	21.9	**0.0082**	0.005	55.3	ug/L	117	Standard
	Ni	60	83.7	9.7	**0.0066**	0.003	47.5	ug/L	68	Standard
	Cu	65	179.0	14.3	**0.0150**	0.011	75.7	ug/L	141	Standard
	Zn	66	150.3	10.2	**-0.0044**	0.013	306.8	ug/L	138	Standard
>	**Ge**	72	286289.2	1.6				ug/L	283230	Standard
	As	75	-154.9	10.3	**0.0186**	0.016	87.8	ug/L	-198	Standard
	Se	82	30.0	9.5	**0.0575**	0.033	57.5	ug/L	21	Standard
	Se-1	77	108.0	14.9	**-0.3213**	0.232	72.3	ug/L	131	Standard
>	**Ga**	71	610.0	5.7				mg/L	607	Standard
	Rb	85	35.0	51.5				ug/L	30	Standard
	Y	89	253498.3	1.3				ug/L	251555	Standard
>	**Rh**	103	343.3	8.9				ug/L	335	Standard
	Mo	98	255.6	10.5	**0.0652**	0.008	11.9	ug/L	13	Standard
	Ag	107	121.3	19.9	**0.0106**	0.004	37.1	ug/L	36	Standard
	Cd	111	88.7	11.4	**0.0095**	0.003	34.1	mg/L	49	Standard
	Cd	114	255.2	18.4	**0.0061**	0.005	81.1	ug/L	170	Standard
>	**In**	115	725043.0	0.7				ug/L	727802	Standard
	Sn	118	887.0	4.4	**0.0300**	0.003	9.8	ug/L	471	Standard
	Sb	123	2252.4	3.9	**0.2692**	0.009	3.4	ug/L	39	Standard
	Ba	135	64.7	26.3	**0.0034**	0.004	117.4	ug/L	25	Standard
	Ce	140	28.3	42.1				ug/L	25	Standard
>	**Tb**	159	1077437.1	0.5				ug/L	1071747	Standard
	Ho	165	13.7	25.7				ug/L	13	Standard
	Tl	203	145.0	41.3	**0.0076**	0.004	46.8	ug/L	5	Standard
	Tl	205	349.3	43.0	**0.0089**	0.004	42.5	ug/L	10	Standard
	Pb	206	482.0	12.9	**0.0050**	0.005	94.2	ug/L	382	Standard
	Pb	207	383.3	14.9	**0.0067**	0.005	78.1	ug/L	306	Standard
	Pb	208	1893.0	12.4	**0.0079**	0.005	57.3	ug/L	1443	Standard
	U	238	154.7	42.2	**0.0098**	0.004	42.8	ug/L	5	Standard
>	**Bi**	209	567523.3	0.6				ug/L	561075	Standard

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⌈	**Na**	23	475.0	7.4	**-0.0079**	0.002	19.8	mg/L	288	Standard
|	**Mg**	24	676.7	33.0	**0.0013**	0.000	23.3	mg/L	218	Standard
|	**K**	39	120.0	15.0	**-0.0011**	0.013	1217.8	mg/L	125	Standard
|	**Ca**	43	3.3	173.2	**-1.8434**	6.090	330.4	mg/L	3	Standard
|	**Fe**	54	554.4	3.7	**0.0134**	0.001	10.9	mg/L	550	Standard
|	**Fe**	57	1591.8	4.9	**-0.0027**	0.001	39.5	mg/L	1772	Standard
⌊>	**Sc-1**	45	325191.2	2.9				mg/L	330668	Standard
	Cl	35	2.3	65.5				ug/L	5	Standard
	Kr	83	35.6	9.8				ug/L	38	Standard
	Br	81	349.2	7.7				ug/L	344	Standard
	P	31	345.0	8.1				ug/L	312	Standard
	S	34	5025.0	1.4				ug/L	5594	Standard
	Sr	88	41.7	54.1				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		101.080	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.621
	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	101.149
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Sunday, July 29, 2012 08:59:31
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: JYH 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	7	9006.0	2.0	**3.1850**	60.027	1884.7	ug/L	9465	Standard
	Be	9	11.7	89.2	**-0.0141**	0.006	44.7	ug/L	10	Standard
	Al	27	5724.4	5.8	**-0.1740**	0.026	14.8	ug/L	7870	Standard
>	**Sc**	45	329739.9	1.5				ug/L	330668	Standard
	Ti	47	63.0	8.4	**0.0109**	0.005	43.4	ug/L	53	Standard
	V	51	6442.2	0.8	**0.3722**	0.007	1.9	ug/L	2687	Standard
	Cr	52	13885.0	1.8	**0.6989**	0.037	5.2	ug/L	8408	Standard
	Cr	53	1248.4	5.7	**0.7501**	0.050	6.7	ug/L	288	Standard
	Mn	55	7516.5	1.0	**0.4863**	0.008	1.6	ug/L	1080	Standard
	Co	59	3321.0	1.6	**0.3868**	0.005	1.4	ug/L	117	Standard
	Ni	60	3987.9	3.2	**1.6857**	0.059	3.5	ug/L	68	Standard
	Cu	65	1763.4	1.7	**0.7517**	0.013	1.7	ug/L	141	Standard
	Zn	66	8250.2	0.7	**7.9700**	0.091	1.1	ug/L	138	Standard
>	**Ge**	72	285106.5	0.4				ug/L	283230	Standard
	As	75	207.1	13.9	**0.3795**	0.028	7.5	ug/L	-198	Standard
	Se	82	62.2	4.9	**0.3821**	0.032	8.4	ug/L	21	Standard
	Se-1	77	144.0	5.9	**0.1978**	0.119	60.2	ug/L	131	Standard
>	**Ga**	71	626.7	12.4				mg/L	607	Standard
	Rb	85	15.0	88.2				ug/L	30	Standard
	Y	89	251900.5	1.8				ug/L	251555	Standard
>	**Rh**	103	346.7	5.1				ug/L	335	Standard
	Mo	98	80.3	8.3	**0.0155**	0.002	11.0	ug/L	13	Standard
	Ag	107	2518.2	2.6	**0.3951**	0.009	2.2	ug/L	36	Standard
	Cd	111	846.8	1.7	**0.2466**	0.004	1.8	mg/L	49	Standard
	Cd	114	2508.4	2.3	**0.2377**	0.004	1.7	ug/L	170	Standard
>	**In**	115	726762.6	1.4				ug/L	727802	Standard
	Sn	118	664.0	6.9	**0.0104**	0.005	45.9	ug/L	471	Standard
	Sb	123	3799.7	2.2	**0.4520**	0.015	3.3	ug/L	39	Standard
	Ba	135	3296.0	2.5	**0.7443**	0.024	3.2	ug/L	25	Standard
	Ce	140	26.7	27.1				ug/L	25	Standard
>	**Tb**	159	1072411.0	0.4				ug/L	1071747	Standard
	Ho	165	10.3	14.8				ug/L	13	Standard
	Tl	203	1389.1	2.5	**0.0816**	0.002	2.0	ug/L	5	Standard
	Tl	205	3154.0	1.0	**0.0805**	0.000	0.5	ug/L	10	Standard
	Pb	206	2941.6	1.2	**0.1948**	0.004	1.9	ug/L	382	Standard
	Pb	207	2428.5	1.7	**0.1957**	0.003	1.3	ug/L	306	Standard
	Pb	208	11399.0	1.3	**0.1948**	0.003	1.5	ug/L	1443	Standard
	U	238	5910.2	1.3	**0.3843**	0.007	1.8	ug/L	5	Standard
>	**Bi**	209	566525.9	0.5				ug/L	561075	Standard

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Na	23	386.7	15.0	**-0.0135**	0.003	23.4	mg/L	288	Standard
Mg	24	236.7	23.2	**0.0006**	0.000	12.9	mg/L	218	Standard
K	39	118.3	21.7	**-0.0040**	0.021	540.1	mg/L	125	Standard
Ca	43	3.3	86.6	**-1.7497**	3.126	178.7	mg/L	3	Standard
Fe	54	619.5	8.6	**0.0272**	0.013	49.4	mg/L	550	Standard
Fe	57	1721.8	8.4	**-0.0006**	0.002	437.1	mg/L	1772	Standard
Sc-1	45	329739.9	1.5				mg/L	330668	Standard
Cl	35	4.0	66.1				ug/L	5	Standard
Kr	83	38.6	8.2				ug/L	38	Standard
Br	81	369.2	7.8				ug/L	344	Standard
P	31	342.5	14.2				ug/L	312	Standard
S	34	5168.4	0.5				ug/L	5594	Standard
Sr	88	48.3	11.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51	93.042		
Cr	52	87.364		
Cr	53			
Mn	55	97.259		
Co	59	96.704		
Ni	60	105.357		
Cu	65	93.964		
Zn	66	127.519		
Ge	72		100.663	
As	75	94.865		
Se	82	95.516		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	98.771		

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	Cd	111	102.730	
	Cd	114		
>	In	115		99.857
	Sn	118		
	Sb	123	112.999	
	Ba	135	99.239	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	101.979	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	97.411	
	U	238	96.080	
>	Bi	209		100.971
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Sunday, July 29, 2012 09:02:42
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: JYH 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	7	7471.9	9.3	**-60.5936**	121.734	200.9	ug/L	9465	Standard
	Be	9	71.7	149.7	**0.0280**	0.073	262.1	ug/L	10	Standard
	Al	27	59159679.8	1.7	**4893.0525**	75.102	1.5	ug/L	7870	Standard
>	**Sc**	45	283351.0	2.4				ug/L	330668	Standard
	Ti	47	12740.4	2.4	**12.6314**	0.180	1.4	ug/L	53	Standard
	V	51	2578.6	4.1	**0.0228**	0.008	35.8	ug/L	2687	Standard
	Cr	52	7246.1	5.3	**-0.0040**	0.045	1143.0	ug/L	8408	Standard
	Cr	53	1357.6	16.2	**0.9970**	0.180	18.0	ug/L	288	Standard
	Mn	55	959.0	6.5	**0.0002**	0.005	2613.7	ug/L	1080	Standard
	Co	59	269.0	9.3	**0.0245**	0.003	12.3	ug/L	117	Standard
	Ni	60	701.0	23.9	**0.3198**	0.078	24.3	ug/L	68	Standard
	Cu	65	257.7	40.9	**0.0706**	0.054	77.0	ug/L	141	Standard
	Zn	66	1305.1	5.5	**1.3385**	0.063	4.7	ug/L	138	Standard
>	**Ge**	72	245702.5	1.5				ug/L	283230	Standard
	As	75	-149.8	15.8	**-0.0010**	0.029	2882.8	ug/L	-198	Standard
	Se	82	24.2	14.5	**0.0389**	0.041	104.8	ug/L	21	Standard
	Se-1	77	234.7	4.3	**2.0280**	0.153	7.6	ug/L	131	Standard
>	**Ga**	71	548.3	12.4				mg/L	607	Standard
	Rb	85	2070.1	3.6				ug/L	30	Standard
	Y	89	209299.2	1.2				ug/L	251555	Standard
>	**Rh**	103	298.3	5.9				ug/L	335	Standard
	Mo	98	258770.9	1.9	**82.9889**	1.159	1.4	ug/L	13	Standard
	Ag	107	127.3	42.7	**0.0142**	0.010	67.4	ug/L	36	Standard
	Cd	111	-75.0	41.4	**-0.0449**	0.011	24.0	mg/L	49	Standard
	Cd	114	1246.0	4.3	**0.1253**	0.004	3.0	ug/L	170	Standard
>	**In**	115	639822.2	2.6				ug/L	727802	Standard
	Sn	118	463.3	23.6	**-0.0017**	0.010	585.8	ug/L	471	Standard
	Sb	123	513.7	12.5	**0.0708**	0.008	10.6	ug/L	39	Standard
	Ba	135	59.3	31.3	**0.0039**	0.005	119.4	ug/L	25	Standard
	Ce	140	1519.1	4.9				ug/L	25	Standard
>	**Tb**	159	986969.7	1.9				ug/L	1071747	Standard
	Ho	165	18.7	48.0				ug/L	13	Standard
	Tl	203	185.3	42.1	**0.0112**	0.005	44.5	ug/L	5	Standard
	Tl	205	418.0	33.5	**0.0118**	0.004	31.6	ug/L	10	Standard
	Pb	206	509.0	13.5	**0.0114**	0.005	45.9	ug/L	382	Standard
	Pb	207	430.3	6.4	**0.0154**	0.001	5.7	ug/L	306	Standard
	Pb	208	2000.4	5.9	**0.0144**	0.002	15.0	ug/L	1443	Standard
	U	238	633.4	157.6	**0.0448**	0.071	158.1	ug/L	5	Standard
>	**Bi**	209	510789.9	4.4				ug/L	561075	Standard

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Na	23	130262.6	1.2	**8.8674**	0.108	1.2	mg/L	288	Standard
Mg	24	2631217.3	3.1	**4.6110**	0.125	2.7	mg/L	218	Standard
K	39	4782.4	6.0	**4.8319**	0.267	5.5	mg/L	125	Standard
Ca	43	21.7	13.3	**21.6854**	3.006	13.9	mg/L	3	Standard
Fe	54	13627.4	1.4	**3.6756**	0.065	1.8	mg/L	550	Standard
Fe	57	151214.1	5.7	**3.4636**	0.115	3.3	mg/L	1772	Standard
Sc-1	45	283351.0	2.4				mg/L	330668	Standard
Cl	35	220.7	13.2				ug/L	5	Standard
Kr	83	37.1	7.0				ug/L	38	Standard
Br	81	308.3	1.7				ug/L	344	Standard
P	31	26539.1	1.4				ug/L	312	Standard
S	34	10998.2	4.1				ug/L	5594	Standard
Sr	88	55.0	32.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.861		
Sc	45			
Ti	47	12.631		
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72		86.750	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	82.989		
Ag	107			

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	Cd	111		
	Cd	114		
>	In	115		87.912
	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		91.038
	Na	23	70.939	
	Mg	24	92.221	
	K	39	96.638	
	Ca	43	144.569	
	Fe	54	29.405	
	Fe	57	27.709	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Ti	47	
QC Std 4	Na	23	
QC Std 4	Ca	43	
QC Std 4	Fe	54	
QC Std 4	Fe	57	

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Method 6020 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Sunday, July 29, 2012 09:05:51
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: JYH 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	7	9089.4	3.5	**1.4076**	67.100	4767.1	ug/L	9465	Standard
	Be	9	164219.0	3.0	**98.0803**	2.859	2.9	ug/L	10	Standard
	Al	27	72371319.1	3.6	**5092.2260**	201.735	4.0	ug/L	7870	Standard
>	**Sc**	45	333042.2	0.4				ug/L	330668	Standard
	Ti	47	121995.6	2.1	**106.0503**	1.453	1.4	ug/L	53	Standard
	V	51	943234.3	0.9	**96.5982**	0.629	0.7	ug/L	2687	Standard
	Cr	52	752888.5	2.1	**96.8636**	0.830	0.9	ug/L	8408	Standard
	Cr	53	128840.6	1.8	**98.9949**	2.833	2.9	ug/L	288	Standard
	Mn	55	1336024.8	0.3	**102.7896**	1.087	1.1	ug/L	1080	Standard
	Co	59	835388.8	0.7	**102.0458**	1.834	1.8	ug/L	117	Standard
	Ni	60	222939.5	0.3	**97.2254**	1.386	1.4	ug/L	68	Standard
	Cu	65	208283.3	1.0	**98.1228**	0.495	0.5	ug/L	141	Standard
	Zn	66	99677.8	0.6	**99.3847**	1.022	1.0	ug/L	138	Standard
>	**Ge**	72	281077.2	1.4				ug/L	283230	Standard
	As	75	100514.3	0.9	**101.9883**	0.682	0.7	ug/L	-198	Standard
	Se	82	10061.2	1.2	**102.3184**	0.588	0.6	ug/L	21	Standard
	Se-1	77	7215.1	1.9	**102.5345**	0.534	0.5	ug/L	131	Standard
>	**Ga**	71	780.0	10.6				mg/L	607	Standard
	Rb	85	2731.9	6.7				ug/L	30	Standard
	Y	89	247295.7	2.2				ug/L	251555	Standard
>	**Rh**	103	365.0	4.9				ug/L	335	Standard
	Mo	98	347535.9	0.5	**95.3157**	0.945	1.0	ug/L	13	Standard
	Ag	107	583922.3	1.8	**91.0204**	2.071	2.3	ug/L	36	Standard
	Cd	111	344214.6	0.4	**104.5527**	0.400	0.4	mg/L	49	Standard
	Cd	114	1005811.0	0.8	**100.4725**	1.010	1.0	ug/L	170	Standard
>	**In**	115	748070.5	0.5				ug/L	727802	Standard
	Sn	118	1074.0	7.4	**0.0434**	0.006	14.6	ug/L	471	Standard
	Sb	123	891158.8	1.0	**102.5525**	0.706	0.7	ug/L	39	Standard
	Ba	135	431007.1	0.6	**95.9879**	0.525	0.5	ug/L	25	Standard
	Ce	140	1815.4	2.6				ug/L	25	Standard
>	**Tb**	159	1115951.4	0.4				ug/L	1071747	Standard
	Ho	165	24.0	26.0				ug/L	13	Standard
	Tl	203	1607214.2	0.7	**97.9586**	0.139	0.1	ug/L	5	Standard
	Tl	205	3903604.3	0.4	**102.0103**	0.450	0.4	ug/L	10	Standard
	Pb	206	1243632.7	0.5	**98.2318**	0.275	0.3	ug/L	382	Standard
	Pb	207	1066483.1	0.4	**100.8877**	0.395	0.4	ug/L	306	Standard
	Pb	208	5039046.0	0.3	**101.4287**	0.556	0.5	ug/L	1443	Standard
	U	238	1537984.0	0.5	**102.5166**	1.138	1.1	ug/L	5	Standard
>	**Bi**	209	553002.0	0.8				ug/L	561075	Standard

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	Na	23	137452.3	0.3	**7.9556**	0.054	0.7	mg/L	288	Standard
	Mg	24	3174966.7	3.0	**4.7331**	0.136	2.9	mg/L	218	Standard
	K	39	5362.6	2.4	**4.6050**	0.123	2.7	mg/L	125	Standard
	Ca	43	40.0	45.1	**37.2318**	19.309	51.9	mg/L	3	Standard
	Fe	54	49788.0	1.5	**11.6783**	0.206	1.8	mg/L	550	Standard
	Fe	57	681685.7	3.2	**13.3912**	0.465	3.5	mg/L	1772	Standard
>	**Sc-1**	45	333042.2	0.4				mg/L	330668	Standard
	Cl	35	238.3	4.5				ug/L	5	Standard
	Kr	83	43.3	13.4				ug/L	38	Standard
	Br	81	422.5	8.4				ug/L	344	Standard
	P	31	70740.6	1.1				ug/L	312	Standard
	S	34	11804.6	0.6				ug/L	5594	Standard
	Sr	88	61.7	32.8				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	101.845		
>	Sc	45			
	Ti	47	106.050		
	V	51	96.598		
	Cr	52	96.864		
	Cr	53			
	Mn	55	102.790		
	Co	59	102.046		
	Ni	60	97.225		
	Cu	65	98.123		
	Zn	66	99.385		
>	Ge	72		99.240	
	As	75	101.988		
	Se	82	102.318		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	95.316		
	Ag	107	91.020		

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	Cd	111	104.553	
	Cd	114		
>	In	115		102.785
	Sn	118		
	Sb	123	102.553	
	Ba	135	95.988	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.959	
	Tl	205		
	Pb	206	98.232	
	Pb	207	100.888	
	Pb	208	101.429	
	U	238	102.517	
>	Bi	209		98.561
	Na	23	63.645	
	Mg	24	94.663	
	K	39	92.100	
	Ca	43	248.212	
	Fe	54	93.426	
	Fe	57	107.130	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Na	23	
QC Std 5	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 09:09:02
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: JYH 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	7	10410.3	9.1	**-42.4291**	45.917	108.2	ug/L	9465	Standard
	Be	9	95659.8	10.3	**48.6117**	1.333	2.7	ug/L	10	Standard
	Al	27	793088.8	9.5	**46.9341**	1.010	2.2	ug/L	7870	Standard
>	**Sc**	45	390793.1	7.7				ug/L	330668	Standard
	Ti	47	134278.1	8.4	**100.4556**	0.255	0.3	ug/L	53	Standard
	V	51	551362.0	7.1	**48.4910**	0.801	1.7	ug/L	2687	Standard
	Cr	52	440909.4	6.9	**48.3313**	1.117	2.3	ug/L	8408	Standard
	Cr	53	75558.8	8.4	**49.8519**	0.184	0.4	ug/L	288	Standard
	Mn	55	774377.1	6.8	**51.2749**	0.998	1.9	ug/L	1080	Standard
	Co	59	479151.8	6.6	**50.4130**	1.146	2.3	ug/L	117	Standard
	Ni	60	133060.5	9.5	**49.8853**	0.455	0.9	ug/L	68	Standard
	Cu	65	124047.5	8.5	**50.2532**	0.118	0.2	ug/L	141	Standard
	Zn	66	57289.8	6.7	**49.1283**	1.090	2.2	ug/L	138	Standard
>	**Ge**	72	326654.2	8.6				ug/L	283230	Standard
	As	75	56083.1	7.6	**49.0840**	0.560	1.1	ug/L	-198	Standard
	Se	82	5696.6	6.8	**49.7783**	1.122	2.3	ug/L	21	Standard
	Se-1	77	4098.2	7.1	**49.2146**	0.870	1.8	ug/L	131	Standard
>	**Ga**	71	705.0	9.8				mg/L	607	Standard
	Rb	85	788.4	12.2				ug/L	30	Standard
	Y	89	289481.0	9.7				ug/L	251555	Standard
>	**Rh**	103	401.7	2.9				ug/L	335	Standard
	Mo	98	402956.2	9.2	**96.2291**	2.077	2.2	ug/L	13	Standard
	Ag	107	366210.0	8.8	**49.7088**	0.853	1.7	ug/L	36	Standard
	Cd	111	198792.7	7.6	**52.6114**	0.233	0.4	mg/L	49	Standard
	Cd	114	579591.8	7.7	**50.4414**	0.309	0.6	ug/L	170	Standard
>	**In**	115	858221.3	7.1				ug/L	727802	Standard
	Sn	118	693673.8	7.0	**51.1166**	0.097	0.2	ug/L	471	Standard
	Sb	123	505779.5	6.6	**50.7488**	0.364	0.7	ug/L	39	Standard
	Ba	135	247009.2	6.6	**47.9563**	0.266	0.6	ug/L	25	Standard
	Ce	140	1031.7	17.5				ug/L	25	Standard
>	**Tb**	159	1231933.2	5.9				ug/L	1071747	Standard
	Ho	165	20.7	10.1				ug/L	13	Standard
	Tl	203	908929.4	5.7	**49.1607**	0.471	1.0	ug/L	5	Standard
	Tl	205	2188348.5	8.4	**50.6949**	1.574	3.1	ug/L	10	Standard
	Pb	206	703479.6	5.5	**49.2974**	0.465	0.9	ug/L	382	Standard
	Pb	207	601284.0	5.4	**50.4706**	0.720	1.4	ug/L	306	Standard
	Pb	208	2764643.7	5.3	**49.3758**	0.561	1.1	ug/L	1443	Standard
	U	238	865934.5	5.8	**51.2170**	0.037	0.1	ug/L	5	Standard
>	**Bi**	209	623200.7	5.8				ug/L	561075	Standard

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Na	23	114709.3	1.6	**5.6665**	0.369	6.5	mg/L	288	Standard
Mg	24	3579737.1	5.7	**4.5533**	0.114	2.5	mg/L	218	Standard
K	39	6066.2	4.3	**4.4443**	0.187	4.2	mg/L	125	Standard
Ca	43	15.0	33.3	**8.0742**	3.674	45.5	mg/L	3	Standard
Fe	54	24207.0	5.3	**4.7748**	0.156	3.3	mg/L	550	Standard
Fe	57	348931.5	8.3	**5.8207**	0.127	2.2	mg/L	1772	Standard
Sc-1	45	390793.1	7.7				mg/L	330668	Standard
Cl	35	8.7	58.1				ug/L	5	Standard
Kr	83	44.2	9.3				ug/L	38	Standard
Br	81	532.5	6.6				ug/L	344	Standard
P	31	392.5	8.3				ug/L	312	Standard
S	34	5426.8	4.9				ug/L	5594	Standard
Sr	88	58.3	35.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	93.868		
Sc	45			
Ti	47	100.456		
V	51	96.982		
Cr	52	96.663		
Cr	53			
Mn	55	102.550		
Co	59	100.826		
Ni	60	99.771		
Cu	65	100.506		
Zn	66	98.257		
Ge	72		115.332	
As	75	98.168		
Se	82	99.557		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.229		
Ag	107	99.418		

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	Cd	111	105.223	
	Cd	114		
>	In	115		117.920
	Sn	118	102.233	
	Sb	123	101.498	
	Ba	135	95.913	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.321	
	Tl	205		
	Pb	206	98.595	
	Pb	207	100.941	
	Pb	208	98.752	
	U	238	102.434	
>	Bi	209		111.073
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 09:12:12
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: JYH 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	7	10622.1	3.6	**-33.2506**	47.711	143.5	ug/L	9465	Standard
	Be	9	41.7	77.1	**-0.0004**	0.016	3842.8	ug/L	10	Standard
	Al	27	14180.6	38.4	**0.2549**	0.314	123.3	ug/L	7870	Standard
>	**Sc**	45	396828.0	0.9				ug/L	330668	Standard
	Ti	47	84.3	26.0	**0.0189**	0.017	89.9	ug/L	53	Standard
	V	51	2862.6	1.4	**-0.0323**	0.007	21.2	ug/L	2687	Standard
	Cr	52	8649.8	1.0	**-0.1335**	0.012	8.7	ug/L	8408	Standard
	Cr	53	334.2	12.3	**0.0199**	0.030	148.6	ug/L	288	Standard
	Mn	55	1327.7	17.8	**0.0021**	0.017	807.5	ug/L	1080	Standard
	Co	59	222.3	53.4	**0.0099**	0.013	127.7	ug/L	117	Standard
	Ni	60	101.0	35.7	**0.0080**	0.014	172.9	ug/L	68	Standard
	Cu	65	183.3	18.5	**0.0052**	0.015	282.4	ug/L	141	Standard
	Zn	66	173.7	11.5	**-0.0054**	0.019	352.2	ug/L	138	Standard
>	**Ge**	72	333471.2	1.4				ug/L	283230	Standard
	As	75	-201.2	10.2	**0.0009**	0.018	1853.0	ug/L	-198	Standard
	Se	82	22.7	22.8	**-0.0483**	0.042	87.4	ug/L	21	Standard
	Se-1	77	135.0	7.1	**-0.2091**	0.129	61.6	ug/L	131	Standard
>	**Ga**	71	731.7	7.5				mg/L	607	Standard
	Rb	85	28.3	53.9				ug/L	30	Standard
	Y	89	285689.2	2.3				ug/L	251555	Standard
>	**Rh**	103	400.0	11.5				ug/L	335	Standard
	Mo	98	350.2	13.8	**0.0745**	0.011	14.7	ug/L	13	Standard
	Ag	107	178.0	42.5	**0.0146**	0.010	68.7	ug/L	36	Standard
	Cd	111	110.5	41.7	**0.0103**	0.012	116.0	mg/L	49	Standard
	Cd	114	338.6	51.6	**0.0086**	0.015	173.4	ug/L	170	Standard
>	**In**	115	879707.1	0.6				ug/L	727802	Standard
	Sn	118	920.7	7.6	**0.0188**	0.005	26.8	ug/L	471	Standard
	Sb	123	3280.7	7.5	**0.3228**	0.023	7.1	ug/L	39	Standard
	Ba	135	93.3	66.3	**0.0062**	0.012	190.1	ug/L	25	Standard
	Ce	140	31.0	16.1				ug/L	25	Standard
>	**Tb**	159	1228804.2	0.8				ug/L	1071747	Standard
	Ho	165	17.0	15.6				ug/L	13	Standard
	Tl	203	269.3	87.5	**0.0131**	0.012	94.5	ug/L	5	Standard
	Tl	205	604.0	87.4	**0.0136**	0.012	87.2	ug/L	10	Standard
	Pb	206	600.0	31.7	**0.0087**	0.013	147.9	ug/L	382	Standard
	Pb	207	515.7	31.9	**0.0133**	0.013	99.8	ug/L	306	Standard
	Pb	208	2352.4	32.5	**0.0115**	0.013	114.0	ug/L	1443	Standard
	U	238	224.3	98.6	**0.0126**	0.013	100.4	ug/L	5	Standard
>	**Bi**	209	642758.5	1.3				ug/L	561075	Standard

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Na	23	678.3	19.8	**-0.0031**	0.006	199.5	mg/L	288	Standard
Mg	24	893.4	67.9	**0.0014**	0.001	53.4	mg/L	218	Standard
K	39	140.0	3.6	**-0.0055**	0.005	83.4	mg/L	125	Standard
Ca	43	6.7	43.3	**0.5882**	2.563	435.7	mg/L	3	Standard
Fe	54	644.4	9.1	**0.0070**	0.011	156.0	mg/L	550	Standard
Fe	57	2248.5	8.4	**0.0024**	0.003	118.5	mg/L	1772	Standard
Sc-1	45	396828.0	0.9				mg/L	330668	Standard
Cl	35	5.7	20.4				ug/L	5	Standard
Kr	83	44.6	5.6				ug/L	38	Standard
Br	81	476.7	8.0				ug/L	344	Standard
P	31	385.8	1.5				ug/L	312	Standard
S	34	5482.7	2.9				ug/L	5594	Standard
Sr	88	55.0	24.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		117.739	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: QC Std 7
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	Cd	111	
	Cd	114	
>	In	115	120.872
	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	114.558
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
In 115 Int Std for QC Std	In	115	Rerun sample

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 09:16:27
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: JYH 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	7	10150.1	5.8	**-46.4519**	89.365	192.4	ug/L	9465	Standard
	Be	9	30.0	44.1	**-0.0056**	0.007	120.6	ug/L	10	Standard
	Al	27	12066.6	22.5	**0.1583**	0.161	101.8	ug/L	7870	Standard
>	**Sc**	45	382074.4	1.0				ug/L	330668	Standard
	Ti	47	71.0	7.5	**0.0110**	0.004	34.1	ug/L	53	Standard
	V	51	2758.0	2.2	**-0.0319**	0.005	15.7	ug/L	2687	Standard
	Cr	52	8422.3	1.6	**-0.1218**	0.020	16.6	ug/L	8408	Standard
	Cr	53	302.5	10.0	**0.0070**	0.022	312.3	ug/L	288	Standard
	Mn	55	1306.7	12.7	**0.0039**	0.011	278.3	ug/L	1080	Standard
	Co	59	222.7	43.2	**0.0107**	0.010	95.2	ug/L	117	Standard
	Ni	60	86.7	3.5	**0.0039**	0.001	23.8	ug/L	68	Standard
	Cu	65	175.7	13.5	**0.0047**	0.010	207.7	ug/L	141	Standard
	Zn	66	175.3	8.0	**0.0017**	0.012	692.5	ug/L	138	Standard
>	**Ge**	72	320767.3	0.7				ug/L	283230	Standard
	As	75	-218.2	6.8	**-0.0210**	0.015	69.0	ug/L	-198	Standard
	Se	82	27.0	21.0	**-0.0019**	0.050	2613.6	ug/L	21	Standard
	Se-1	77	134.0	8.4	**-0.1572**	0.143	90.8	ug/L	131	Standard
>	**Ga**	71	721.7	7.8				mg/L	607	Standard
	Rb	85	30.0	28.9				ug/L	30	Standard
	Y	89	279606.5	0.9				ug/L	251555	Standard
>	**Rh**	103	453.3	16.6				ug/L	335	Standard
	Mo	98	302.3	72.3	**0.0655**	0.052	79.4	ug/L	13	Standard
	Ag	107	178.3	84.0	**0.0154**	0.020	131.8	ug/L	36	Standard
	Cd	111	122.6	68.7	**0.0144**	0.022	154.3	mg/L	49	Standard
	Cd	114	362.2	56.4	**0.0115**	0.018	152.9	ug/L	170	Standard
>	**In**	115	850830.4	1.0				ug/L	727802	Standard
	Sn	118	750.0	15.5	**0.0083**	0.008	98.2	ug/L	471	Standard
	Sb	123	757.4	6.6	**0.0784**	0.005	5.9	ug/L	39	Standard
	Ba	135	95.3	66.9	**0.0071**	0.012	173.6	ug/L	25	Standard
	Ce	140	29.0	32.9				ug/L	25	Standard
>	**Tb**	159	1206367.5	0.7				ug/L	1071747	Standard
	Ho	165	17.7	32.2				ug/L	13	Standard
	Tl	203	186.7	93.7	**0.0090**	0.009	104.9	ug/L	5	Standard
	Tl	205	477.0	81.0	**0.0110**	0.009	80.9	ug/L	10	Standard
	Pb	206	562.7	21.5	**0.0071**	0.008	117.7	ug/L	382	Standard
	Pb	207	469.0	20.1	**0.0104**	0.008	73.8	ug/L	306	Standard
	Pb	208	2199.4	21.2	**0.0098**	0.008	82.6	ug/L	1443	Standard
	U	238	156.7	68.4	**0.0089**	0.006	69.9	ug/L	5	Standard
>	**Bi**	209	627407.9	0.8				ug/L	561075	Standard

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Na	23	525.0	19.0	**-0.0096**	0.005	50.0	mg/L	288	Standard
Mg	24	808.4	55.6	**0.0013**	0.001	43.2	mg/L	218	Standard
K	39	151.7	6.9	**0.0073**	0.007	93.0	mg/L	125	Standard
Ca	43	3.3	86.6	**-2.2868**	2.661	116.4	mg/L	3	Standard
Fe	54	590.7	13.3	**0.0008**	0.015	1891.4	mg/L	550	Standard
Fe	57	2113.5	4.0	**0.0015**	0.001	83.9	mg/L	1772	Standard
> **Sc-1**	45	382074.4	1.0				mg/L	330668	Standard
Cl	35	3.7	31.5				ug/L	5	Standard
Kr	83	40.6	14.2				ug/L	38	Standard
Br	81	443.3	5.7				ug/L	344	Standard
P	31	362.5	10.4				ug/L	312	Standard
S	34	5574.4	1.0				ug/L	5594	Standard
Sr	88	43.3	17.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		113.253	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	116.904
	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	111.822
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: PBW 2A WG404305-02
Sample Date/Time: Sunday, July 29, 2012 09:21:41
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: JYH 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	7	9803.2	4.1	**-45.8404**	66.819	145.8	ug/L	9465	Standard
	Be	9	13.3	78.1	**-0.0140**	0.006	40.9	ug/L	10	Standard
	Al	27	10555.3	1.0	**0.0896**	0.012	13.9	ug/L	7870	Standard
>	**Sc**	45	368946.6	1.1				ug/L	330668	Standard
	Ti	47	44.0	9.9	**-0.0089**	0.004	39.9	ug/L	53	Standard
	V	51	2696.0	1.7	**-0.0330**	0.004	12.1	ug/L	2687	Standard
	Cr	52	8373.0	1.2	**-0.1097**	0.005	4.2	ug/L	8408	Standard
	Cr	53	290.0	0.9	**0.0022**	0.003	123.7	ug/L	288	Standard
	Mn	55	1134.7	1.4	**-0.0063**	0.001	21.6	ug/L	1080	Standard
	Co	59	116.3	4.1	**-0.0004**	0.001	136.5	ug/L	117	Standard
	Ni	60	94.3	8.0	**0.0075**	0.003	38.1	ug/L	68	Standard
	Cu	65	154.7	2.3	**-0.0027**	0.001	53.3	ug/L	141	Standard
	Zn	66	389.7	8.3	**0.1955**	0.026	13.5	ug/L	138	Standard
>	**Ge**	72	314868.5	0.8				ug/L	283230	Standard
	As	75	-188.5	4.3	**0.0022**	0.009	395.7	ug/L	-198	Standard
	Se	82	24.9	18.4	**-0.0169**	0.040	238.9	ug/L	21	Standard
	Se-1	77	121.7	6.2	**-0.2851**	0.087	30.4	ug/L	131	Standard
>	**Ga**	71	641.7	6.5				mg/L	607	Standard
	Rb	85	20.0	25.0				ug/L	30	Standard
	Y	89	273283.4	2.4				ug/L	251555	Standard
>	**Rh**	103	421.7	3.4				ug/L	335	Standard
	Mo	98	110.0	33.0	**0.0203**	0.009	45.8	ug/L	13	Standard
	Ag	107	52.7	17.9	**-0.0015**	0.001	93.8	ug/L	36	Standard
	Cd	111	67.1	9.0	**0.0003**	0.002	690.5	mg/L	49	Standard
	Cd	114	201.2	0.3	**-0.0019**	0.000	21.4	ug/L	170	Standard
>	**In**	115	822183.3	2.4				ug/L	727802	Standard
	Sn	118	676.0	8.0	**0.0046**	0.003	69.0	ug/L	471	Standard
	Sb	123	499.4	23.3	**0.0541**	0.013	23.2	ug/L	39	Standard
	Ba	135	41.3	15.7	**-0.0031**	0.001	45.3	ug/L	25	Standard
	Ce	140	22.3	15.7				ug/L	25	Standard
>	**Tb**	159	1172218.5	1.6				ug/L	1071747	Standard
	Ho	165	13.0	20.4				ug/L	13	Standard
	Tl	203	22.0	62.5	**0.0002**	0.001	469.8	ug/L	5	Standard
	Tl	205	53.3	38.7	**0.0013**	0.000	38.1	ug/L	10	Standard
	Pb	206	419.7	8.1	**-0.0021**	0.002	99.7	ug/L	382	Standard
	Pb	207	359.7	10.5	**0.0021**	0.003	147.2	ug/L	306	Standard
	Pb	208	1666.7	5.2	**0.0011**	0.001	116.5	ug/L	1443	Standard
	U	238	14.0	75.6	**0.0006**	0.001	104.1	ug/L	5	Standard
>	**Bi**	209	611656.0	1.3				ug/L	561075	Standard

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Na	23	391.7	9.7	**-0.0156**	0.002	14.2	mg/L	288	Standard
Mg	24	261.7	6.7	**0.0006**	0.000	4.3	mg/L	218	Standard
K	39	145.0	12.4	**0.0063**	0.015	242.8	mg/L	125	Standard
Ca	43	3.3	173.2	**-2.1765**	5.513	253.3	mg/L	3	Standard
Fe	54	584.4	13.6	**0.0040**	0.018	450.0	mg/L	550	Standard
Fe	57	1950.1	0.7	**-0.0001**	0.000	346.2	mg/L	1772	Standard
> **Sc-1**	45	368946.6	1.1				mg/L	330668	Standard
Cl	35	5.0	60.0				ug/L	5	Standard
Kr	83	39.1	12.8				ug/L	38	Standard
Br	81	445.8	3.1				ug/L	344	Standard
P	31	348.3	12.4				ug/L	312	Standard
S	34	5526.0	1.8				ug/L	5594	Standard
Sr	88	51.7	40.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		111.171	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

Sample ID: PBW 2A WG404305-02
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	Cd	111	
	Cd	114	
>	In	115	112.968
	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	109.015
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 2A WG404305-02
Report Date/Time: Sunday, July 29, 2012 09:24:11
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Method 6020 - Summary Report

Sample ID: LCSW 2A WG404305-03
Sample Date/Time: Sunday, July 29, 2012 09:25:13
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: JYH 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	7	10071.7	1.7	**-74.4437**	36.421	48.9	ug/L	9465	Standard
	Be	9	44715.9	2.1	**23.0612**	0.534	2.3	ug/L	10	Standard
	Al	27	431093.7	2.2	**25.6266**	0.340	1.3	ug/L	7870	Standard
>	**Sc**	45	385451.7	1.1				ug/L	330668	Standard
	Ti	47	85.7	8.9	**0.0206**	0.007	31.8	ug/L	53	Standard
	V	51	274903.8	0.4	**23.8203**	0.404	1.7	ug/L	2687	Standard
	Cr	52	226808.0	0.7	**24.1059**	0.402	1.7	ug/L	8408	Standard
	Cr	53	38542.3	0.6	**25.1243**	0.186	0.7	ug/L	288	Standard
	Mn	55	382845.4	0.9	**25.0767**	0.443	1.8	ug/L	1080	Standard
	Co	59	240205.2	1.0	**25.0323**	0.428	1.7	ug/L	117	Standard
	Ni	60	66483.9	1.0	**24.7218**	0.098	0.4	ug/L	68	Standard
	Cu	65	62285.1	0.2	**24.9947**	0.291	1.2	ug/L	141	Standard
	Zn	66	29121.0	1.9	**24.6655**	0.369	1.5	ug/L	138	Standard
>	**Ge**	72	329327.7	1.3				ug/L	283230	Standard
	As	75	26725.9	1.2	**23.2815**	0.548	2.4	ug/L	-198	Standard
	Se	82	2623.5	0.8	**22.5844**	0.416	1.8	ug/L	21	Standard
	Se-1	77	1947.5	1.3	**22.1982**	0.589	2.7	ug/L	131	Standard
>	**Ga**	71	698.3	6.7				mg/L	607	Standard
	Rb	85	45.0	11.1				ug/L	30	Standard
	Y	89	287514.5	1.7				ug/L	251555	Standard
>	**Rh**	103	420.0	8.6				ug/L	335	Standard
	Mo	98	98.1	19.6	**0.0165**	0.005	30.2	ug/L	13	Standard
	Ag	107	183964.8	0.5	**25.1865**	0.538	2.1	ug/L	36	Standard
	Cd	111	94366.7	0.4	**25.1694**	0.518	2.1	mg/L	49	Standard
	Cd	114	275547.6	0.5	**24.1673**	0.474	2.0	ug/L	170	Standard
>	**In**	115	851621.0	1.6				ug/L	727802	Standard
	Sn	118	838.7	5.6	**0.0150**	0.004	30.0	ug/L	471	Standard
	Sb	123	238222.2	0.3	**24.0872**	0.453	1.9	ug/L	39	Standard
	Ba	135	123273.8	0.7	**24.1125**	0.541	2.2	ug/L	25	Standard
	Ce	140	245.7	5.0				ug/L	25	Standard
>	**Tb**	159	1228778.0	0.8				ug/L	1071747	Standard
	Ho	165	22.3	21.2				ug/L	13	Standard
	Tl	203	454249.8	0.4	**24.4086**	0.230	0.9	ug/L	5	Standard
	Tl	205	1054060.5	0.8	**24.2849**	0.323	1.3	ug/L	10	Standard
	Pb	206	352297.2	1.0	**24.5089**	0.247	1.0	ug/L	382	Standard
	Pb	207	299091.6	0.7	**24.9235**	0.338	1.4	ug/L	306	Standard
	Pb	208	1384892.9	0.3	**24.5539**	0.220	0.9	ug/L	1443	Standard
	U	238	412456.3	1.1	**24.2375**	0.317	1.3	ug/L	5	Standard
>	**Bi**	209	627259.0	0.6				ug/L	561075	Standard

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Na	23	1128.4	9.0	**0.0205**	0.005	25.1	mg/L	288	Standard
Mg	24	8951.0	2.4	**0.0118**	0.000	2.6	mg/L	218	Standard
K	39	158.3	37.9	**0.0112**	0.045	397.4	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	904.7	4.0	**0.0641**	0.007	11.5	mg/L	550	Standard
Fe	57	2080.1	5.5	**0.0006**	0.002	367.2	mg/L	1772	Standard
Sc-1	45	385451.7	1.1				mg/L	330668	Standard
Cl	35	4.0	43.3				ug/L	5	Standard
Kr	83	35.9	10.0				ug/L	38	Standard
Br	81	446.7	4.0				ug/L	344	Standard
P	31	511.7	1.8				ug/L	312	Standard
S	34	5494.3	2.0				ug/L	5594	Standard
Sr	88	58.3	62.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		116.276	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: LCSW 2A WG404305-03
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	Cd	111	
	Cd	114	
>	In	115	117.013
	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	111.796
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 2A WG404305-03
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Method 6020 - Summary Report

Sample ID: L1207066608
Sample Date/Time: Sunday, July 29, 2012 09:28:23
Number of Replicates: 3
Autosampler Position: 207
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	10145.1	0.3	**41.0160**	40.390	98.5	ug/L	9465	Standard
	Be	9	23.3	61.9	**-0.0084**	0.008	96.0	ug/L	10	Standard
	Al	27	439983.7	0.6	**27.7737**	0.510	1.8	ug/L	7870	Standard
>	**Sc**	45	363737.5	2.3				ug/L	330668	Standard
	Ti	47	744.7	5.7	**0.5495**	0.037	6.7	ug/L	53	Standard
	V	51	3729.9	1.5	**0.0703**	0.005	6.5	ug/L	2687	Standard
	Cr	52	12431.8	1.4	**0.3975**	0.019	4.8	ug/L	8408	Standard
	Cr	53	1076.7	2.9	**0.5609**	0.015	2.7	ug/L	288	Standard
	Mn	55	22614.9	0.7	**1.5087**	0.023	1.5	ug/L	1080	Standard
	Co	59	409.0	13.5	**0.0326**	0.007	20.3	ug/L	117	Standard
	Ni	60	965.4	2.6	**0.3560**	0.014	3.8	ug/L	68	Standard
	Cu	65	1040.0	3.5	**0.3807**	0.014	3.6	ug/L	141	Standard
	Zn	66	4346.6	1.9	**3.8189**	0.085	2.2	ug/L	138	Standard
>	**Ge**	72	307258.4	1.0				ug/L	283230	Standard
	As	75	-164.3	25.6	**0.0203**	0.040	196.5	ug/L	-198	Standard
	Se	82	23.9	14.2	**-0.0203**	0.031	153.6	ug/L	21	Standard
	Se-1	77	120.7	15.6	**-0.2580**	0.259	100.4	ug/L	131	Standard
>	**Ga**	71	690.0	5.2				mg/L	607	Standard
	Rb	85	1193.4	7.0				ug/L	30	Standard
	Y	89	270967.3	2.3				ug/L	251555	Standard
>	**Rh**	103	346.7	10.8				ug/L	335	Standard
	Mo	98	3189.2	1.3	**0.8006**	0.014	1.8	ug/L	13	Standard
	Ag	107	83.0	1.2	**0.0030**	0.000	2.7	ug/L	36	Standard
	Cd	111	76.7	13.2	**0.0032**	0.003	84.0	mg/L	49	Standard
	Cd	114	302.7	6.4	**0.0077**	0.002	21.6	ug/L	170	Standard
>	**In**	115	810145.1	0.6				ug/L	727802	Standard
	Sn	118	1290.4	3.0	**0.0534**	0.003	5.6	ug/L	471	Standard
	Sb	123	1462.8	2.4	**0.1572**	0.004	2.8	ug/L	39	Standard
	Ba	135	3484.7	1.4	**0.7052**	0.010	1.4	ug/L	25	Standard
	Ce	140	4375.6	2.0				ug/L	25	Standard
>	**Tb**	159	1173926.8	0.2				ug/L	1071747	Standard
	Ho	165	76.7	14.3				ug/L	13	Standard
	Tl	203	143.0	13.3	**0.0069**	0.001	14.7	ug/L	5	Standard
	Tl	205	306.0	15.4	**0.0074**	0.001	15.1	ug/L	10	Standard
	Pb	206	1692.4	3.6	**0.0907**	0.003	3.5	ug/L	382	Standard
	Pb	207	1371.1	3.5	**0.0905**	0.005	6.0	ug/L	306	Standard
	Pb	208	6537.6	0.8	**0.0917**	0.000	0.4	ug/L	1443	Standard
	U	238	180.0	37.7	**0.0108**	0.004	38.3	ug/L	5	Standard
>	**Bi**	209	602169.1	1.1				ug/L	561075	Standard

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Na	23	19772.9	5.2	**1.0160**	0.034	3.4	mg/L	288	Standard
Mg	24	16333.8	1.6	**0.0226**	0.000	1.1	mg/L	218	Standard
K	39	178.3	1.6	**0.0347**	0.003	9.4	mg/L	125	Standard
Ca	43	3.3	86.6	**-2.1294**	2.799	131.5	mg/L	3	Standard
Fe	54	854.6	4.4	**0.0644**	0.010	15.6	mg/L	550	Standard
Fe	57	4595.7	3.4	**0.0481**	0.003	6.7	mg/L	1772	Standard
> **Sc-1**	45	363737.5	2.3				mg/L	330668	Standard
Cl	35	5.3	10.8				ug/L	5	Standard
Kr	83	37.8	18.1				ug/L	38	Standard
Br	81	420.8	6.2				ug/L	344	Standard
P	31	1036.7	1.8				ug/L	312	Standard
S	34	5161.7	1.5				ug/L	5594	Standard
Sr	88	36.7	41.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		108.484	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.314
	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	107.324
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207066618
Sample Date/Time: Sunday, July 29, 2012 09:31:33
Number of Replicates: 3
Autosampler Position: 208
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	10438.6	0.9	**106.8428**	33.136	31.0	ug/L	9465	Standard
	Be	9	23.3	32.7	**-0.0083**	0.004	50.4	ug/L	10	Standard
	Al	27	1585700.7	1.2	**102.3292**	1.770	1.7	ug/L	7870	Standard
>	**Sc**	45	361170.3	2.2				ug/L	330668	Standard
	Ti	47	1324.4	3.5	**1.0045**	0.041	4.1	ug/L	53	Standard
	V	51	18045.7	2.3	**1.4057**	0.055	3.9	ug/L	2687	Standard
	Cr	52	24823.7	0.6	**1.8553**	0.044	2.4	ug/L	8408	Standard
	Cr	53	3293.7	4.5	**2.1093**	0.128	6.1	ug/L	288	Standard
	Mn	55	67971.5	1.2	**4.6757**	0.107	2.3	ug/L	1080	Standard
	Co	59	860.7	2.3	**0.0825**	0.001	1.8	ug/L	117	Standard
	Ni	60	4316.6	1.7	**1.6833**	0.045	2.7	ug/L	68	Standard
	Cu	65	1470.1	1.5	**0.5625**	0.014	2.4	ug/L	141	Standard
	Zn	66	11020.7	0.7	**9.8565**	0.140	1.4	ug/L	138	Standard
>	**Ge**	72	309074.8	1.1				ug/L	283230	Standard
	As	75	28.6	129.9	**0.1993**	0.034	17.2	ug/L	-198	Standard
	Se	82	49.0	16.5	**0.2115**	0.079	37.4	ug/L	21	Standard
	Se-1	77	137.0	4.6	**-0.0531**	0.091	171.5	ug/L	131	Standard
>	**Ga**	71	905.0	4.5				mg/L	607	Standard
	Rb	85	1961.8	4.1				ug/L	30	Standard
	Y	89	278972.0	1.8				ug/L	251555	Standard
>	**Rh**	103	350.0	9.4				ug/L	335	Standard
	Mo	98	898.5	3.4	**0.2219**	0.009	4.0	ug/L	13	Standard
	Ag	107	109.3	7.1	**0.0069**	0.001	16.1	ug/L	36	Standard
	Cd	111	485.5	6.1	**0.1188**	0.009	7.6	mg/L	49	Standard
	Cd	114	1424.3	2.8	**0.1121**	0.004	4.0	ug/L	170	Standard
>	**In**	115	804910.9	0.7				ug/L	727802	Standard
	Sn	118	873.7	0.5	**0.0213**	0.000	0.6	ug/L	471	Standard
	Sb	123	471.4	19.4	**0.0523**	0.010	19.4	ug/L	39	Standard
	Ba	135	5764.4	2.3	**1.1817**	0.022	1.9	ug/L	25	Standard
	Ce	140	17323.9	0.2				ug/L	25	Standard
>	**Tb**	159	1177330.3	0.4				ug/L	1071747	Standard
	Ho	165	846.4	3.4				ug/L	13	Standard
	Tl	203	280.0	4.5	**0.0146**	0.001	4.3	ug/L	5	Standard
	Tl	205	621.3	4.6	**0.0149**	0.001	4.3	ug/L	10	Standard
	Pb	206	2538.5	1.2	**0.1519**	0.002	1.2	ug/L	382	Standard
	Pb	207	1856.1	2.5	**0.1325**	0.003	2.3	ug/L	306	Standard
	Pb	208	8943.3	1.2	**0.1360**	0.002	1.3	ug/L	1443	Standard
	U	238	1468.1	1.2	**0.0896**	0.001	1.0	ug/L	5	Standard
>	**Bi**	209	602675.5	0.7				ug/L	561075	Standard

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⌈	**Na**	23	2311.8	0.9	**0.0878**	0.002	2.0	mg/L	288	Standard
|	**Mg**	24	34064.9	0.6	**0.0471**	0.001	2.1	mg/L	218	Standard
|	**K**	39	163.3	31.4	**0.0235**	0.041	173.5	mg/L	125	Standard
|	**Ca**	43	3.3	173.2	**-2.1368**	5.582	261.2	mg/L	3	Standard
|	**Fe**	54	1704.7	10.2	**0.2510**	0.031	12.2	mg/L	550	Standard
|	**Fe**	57	15499.6	4.3	**0.2469**	0.017	6.9	mg/L	1772	Standard
⌊>	**Sc-1**	45	361170.3	2.2				mg/L	330668	Standard
	Cl	35	8.0	33.1				ug/L	5	Standard
	Kr	83	38.6	4.8				ug/L	38	Standard
	Br	81	402.5	8.6				ug/L	344	Standard
	P	31	2072.6	2.2				ug/L	312	Standard
	S	34	5401.0	1.1				ug/L	5594	Standard
	Sr	88	66.7	4.3				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		109.125	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	110.595
	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	107.414
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065820 WG404305-01
Sample Date/Time: Sunday, July 29, 2012 09:34:42
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: JYH 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	7	26925.6	2.3	**3641.4122**	93.147	2.6	ug/L	9465	Standard
	Be	9	26.7	47.2	**-0.0049**	0.008	154.3	ug/L	10	Standard
	Al	27	1479342.9	2.1	**106.3516**	1.508	1.4	ug/L	7870	Standard
>	**Sc**	45	324183.3	1.0				ug/L	330668	Standard
	Ti	47	2578.9	0.9	**2.2669**	0.025	1.1	ug/L	53	Standard
	V	51	5851.0	2.7	**0.3388**	0.017	4.9	ug/L	2687	Standard
	Cr	52	8993.0	1.3	**0.1229**	0.010	8.0	ug/L	8408	Standard
	Cr	53	590.8	2.3	**0.2713**	0.012	4.6	ug/L	288	Standard
	Mn	55	82474.6	1.8	**6.4554**	0.089	1.4	ug/L	1080	Standard
	Co	59	3379.7	1.8	**0.4121**	0.005	1.2	ug/L	117	Standard
	Ni	60	915.4	5.7	**0.3820**	0.023	6.1	ug/L	68	Standard
	Cu	65	535.7	5.4	**0.1922**	0.012	6.5	ug/L	141	Standard
	Zn	66	2546.5	1.4	**2.4670**	0.026	1.1	ug/L	138	Standard
>	**Ge**	72	272912.0	0.6				ug/L	283230	Standard
	As	75	585.3	1.2	**0.7833**	0.008	1.1	ug/L	-198	Standard
	Se	82	31.9	10.5	**0.0914**	0.033	36.6	ug/L	21	Standard
	Se-1	77	108.3	1.4	**-0.2417**	0.023	9.5	ug/L	131	Standard
>	**Ga**	71	733.4	6.8				mg/L	607	Standard
	Rb	85	2410.2	2.5				ug/L	30	Standard
	Y	89	236589.4	3.6				ug/L	251555	Standard
>	**Rh**	103	291.7	7.9				ug/L	335	Standard
	Mo	98	204.1	8.8	**0.0512**	0.005	10.0	ug/L	13	Standard
	Ag	107	264.0	15.0	**0.0340**	0.006	18.6	ug/L	36	Standard
	Cd	111	68.5	14.3	**0.0035**	0.003	94.1	mg/L	49	Standard
	Cd	114	219.5	8.7	**0.0027**	0.002	69.9	ug/L	170	Standard
>	**In**	115	717115.3	1.1				ug/L	727802	Standard
	Sn	118	726.0	1.0	**0.0167**	0.001	3.3	ug/L	471	Standard
	Sb	123	286.2	16.5	**0.0361**	0.006	15.6	ug/L	39	Standard
	Ba	135	22255.3	2.5	**5.1601**	0.153	3.0	ug/L	25	Standard
	Ce	140	37144.1	1.0				ug/L	25	Standard
>	**Tb**	159	1080544.4	0.8				ug/L	1071747	Standard
	Ho	165	472.3	8.4				ug/L	13	Standard
	Tl	203	136.7	11.9	**0.0072**	0.001	12.7	ug/L	5	Standard
	Tl	205	302.3	10.0	**0.0079**	0.001	9.3	ug/L	10	Standard
	Pb	206	2114.5	5.7	**0.1336**	0.008	5.9	ug/L	382	Standard
	Pb	207	1680.8	2.2	**0.1292**	0.005	4.1	ug/L	306	Standard
	Pb	208	8019.2	2.8	**0.1310**	0.005	3.8	ug/L	1443	Standard
	U	238	222.3	5.0	**0.0145**	0.001	6.0	ug/L	5	Standard
>	**Bi**	209	557459.8	1.2				ug/L	561075	Standard

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⌈	**Na**	23	109215.8	3.0	**6.4866**	0.141	2.2	mg/L	288	Standard
|	**Mg**	24	104093.3	3.2	**0.1597**	0.004	2.3	mg/L	218	Standard
|	**K**	39	241.7	8.4	**0.1093**	0.017	15.5	mg/L	125	Standard
|	**Ca**	43	1.7	173.2	**-3.5251**	3.177	90.1	mg/L	3	Standard
|	**Fe**	54	924.0	5.2	**0.1038**	0.010	9.8	mg/L	550	Standard
|	**Fe**	57	9749.8	5.8	**0.1624**	0.010	5.9	mg/L	1772	Standard
⌊>	**Sc-1**	45	324183.3	1.0				mg/L	330668	Standard
	Cl	35	6.0	57.7				ug/L	5	Standard
	Kr	83	34.1	4.6				ug/L	38	Standard
	Br	81	443.3	4.9				ug/L	344	Standard
	P	31	261.7	3.6				ug/L	312	Standard
	S	34	6809.0	0.8				ug/L	5594	Standard
	Sr	88	68.3	23.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		96.357	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.532
	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	99.356
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207065820 WG404305-01
Report Date/Time: Sunday, July 29, 2012 09:37:12
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065820S WG404305-04
Sample Date/Time: Sunday, July 29, 2012 09:37:51
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27747.1	6.6	**3810.7494**	346.185	9.1	ug/L	9465	Standard
	Be	9	9452.9	3.2	**5.7849**	0.190	3.3	ug/L	10	Standard
	Al	27	1510075.5	2.0	**108.6658**	2.048	1.9	ug/L	7870	Standard
>	**Sc**	45	323924.4	0.5				ug/L	330668	Standard
	Ti	47	2451.5	4.0	**2.1348**	0.047	2.2	ug/L	53	Standard
	V	51	57062.3	1.8	**5.7113**	0.243	4.3	ug/L	2687	Standard
	Cr	52	50035.8	1.5	**5.5731**	0.259	4.7	ug/L	8408	Standard
	Cr	53	7598.6	1.8	**5.7793**	0.069	1.2	ug/L	288	Standard
	Mn	55	158412.0	1.6	**12.3856**	0.524	4.2	ug/L	1080	Standard
	Co	59	49810.8	1.7	**6.2062**	0.203	3.3	ug/L	117	Standard
	Ni	60	13315.2	2.4	**5.9060**	0.153	2.6	ug/L	68	Standard
	Cu	65	12406.1	2.3	**5.9099**	0.199	3.4	ug/L	141	Standard
	Zn	66	8433.3	2.3	**8.4543**	0.245	2.9	ug/L	138	Standard
>	**Ge**	72	275115.7	2.6				ug/L	283230	Standard
	As	75	6470.1	1.1	**6.8715**	0.198	2.9	ug/L	-198	Standard
	Se	82	654.2	0.6	**6.5733**	0.183	2.8	ug/L	21	Standard
	Se-1	77	549.0	6.2	**6.2666**	0.611	9.8	ug/L	131	Standard
>	**Ga**	71	751.7	9.0				mg/L	607	Standard
	Rb	85	2378.5	1.6				ug/L	30	Standard
	Y	89	235437.0	1.4				ug/L	251555	Standard
>	**Rh**	103	285.0	20.7				ug/L	335	Standard
	Mo	98	210.9	7.8	**0.0529**	0.004	8.4	ug/L	13	Standard
	Ag	107	34476.9	1.6	**5.5752**	0.162	2.9	ug/L	36	Standard
	Cd	111	20297.7	0.9	**6.3886**	0.145	2.3	mg/L	49	Standard
	Cd	114	59507.5	1.7	**6.1566**	0.134	2.2	ug/L	170	Standard
>	**In**	115	720156.3	1.7				ug/L	727802	Standard
	Sn	118	629.7	6.1	**0.0079**	0.004	46.4	ug/L	471	Standard
	Sb	123	47303.3	2.1	**5.6579**	0.181	3.2	ug/L	39	Standard
	Ba	135	47463.9	0.6	**10.9718**	0.180	1.6	ug/L	25	Standard
	Ce	140	39128.8	1.1				ug/L	25	Standard
>	**Tb**	159	1073153.0	2.3				ug/L	1071747	Standard
	Ho	165	504.0	4.8				ug/L	13	Standard
	Tl	203	91433.1	1.0	**5.5125**	0.139	2.5	ug/L	5	Standard
	Tl	205	210529.0	1.0	**5.4430**	0.131	2.4	ug/L	10	Standard
	Pb	206	73034.3	0.9	**5.6770**	0.128	2.2	ug/L	382	Standard
	Pb	207	61377.1	1.0	**5.7169**	0.118	2.1	ug/L	306	Standard
	Pb	208	285816.5	1.0	**5.6642**	0.147	2.6	ug/L	1443	Standard
	U	238	80690.3	1.3	**5.3208**	0.137	2.6	ug/L	5	Standard
>	**Bi**	209	559161.0	2.5				ug/L	561075	Standard

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⌈	**Na**	23	113327.4	2.0	**6.7380**	0.101	1.5	mg/L	288	Standard
|	**Mg**	24	113646.7	4.0	**0.1745**	0.006	3.6	mg/L	218	Standard
|	**K**	39	211.7	8.3	**0.0824**	0.015	18.1	mg/L	125	Standard
|	**Ca**	43	1.7	173.2	**-3.5289**	3.171	89.9	mg/L	3	Standard
|	**Fe**	54	856.9	2.1	**0.0877**	0.005	5.9	mg/L	550	Standard
|	**Fe**	57	8931.0	2.9	**0.1461**	0.006	3.9	mg/L	1772	Standard
⌊>	**Sc-1**	45	323924.4	0.5				mg/L	330668	Standard
	Cl	35	6.7	22.9				ug/L	5	Standard
	Kr	83	37.4	6.7				ug/L	38	Standard
	Br	81	416.7	6.6				ug/L	344	Standard
	P	31	279.2	11.1				ug/L	312	Standard
	S	34	6807.4	0.9				ug/L	5594	Standard
	Sr	88	66.7	11.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		97.135	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.949
	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	99.659
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065820SD WG404305-05
Sample Date/Time: Sunday, July 29, 2012 09:40:59
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	28553.6	2.5	**3867.0740**	124.227	3.2	ug/L	9465	Standard
	Be	9	10068.3	3.1	**6.0479**	0.176	2.9	ug/L	10	Standard
	Al	27	1728714.7	2.2	**122.1617**	2.574	2.1	ug/L	7870	Standard
>	**Sc**	45	330132.9	2.8				ug/L	330668	Standard
	Ti	47	2754.3	4.8	**2.3883**	0.092	3.8	ug/L	53	Standard
	V	51	59710.3	1.8	**5.9458**	0.047	0.8	ug/L	2687	Standard
	Cr	52	51830.9	1.8	**5.7641**	0.074	1.3	ug/L	8408	Standard
	Cr	53	7897.9	2.0	**5.9746**	0.058	1.0	ug/L	288	Standard
	Mn	55	162220.8	1.0	**12.5966**	0.014	0.1	ug/L	1080	Standard
	Co	59	51363.3	1.2	**6.3568**	0.014	0.2	ug/L	117	Standard
	Ni	60	13869.7	2.4	**6.1125**	0.084	1.4	ug/L	68	Standard
	Cu	65	12950.9	1.7	**6.1305**	0.050	0.8	ug/L	141	Standard
	Zn	66	8782.9	2.0	**8.7519**	0.136	1.5	ug/L	138	Standard
>	**Ge**	72	276841.1	1.0				ug/L	283230	Standard
	As	75	6738.2	2.1	**7.1017**	0.073	1.0	ug/L	-198	Standard
	Se	82	688.1	3.9	**6.8775**	0.208	3.0	ug/L	21	Standard
	Se-1	77	588.0	3.5	**6.7828**	0.324	4.8	ug/L	131	Standard
>	**Ga**	71	760.0	11.2				mg/L	607	Standard
	Rb	85	2716.9	2.8				ug/L	30	Standard
	Y	89	243641.9	1.4				ug/L	251555	Standard
>	**Rh**	103	306.7	11.5				ug/L	335	Standard
	Mo	98	231.6	2.5	**0.0582**	0.001	1.5	ug/L	13	Standard
	Ag	107	36411.7	3.4	**5.8321**	0.114	2.0	ug/L	36	Standard
	Cd	111	20845.4	0.6	**6.5006**	0.058	0.9	mg/L	49	Standard
	Cd	114	61346.3	2.2	**6.2881**	0.045	0.7	ug/L	170	Standard
>	**In**	115	726773.5	1.5				ug/L	727802	Standard
	Sn	118	636.7	6.1	**0.0080**	0.003	32.2	ug/L	471	Standard
	Sb	123	48256.1	1.4	**5.7181**	0.074	1.3	ug/L	39	Standard
	Ba	135	48684.1	1.5	**11.1497**	0.017	0.1	ug/L	25	Standard
	Ce	140	39958.0	1.4				ug/L	25	Standard
>	**Tb**	159	1075869.9	0.7				ug/L	1071747	Standard
	Ho	165	550.7	5.8				ug/L	13	Standard
	Tl	203	93644.5	1.2	**5.5947**	0.047	0.8	ug/L	5	Standard
	Tl	205	217456.3	1.6	**5.5712**	0.072	1.3	ug/L	10	Standard
	Pb	206	74896.0	1.1	**5.7697**	0.039	0.7	ug/L	382	Standard
	Pb	207	63644.7	1.5	**5.8756**	0.064	1.1	ug/L	306	Standard
	Pb	208	294090.2	1.3	**5.7759**	0.050	0.9	ug/L	1443	Standard
	U	238	83546.1	2.3	**5.4592**	0.111	2.0	ug/L	5	Standard
>	**Bi**	209	564042.0	0.4				ug/L	561075	Standard

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⌈	**Na**	23	113634.6	1.1	**6.6337**	0.262	4.0	mg/L	288	Standard
|	**Mg**	24	109952.7	2.3	**0.1657**	0.005	2.8	mg/L	218	Standard
|	**K**	39	218.3	5.8	**0.0848**	0.012	13.8	mg/L	125	Standard
|	**Ca**	43	3.3	86.6	**-1.7415**	3.135	180.0	mg/L	3	Standard
|	**Fe**	54	1039.0	8.2	**0.1272**	0.017	13.3	mg/L	550	Standard
|	**Fe**	57	10025.0	1.6	**0.1645**	0.005	3.1	mg/L	1772	Standard
⌊>	**Sc-1**	45	330132.9	2.8				mg/L	330668	Standard
	Cl	35	5.7	27.0				ug/L	5	Standard
	Kr	83	35.3	4.1				ug/L	38	Standard
	Br	81	384.2	1.5				ug/L	344	Standard
	P	31	278.3	9.0				ug/L	312	Standard
	S	34	6667.3	1.7				ug/L	5594	Standard
	Sr	88	93.3	30.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		97.744	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

Sample ID: L1207065820SD WG404305-05
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	Cd	111	
	Cd	114	
>	In	115	99.859
	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	100.529
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207065820SD WG404305-05
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Method 6020 - Summary Report

Sample ID: L1207065812
Sample Date/Time: Sunday, July 29, 2012 09:44:07
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	41560.3	2.2	**6749.8858**	302.906	4.5	ug/L	9465	Standard
	Be	9	45.0	61.9	**0.0068**	0.017	248.1	ug/L	10	Standard
	Al	27	2635122.1	2.1	**193.6077**	8.120	4.2	ug/L	7870	Standard
>	**Sc**	45	318189.0	2.2				ug/L	330668	Standard
	Ti	47	4264.3	3.6	**3.7150**	0.145	3.9	ug/L	53	Standard
	V	51	9433.6	1.2	**0.7016**	0.015	2.2	ug/L	2687	Standard
	Cr	52	17765.7	0.2	**1.2600**	0.016	1.3	ug/L	8408	Standard
	Cr	53	2006.0	4.0	**1.3675**	0.064	4.7	ug/L	288	Standard
	Mn	55	345103.9	1.1	**26.8406**	0.415	1.5	ug/L	1080	Standard
	Co	59	5681.4	3.2	**0.6901**	0.023	3.3	ug/L	117	Standard
	Ni	60	1409.7	5.3	**0.5939**	0.036	6.0	ug/L	68	Standard
	Cu	65	905.4	2.1	**0.3647**	0.010	2.9	ug/L	141	Standard
	Zn	66	3057.3	2.4	**2.9414**	0.063	2.1	ug/L	138	Standard
>	**Ge**	72	277389.9	0.5				ug/L	283230	Standard
	As	75	589.4	5.6	**0.7778**	0.037	4.7	ug/L	-198	Standard
	Se	82	31.4	6.4	**0.0813**	0.022	26.8	ug/L	21	Standard
	Se-1	77	120.0	9.8	**-0.0973**	0.165	169.5	ug/L	131	Standard
>	**Ga**	71	946.7	10.4				mg/L	607	Standard
	Rb	85	15179.3	1.3				ug/L	30	Standard
	Y	89	248206.7	1.1				ug/L	251555	Standard
>	**Rh**	103	295.0	14.7				ug/L	335	Standard
	Mo	98	1390.9	4.8	**0.3879**	0.018	4.5	ug/L	13	Standard
	Ag	107	80.3	19.5	**0.0040**	0.002	59.3	ug/L	36	Standard
	Cd	111	68.3	13.4	**0.0032**	0.003	79.1	mg/L	49	Standard
	Cd	114	226.0	10.6	**0.0032**	0.002	74.9	ug/L	170	Standard
>	**In**	115	722307.6	1.7				ug/L	727802	Standard
	Sn	118	707.0	3.2	**0.0145**	0.002	16.0	ug/L	471	Standard
	Sb	123	307.0	12.9	**0.0384**	0.005	13.1	ug/L	39	Standard
	Ba	135	41961.7	1.8	**9.6709**	0.296	3.1	ug/L	25	Standard
	Ce	140	64254.6	1.2				ug/L	25	Standard
>	**Tb**	159	1080066.7	0.6				ug/L	1071747	Standard
	Ho	165	1077.0	0.3				ug/L	13	Standard
	Tl	203	142.0	22.2	**0.0074**	0.002	24.2	ug/L	5	Standard
	Tl	205	292.0	12.8	**0.0075**	0.001	12.3	ug/L	10	Standard
	Pb	206	3565.4	1.4	**0.2448**	0.006	2.4	ug/L	382	Standard
	Pb	207	2781.3	1.9	**0.2300**	0.002	0.9	ug/L	306	Standard
	Pb	208	13423.7	0.9	**0.2365**	0.005	2.1	ug/L	1443	Standard
	U	238	642.7	8.1	**0.0419**	0.004	8.5	ug/L	5	Standard
>	**Bi**	209	562617.4	1.4				ug/L	561075	Standard

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	Na	23	115344.0	0.1	**6.9853**	0.152	2.2	mg/L	288	Standard
	Mg	24	178374.2	2.4	**0.2788**	0.012	4.2	mg/L	218	Standard
	K	39	915.0	5.2	**0.7328**	0.030	4.2	mg/L	125	Standard
	Ca	43	5.0	100.0	**0.1576**	5.547	3519.9	mg/L	3	Standard
	Fe	54	1700.2	5.6	**0.3011**	0.033	10.8	mg/L	550	Standard
	Fe	57	19519.2	2.2	**0.3678**	0.018	4.9	mg/L	1772	Standard
>	**Sc-1**	45	318189.0	2.2				mg/L	330668	Standard
	Cl	35	8.3	30.2				ug/L	5	Standard
	Kr	83	37.7	7.2				ug/L	38	Standard
	Br	81	455.8	1.4				ug/L	344	Standard
	P	31	296.7	13.3				ug/L	312	Standard
	S	34	6392.2	1.4				ug/L	5594	Standard
	Sr	88	111.7	27.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		97.938	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.245
	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	100.275
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065812PS WG404831-01
Sample Date/Time: Sunday, July 29, 2012 09:47:17
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	47462.6	1.3	**6366.6464**	181.256	2.8	ug/L	9465	Standard
	Be	9	84060.9	1.8	**43.9562**	1.224	2.8	ug/L	10	Standard
	Al	27	3534627.7	1.4	**217.1974**	3.227	1.5	ug/L	7870	Standard
>	**Sc**	45	380367.2	1.0				ug/L	330668	Standard
	Ti	47	4546.7	1.5	**3.4999**	0.033	1.0	ug/L	53	Standard
	V	51	482520.1	0.7	**44.1257**	0.409	0.9	ug/L	2687	Standard
	Cr	52	392579.6	0.3	**44.6864**	0.566	1.3	ug/L	8408	Standard
	Cr	53	67110.8	1.1	**46.0877**	0.203	0.4	ug/L	288	Standard
	Mn	55	1037727.8	1.4	**71.5044**	0.431	0.6	ug/L	1080	Standard
	Co	59	421347.9	0.1	**46.1070**	0.525	1.1	ug/L	117	Standard
	Ni	60	115887.5	1.2	**45.2626**	0.117	0.3	ug/L	68	Standard
	Cu	65	107672.6	1.1	**45.4126**	0.077	0.2	ug/L	141	Standard
	Zn	66	53379.9	0.9	**47.6083**	0.520	1.1	ug/L	138	Standard
>	**Ge**	72	313694.3	1.1				ug/L	283230	Standard
	As	75	50273.5	0.6	**45.8030**	0.554	1.2	ug/L	-198	Standard
	Se	82	4978.8	0.1	**45.2339**	0.441	1.0	ug/L	21	Standard
	Se-1	77	3630.4	0.8	**45.2147**	0.648	1.4	ug/L	131	Standard
>	**Ga**	71	1136.7	0.9				mg/L	607	Standard
	Rb	85	16564.1	3.2				ug/L	30	Standard
	Y	89	280837.3	0.9				ug/L	251555	Standard
>	**Rh**	103	421.7	9.7				ug/L	335	Standard
	Mo	98	1612.9	1.7	**0.3942**	0.009	2.2	ug/L	13	Standard
	Ag	107	313907.3	0.9	**44.3801**	0.103	0.2	ug/L	36	Standard
	Cd	111	175947.5	0.3	**48.4727**	0.322	0.7	mg/L	49	Standard
	Cd	114	503126.0	0.5	**45.5810**	0.114	0.2	ug/L	170	Standard
>	**In**	115	824622.7	0.7				ug/L	727802	Standard
	Sn	118	1175.4	5.8	**0.0428**	0.005	11.7	ug/L	471	Standard
	Sb	123	440145.8	0.6	**45.9508**	0.217	0.5	ug/L	39	Standard
	Ba	135	257212.5	0.5	**51.9622**	0.618	1.2	ug/L	25	Standard
	Ce	140	66861.2	1.1				ug/L	25	Standard
>	**Tb**	159	1180215.2	0.9				ug/L	1071747	Standard
	Ho	165	1117.7	2.8				ug/L	13	Standard
	Tl	203	797799.1	0.5	**44.3599**	0.534	1.2	ug/L	5	Standard
	Tl	205	1834544.8	0.5	**43.7348**	0.436	1.0	ug/L	10	Standard
	Pb	206	624535.0	0.5	**44.9854**	0.429	1.0	ug/L	382	Standard
	Pb	207	526717.9	0.4	**45.4395**	0.450	1.0	ug/L	306	Standard
	Pb	208	2443595.1	0.1	**44.8536**	0.314	0.7	ug/L	1443	Standard
	U	238	746964.1	0.4	**45.4196**	0.360	0.8	ug/L	5	Standard
>	**Bi**	209	606199.0	0.7				ug/L	561075	Standard

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Na	23	113782.3	1.1	**5.7563**	0.055	1.0	mg/L	288	Standard
Mg	24	187355.3	3.2	**0.2449**	0.009	3.6	mg/L	218	Standard
K	39	956.7	2.5	**0.6274**	0.012	2.0	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.8110**	2.682	70.4	mg/L	3	Standard
Fe	54	2183.9	6.1	**0.3323**	0.032	9.7	mg/L	550	Standard
Fe	57	24120.9	5.5	**0.3810**	0.019	4.9	mg/L	1772	Standard
Sc-1	45	380367.2	1.0				mg/L	330668	Standard
Cl	35	6.0	16.7				ug/L	5	Standard
Kr	83	37.1	4.2				ug/L	38	Standard
Br	81	565.0	6.5				ug/L	344	Standard
P	31	469.2	2.6				ug/L	312	Standard
S	34	6918.2	2.1				ug/L	5594	Standard
Sr	88	88.3	26.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		110.756	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	113.303
	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	108.042
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065812SDL WG404831-02
Sample Date/Time: Sunday, July 29, 2012 09:50:26
Number of Replicates: 3
Autosampler Position: 214
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	16170.3	1.5	**1212.1214**	46.463	3.8	ug/L	9465	Standard
	Be	9	26.7	39.0	**-0.0062**	0.006	95.4	ug/L	10	Standard
	Al	27	486091.8	1.3	**31.7245**	1.217	3.8	ug/L	7870	Standard
>	**Sc**	45	352829.1	2.4				ug/L	330668	Standard
	Ti	47	893.7	2.0	**0.6906**	0.022	3.2	ug/L	53	Standard
	V	51	4052.7	2.9	**0.1126**	0.006	5.5	ug/L	2687	Standard
	Cr	52	10156.7	1.3	**0.1651**	0.021	12.5	ug/L	8408	Standard
	Cr	53	595.8	7.9	**0.2354**	0.027	11.4	ug/L	288	Standard
	Mn	55	71143.3	0.8	**5.0865**	0.134	2.6	ug/L	1080	Standard
	Co	59	1256.4	2.7	**0.1317**	0.004	2.7	ug/L	117	Standard
	Ni	60	520.0	5.6	**0.1850**	0.016	8.5	ug/L	68	Standard
	Cu	65	325.3	3.7	**0.0769**	0.004	5.7	ug/L	141	Standard
	Zn	66	3056.3	3.5	**2.7283**	0.089	3.3	ug/L	138	Standard
>	**Ge**	72	297846.0	1.9				ug/L	283230	Standard
	As	75	-40.6	96.8	**0.1336**	0.039	28.8	ug/L	-198	Standard
	Se	82	23.6	22.6	**-0.0167**	0.047	282.8	ug/L	21	Standard
	Se-1	77	125.0	5.5	**-0.1490**	0.099	66.6	ug/L	131	Standard
>	**Ga**	71	676.7	3.5				mg/L	607	Standard
	Rb	85	3210.3	2.4				ug/L	30	Standard
	Y	89	257215.3	3.8				ug/L	251555	Standard
>	**Rh**	103	340.0	2.5				ug/L	335	Standard
	Mo	98	318.0	7.4	**0.0749**	0.005	7.3	ug/L	13	Standard
	Ag	107	124.7	19.8	**0.0093**	0.003	37.1	ug/L	36	Standard
	Cd	111	76.9	31.1	**0.0037**	0.007	180.7	mg/L	49	Standard
	Cd	114	256.7	22.1	**0.0039**	0.005	131.4	ug/L	170	Standard
>	**In**	115	795323.8	0.8				ug/L	727802	Standard
	Sn	118	583.3	4.7	**-0.0010**	0.002	250.2	ug/L	471	Standard
	Sb	123	2155.0	1.8	**0.2350**	0.002	1.0	ug/L	39	Standard
	Ba	135	8234.9	0.8	**1.7138**	0.029	1.7	ug/L	25	Standard
	Ce	140	12543.9	0.7				ug/L	25	Standard
>	**Tb**	159	1146422.8	1.1				ug/L	1071747	Standard
	Ho	165	229.3	6.1				ug/L	13	Standard
	Tl	203	143.0	42.6	**0.0070**	0.003	48.2	ug/L	5	Standard
	Tl	205	315.0	35.2	**0.0077**	0.003	34.4	ug/L	10	Standard
	Pb	206	1133.0	3.8	**0.0511**	0.003	5.2	ug/L	382	Standard
	Pb	207	926.7	2.6	**0.0529**	0.002	3.2	ug/L	306	Standard
	Pb	208	4359.2	5.1	**0.0524**	0.004	6.9	ug/L	1443	Standard
	U	238	218.7	15.0	**0.0133**	0.002	14.6	ug/L	5	Standard
>	**Bi**	209	594690.0	0.6				ug/L	561075	Standard

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Na	23	50837.0	5.7	**2.7561**	0.199	7.2	mg/L	288	Standard
Mg	24	36925.0	2.0	**0.0523**	0.001	2.8	mg/L	218	Standard
K	39	305.0	17.3	**0.1436**	0.039	26.9	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.7032**	2.869	77.5	mg/L	3	Standard
Fe	54	808.2	7.2	**0.0599**	0.016	26.4	mg/L	550	Standard
Fe	57	5787.8	4.1	**0.0728**	0.003	3.5	mg/L	1772	Standard
> **Sc-1**	45	352829.1	2.4				mg/L	330668	Standard
Cl	35	3.7	83.3				ug/L	5	Standard
Kr	83	35.9	21.9				ug/L	38	Standard
Br	81	400.8	5.6				ug/L	344	Standard
P	31	312.5	8.4				ug/L	312	Standard
S	34	5230.1	2.5				ug/L	5594	Standard
Sr	88	46.7	27.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		105.161	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065812SDL WG404831-02
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	Cd	111	
	Cd	114	
>	In	115	109.278
	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	105.991
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 09:53:38
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: JYH 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	7	10013.3	2.1	**-57.3908**	92.199	160.7	ug/L	9465	Standard
	Be	9	95173.0	0.8	**49.8712**	1.891	3.8	ug/L	10	Standard
	Al	27	762983.5	1.0	**46.5214**	1.366	2.9	ug/L	7870	Standard
>	**Sc**	45	379826.8	3.2				ug/L	330668	Standard
	Ti	47	130694.7	1.5	**98.9579**	1.165	1.2	ug/L	53	Standard
	V	51	540919.6	1.2	**48.1078**	0.238	0.5	ug/L	2687	Standard
	Cr	52	434040.0	1.2	**48.1034**	0.339	0.7	ug/L	8408	Standard
	Cr	53	73281.8	1.3	**48.9330**	0.449	0.9	ug/L	288	Standard
	Mn	55	753838.1	0.9	**50.4693**	0.078	0.2	ug/L	1080	Standard
	Co	59	475018.7	1.5	**50.5269**	0.651	1.3	ug/L	117	Standard
	Ni	60	129529.0	1.4	**49.1829**	0.689	1.4	ug/L	68	Standard
	Cu	65	120513.5	1.5	**49.4192**	0.933	1.9	ug/L	141	Standard
	Zn	66	56463.0	0.7	**48.9552**	0.206	0.4	ug/L	138	Standard
>	**Ge**	72	322702.5	1.0				ug/L	283230	Standard
	As	75	55742.8	1.3	**49.3522**	0.550	1.1	ug/L	-198	Standard
	Se	82	5620.4	1.3	**49.6611**	0.786	1.6	ug/L	21	Standard
	Se-1	77	4136.2	2.4	**50.2719**	1.169	2.3	ug/L	131	Standard
>	**Ga**	71	678.3	11.3				mg/L	607	Standard
	Rb	85	708.4	11.3				ug/L	30	Standard
	Y	89	281698.5	1.9				ug/L	251555	Standard
>	**Rh**	103	445.0	8.9				ug/L	335	Standard
	Mo	98	393644.9	1.7	**96.1472**	1.659	1.7	ug/L	13	Standard
	Ag	107	351586.4	1.5	**48.8027**	0.942	1.9	ug/L	36	Standard
	Cd	111	194247.2	0.6	**52.5371**	0.470	0.9	mg/L	49	Standard
	Cd	114	562390.0	1.0	**50.0215**	0.620	1.2	ug/L	170	Standard
>	**In**	115	839978.5	0.5				ug/L	727802	Standard
	Sn	118	666880.6	0.8	**50.2060**	0.255	0.5	ug/L	471	Standard
	Sb	123	485325.7	0.7	**49.7404**	0.118	0.2	ug/L	39	Standard
	Ba	135	239051.4	0.6	**47.4087**	0.550	1.2	ug/L	25	Standard
	Ce	140	940.0	1.3				ug/L	25	Standard
>	**Tb**	159	1200150.1	0.6				ug/L	1071747	Standard
	Ho	165	16.7	22.7				ug/L	13	Standard
	Tl	203	882550.1	0.0	**48.9777**	0.171	0.3	ug/L	5	Standard
	Tl	205	2159620.1	0.8	**51.3866**	0.573	1.1	ug/L	10	Standard
	Pb	206	684892.3	1.3	**49.2421**	0.696	1.4	ug/L	382	Standard
	Pb	207	581025.6	0.2	**50.0313**	0.134	0.3	ug/L	306	Standard
	Pb	208	2688299.9	0.2	**49.2544**	0.284	0.6	ug/L	1443	Standard
	U	238	840139.2	0.5	**50.9883**	0.396	0.8	ug/L	5	Standard
>	**Bi**	209	607340.4	0.3				ug/L	561075	Standard

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Na	23	112971.3	1.7	**5.7287**	0.271	4.7	mg/L	288	Standard
Mg	24	3583720.3	0.2	**4.6880**	0.163	3.5	mg/L	218	Standard
K	39	6169.6	4.3	**4.6512**	0.301	6.5	mg/L	125	Standard
Ca	43	13.3	78.1	**7.2568**	10.232	141.0	mg/L	3	Standard
Fe	54	23292.6	2.4	**4.7207**	0.118	2.5	mg/L	550	Standard
Fe	57	342391.0	1.5	**5.8811**	0.173	2.9	mg/L	1772	Standard
Sc-1	45	379826.8	3.2				mg/L	330668	Standard
Cl	35	2.3	65.5				ug/L	5	Standard
Kr	83	40.9	8.0				ug/L	38	Standard
Br	81	449.2	12.5				ug/L	344	Standard
P	31	378.3	12.2				ug/L	312	Standard
S	34	5730.3	2.3				ug/L	5594	Standard
Sr	88	55.0	9.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	93.043		
Sc	45			
Ti	47	98.958		
V	51	96.216		
Cr	52	96.207		
Cr	53			
Mn	55	100.939		
Co	59	101.054		
Ni	60	98.366		
Cu	65	98.838		
Zn	66	97.910		
Ge	72		113.937	
As	75	98.704		
Se	82	99.322		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.147		
Ag	107	97.605		

Sample ID: QC Std 6
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	Cd	111	105.074	
	Cd	114		
>	In	115		115.413
	Sn	118	100.412	
	Sb	123	99.481	
	Ba	135	94.817	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.955	
	Tl	205		
	Pb	206	98.484	
	Pb	207	100.063	
	Pb	208	98.509	
	U	238	101.977	
>	Bi	209		108.246
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 09:56:48
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: JYH 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	7	9229.5	0.3	**-72.2883**	34.823	48.2	ug/L	9465	Standard
	Be	9	25.0	60.0	**-0.0072**	0.008	117.9	ug/L	10	Standard
	Al	27	7678.6	2.8	**-0.0708**	0.016	22.6	ug/L	7870	Standard
>	**Sc**	45	352851.1	2.3				ug/L	330668	Standard
	Ti	47	54.3	13.9	**0.0012**	0.006	521.2	ug/L	53	Standard
	V	51	2486.2	1.8	**-0.0410**	0.005	12.5	ug/L	2687	Standard
	Cr	52	7697.0	1.8	**-0.1441**	0.019	13.3	ug/L	8408	Standard
	Cr	53	257.5	5.9	**-0.0115**	0.011	92.5	ug/L	288	Standard
	Mn	55	1093.0	5.5	**-0.0054**	0.004	82.6	ug/L	1080	Standard
	Co	59	123.0	9.2	**0.0010**	0.001	149.8	ug/L	117	Standard
	Ni	60	64.7	3.9	**-0.0028**	0.001	40.9	ug/L	68	Standard
	Cu	65	150.3	8.3	**-0.0015**	0.005	324.9	ug/L	141	Standard
	Zn	66	155.7	16.5	**-0.0063**	0.023	359.8	ug/L	138	Standard
>	**Ge**	72	300097.0	1.1				ug/L	283230	Standard
	As	75	-171.3	5.8	**0.0102**	0.008	75.8	ug/L	-198	Standard
	Se	82	24.6	16.1	**-0.0078**	0.039	501.4	ug/L	21	Standard
	Se-1	77	112.0	9.4	**-0.3381**	0.145	42.9	ug/L	131	Standard
>	**Ga**	71	623.3	0.9				mg/L	607	Standard
	Rb	85	20.0	90.1				ug/L	30	Standard
	Y	89	256611.7	1.3				ug/L	251555	Standard
>	**Rh**	103	355.0	18.6				ug/L	335	Standard
	Mo	98	183.1	8.9	**0.0400**	0.004	10.9	ug/L	13	Standard
	Ag	107	89.3	3.4	**0.0041**	0.000	10.9	ug/L	36	Standard
	Cd	111	58.6	15.4	**-0.0016**	0.003	160.0	mg/L	49	Standard
	Cd	114	206.1	15.5	**-0.0009**	0.003	344.7	ug/L	170	Standard
>	**In**	115	797067.2	0.4				ug/L	727802	Standard
	Sn	118	828.4	6.7	**0.0184**	0.004	23.7	ug/L	471	Standard
	Sb	123	2589.8	7.7	**0.2815**	0.022	7.9	ug/L	39	Standard
	Ba	135	40.7	3.8	**-0.0030**	0.000	10.6	ug/L	25	Standard
	Ce	140	31.7	11.1				ug/L	25	Standard
>	**Tb**	159	1146507.7	0.3				ug/L	1071747	Standard
	Ho	165	10.7	19.5				ug/L	13	Standard
	Tl	203	61.7	22.1	**0.0024**	0.001	32.6	ug/L	5	Standard
	Tl	205	133.7	31.4	**0.0033**	0.001	31.8	ug/L	10	Standard
	Pb	206	431.7	3.3	**-0.0005**	0.001	232.4	ug/L	382	Standard
	Pb	207	355.0	7.2	**0.0025**	0.002	98.6	ug/L	306	Standard
	Pb	208	1676.7	2.6	**0.0021**	0.001	43.8	ug/L	1443	Standard
	U	238	74.3	17.1	**0.0044**	0.001	18.7	ug/L	5	Standard
>	**Bi**	209	596960.0	0.6				ug/L	561075	Standard

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Na	23	401.7	20.5	**-0.0141**	0.005	34.1	mg/L	288	Standard
Mg	24	365.0	20.5	**0.0008**	0.000	14.4	mg/L	218	Standard
K	39	116.7	2.5	**-0.0120**	0.004	36.8	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.6801**	2.909	79.0	mg/L	3	Standard
Fe	54	532.7	2.5	**-0.0019**	0.006	304.2	mg/L	550	Standard
Fe	57	1943.5	6.8	**0.0014**	0.003	212.1	mg/L	1772	Standard
Sc-1	45	352851.1	2.3				mg/L	330668	Standard
Cl	35	5.7	27.0				ug/L	5	Standard
Kr	83	35.4	7.9				ug/L	38	Standard
Br	81	430.8	11.7				ug/L	344	Standard
P	31	330.0	5.9				ug/L	312	Standard
S	34	5655.2	1.0				ug/L	5594	Standard
Sr	88	38.3	27.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		105.955	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	109.517
	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	106.396
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1207064901
Sample Date/Time: Sunday, July 29, 2012 09:59:59
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: JYH 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	7	52340.4	4.4	**9013.7903**	545.529	6.1	ug/L	9465	Standard
	Be	9	20.0	50.0	**-0.0087**	0.006	71.7	ug/L	10	Standard
	Al	27	584539.0	3.8	**42.6925**	1.950	4.6	ug/L	7870	Standard
>	**Sc**	45	316624.2	0.8				ug/L	330668	Standard
	Ti	47	1990.8	5.5	**1.7535**	0.093	5.3	ug/L	53	Standard
	V	51	6887.7	2.6	**0.4540**	0.016	3.6	ug/L	2687	Standard
	Cr	52	9935.3	3.6	**0.2593**	0.045	17.2	ug/L	8408	Standard
	Cr	53	754.2	9.3	**0.4053**	0.055	13.5	ug/L	288	Standard
	Mn	55	115754.5	0.2	**9.1651**	0.033	0.4	ug/L	1080	Standard
	Co	59	702.7	5.5	**0.0760**	0.005	6.1	ug/L	117	Standard
	Ni	60	1162.7	3.9	**0.4971**	0.019	3.8	ug/L	68	Standard
	Cu	65	425.3	1.2	**0.1403**	0.002	1.1	ug/L	141	Standard
	Zn	66	1924.1	2.3	**1.8422**	0.041	2.2	ug/L	138	Standard
>	**Ge**	72	270832.8	0.4				ug/L	283230	Standard
	As	75	23.0	119.6	**0.1969**	0.029	14.7	ug/L	-198	Standard
	Se	82	106.8	11.6	**0.8874**	0.133	15.0	ug/L	21	Standard
	Se-1	77	160.3	6.0	**0.5512**	0.136	24.6	ug/L	131	Standard
>	**Ga**	71	618.3	9.1				mg/L	607	Standard
	Rb	85	1495.1	4.2				ug/L	30	Standard
	Y	89	235769.2	2.3				ug/L	251555	Standard
>	**Rh**	103	406.7	9.9				ug/L	335	Standard
	Mo	98	814.0	2.7	**0.2268**	0.005	2.0	ug/L	13	Standard
	Ag	107	70.7	15.7	**0.0026**	0.002	66.7	ug/L	36	Standard
	Cd	111	93.0	1.9	**0.0114**	0.001	6.7	mg/L	49	Standard
	Cd	114	251.9	5.0	**0.0062**	0.001	20.7	ug/L	170	Standard
>	**In**	115	713678.9	0.8				ug/L	727802	Standard
	Sn	118	586.3	4.3	**0.0046**	0.002	42.5	ug/L	471	Standard
	Sb	123	1022.3	6.0	**0.1251**	0.007	5.3	ug/L	39	Standard
	Ba	135	26536.9	4.1	**6.1837**	0.242	3.9	ug/L	25	Standard
	Ce	140	4348.6	1.3				ug/L	25	Standard
>	**Tb**	159	1078535.8	0.3				ug/L	1071747	Standard
	Ho	165	80.3	1.4				ug/L	13	Standard
	Tl	203	364.0	10.4	**0.0212**	0.002	11.1	ug/L	5	Standard
	Tl	205	876.4	8.5	**0.0230**	0.002	8.7	ug/L	10	Standard
	Pb	206	934.7	0.9	**0.0421**	0.001	1.3	ug/L	382	Standard
	Pb	207	801.0	2.6	**0.0475**	0.002	4.4	ug/L	306	Standard
	Pb	208	3681.5	1.8	**0.0453**	0.001	3.3	ug/L	1443	Standard
	U	238	17896.9	1.5	**1.1986**	0.020	1.6	ug/L	5	Standard
>	**Bi**	209	550266.3	0.2				ug/L	561075	Standard

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Na	23	126554.7	0.9	**7.7040**	0.120	1.6	mg/L	288	Standard
Mg	24	1191573.3	2.0	**1.8689**	0.047	2.5	mg/L	218	Standard
K	39	263.3	13.5	**0.1348**	0.034	25.2	mg/L	125	Standard
Ca	43	21.7	13.3	**18.8818**	3.251	17.2	mg/L	3	Standard
Fe	54	485.6	10.5	**-0.0001**	0.012	9637.3	mg/L	550	Standard
Fe	57	5617.7	5.4	**0.0816**	0.007	8.8	mg/L	1772	Standard
> **Sc-1**	45	316624.2	0.8				mg/L	330668	Standard
Cl	35	14.3	22.4				ug/L	5	Standard
Kr	83	37.7	9.0				ug/L	38	Standard
Br	81	714.2	5.3				ug/L	344	Standard
P	31	247.5	10.9				ug/L	312	Standard
S	34	8044.6	2.4				ug/L	5594	Standard
Sr	88	208.3	10.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		95.623	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207064901
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	Cd	111	
	Cd	114	
>	In	115	98.059
	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	98.074
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064902
Sample Date/Time: Sunday, July 29, 2012 10:03:09
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: JYH 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	7	48673.1	1.6	**8526.1839**	113.451	1.3	ug/L	9465	Standard
	Be	9	20.0	66.1	**-0.0083**	0.009	104.2	ug/L	10	Standard
	Al	27	37760.3	0.9	**2.2895**	0.024	1.0	ug/L	7870	Standard
>	**Sc**	45	308284.8	0.6				ug/L	330668	Standard
	Ti	47	339.0	11.7	**0.2670**	0.041	15.4	ug/L	53	Standard
	V	51	5248.5	2.4	**0.2861**	0.013	4.6	ug/L	2687	Standard
	Cr	52	7941.1	0.9	**0.0032**	0.008	257.4	ug/L	8408	Standard
	Cr	53	526.7	9.4	**0.2291**	0.045	19.8	ug/L	288	Standard
	Mn	55	100016.0	0.9	**8.0050**	0.080	1.0	ug/L	1080	Standard
	Co	59	434.3	3.7	**0.0426**	0.002	4.3	ug/L	117	Standard
	Ni	60	662.7	4.1	**0.2743**	0.008	2.9	ug/L	68	Standard
	Cu	65	212.0	5.9	**0.0372**	0.006	16.7	ug/L	141	Standard
	Zn	66	1464.7	2.2	**1.3849**	0.047	3.4	ug/L	138	Standard
>	**Ge**	72	267591.7	1.6				ug/L	283230	Standard
	As	75	-73.6	35.1	**0.0942**	0.028	30.2	ug/L	-198	Standard
	Se	82	82.0	1.6	**0.6347**	0.008	1.3	ug/L	21	Standard
	Se-1	77	161.3	11.6	**0.5989**	0.320	53.5	ug/L	131	Standard
>	**Ga**	71	560.0	3.1				mg/L	607	Standard
	Rb	85	791.7	5.1				ug/L	30	Standard
	Y	89	227999.4	0.9				ug/L	251555	Standard
>	**Rh**	103	311.7	9.4				ug/L	335	Standard
	Mo	98	1058.0	1.2	**0.2984**	0.001	0.5	ug/L	13	Standard
	Ag	107	62.3	17.2	**0.0013**	0.002	141.2	ug/L	36	Standard
	Cd	111	32.1	31.9	**-0.0080**	0.003	41.3	mg/L	49	Standard
	Cd	114	123.2	20.0	**-0.0072**	0.003	37.2	ug/L	170	Standard
>	**In**	115	710439.6	0.9				ug/L	727802	Standard
	Sn	118	612.7	0.3	**0.0072**	0.000	6.4	ug/L	471	Standard
	Sb	123	423.2	7.0	**0.0531**	0.003	6.0	ug/L	39	Standard
	Ba	135	20678.1	1.9	**4.8379**	0.054	1.1	ug/L	25	Standard
	Ce	140	302.7	1.9				ug/L	25	Standard
>	**Tb**	159	1057558.6	0.1				ug/L	1071747	Standard
	Ho	165	15.0	13.3				ug/L	13	Standard
	Tl	203	377.0	4.6	**0.0221**	0.001	4.1	ug/L	5	Standard
	Tl	205	874.4	2.3	**0.0230**	0.000	1.7	ug/L	10	Standard
	Pb	206	490.7	7.5	**0.0070**	0.003	45.6	ug/L	382	Standard
	Pb	207	396.7	3.8	**0.0092**	0.002	18.5	ug/L	306	Standard
	Pb	208	1864.7	4.4	**0.0086**	0.002	22.7	ug/L	1443	Standard
	U	238	19380.7	0.3	**1.3004**	0.012	0.9	ug/L	5	Standard
>	**Bi**	209	549255.9	0.7				ug/L	561075	Standard

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	Na	23	124474.2	1.1	**7.7820**	0.048	0.6	mg/L	288	Standard
	Mg	24	1141740.5	1.9	**1.8390**	0.036	2.0	mg/L	218	Standard
	K	39	265.0	7.5	**0.1428**	0.018	12.8	mg/L	125	Standard
	Ca	43	23.3	24.7	**21.4734**	6.791	31.6	mg/L	3	Standard
	Fe	54	277.8	14.7	**-0.0500**	0.011	21.3	mg/L	550	Standard
	Fe	57	2476.9	11.7	**0.0179**	0.006	33.7	mg/L	1772	Standard
>	**Sc-1**	45	308284.8	0.6				mg/L	330668	Standard
	Cl	35	11.3	31.0				ug/L	5	Standard
	Kr	83	36.9	14.9				ug/L	38	Standard
	Br	81	588.3	5.2				ug/L	344	Standard
	P	31	214.2	13.0				ug/L	312	Standard
	S	34	8377.3	2.8				ug/L	5594	Standard
	Sr	88	193.3	32.7				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		94.479	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	97.614
	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	97.893
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064903
Sample Date/Time: Sunday, July 29, 2012 10:06:18
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: JYH 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	7	39300.9	1.4	**6435.8325**	127.872	2.0	ug/L	9465	Standard
	Be	9	16.7	45.8	**-0.0106**	0.005	47.5	ug/L	10	Standard
	Al	27	252780.2	2.2	**18.3869**	0.232	1.3	ug/L	7870	Standard
>	**Sc**	45	312284.0	1.2				ug/L	330668	Standard
	Ti	47	2808.3	2.9	**2.5076**	0.072	2.9	ug/L	53	Standard
	V	51	6517.4	2.2	**0.4189**	0.015	3.7	ug/L	2687	Standard
	Cr	52	9400.9	0.5	**0.1953**	0.010	5.1	ug/L	8408	Standard
	Cr	53	820.9	6.6	**0.4628**	0.044	9.5	ug/L	288	Standard
	Mn	55	15225.0	1.9	**1.1400**	0.026	2.3	ug/L	1080	Standard
	Co	59	415.3	3.5	**0.0399**	0.002	4.7	ug/L	117	Standard
	Ni	60	628.7	1.1	**0.2572**	0.004	1.4	ug/L	68	Standard
	Cu	65	245.3	9.2	**0.0529**	0.011	20.4	ug/L	141	Standard
	Zn	66	1791.8	3.6	**1.7167**	0.063	3.7	ug/L	138	Standard
>	**Ge**	72	269129.2	0.3				ug/L	283230	Standard
	As	75	-55.6	28.4	**0.1139**	0.017	14.8	ug/L	-198	Standard
	Se	82	103.4	1.1	**0.8575**	0.015	1.8	ug/L	21	Standard
	Se-1	77	171.0	8.1	**0.7281**	0.213	29.2	ug/L	131	Standard
>	**Ga**	71	536.7	13.5				mg/L	607	Standard
	Rb	85	781.7	2.0				ug/L	30	Standard
	Y	89	230589.9	1.0				ug/L	251555	Standard
>	**Rh**	103	323.3	8.9				ug/L	335	Standard
	Mo	98	1053.4	3.6	**0.2967**	0.012	4.0	ug/L	13	Standard
	Ag	107	49.0	5.4	**-0.0009**	0.000	45.6	ug/L	36	Standard
	Cd	111	32.8	13.9	**-0.0078**	0.001	18.4	mg/L	49	Standard
	Cd	114	102.3	5.1	**-0.0095**	0.001	6.2	ug/L	170	Standard
>	**In**	115	711405.5	0.3				ug/L	727802	Standard
	Sn	118	548.7	0.3	**0.0014**	0.000	18.6	ug/L	471	Standard
	Sb	123	413.4	9.2	**0.0518**	0.005	8.8	ug/L	39	Standard
	Ba	135	24198.3	1.7	**5.6562**	0.114	2.0	ug/L	25	Standard
	Ce	140	4864.8	2.2				ug/L	25	Standard
>	**Tb**	159	1064933.5	0.4				ug/L	1071747	Standard
	Ho	165	68.3	7.2				ug/L	13	Standard
	Tl	203	373.0	6.7	**0.0216**	0.001	6.5	ug/L	5	Standard
	Tl	205	891.4	6.8	**0.0233**	0.002	6.5	ug/L	10	Standard
	Pb	206	940.0	2.0	**0.0421**	0.002	4.8	ug/L	382	Standard
	Pb	207	815.0	5.1	**0.0484**	0.005	9.8	ug/L	306	Standard
	Pb	208	3683.8	0.7	**0.0449**	0.001	3.0	ug/L	1443	Standard
	U	238	18475.9	1.2	**1.2295**	0.023	1.9	ug/L	5	Standard
>	**Bi**	209	553841.3	1.2				ug/L	561075	Standard

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Na	23	116242.6	1.9	**7.1722**	0.159	2.2	mg/L	288	Standard
Mg	24	1023952.1	0.9	**1.6284**	0.028	1.7	mg/L	218	Standard
K	39	238.3	5.3	**0.1146**	0.013	11.0	mg/L	125	Standard
Ca	43	25.0	91.7	**22.8266**	25.711	112.6	mg/L	3	Standard
Fe	54	450.4	7.7	**-0.0072**	0.010	133.0	mg/L	550	Standard
Fe	57	4912.5	1.9	**0.0684**	0.001	1.8	mg/L	1772	Standard
Sc-1	45	312284.0	1.2				mg/L	330668	Standard
Cl	35	16.3	7.1				ug/L	5	Standard
Kr	83	32.3	3.7				ug/L	38	Standard
Br	81	672.5	3.3				ug/L	344	Standard
P	31	242.5	5.7				ug/L	312	Standard
S	34	8752.5	2.4				ug/L	5594	Standard
Sr	88	160.0	21.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		95.022	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207064903
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	Cd	111	
	Cd	114	
>	In	115	97.747
	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	98.711
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064904
Sample Date/Time: Sunday, July 29, 2012 10:09:27
Number of Replicates: 3
Autosampler Position: 218
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	40056.3	4.7	**6624.8838**	324.604	4.9	ug/L	9465	Standard
	Be	9	11.7	49.5	**-0.0138**	0.004	26.2	ug/L	10	Standard
	Al	27	32089.0	3.3	**1.8363**	0.055	3.0	ug/L	7870	Standard
>	**Sc**	45	311056.0	1.5				ug/L	330668	Standard
	Ti	47	213.3	16.7	**0.1524**	0.032	20.9	ug/L	53	Standard
	V	51	4902.3	2.4	**0.2507**	0.009	3.7	ug/L	2687	Standard
	Cr	52	8920.6	1.5	**0.1416**	0.016	11.3	ug/L	8408	Standard
	Cr	53	775.9	7.1	**0.4325**	0.044	10.2	ug/L	288	Standard
	Mn	55	10760.2	2.0	**0.7893**	0.021	2.6	ug/L	1080	Standard
	Co	59	499.3	3.1	**0.0512**	0.002	4.7	ug/L	117	Standard
	Ni	60	627.0	1.8	**0.2592**	0.007	2.7	ug/L	68	Standard
	Cu	65	285.0	6.7	**0.0738**	0.009	12.8	ug/L	141	Standard
	Zn	66	1639.1	2.6	**1.5741**	0.053	3.4	ug/L	138	Standard
>	**Ge**	72	266584.9	0.7				ug/L	283230	Standard
	As	75	-67.9	29.1	**0.1001**	0.022	21.6	ug/L	-198	Standard
	Se	82	94.7	3.4	**0.7744**	0.036	4.6	ug/L	21	Standard
	Se-1	77	161.0	9.3	**0.5991**	0.212	35.4	ug/L	131	Standard
>	**Ga**	71	535.0	7.5				mg/L	607	Standard
	Rb	85	506.7	1.5				ug/L	30	Standard
	Y	89	232036.7	0.9				ug/L	251555	Standard
>	**Rh**	103	338.3	5.6				ug/L	335	Standard
	Mo	98	1137.9	3.1	**0.3189**	0.014	4.4	ug/L	13	Standard
	Ag	107	89.0	60.0	**0.0056**	0.009	159.2	ug/L	36	Standard
	Cd	111	58.6	27.5	**0.0004**	0.005	1473.7	mg/L	49	Standard
	Cd	114	163.0	44.3	**-0.0031**	0.008	246.3	ug/L	170	Standard
>	**In**	115	716298.3	1.2				ug/L	727802	Standard
	Sn	118	595.7	8.4	**0.0052**	0.005	96.1	ug/L	471	Standard
	Sb	123	283.5	8.1	**0.0359**	0.003	8.7	ug/L	39	Standard
	Ba	135	23787.3	1.7	**5.5220**	0.097	1.8	ug/L	25	Standard
	Ce	140	222.0	7.6				ug/L	25	Standard
>	**Tb**	159	1060601.2	0.5				ug/L	1071747	Standard
	Ho	165	16.3	23.2				ug/L	13	Standard
	Tl	203	428.7	5.6	**0.0249**	0.001	5.4	ug/L	5	Standard
	Tl	205	991.0	6.3	**0.0258**	0.002	6.2	ug/L	10	Standard
	Pb	206	505.3	3.2	**0.0076**	0.001	14.1	ug/L	382	Standard
	Pb	207	400.7	11.6	**0.0090**	0.004	47.6	ug/L	306	Standard
	Pb	208	1937.7	5.9	**0.0096**	0.002	24.0	ug/L	1443	Standard
	U	238	17779.1	1.9	**1.1780**	0.022	1.9	ug/L	5	Standard
>	**Bi**	209	556216.9	0.5				ug/L	561075	Standard

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Na	23	117500.5	0.7	**7.2794**	0.117	1.6	mg/L	288	Standard
Mg	24	1028998.7	2.3	**1.6428**	0.039	2.4	mg/L	218	Standard
K	39	236.7	27.2	**0.1145**	0.064	56.2	mg/L	125	Standard
Ca	43	18.3	15.7	**15.5392**	3.461	22.3	mg/L	3	Standard
Fe	54	248.6	7.8	**-0.0581**	0.004	7.6	mg/L	550	Standard
Fe	57	2526.9	6.1	**0.0185**	0.004	19.6	mg/L	1772	Standard
Sc-1	45	311056.0	1.5				mg/L	330668	Standard
Cl	35	14.7	20.8				ug/L	5	Standard
Kr	83	38.3	7.6				ug/L	38	Standard
Br	81	669.2	10.9				ug/L	344	Standard
P	31	226.7	8.4				ug/L	312	Standard
S	34	8711.7	2.8				ug/L	5594	Standard
Sr	88	185.0	8.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.123	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.419
	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	99.134
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064906
Sample Date/Time: Sunday, July 29, 2012 10:12:36
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: JYH 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	7	63648.4	0.6	**11219.9688**	108.982	1.0	ug/L	9465	Standard
	Be	9	18.3	78.7	**-0.0098**	0.009	91.0	ug/L	10	Standard
	Al	27	4922163.8	0.6	**360.3188**	3.044	0.8	ug/L	7870	Standard
>	**Sc**	45	319617.6	0.4				ug/L	330668	Standard
	Ti	47	10838.9	5.2	**9.7363**	0.625	6.4	ug/L	53	Standard
	V	51	14640.5	2.0	**1.2794**	0.048	3.8	ug/L	2687	Standard
	Cr	52	12591.2	1.8	**0.6170**	0.053	8.6	ug/L	8408	Standard
	Cr	53	1421.7	7.5	**0.9377**	0.087	9.3	ug/L	288	Standard
	Mn	55	83173.4	2.2	**6.5577**	0.230	3.5	ug/L	1080	Standard
	Co	59	1616.8	0.6	**0.1917**	0.002	0.9	ug/L	117	Standard
	Ni	60	1942.5	4.0	**0.8497**	0.046	5.4	ug/L	68	Standard
	Cu	65	949.0	4.4	**0.3963**	0.026	6.7	ug/L	141	Standard
	Zn	66	2224.5	2.6	**2.1522**	0.090	4.2	ug/L	138	Standard
>	**Ge**	72	271075.4	1.4				ug/L	283230	Standard
	As	75	43.3	140.6	**0.2180**	0.064	29.3	ug/L	-198	Standard
	Se	82	222.8	6.5	**2.1134**	0.182	8.6	ug/L	21	Standard
	Se-1	77	269.7	3.9	**2.1911**	0.198	9.0	ug/L	131	Standard
>	**Ga**	71	973.4	3.9				mg/L	607	Standard
	Rb	85	4817.4	4.2				ug/L	30	Standard
	Y	89	227417.4	0.9				ug/L	251555	Standard
>	**Rh**	103	333.3	12.1				ug/L	335	Standard
	Mo	98	586.9	5.1	**0.1596**	0.009	5.8	ug/L	13	Standard
	Ag	107	58.3	5.5	**0.0005**	0.000	99.9	ug/L	36	Standard
	Cd	111	39.6	11.4	**-0.0058**	0.001	25.2	mg/L	49	Standard
	Cd	114	127.2	11.9	**-0.0071**	0.002	21.8	ug/L	170	Standard
>	**In**	115	722378.3	0.8				ug/L	727802	Standard
	Sn	118	627.3	7.1	**0.0075**	0.004	50.5	ug/L	471	Standard
	Sb	123	344.0	9.0	**0.0428**	0.004	9.2	ug/L	39	Standard
	Ba	135	34314.2	1.4	**7.9031**	0.086	1.1	ug/L	25	Standard
	Ce	140	18116.8	1.2				ug/L	25	Standard
>	**Tb**	159	1066933.5	0.1				ug/L	1071747	Standard
	Ho	165	312.3	3.1				ug/L	13	Standard
	Tl	203	398.0	8.1	**0.0232**	0.002	8.0	ug/L	5	Standard
	Tl	205	940.4	6.9	**0.0246**	0.002	6.4	ug/L	10	Standard
	Pb	206	1858.8	2.6	**0.1147**	0.003	2.7	ug/L	382	Standard
	Pb	207	1505.1	1.7	**0.1137**	0.002	1.9	ug/L	306	Standard
	Pb	208	7110.3	1.5	**0.1139**	0.001	1.3	ug/L	1443	Standard
	U	238	20232.8	2.1	**1.3481**	0.024	1.8	ug/L	5	Standard
>	**Bi**	209	553096.4	0.5				ug/L	561075	Standard

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	Na	23	120601.5	1.3	**7.2706**	0.123	1.7	mg/L	288	Standard
	Mg	24	1452500.6	0.6	**2.2565**	0.021	0.9	mg/L	218	Standard
	K	39	238.3	3.2	**0.1095**	0.008	6.9	mg/L	125	Standard
	Ca	43	20.0	129.9	**16.7436**	28.668	171.2	mg/L	3	Standard
	Fe	54	1571.8	4.6	**0.2670**	0.019	7.0	mg/L	550	Standard
	Fe	57	18417.9	6.6	**0.3432**	0.026	7.5	mg/L	1772	Standard
>	**Sc-1**	45	319617.6	0.4				mg/L	330668	Standard
	Cl	35	15.3	10.0				ug/L	5	Standard
	Kr	83	36.4	2.9				ug/L	38	Standard
	Br	81	670.0	5.8				ug/L	344	Standard
	P	31	351.7	13.9				ug/L	312	Standard
	S	34	9733.1	2.3				ug/L	5594	Standard
	Sr	88	213.3	5.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		95.709	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.255
	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	98.578
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064907
Sample Date/Time: Sunday, July 29, 2012 10:15:46
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: JYH 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	7	65404.4	4.2	**11761.7881**	144.625	1.2	ug/L	9465	Standard
	Be	9	11.7	107.9	**-0.0139**	0.008	56.7	ug/L	10	Standard
	Al	27	24209.3	3.1	**1.2195**	0.057	4.7	ug/L	7870	Standard
>	**Sc**	45	315220.8	3.2				ug/L	330668	Standard
	Ti	47	232.3	3.2	**0.1655**	0.007	4.0	ug/L	53	Standard
	V	51	7472.8	3.1	**0.5124**	0.026	5.1	ug/L	2687	Standard
	Cr	52	8085.2	3.5	**0.0041**	0.040	982.5	ug/L	8408	Standard
	Cr	53	558.3	2.9	**0.2466**	0.013	5.1	ug/L	288	Standard
	Mn	55	18310.7	1.9	**1.3715**	0.031	2.3	ug/L	1080	Standard
	Co	59	287.7	5.1	**0.0232**	0.002	7.6	ug/L	117	Standard
	Ni	60	735.7	3.3	**0.3021**	0.011	3.7	ug/L	68	Standard
	Cu	65	284.0	4.7	**0.0704**	0.007	9.7	ug/L	141	Standard
	Zn	66	1543.4	4.3	**1.4397**	0.070	4.9	ug/L	138	Standard
>	**Ge**	72	272208.1	0.3				ug/L	283230	Standard
	As	75	-40.4	97.8	**0.1305**	0.041	31.6	ug/L	-198	Standard
	Se	82	226.1	3.8	**2.1371**	0.096	4.5	ug/L	21	Standard
	Se-1	77	262.0	7.9	**2.0578**	0.301	14.6	ug/L	131	Standard
>	**Ga**	71	526.7	10.2				mg/L	607	Standard
	Rb	85	528.3	12.0				ug/L	30	Standard
	Y	89	238028.7	1.5				ug/L	251555	Standard
>	**Rh**	103	403.3	14.1				ug/L	335	Standard
	Mo	98	673.8	7.1	**0.1836**	0.014	7.5	ug/L	13	Standard
	Ag	107	51.3	7.9	**-0.0007**	0.001	86.2	ug/L	36	Standard
	Cd	111	36.7	17.2	**-0.0067**	0.002	30.1	mg/L	49	Standard
	Cd	114	112.5	15.4	**-0.0086**	0.002	19.8	ug/L	170	Standard
>	**In**	115	724883.5	1.2				ug/L	727802	Standard
	Sn	118	640.3	7.6	**0.0085**	0.004	46.0	ug/L	471	Standard
	Sb	123	298.3	18.7	**0.0372**	0.007	17.6	ug/L	39	Standard
	Ba	135	25384.6	1.7	**5.8239**	0.126	2.2	ug/L	25	Standard
	Ce	140	179.0	5.1				ug/L	25	Standard
>	**Tb**	159	1068918.1	0.6				ug/L	1071747	Standard
	Ho	165	15.3	15.1				ug/L	13	Standard
	Tl	203	383.0	9.7	**0.0223**	0.002	9.4	ug/L	5	Standard
	Tl	205	876.7	7.8	**0.0229**	0.002	7.5	ug/L	10	Standard
	Pb	206	644.7	1.9	**0.0189**	0.001	7.7	ug/L	382	Standard
	Pb	207	552.3	3.2	**0.0236**	0.002	8.1	ug/L	306	Standard
	Pb	208	2530.1	1.0	**0.0217**	0.001	4.6	ug/L	1443	Standard
	U	238	22150.9	2.4	**1.4764**	0.031	2.1	ug/L	5	Standard
>	**Bi**	209	552926.8	1.0				ug/L	561075	Standard

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Na	23	127060.5	0.2	**7.7745**	0.259	3.3	mg/L	288	Standard
Mg	24	1510838.4	0.7	**2.3811**	0.060	2.5	mg/L	218	Standard
K	39	278.3	9.9	**0.1494**	0.019	12.7	mg/L	125	Standard
Ca	43	25.0	40.0	**22.5132**	10.386	46.1	mg/L	3	Standard
Fe	54	274.8	10.5	**-0.0523**	0.007	13.6	mg/L	550	Standard
Fe	57	2846.9	3.5	**0.0245**	0.003	13.8	mg/L	1772	Standard
Sc-1	45	315220.8	3.2				mg/L	330668	Standard
Cl	35	14.7	15.7				ug/L	5	Standard
Kr	83	32.2	9.3				ug/L	38	Standard
Br	81	664.2	4.7				ug/L	344	Standard
P	31	255.0	2.0				ug/L	312	Standard
S	34	10452.8	1.6				ug/L	5594	Standard
Sr	88	273.3	14.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		96.109	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.599
	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	98.548
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064908
Sample Date/Time: Sunday, July 29, 2012 10:18:56
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: JYH 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	7	53213.4	4.1	**9011.0782**	337.343	3.7	ug/L	9465	Standard
	Be	9	8.3	91.7	**-0.0161**	0.005	29.5	ug/L	10	Standard
	Al	27	391659.8	1.3	**27.9398**	0.548	2.0	ug/L	7870	Standard
>	**Sc**	45	321842.5	1.0				ug/L	330668	Standard
	Ti	47	1259.7	0.2	**1.1049**	0.024	2.1	ug/L	53	Standard
	V	51	6573.5	3.6	**0.4274**	0.035	8.1	ug/L	2687	Standard
	Cr	52	8975.7	2.3	**0.1419**	0.055	38.5	ug/L	8408	Standard
	Cr	53	757.5	0.6	**0.4138**	0.014	3.3	ug/L	288	Standard
	Mn	55	107930.7	0.6	**8.6239**	0.241	2.8	ug/L	1080	Standard
	Co	59	470.7	5.8	**0.0471**	0.003	6.9	ug/L	117	Standard
	Ni	60	841.0	0.6	**0.3551**	0.007	2.1	ug/L	68	Standard
	Cu	65	293.7	2.1	**0.0773**	0.006	7.9	ug/L	141	Standard
	Zn	66	1765.1	1.5	**1.6955**	0.068	4.0	ug/L	138	Standard
>	**Ge**	72	268326.9	2.2				ug/L	283230	Standard
	As	75	-26.3	227.7	**0.1455**	0.062	42.9	ug/L	-198	Standard
	Se	82	120.3	7.7	**1.0430**	0.127	12.2	ug/L	21	Standard
	Se-1	77	187.0	3.0	**0.9782**	0.062	6.3	ug/L	131	Standard
>	**Ga**	71	591.7	15.7				mg/L	607	Standard
	Rb	85	1075.0	10.5				ug/L	30	Standard
	Y	89	231807.4	2.8				ug/L	251555	Standard
>	**Rh**	103	306.7	22.8				ug/L	335	Standard
	Mo	98	945.4	3.0	**0.2631**	0.005	1.9	ug/L	13	Standard
	Ag	107	43.3	9.3	**-0.0019**	0.001	30.4	ug/L	36	Standard
	Cd	111	32.7	5.5	**-0.0079**	0.001	8.9	mg/L	49	Standard
	Cd	114	100.9	8.3	**-0.0097**	0.001	9.5	ug/L	170	Standard
>	**In**	115	717637.0	1.2				ug/L	727802	Standard
	Sn	118	464.0	7.7	**-0.0065**	0.003	50.8	ug/L	471	Standard
	Sb	123	212.4	9.1	**0.0273**	0.002	8.1	ug/L	39	Standard
	Ba	135	40927.5	1.1	**9.4913**	0.093	1.0	ug/L	25	Standard
	Ce	140	2925.9	5.3				ug/L	25	Standard
>	**Tb**	159	1064109.7	0.6				ug/L	1071747	Standard
	Ho	165	53.7	7.1				ug/L	13	Standard
	Tl	203	389.7	8.3	**0.0224**	0.002	8.1	ug/L	5	Standard
	Tl	205	924.0	6.2	**0.0239**	0.001	5.6	ug/L	10	Standard
	Pb	206	870.7	6.6	**0.0360**	0.005	13.5	ug/L	382	Standard
	Pb	207	702.3	1.4	**0.0371**	0.001	2.8	ug/L	306	Standard
	Pb	208	3415.2	2.5	**0.0388**	0.002	4.7	ug/L	1443	Standard
	U	238	12144.9	0.4	**0.8004**	0.008	1.0	ug/L	5	Standard
>	**Bi**	209	559121.0	0.6				ug/L	561075	Standard

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Na	23	126734.6	1.5	**7.5900**	0.189	2.5	mg/L	288	Standard
Mg	24	1297154.4	0.5	**2.0014**	0.028	1.4	mg/L	218	Standard
K	39	256.7	18.1	**0.1244**	0.040	32.5	mg/L	125	Standard
Ca	43	8.3	69.3	**3.8388**	6.434	167.6	mg/L	3	Standard
Fe	54	407.2	13.0	**-0.0212**	0.013	63.6	mg/L	550	Standard
Fe	57	4495.7	4.2	**0.0569**	0.005	8.0	mg/L	1772	Standard
Sc-1	45	321842.5	1.0				mg/L	330668	Standard
Cl	35	18.3	3.1				ug/L	5	Standard
Kr	83	32.9	7.1				ug/L	38	Standard
Br	81	711.7	3.7				ug/L	344	Standard
P	31	318.3	2.0				ug/L	312	Standard
S	34	9195.3	1.5				ug/L	5594	Standard
Sr	88	223.3	4.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.738	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.603
	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	99.652
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064909
Sample Date/Time: Sunday, July 29, 2012 10:22:04
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	54519.6	0.9	**9710.7846**	378.303	3.9	ug/L	9465	Standard
	Be	9	5.0	100.0	**-0.0179**	0.003	18.3	ug/L	10	Standard
	Al	27	15798.2	2.8	**0.6138**	0.023	3.8	ug/L	7870	Standard
>	**Sc**	45	309907.1	2.7				ug/L	330668	Standard
	Ti	47	216.7	4.9	**0.1596**	0.010	6.0	ug/L	53	Standard
	V	51	5866.8	2.1	**0.3681**	0.015	4.1	ug/L	2687	Standard
	Cr	52	8462.7	0.9	**0.1023**	0.013	12.4	ug/L	8408	Standard
	Cr	53	603.3	10.1	**0.3025**	0.052	17.1	ug/L	288	Standard
	Mn	55	109819.6	1.9	**9.0118**	0.193	2.1	ug/L	1080	Standard
	Co	59	390.3	2.6	**0.0382**	0.001	3.4	ug/L	117	Standard
	Ni	60	557.3	9.3	**0.2323**	0.025	10.7	ug/L	68	Standard
	Cu	65	180.7	11.5	**0.0238**	0.011	45.4	ug/L	141	Standard
	Zn	66	1406.7	2.5	**1.3594**	0.043	3.1	ug/L	138	Standard
>	**Ge**	72	261285.3	0.3				ug/L	283230	Standard
	As	75	-60.5	61.8	**0.1067**	0.041	38.3	ug/L	-198	Standard
	Se	82	109.7	4.0	**0.9598**	0.051	5.3	ug/L	21	Standard
	Se-1	77	185.3	2.2	**1.0287**	0.072	7.0	ug/L	131	Standard
>	**Ga**	71	538.3	2.7				mg/L	607	Standard
	Rb	85	591.7	12.3				ug/L	30	Standard
	Y	89	228431.7	2.8				ug/L	251555	Standard
>	**Rh**	103	286.7	2.7				ug/L	335	Standard
	Mo	98	1033.5	2.4	**0.2942**	0.011	3.7	ug/L	13	Standard
	Ag	107	39.0	5.1	**-0.0025**	0.000	10.0	ug/L	36	Standard
	Cd	111	32.5	21.7	**-0.0078**	0.002	27.6	mg/L	49	Standard
	Cd	114	106.6	5.2	**-0.0089**	0.001	7.7	ug/L	170	Standard
>	**In**	115	703741.7	1.3				ug/L	727802	Standard
	Sn	118	423.7	0.7	**-0.0093**	0.001	8.1	ug/L	471	Standard
	Sb	123	220.1	7.6	**0.0287**	0.002	6.8	ug/L	39	Standard
	Ba	135	41045.5	1.2	**9.7078**	0.191	2.0	ug/L	25	Standard
	Ce	140	137.3	2.6				ug/L	25	Standard
>	**Tb**	159	1047148.8	1.0				ug/L	1071747	Standard
	Ho	165	14.0	28.6				ug/L	13	Standard
	Tl	203	400.7	8.1	**0.0236**	0.002	7.6	ug/L	5	Standard
	Tl	205	948.0	8.0	**0.0251**	0.002	7.3	ug/L	10	Standard
	Pb	206	392.7	4.9	**-0.0007**	0.001	170.1	ug/L	382	Standard
	Pb	207	335.0	1.8	**0.0034**	0.001	22.1	ug/L	306	Standard
	Pb	208	1562.7	1.7	**0.0026**	0.000	11.1	ug/L	1443	Standard
	U	238	12337.7	0.9	**0.8313**	0.002	0.3	ug/L	5	Standard
>	**Bi**	209	546910.9	0.9				ug/L	561075	Standard

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	Na	23	127586.7	1.6	**7.9374**	0.108	1.4	mg/L	288	Standard
	Mg	24	1355256.5	2.6	**2.1718**	0.052	2.4	mg/L	218	Standard
	K	39	261.7	13.0	**0.1389**	0.038	27.3	mg/L	125	Standard
	Ca	43	20.0	25.0	**17.4855**	5.679	32.5	mg/L	3	Standard
	Fe	54	307.5	15.6	**-0.0430**	0.011	24.6	mg/L	550	Standard
	Fe	57	2630.2	2.3	**0.0209**	0.002	8.6	mg/L	1772	Standard
>	**Sc-1**	45	309907.1	2.7				mg/L	330668	Standard
	Cl	35	23.0	23.0				ug/L	5	Standard
	Kr	83	35.3	0.9				ug/L	38	Standard
	Br	81	770.0	10.2				ug/L	344	Standard
	P	31	270.0	7.6				ug/L	312	Standard
	S	34	9465.5	2.2				ug/L	5594	Standard
	Sr	88	246.7	29.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		92.252	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	96.694
	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	97.476
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064910
Sample Date/Time: Sunday, July 29, 2012 10:25:14
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	61491.2	2.4	**10880.4447**	329.035	3.0	ug/L	9465	Standard
	Be	9	8.3	34.6	**-0.0160**	0.002	11.3	ug/L	10	Standard
	Al	27	750361.9	1.8	**54.8761**	0.857	1.6	ug/L	7870	Standard
>	**Sc**	45	317071.7	0.4				ug/L	330668	Standard
	Ti	47	2213.2	1.3	**2.0235**	0.044	2.2	ug/L	53	Standard
	V	51	7506.7	0.5	**0.5476**	0.012	2.1	ug/L	2687	Standard
	Cr	52	9182.4	1.4	**0.2006**	0.026	13.2	ug/L	8408	Standard
	Cr	53	894.2	10.0	**0.5422**	0.079	14.6	ug/L	288	Standard
	Mn	55	128897.4	1.5	**10.5709**	0.210	2.0	ug/L	1080	Standard
	Co	59	569.7	3.8	**0.0616**	0.003	5.6	ug/L	117	Standard
	Ni	60	859.0	6.0	**0.3732**	0.029	7.6	ug/L	68	Standard
	Cu	65	362.3	3.7	**0.1155**	0.005	4.2	ug/L	141	Standard
	Zn	66	1681.4	1.3	**1.6510**	0.042	2.5	ug/L	138	Standard
>	**Ge**	72	261817.6	1.1				ug/L	283230	Standard
	As	75	-34.8	69.1	**0.1348**	0.026	19.5	ug/L	-198	Standard
	Se	82	116.6	3.1	**1.0331**	0.052	5.1	ug/L	21	Standard
	Se-1	77	175.7	7.1	**0.8740**	0.221	25.2	ug/L	131	Standard
>	**Ga**	71	590.0	3.1				mg/L	607	Standard
	Rb	85	1408.4	5.0				ug/L	30	Standard
	Y	89	229760.9	1.6				ug/L	251555	Standard
>	**Rh**	103	380.0	13.7				ug/L	335	Standard
	Mo	98	1066.3	5.3	**0.3004**	0.019	6.5	ug/L	13	Standard
	Ag	107	43.3	11.6	**-0.0019**	0.001	40.0	ug/L	36	Standard
	Cd	111	34.1	34.6	**-0.0074**	0.004	52.6	mg/L	49	Standard
	Cd	114	115.8	3.5	**-0.0080**	0.001	7.0	ug/L	170	Standard
>	**In**	115	711719.0	1.1				ug/L	727802	Standard
	Sn	118	528.0	7.7	**-0.0004**	0.004	932.0	ug/L	471	Standard
	Sb	123	205.8	15.0	**0.0267**	0.004	14.9	ug/L	39	Standard
	Ba	135	47997.6	1.3	**11.2271**	0.273	2.4	ug/L	25	Standard
	Ce	140	4157.6	3.1				ug/L	25	Standard
>	**Tb**	159	1061657.8	0.5				ug/L	1071747	Standard
	Ho	165	82.0	8.8				ug/L	13	Standard
	Tl	203	414.3	2.5	**0.0243**	0.001	2.3	ug/L	5	Standard
	Tl	205	952.7	8.9	**0.0250**	0.002	8.5	ug/L	10	Standard
	Pb	206	686.7	3.5	**0.0224**	0.002	8.3	ug/L	382	Standard
	Pb	207	545.3	4.4	**0.0232**	0.002	10.6	ug/L	306	Standard
	Pb	208	2635.1	3.1	**0.0241**	0.002	7.1	ug/L	1443	Standard
	U	238	14064.2	1.5	**0.9421**	0.011	1.1	ug/L	5	Standard
>	**Bi**	209	550097.4	0.4				ug/L	561075	Standard

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Na	23	131165.3	0.3	**7.9741**	0.024	0.3	mg/L	288	Standard
Mg	24	1688851.6	22.6	**2.6430**	0.584	22.1	mg/L	218	Standard
K	39	248.3	2.3	**0.1204**	0.006	4.7	mg/L	125	Standard
Ca	43	13.3	21.7	**9.5331**	3.209	33.7	mg/L	3	Standard
Fe	54	506.0	12.3	**0.0048**	0.016	324.0	mg/L	550	Standard
Fe	57	5325.9	3.2	**0.0754**	0.003	4.1	mg/L	1772	Standard
Sc-1	45	317071.7	0.4				mg/L	330668	Standard
Cl	35	13.7	15.2				ug/L	5	Standard
Kr	83	37.0	14.5				ug/L	38	Standard
Br	81	709.2	4.8				ug/L	344	Standard
P	31	302.5	9.9				ug/L	312	Standard
S	34	9808.2	1.4				ug/L	5594	Standard
Sr	88	251.7	11.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.440	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	97.790
	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	98.043
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064911
Sample Date/Time: Sunday, July 29, 2012 10:28:22
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	57291.5	3.1	**9877.6116**	271.263	2.7	ug/L	9465	Standard
	Be	9	21.7	53.3	**-0.0078**	0.007	88.9	ug/L	10	Standard
	Al	27	84334.4	4.5	**5.5786**	0.218	3.9	ug/L	7870	Standard
>	**Sc**	45	320783.8	1.2				ug/L	330668	Standard
	Ti	47	387.3	7.2	**0.3102**	0.027	8.7	ug/L	53	Standard
	V	51	5979.6	4.4	**0.3637**	0.022	6.0	ug/L	2687	Standard
	Cr	52	8352.3	3.0	**0.0572**	0.021	36.7	ug/L	8408	Standard
	Cr	53	643.3	3.8	**0.3221**	0.016	4.8	ug/L	288	Standard
	Mn	55	111798.0	1.8	**8.9417**	0.141	1.6	ug/L	1080	Standard
	Co	59	358.7	17.9	**0.0328**	0.008	23.4	ug/L	117	Standard
	Ni	60	651.3	3.1	**0.2687**	0.010	3.7	ug/L	68	Standard
	Cu	65	233.7	12.0	**0.0476**	0.012	26.1	ug/L	141	Standard
	Zn	66	1815.8	3.5	**1.7496**	0.069	3.9	ug/L	138	Standard
>	**Ge**	72	268053.2	1.2				ug/L	283230	Standard
	As	75	-44.1	52.1	**0.1260**	0.024	19.2	ug/L	-198	Standard
	Se	82	108.4	2.5	**0.9156**	0.028	3.0	ug/L	21	Standard
	Se-1	77	171.7	8.0	**0.7500**	0.234	31.2	ug/L	131	Standard
>	**Ga**	71	571.7	9.4				mg/L	607	Standard
	Rb	85	665.0	6.9				ug/L	30	Standard
	Y	89	228654.9	2.7				ug/L	251555	Standard
>	**Rh**	103	378.3	13.8				ug/L	335	Standard
	Mo	98	978.0	4.1	**0.2729**	0.010	3.6	ug/L	13	Standard
	Ag	107	43.3	8.7	**-0.0019**	0.001	31.2	ug/L	36	Standard
	Cd	111	36.0	16.4	**-0.0068**	0.002	28.2	mg/L	49	Standard
	Cd	114	111.9	17.9	**-0.0085**	0.002	23.5	ug/L	170	Standard
>	**In**	115	716388.1	0.7				ug/L	727802	Standard
	Sn	118	588.0	0.7	**0.0045**	0.000	6.4	ug/L	471	Standard
	Sb	123	212.7	8.3	**0.0274**	0.002	8.4	ug/L	39	Standard
	Ba	135	41989.1	1.8	**9.7540**	0.119	1.2	ug/L	25	Standard
	Ce	140	426.7	5.9				ug/L	25	Standard
>	**Tb**	159	1059375.3	0.3				ug/L	1071747	Standard
	Ho	165	15.3	33.5				ug/L	13	Standard
	Tl	203	400.0	4.4	**0.0232**	0.001	4.0	ug/L	5	Standard
	Tl	205	941.4	8.0	**0.0245**	0.002	7.8	ug/L	10	Standard
	Pb	206	473.7	5.8	**0.0052**	0.002	43.5	ug/L	382	Standard
	Pb	207	378.7	0.3	**0.0070**	0.000	3.9	ug/L	306	Standard
	Pb	208	1797.7	1.9	**0.0068**	0.001	10.1	ug/L	1443	Standard
	U	238	13036.3	2.5	**0.8647**	0.019	2.2	ug/L	5	Standard
>	**Bi**	209	555514.6	0.6				ug/L	561075	Standard

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Na	23	128643.9	1.2	**7.7300**	0.143	1.8	mg/L	288	Standard
Mg	24	1369388.5	1.8	**2.1197**	0.032	1.5	mg/L	218	Standard
K	39	270.0	9.8	**0.1374**	0.022	16.2	mg/L	125	Standard
Ca	43	16.7	17.3	**13.0597**	3.325	25.5	mg/L	3	Standard
Fe	54	311.1	8.3	**-0.0446**	0.006	13.8	mg/L	550	Standard
Fe	57	2886.9	6.3	**0.0242**	0.003	12.5	mg/L	1772	Standard
Sc-1	45	320783.8	1.2				mg/L	330668	Standard
Cl	35	18.3	36.3				ug/L	5	Standard
Kr	83	34.3	9.3				ug/L	38	Standard
Br	81	694.2	4.0				ug/L	344	Standard
P	31	300.0	10.4				ug/L	312	Standard
S	34	9663.9	2.2				ug/L	5594	Standard
Sr	88	188.3	23.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.642	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.432
	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	99.009
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 10:31:35
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: JYH 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	7	9881.6	1.8	**56.3516**	42.111	74.7	ug/L	9465	Standard
	Be	9	91378.1	1.3	**51.7379**	0.432	0.8	ug/L	10	Standard
	Al	27	729026.4	1.1	**48.0620**	0.768	1.6	ug/L	7870	Standard
>	**Sc**	45	351241.4	0.8				ug/L	330668	Standard
	Ti	47	121059.7	1.0	**99.4106**	0.452	0.5	ug/L	53	Standard
	V	51	502495.9	0.9	**48.4725**	0.506	1.0	ug/L	2687	Standard
	Cr	52	403956.2	1.1	**48.5639**	0.360	0.7	ug/L	8408	Standard
	Cr	53	68359.7	1.1	**49.5123**	0.945	1.9	ug/L	288	Standard
	Mn	55	701772.2	0.3	**50.9586**	0.527	1.0	ug/L	1080	Standard
	Co	59	438622.6	1.6	**50.6005**	0.841	1.7	ug/L	117	Standard
	Ni	60	118644.0	0.1	**48.8587**	0.456	0.9	ug/L	68	Standard
	Cu	65	111249.0	1.2	**49.4723**	0.268	0.5	ug/L	141	Standard
	Zn	66	52672.4	0.4	**49.5330**	0.579	1.2	ug/L	138	Standard
>	**Ge**	72	297549.1	0.8				ug/L	283230	Standard
	As	75	52039.4	0.4	**49.9667**	0.378	0.8	ug/L	-198	Standard
	Se	82	5347.5	1.1	**51.2486**	0.361	0.7	ug/L	21	Standard
	Se-1	77	3829.5	1.0	**50.4884**	0.730	1.4	ug/L	131	Standard
>	**Ga**	71	645.0	7.1				mg/L	607	Standard
	Rb	85	788.4	7.0				ug/L	30	Standard
	Y	89	261124.4	0.9				ug/L	251555	Standard
>	**Rh**	103	365.0	5.5				ug/L	335	Standard
	Mo	98	365607.3	0.6	**94.6916**	0.512	0.5	ug/L	13	Standard
	Ag	107	329412.4	0.1	**48.4856**	0.455	0.9	ug/L	36	Standard
	Cd	111	185520.2	1.3	**53.2094**	0.936	1.8	mg/L	49	Standard
	Cd	114	537445.6	0.8	**50.6922**	0.769	1.5	ug/L	170	Standard
>	**In**	115	792154.1	1.0				ug/L	727802	Standard
	Sn	118	628961.8	0.9	**50.2107**	0.125	0.2	ug/L	471	Standard
	Sb	123	461022.5	0.1	**50.1062**	0.550	1.1	ug/L	39	Standard
	Ba	135	248279.4	0.6	**52.2154**	0.745	1.4	ug/L	25	Standard
	Ce	140	898.4	0.7				ug/L	25	Standard
>	**Tb**	159	1158583.1	1.4				ug/L	1071747	Standard
	Ho	165	20.7	19.6				ug/L	13	Standard
	Tl	203	858174.6	0.5	**48.8586**	0.464	1.0	ug/L	5	Standard
	Tl	205	1978799.7	0.6	**48.3047**	0.713	1.5	ug/L	10	Standard
	Pb	206	664114.6	0.4	**48.9856**	0.624	1.3	ug/L	382	Standard
	Pb	207	562222.6	0.4	**49.6669**	0.569	1.1	ug/L	306	Standard
	Pb	208	2603130.8	0.3	**48.9297**	0.555	1.1	ug/L	1443	Standard
	U	238	813943.5	0.6	**50.6787**	0.643	1.3	ug/L	5	Standard
>	**Bi**	209	592050.6	1.3				ug/L	561075	Standard

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Na	23	110405.8	0.7	**6.0505**	0.056	0.9	mg/L	288	Standard
Mg	24	3389236.5	0.8	**4.7911**	0.062	1.3	mg/L	218	Standard
K	39	5836.1	1.8	**4.7550**	0.051	1.1	mg/L	125	Standard
Ca	43	13.3	78.1	**8.1412**	10.628	130.5	mg/L	3	Standard
Fe	54	22100.1	5.6	**4.8464**	0.314	6.5	mg/L	550	Standard
Fe	57	294757.6	6.6	**5.4715**	0.406	7.4	mg/L	1772	Standard
Sc-1	45	351241.4	0.8				mg/L	330668	Standard
Cl	35	3.7	41.7				ug/L	5	Standard
Kr	83	37.4	6.8				ug/L	38	Standard
Br	81	421.7	4.4				ug/L	344	Standard
P	31	423.3	16.3				ug/L	312	Standard
S	34	6550.6	2.9				ug/L	5594	Standard
Sr	88	58.3	24.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	96.124		
Sc	45			
Ti	47	99.411		
V	51	96.945		
Cr	52	97.128		
Cr	53			
Mn	55	101.917		
Co	59	101.201		
Ni	60	97.717		
Cu	65	98.945		
Zn	66	99.066		
Ge	72		105.056	
As	75	99.933		
Se	82	102.497		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	94.692		
Ag	107	96.971		

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	Cd	111	106.419	
	Cd	114		
>	In	115		108.842
	Sn	118	100.421	
	Sb	123	100.212	
	Ba	135	104.431	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.717	
	Tl	205		
	Pb	206	97.971	
	Pb	207	99.334	
	Pb	208	97.859	
	U	238	101.357	
>	Bi	209		105.521
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 10:34:05
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 10:34:45
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: JYH 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	7	9051.0	1.4	**-74.8966**	65.993	88.1	ug/L	9465	Standard
	Be	9	15.0	0.0	**-0.0126**	0.000	1.7	ug/L	10	Standard
	Al	27	8087.2	2.0	**-0.0338**	0.024	71.7	ug/L	7870	Standard
>	**Sc**	45	346665.8	2.4				ug/L	330668	Standard
	Ti	47	73.0	14.5	**0.0187**	0.009	47.7	ug/L	53	Standard
	V	51	2417.0	0.8	**-0.0385**	0.003	6.6	ug/L	2687	Standard
	Cr	52	7516.2	0.3	**-0.1304**	0.001	0.4	ug/L	8408	Standard
	Cr	53	250.8	5.0	**-0.0092**	0.010	106.6	ug/L	288	Standard
	Mn	55	1112.7	5.1	**-0.0009**	0.004	508.6	ug/L	1080	Standard
	Co	59	130.3	9.9	**0.0024**	0.002	65.6	ug/L	117	Standard
	Ni	60	68.0	10.3	**-0.0004**	0.003	810.2	ug/L	68	Standard
	Cu	65	155.3	7.7	**0.0034**	0.005	158.4	ug/L	141	Standard
	Zn	66	151.7	4.4	**-0.0043**	0.006	146.5	ug/L	138	Standard
>	**Ge**	72	288802.5	0.2				ug/L	283230	Standard
	As	75	-170.7	14.7	**0.0044**	0.025	553.5	ug/L	-198	Standard
	Se	82	24.6	7.0	**0.0008**	0.017	2187.5	ug/L	21	Standard
	Se-1	77	109.7	2.9	**-0.3119**	0.043	13.8	ug/L	131	Standard
>	**Ga**	71	636.7	5.7				mg/L	607	Standard
	Rb	85	21.7	35.3				ug/L	30	Standard
	Y	89	254406.9	2.0				ug/L	251555	Standard
>	**Rh**	103	361.7	23.8				ug/L	335	Standard
	Mo	98	192.9	11.2	**0.0438**	0.006	14.2	ug/L	13	Standard
	Ag	107	81.0	28.9	**0.0032**	0.004	113.3	ug/L	36	Standard
	Cd	111	67.5	15.9	**0.0015**	0.003	223.3	mg/L	49	Standard
	Cd	114	220.4	18.5	**0.0010**	0.004	408.0	ug/L	170	Standard
>	**In**	115	777470.1	1.3				ug/L	727802	Standard
	Sn	118	866.0	2.3	**0.0231**	0.002	9.7	ug/L	471	Standard
	Sb	123	2289.4	4.4	**0.2554**	0.014	5.5	ug/L	39	Standard
	Ba	135	48.3	32.1	**-0.0011**	0.003	305.4	ug/L	25	Standard
	Ce	140	22.3	6.8				ug/L	25	Standard
>	**Tb**	159	1122966.0	0.0				ug/L	1071747	Standard
	Ho	165	12.3	38.3				ug/L	13	Standard
	Tl	203	78.7	38.8	**0.0034**	0.002	51.5	ug/L	5	Standard
	Tl	205	182.7	46.1	**0.0045**	0.002	46.3	ug/L	10	Standard
	Pb	206	449.7	8.8	**0.0010**	0.003	326.2	ug/L	382	Standard
	Pb	207	381.3	5.6	**0.0049**	0.002	40.8	ug/L	306	Standard
	Pb	208	1752.4	5.7	**0.0036**	0.002	58.8	ug/L	1443	Standard
	U	238	97.3	44.3	**0.0058**	0.003	46.6	ug/L	5	Standard
>	**Bi**	209	594772.2	0.7				ug/L	561075	Standard

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Na	23	450.0	6.9	**-0.0110**	0.002	20.7	mg/L	288	Standard
Mg	24	561.7	30.4	**0.0011**	0.000	23.3	mg/L	218	Standard
K	39	143.3	17.2	**0.0125**	0.023	182.9	mg/L	125	Standard
Ca	43	3.3	86.6	**-1.9963**	2.913	145.9	mg/L	3	Standard
Fe	54	607.5	5.9	**0.0173**	0.011	63.8	mg/L	550	Standard
Fe	57	1751.8	6.1	**-0.0017**	0.001	84.6	mg/L	1772	Standard
Sc-1	45	346665.8	2.4				mg/L	330668	Standard
Cl	35	2.7	21.7				ug/L	5	Standard
Kr	83	34.2	8.5				ug/L	38	Standard
Br	81	373.3	2.2				ug/L	344	Standard
P	31	393.3	2.2				ug/L	312	Standard
S	34	6386.3	3.1				ug/L	5594	Standard
Sr	88	40.0	57.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		101.968	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: QC Std 7
Report Date/Time: Sunday, July 29, 2012 10:37:15
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	Cd	111	
	Cd	114	
>	In	115	106.824
	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	106.006
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Sunday, July 29, 2012 10:37:15
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Method 6020 - Summary Report

Sample ID: L1207065814
Sample Date/Time: Sunday, July 29, 2012 10:37:56
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	35633.5	0.9	**5487.7534**	150.566	2.7	ug/L	9465	Standard
	Be	9	41.7	48.5	**0.0048**	0.013	269.1	ug/L	10	Standard
	Al	27	1801411.8	0.9	**131.3186**	2.747	2.1	ug/L	7870	Standard
>	**Sc**	45	320108.1	1.2				ug/L	330668	Standard
	Ti	47	4665.7	0.5	**4.2014**	0.023	0.6	ug/L	53	Standard
	V	51	10167.8	3.5	**0.8122**	0.037	4.6	ug/L	2687	Standard
	Cr	52	12114.5	4.1	**0.5666**	0.068	12.0	ug/L	8408	Standard
	Cr	53	1122.5	7.4	**0.7068**	0.070	9.9	ug/L	288	Standard
	Mn	55	193866.9	1.3	**15.5293**	0.223	1.4	ug/L	1080	Standard
	Co	59	3695.5	1.6	**0.4591**	0.005	1.1	ug/L	117	Standard
	Ni	60	1821.4	2.7	**0.8018**	0.023	2.9	ug/L	68	Standard
	Cu	65	987.4	4.4	**0.4190**	0.020	4.7	ug/L	141	Standard
	Zn	66	15050.5	1.3	**15.5681**	0.214	1.4	ug/L	138	Standard
>	**Ge**	72	268708.5	0.4				ug/L	283230	Standard
	As	75	312.8	6.7	**0.5041**	0.022	4.3	ug/L	-198	Standard
	Se	82	26.0	27.8	**0.0341**	0.078	228.1	ug/L	21	Standard
	Se-1	77	111.3	10.4	**-0.1714**	0.171	99.9	ug/L	131	Standard
>	**Ga**	71	838.4	13.1				mg/L	607	Standard
	Rb	85	4217.3	3.1				ug/L	30	Standard
	Y	89	237083.9	0.5				ug/L	251555	Standard
>	**Rh**	103	343.3	8.3				ug/L	335	Standard
	Mo	98	284.4	8.8	**0.0746**	0.007	9.4	ug/L	13	Standard
	Ag	107	59.7	16.1	**0.0008**	0.002	197.3	ug/L	36	Standard
	Cd	111	143.3	11.6	**0.0274**	0.005	18.9	mg/L	49	Standard
	Cd	114	419.4	1.6	**0.0237**	0.001	2.7	ug/L	170	Standard
>	**In**	115	713750.7	0.3				ug/L	727802	Standard
	Sn	118	1151.7	2.3	**0.0547**	0.002	3.8	ug/L	471	Standard
	Sb	123	465.1	15.2	**0.0579**	0.008	14.5	ug/L	39	Standard
	Ba	135	36520.6	1.7	**8.5136**	0.121	1.4	ug/L	25	Standard
	Ce	140	64805.3	1.6				ug/L	25	Standard
>	**Tb**	159	1062389.4	0.9				ug/L	1071747	Standard
	Ho	165	857.0	3.8				ug/L	13	Standard
	Tl	203	233.7	21.0	**0.0131**	0.003	22.3	ug/L	5	Standard
	Tl	205	524.0	22.2	**0.0136**	0.003	21.8	ug/L	10	Standard
	Pb	206	4357.3	2.0	**0.3094**	0.005	1.6	ug/L	382	Standard
	Pb	207	3485.7	0.9	**0.2985**	0.001	0.4	ug/L	306	Standard
	Pb	208	16660.9	1.2	**0.3035**	0.002	0.7	ug/L	1443	Standard
	U	238	431.0	14.9	**0.0283**	0.004	14.5	ug/L	5	Standard
>	**Bi**	209	557517.8	0.6				ug/L	561075	Standard

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Na	23	112303.0	0.9	**6.7573**	0.047	0.7	mg/L	288	Standard
Mg	24	335245.8	1.8	**0.5204**	0.016	3.0	mg/L	218	Standard
K	39	225.0	14.6	**0.0969**	0.030	30.6	mg/L	125	Standard
Ca	43	6.7	43.3	**2.0045**	3.136	156.5	mg/L	3	Standard
Fe	54	2744.1	2.2	**0.5556**	0.023	4.2	mg/L	550	Standard
Fe	57	34582.8	4.8	**0.6741**	0.040	6.0	mg/L	1772	Standard
Sc-1	45	320108.1	1.2				mg/L	330668	Standard
Cl	35	6.0					ug/L	5	Standard
Kr	83	35.2	3.8				ug/L	38	Standard
Br	81	409.2	10.8				ug/L	344	Standard
P	31	497.5	4.8				ug/L	312	Standard
S	34	7608.6	1.0				ug/L	5594	Standard
Sr	88	115.0	11.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.873	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065814
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	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	99.366
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065815
Sample Date/Time: Sunday, July 29, 2012 10:41:05
Number of Replicates: 3
Autosampler Position: 226
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	36442.1	3.1	**5620.2573**	251.403	4.5	ug/L	9465	Standard
	Be	9	50.0	10.0	**0.0097**	0.003	32.1	ug/L	10	Standard
	Al	27	1284667.2	1.9	**93.0708**	2.216	2.4	ug/L	7870	Standard
>	**Sc**	45	321484.9	0.5				ug/L	330668	Standard
	Ti	47	3294.7	1.6	**2.9226**	0.052	1.8	ug/L	53	Standard
	V	51	7735.9	2.1	**0.5421**	0.008	1.5	ug/L	2687	Standard
	Cr	52	10053.0	2.5	**0.2714**	0.020	7.5	ug/L	8408	Standard
	Cr	53	753.4	1.6	**0.4031**	0.017	4.1	ug/L	288	Standard
	Mn	55	28651.1	2.0	**2.1986**	0.022	1.0	ug/L	1080	Standard
	Co	59	1705.1	1.7	**0.2025**	0.006	2.9	ug/L	117	Standard
	Ni	60	1119.7	1.8	**0.4763**	0.012	2.5	ug/L	68	Standard
	Cu	65	775.0	3.8	**0.3103**	0.013	4.2	ug/L	141	Standard
	Zn	66	21482.2	1.8	**22.0472**	0.184	0.8	ug/L	138	Standard
>	**Ge**	72	271581.5	1.1				ug/L	283230	Standard
	As	75	106.9	47.1	**0.2844**	0.052	18.2	ug/L	-198	Standard
	Se	82	254.8	8.0	**2.4433**	0.187	7.6	ug/L	21	Standard
	Se-1	77	270.7	3.4	**2.1976**	0.148	6.7	ug/L	131	Standard
>	**Ga**	71	768.4	4.2				mg/L	607	Standard
	Rb	85	4350.6	10.4				ug/L	30	Standard
	Y	89	237363.9	2.5				ug/L	251555	Standard
>	**Rh**	103	311.7	10.9				ug/L	335	Standard
	Mo	98	259.7	2.3	**0.0662**	0.002	2.3	ug/L	13	Standard
	Ag	107	41.7	9.7	**-0.0023**	0.001	28.8	ug/L	36	Standard
	Cd	111	181.4	6.4	**0.0385**	0.004	9.1	mg/L	49	Standard
	Cd	114	521.3	8.1	**0.0334**	0.004	12.5	ug/L	170	Standard
>	**In**	115	726333.7	0.4				ug/L	727802	Standard
	Sn	118	1105.7	4.2	**0.0489**	0.004	7.5	ug/L	471	Standard
	Sb	123	520.8	19.7	**0.0635**	0.012	18.9	ug/L	39	Standard
	Ba	135	29434.9	0.9	**6.7408**	0.065	1.0	ug/L	25	Standard
	Ce	140	70431.4	2.2				ug/L	25	Standard
>	**Tb**	159	1069204.2	0.2				ug/L	1071747	Standard
	Ho	165	863.7	3.2				ug/L	13	Standard
	Tl	203	209.0	10.9	**0.0115**	0.001	10.9	ug/L	5	Standard
	Tl	205	484.0	6.5	**0.0125**	0.001	5.7	ug/L	10	Standard
	Pb	206	2641.2	2.6	**0.1739**	0.005	3.0	ug/L	382	Standard
	Pb	207	2124.8	3.3	**0.1698**	0.006	3.4	ug/L	306	Standard
	Pb	208	10067.6	1.7	**0.1709**	0.002	0.9	ug/L	1443	Standard
	U	238	626.7	4.2	**0.0410**	0.002	4.1	ug/L	5	Standard
>	**Bi**	209	560213.0	1.0				ug/L	561075	Standard

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	Na	23	128975.0	0.4	**7.7324**	0.068	0.9	mg/L	288	Standard
	Mg	24	367630.2	2.6	**0.5681**	0.017	3.0	mg/L	218	Standard
	K	39	220.0	4.5	**0.0915**	0.010	10.9	mg/L	125	Standard
	Ca	43	5.0	100.0	**0.1515**	5.527	3649.0	mg/L	3	Standard
	Fe	54	1215.7	6.8	**0.1773**	0.019	10.9	mg/L	550	Standard
	Fe	57	13923.1	9.7	**0.2494**	0.029	11.5	mg/L	1772	Standard
>	**Sc-1**	45	321484.9	0.5				mg/L	330668	Standard
	Cl	35	6.0	33.3				ug/L	5	Standard
	Kr	83	34.1	6.5				ug/L	38	Standard
	Br	81	659.2	10.9				ug/L	344	Standard
	P	31	400.0	4.5				ug/L	312	Standard
	S	34	8684.2	2.0				ug/L	5594	Standard
	Sr	88	135.0	6.4				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		95.887	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.798
	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	99.846
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065816
Sample Date/Time: Sunday, July 29, 2012 10:44:16
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	31826.7	2.2	**4795.9587**	63.827	1.3	ug/L	9465	Standard
	Be	9	33.3	122.2	**-0.0000**	0.026	85490.6	ug/L	10	Standard
	Al	27	300675.4	4.9	**21.7229**	1.050	4.8	ug/L	7870	Standard
>	**Sc**	45	315914.9	1.4				ug/L	330668	Standard
	Ti	47	819.4	8.7	**0.6946**	0.061	8.8	ug/L	53	Standard
	V	51	4193.1	2.0	**0.1659**	0.016	9.4	ug/L	2687	Standard
	Cr	52	7929.4	0.9	**-0.0138**	0.009	65.7	ug/L	8408	Standard
	Cr	53	420.8	11.8	**0.1384**	0.040	28.9	ug/L	288	Standard
	Mn	55	66183.6	1.4	**5.1936**	0.154	3.0	ug/L	1080	Standard
	Co	59	653.7	6.9	**0.0696**	0.007	9.4	ug/L	117	Standard
	Ni	60	503.0	20.7	**0.1978**	0.046	23.2	ug/L	68	Standard
	Cu	65	336.0	16.8	**0.0961**	0.026	27.4	ug/L	141	Standard
	Zn	66	2875.6	1.5	**2.8223**	0.092	3.3	ug/L	138	Standard
>	**Ge**	72	271453.8	1.5				ug/L	283230	Standard
	As	75	-40.3	74.9	**0.1305**	0.032	24.2	ug/L	-198	Standard
	Se	82	218.2	3.3	**2.0604**	0.102	4.9	ug/L	21	Standard
	Se-1	77	251.3	10.3	**1.9102**	0.394	20.6	ug/L	131	Standard
>	**Ga**	71	530.0	4.1				mg/L	607	Standard
	Rb	85	8932.6	4.7				ug/L	30	Standard
	Y	89	231275.4	1.7				ug/L	251555	Standard
>	**Rh**	103	325.0	17.3				ug/L	335	Standard
	Mo	98	370.7	12.9	**0.0976**	0.014	14.0	ug/L	13	Standard
	Ag	107	65.7	47.5	**0.0016**	0.005	317.9	ug/L	36	Standard
	Cd	111	304.1	9.3	**0.0769**	0.009	11.8	mg/L	49	Standard
	Cd	114	911.1	11.2	**0.0735**	0.011	14.4	ug/L	170	Standard
>	**In**	115	726444.2	0.5				ug/L	727802	Standard
	Sn	118	1054.7	7.5	**0.0445**	0.007	15.9	ug/L	471	Standard
	Sb	123	329.9	9.1	**0.0409**	0.003	8.3	ug/L	39	Standard
	Ba	135	19370.7	2.1	**4.4313**	0.087	2.0	ug/L	25	Standard
	Ce	140	12026.1	1.4				ug/L	25	Standard
>	**Tb**	159	1061093.8	0.2				ug/L	1071747	Standard
	Ho	165	170.0	6.9				ug/L	13	Standard
	Tl	203	154.7	38.1	**0.0083**	0.003	41.6	ug/L	5	Standard
	Tl	205	354.0	33.6	**0.0092**	0.003	32.3	ug/L	10	Standard
	Pb	206	889.4	5.1	**0.0376**	0.003	7.6	ug/L	382	Standard
	Pb	207	739.0	5.7	**0.0407**	0.003	8.0	ug/L	306	Standard
	Pb	208	3458.2	5.5	**0.0398**	0.003	7.7	ug/L	1443	Standard
	U	238	515.0	16.1	**0.0338**	0.005	15.1	ug/L	5	Standard
>	**Bi**	209	557689.2	1.1				ug/L	561075	Standard

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	Na	23	125507.7	1.0	**7.6575**	0.120	1.6	mg/L	288	Standard
	Mg	24	252002.6	2.5	**0.3963**	0.009	2.3	mg/L	218	Standard
	K	39	396.7	17.0	**0.2592**	0.066	25.4	mg/L	125	Standard
	Ca	43	3.3	86.6	**-1.6292**	3.231	198.3	mg/L	3	Standard
	Fe	54	412.2	3.3	**-0.0181**	0.004	23.3	mg/L	550	Standard
	Fe	57	3700.5	4.8	**0.0420**	0.004	8.7	mg/L	1772	Standard
>	**Sc-1**	45	315914.9	1.4				mg/L	330668	Standard
	Cl	35	5.3	57.3				ug/L	5	Standard
	Kr	83	34.6	9.7				ug/L	38	Standard
	Br	81	575.0	4.1				ug/L	344	Standard
	P	31	273.3	19.7				ug/L	312	Standard
	S	34	8148.9	1.5				ug/L	5594	Standard
	Sr	88	91.7	8.3				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		95.842	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.813
	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	99.397
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065817
Sample Date/Time: Sunday, July 29, 2012 10:47:26
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	30492.3	1.0	**4102.9867**	116.958	2.9	ug/L	9465	Standard
	Be	9	96.7	3.0	**0.0356**	0.002	4.4	ug/L	10	Standard
	Al	27	8268545.8	0.4	**572.1861**	14.670	2.6	ug/L	7870	Standard
>	**Sc**	45	338470.9	2.9				ug/L	330668	Standard
	Ti	47	11862.6	0.6	**10.5384**	0.082	0.8	ug/L	53	Standard
	V	51	19831.3	2.1	**1.8089**	0.046	2.6	ug/L	2687	Standard
	Cr	52	19465.8	1.7	**1.5155**	0.047	3.1	ug/L	8408	Standard
	Cr	53	2271.0	3.4	**1.5957**	0.060	3.8	ug/L	288	Standard
	Mn	55	186708.7	0.9	**14.6600**	0.161	1.1	ug/L	1080	Standard
	Co	59	4643.4	2.3	**0.5687**	0.014	2.4	ug/L	117	Standard
	Ni	60	2908.3	2.9	**1.2718**	0.037	2.9	ug/L	68	Standard
	Cu	65	1842.8	4.5	**0.8232**	0.042	5.1	ug/L	141	Standard
	Zn	66	26404.7	1.6	**26.8904**	0.465	1.7	ug/L	138	Standard
>	**Ge**	72	274043.8	0.2				ug/L	283230	Standard
	As	75	219.3	5.7	**0.4005**	0.013	3.3	ug/L	-198	Standard
	Se	82	187.0	2.3	**1.7118**	0.043	2.5	ug/L	21	Standard
	Se-1	77	233.3	4.7	**1.6068**	0.169	10.5	ug/L	131	Standard
>	**Ga**	71	1703.4	4.4				mg/L	607	Standard
	Rb	85	14777.2	0.9				ug/L	30	Standard
	Y	89	249329.0	2.7				ug/L	251555	Standard
>	**Rh**	103	348.3	4.6				ug/L	335	Standard
	Mo	98	594.8	5.6	**0.1577**	0.010	6.6	ug/L	13	Standard
	Ag	107	52.7	15.2	**-0.0007**	0.001	185.5	ug/L	36	Standard
	Cd	111	77.6	7.8	**0.0055**	0.002	32.5	mg/L	49	Standard
	Cd	114	248.4	9.9	**0.0049**	0.002	47.8	ug/L	170	Standard
>	**In**	115	740579.2	0.7				ug/L	727802	Standard
	Sn	118	1425.7	2.2	**0.0744**	0.003	4.3	ug/L	471	Standard
	Sb	123	303.0	14.5	**0.0370**	0.005	13.2	ug/L	39	Standard
	Ba	135	42111.1	1.0	**9.4627**	0.030	0.3	ug/L	25	Standard
	Ce	140	194912.1	1.1				ug/L	25	Standard
>	**Tb**	159	1077199.2	0.3				ug/L	1071747	Standard
	Ho	165	2448.2	0.6				ug/L	13	Standard
	Tl	203	254.0	7.2	**0.0140**	0.001	7.3	ug/L	5	Standard
	Tl	205	497.0	2.7	**0.0127**	0.000	3.7	ug/L	10	Standard
	Pb	206	7463.2	1.0	**0.5429**	0.009	1.6	ug/L	382	Standard
	Pb	207	5900.5	1.6	**0.5157**	0.003	0.6	ug/L	306	Standard
	Pb	208	28114.5	1.0	**0.5227**	0.005	1.0	ug/L	1443	Standard
	U	238	821.0	3.2	**0.0531**	0.002	4.2	ug/L	5	Standard
>	**Bi**	209	567153.6	1.0				ug/L	561075	Standard

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Na	23	124677.5	0.7	**7.1006**	0.220	3.1	mg/L	288	Standard
Mg	24	221343.7	1.6	**0.3252**	0.013	3.9	mg/L	218	Standard
K	39	450.0	6.2	**0.2802**	0.017	6.2	mg/L	125	Standard
Ca	43	3.3	173.2	**-1.9218**	5.954	309.8	mg/L	3	Standard
Fe	54	3627.6	1.7	**0.7250**	0.014	1.9	mg/L	550	Standard
Fe	57	46685.2	3.8	**0.8706**	0.050	5.8	mg/L	1772	Standard
Sc-1	45	338470.9	2.9				mg/L	330668	Standard
Cl	35	4.0	25.0				ug/L	5	Standard
Kr	83	39.7	5.9				ug/L	38	Standard
Br	81	535.0	2.6				ug/L	344	Standard
P	31	544.2	13.9				ug/L	312	Standard
S	34	7592.7	2.1				ug/L	5594	Standard
Sr	88	73.3	14.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		96.757	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065817
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	Cd	111	
	Cd	114	
>	In	115	101.756
	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	101.083
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065818
Sample Date/Time: Sunday, July 29, 2012 10:50:37
Number of Replicates: 3
Autosampler Position: 229
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	58912.6	0.6	**10314.5735**	124.620	1.2	ug/L	9465	Standard
	Be	9	28.3	53.9	**-0.0034**	0.010	289.3	ug/L	10	Standard
	Al	27	383323.5	0.6	**27.6707**	0.431	1.6	ug/L	7870	Standard
>	**Sc**	45	318004.6	1.4				ug/L	330668	Standard
	Ti	47	1273.1	17.4	**1.1011**	0.198	18.0	ug/L	53	Standard
	V	51	4121.6	1.1	**0.1574**	0.004	2.3	ug/L	2687	Standard
	Cr	52	7977.4	1.3	**-0.0094**	0.008	83.4	ug/L	8408	Standard
	Cr	53	1037.5	1.3	**0.6284**	0.011	1.8	ug/L	288	Standard
	Mn	55	51558.6	1.8	**4.0186**	0.049	1.2	ug/L	1080	Standard
	Co	59	747.4	4.5	**0.0812**	0.004	4.5	ug/L	117	Standard
	Ni	60	724.7	5.9	**0.2974**	0.017	5.8	ug/L	68	Standard
	Cu	65	293.7	6.3	**0.0753**	0.010	13.1	ug/L	141	Standard
	Zn	66	2681.2	3.4	**2.6152**	0.078	3.0	ug/L	138	Standard
>	**Ge**	72	271934.0	0.6				ug/L	283230	Standard
	As	75	-50.8	114.1	**0.1193**	0.061	51.1	ug/L	-198	Standard
	Se	82	306.5	5.0	**2.9856**	0.142	4.8	ug/L	21	Standard
	Se-1	77	299.7	4.5	**2.6250**	0.177	6.7	ug/L	131	Standard
>	**Ga**	71	658.3	16.2				mg/L	607	Standard
	Rb	85	1375.1	6.6				ug/L	30	Standard
	Y	89	229874.2	1.3				ug/L	251555	Standard
>	**Rh**	103	355.0	4.2				ug/L	335	Standard
	Mo	98	165.9	10.0	**0.0393**	0.005	12.8	ug/L	13	Standard
	Ag	107	47.0	9.3	**-0.0015**	0.001	54.5	ug/L	36	Standard
	Cd	111	83.9	7.0	**0.0078**	0.002	27.9	mg/L	49	Standard
	Cd	114	268.5	4.0	**0.0072**	0.001	13.3	ug/L	170	Standard
>	**In**	115	733441.3	1.7				ug/L	727802	Standard
	Sn	118	689.0	4.4	**0.0120**	0.002	13.3	ug/L	471	Standard
	Sb	123	137.8	15.0	**0.0180**	0.002	13.3	ug/L	39	Standard
	Ba	135	22247.0	1.5	**5.0428**	0.061	1.2	ug/L	25	Standard
	Ce	140	6470.0	1.3				ug/L	25	Standard
>	**Tb**	159	1068606.0	1.3				ug/L	1071747	Standard
	Ho	165	98.0	10.4				ug/L	13	Standard
	Tl	203	446.0	6.4	**0.0261**	0.001	4.7	ug/L	5	Standard
	Tl	205	994.0	6.4	**0.0259**	0.001	4.6	ug/L	10	Standard
	Pb	206	1070.0	4.5	**0.0523**	0.004	8.5	ug/L	382	Standard
	Pb	207	847.0	1.4	**0.0513**	0.003	4.9	ug/L	306	Standard
	Pb	208	3995.5	2.3	**0.0511**	0.003	5.4	ug/L	1443	Standard
	U	238	242.3	8.5	**0.0159**	0.001	6.8	ug/L	5	Standard
>	**Bi**	209	554283.3	1.8				ug/L	561075	Standard

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	Na	23	139294.1	1.0	**8.4465**	0.127	1.5	mg/L	288	Standard
	Mg	24	794200.9	0.8	**1.2404**	0.022	1.7	mg/L	218	Standard
	K	39	261.7	7.2	**0.1322**	0.021	15.6	mg/L	125	Standard
	Ca	43	15.0	33.3	**11.3798**	5.666	49.8	mg/L	3	Standard
	Fe	54	589.3	6.3	**0.0252**	0.011	42.9	mg/L	550	Standard
	Fe	57	6219.6	3.3	**0.0936**	0.006	6.4	mg/L	1772	Standard
>	**Sc-1**	45	318004.6	1.4				mg/L	330668	Standard
	Cl	35	26.7	9.4				ug/L	5	Standard
	Kr	83	35.7	14.0				ug/L	38	Standard
	Br	81	1335.1	4.7				ug/L	344	Standard
	P	31	255.8	5.6				ug/L	312	Standard
	S	34	10942.3	2.0				ug/L	5594	Standard
	Sr	88	198.3	7.7				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		96.012	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	100.775
	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	98.789
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065819
Sample Date/Time: Sunday, July 29, 2012 10:53:46
Number of Replicates: 3
Autosampler Position: 230
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	83710.7	2.5	**15721.5946**	649.089	4.1	ug/L	9465	Standard
	Be	9	18.3	56.8	**-0.0095**	0.007	70.8	ug/L	10	Standard
	Al	27	61884.7	5.7	**4.0650**	0.320	7.9	ug/L	7870	Standard
>	**Sc**	45	312331.7	1.2				ug/L	330668	Standard
	Ti	47	329.0	3.8	**0.2569**	0.014	5.6	ug/L	53	Standard
	V	51	2975.8	1.9	**0.0403**	0.008	20.6	ug/L	2687	Standard
	Cr	52	7957.4	2.4	**0.0033**	0.037	1108.5	ug/L	8408	Standard
	Cr	53	1090.0	2.0	**0.6824**	0.022	3.3	ug/L	288	Standard
	Mn	55	124272.3	0.9	**9.9453**	0.127	1.3	ug/L	1080	Standard
	Co	59	500.0	10.6	**0.0509**	0.007	14.3	ug/L	117	Standard
	Ni	60	659.3	1.1	**0.2722**	0.005	1.8	ug/L	68	Standard
	Cu	65	373.7	2.0	**0.1168**	0.004	3.4	ug/L	141	Standard
	Zn	66	2506.5	1.9	**2.4718**	0.055	2.2	ug/L	138	Standard
>	**Ge**	72	268156.6	1.0				ug/L	283230	Standard
	As	75	-29.2	24.1	**0.1417**	0.007	5.1	ug/L	-198	Standard
	Se	82	57.4	4.4	**0.3709**	0.032	8.5	ug/L	21	Standard
	Se-1	77	133.0	4.7	**0.1607**	0.085	52.6	ug/L	131	Standard
>	**Ga**	71	553.3	10.0				mg/L	607	Standard
	Rb	85	1873.4	7.8				ug/L	30	Standard
	Y	89	233133.5	1.4				ug/L	251555	Standard
>	**Rh**	103	435.0	7.0				ug/L	335	Standard
	Mo	98	210.0	6.6	**0.0520**	0.003	6.2	ug/L	13	Standard
	Ag	107	115.7	105.8	**0.0094**	0.019	204.6	ug/L	36	Standard
	Cd	111	186.5	58.1	**0.0396**	0.033	82.7	mg/L	49	Standard
	Cd	114	579.5	60.3	**0.0390**	0.035	89.4	ug/L	170	Standard
>	**In**	115	728354.9	1.4				ug/L	727802	Standard
	Sn	118	1087.7	20.6	**0.0469**	0.018	38.6	ug/L	471	Standard
	Sb	123	262.6	96.6	**0.0326**	0.029	90.2	ug/L	39	Standard
	Ba	135	29628.3	1.9	**6.7661**	0.060	0.9	ug/L	25	Standard
	Ce	140	1136.7	8.6				ug/L	25	Standard
>	**Tb**	159	1065339.6	0.4				ug/L	1071747	Standard
	Ho	165	29.3	16.1				ug/L	13	Standard
	Tl	203	609.7	43.6	**0.0367**	0.016	44.9	ug/L	5	Standard
	Tl	205	1361.1	37.6	**0.0362**	0.014	37.6	ug/L	10	Standard
	Pb	206	596.7	23.6	**0.0158**	0.011	71.5	ug/L	382	Standard
	Pb	207	509.3	21.0	**0.0203**	0.010	50.7	ug/L	306	Standard
	Pb	208	2307.4	21.5	**0.0180**	0.010	56.4	ug/L	1443	Standard
	U	238	1787.8	5.6	**0.1208**	0.007	5.7	ug/L	5	Standard
>	**Bi**	209	544382.8	0.5				ug/L	561075	Standard

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	Na	23	149426.7	1.9	**9.2297**	0.267	2.9	mg/L	288	Standard
	Mg	24	1844205.5	22.5	**2.9344**	0.677	23.1	mg/L	218	Standard
	K	39	435.0	3.0	**0.2990**	0.015	5.1	mg/L	125	Standard
	Ca	43	15.0	33.3	**11.6478**	5.689	48.8	mg/L	3	Standard
	Fe	54	342.9	12.4	**-0.0345**	0.011	31.5	mg/L	550	Standard
	Fe	57	3138.7	1.8	**0.0311**	0.002	6.3	mg/L	1772	Standard
>	**Sc-1**	45	312331.7	1.2				mg/L	330668	Standard
	Cl	35	31.0	8.5				ug/L	5	Standard
	Kr	83	35.6	4.8				ug/L	38	Standard
	Br	81	1322.6	3.6				ug/L	344	Standard
	P	31	260.8	8.4				ug/L	312	Standard
	S	34	19133.7	2.3				ug/L	5594	Standard
	Sr	88	438.3	6.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		94.678	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	100.076
	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	97.025
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 10:56:58
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: JYH 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	7	9234.5	2.3	**-88.6010**	20.204	22.8	ug/L	9465	Standard
	Be	9	88363.6	0.9	**49.3209**	0.145	0.3	ug/L	10	Standard
	Al	27	710500.3	1.8	**46.1482**	0.469	1.0	ug/L	7870	Standard
>	**Sc**	45	356302.7	1.1				ug/L	330668	Standard
	Ti	47	120838.0	1.3	**99.5497**	0.895	0.9	ug/L	53	Standard
	V	51	493704.2	0.7	**47.7739**	0.259	0.5	ug/L	2687	Standard
	Cr	52	398614.8	1.4	**48.0702**	0.966	2.0	ug/L	8408	Standard
	Cr	53	68340.5	0.9	**49.6558**	0.546	1.1	ug/L	288	Standard
	Mn	55	707827.7	0.7	**51.5653**	0.532	1.0	ug/L	1080	Standard
	Co	59	443006.9	0.6	**51.2711**	0.150	0.3	ug/L	117	Standard
	Ni	60	118284.6	0.3	**48.8677**	0.311	0.6	ug/L	68	Standard
	Cu	65	110257.4	0.4	**49.1915**	0.133	0.3	ug/L	141	Standard
	Zn	66	52416.8	0.4	**49.4513**	0.444	0.9	ug/L	138	Standard
>	**Ge**	72	296584.3	0.6				ug/L	283230	Standard
	As	75	51977.6	0.3	**50.0682**	0.203	0.4	ug/L	-198	Standard
	Se	82	5293.1	1.7	**50.8922**	0.985	1.9	ug/L	21	Standard
	Se-1	77	3871.8	2.0	**51.2352**	0.940	1.8	ug/L	131	Standard
>	**Ga**	71	636.7	6.5				mg/L	607	Standard
	Rb	85	723.4	5.4				ug/L	30	Standard
	Y	89	259404.1	2.2				ug/L	251555	Standard
>	**Rh**	103	390.0	10.0				ug/L	335	Standard
	Mo	98	363241.2	0.4	**92.7946**	0.160	0.2	ug/L	13	Standard
	Ag	107	330346.8	0.3	**47.9586**	0.334	0.7	ug/L	36	Standard
	Cd	111	188409.6	1.2	**53.2983**	0.656	1.2	mg/L	49	Standard
	Cd	114	544422.3	0.8	**50.6458**	0.153	0.3	ug/L	170	Standard
>	**In**	115	803093.7	0.5				ug/L	727802	Standard
	Sn	118	640542.1	0.7	**50.4395**	0.485	1.0	ug/L	471	Standard
	Sb	123	472727.5	0.8	**50.6756**	0.510	1.0	ug/L	39	Standard
	Ba	135	244548.3	1.3	**50.7258**	0.712	1.4	ug/L	25	Standard
	Ce	140	939.4	4.2				ug/L	25	Standard
>	**Tb**	159	1156784.9	0.7				ug/L	1071747	Standard
	Ho	165	21.3	7.2				ug/L	13	Standard
	Tl	203	855406.5	0.8	**49.1219**	0.300	0.6	ug/L	5	Standard
	Tl	205	1975937.9	0.3	**48.6506**	0.198	0.4	ug/L	10	Standard
	Pb	206	665180.4	0.6	**49.4874**	0.186	0.4	ug/L	382	Standard
	Pb	207	563944.8	0.5	**50.2494**	0.154	0.3	ug/L	306	Standard
	Pb	208	2608683.1	0.5	**49.4575**	0.093	0.2	ug/L	1443	Standard
	U	238	813813.1	0.2	**51.1079**	0.100	0.2	ug/L	5	Standard
>	**Bi**	209	586925.6	0.3				ug/L	561075	Standard

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	Na	23	114089.6	0.4	**6.1645**	0.052	0.8	mg/L	288	Standard
	Mg	24	3348346.6	2.0	**4.6656**	0.052	1.1	mg/L	218	Standard
	K	39	5689.4	5.2	**4.5647**	0.208	4.6	mg/L	125	Standard
	Ca	43	5.0	100.0	**-0.4124**	4.960	1202.6	mg/L	3	Standard
	Fe	54	22287.2	3.4	**4.8158**	0.157	3.3	mg/L	550	Standard
	Fe	57	305939.1	3.8	**5.5962**	0.167	3.0	mg/L	1772	Standard
>	**Sc-1**	45	356302.7	1.1				mg/L	330668	Standard
	Cl	35	6.7	37.7				ug/L	5	Standard
	Kr	83	40.7	10.7				ug/L	38	Standard
	Br	81	465.8	13.9				ug/L	344	Standard
	P	31	415.0	4.3				ug/L	312	Standard
	S	34	6145.4	0.5				ug/L	5594	Standard
	Sr	88	41.7	18.3				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	92.296		
>	Sc	45			
	Ti	47	99.550		
	V	51	95.548		
	Cr	52	96.140		
	Cr	53			
	Mn	55	103.131		
	Co	59	102.542		
	Ni	60	97.735		
	Cu	65	98.383		
	Zn	66	98.903		
>	Ge	72		104.715	
	As	75	100.136		
	Se	82	101.784		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	92.795		
	Ag	107	95.917		

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	Cd	111	106.597	
	Cd	114		
>	In	115		110.345
	Sn	118	100.879	
	Sb	123	101.351	
	Ba	135	101.452	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.244	
	Tl	205		
	Pb	206	98.975	
	Pb	207	100.499	
	Pb	208	98.915	
	U	238	102.216	
>	Bi	209		104.607
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 11:00:08
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: JYH 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	7	9189.5	4.2	**-10.8922**	85.327	783.4	ug/L	9465	Standard
	Be	9	8.3	91.7	**-0.0163**	0.005	28.1	ug/L	10	Standard
	Al	27	7762.0	6.7	**-0.0439**	0.048	108.3	ug/L	7870	Standard
>	**Sc**	45	339136.1	2.1				ug/L	330668	Standard
	Ti	47	55.3	13.8	**0.0037**	0.007	192.4	ug/L	53	Standard
	V	51	2381.6	2.5	**-0.0426**	0.010	22.6	ug/L	2687	Standard
	Cr	52	7356.5	0.6	**-0.1527**	0.019	12.4	ug/L	8408	Standard
	Cr	53	240.0	9.9	**-0.0178**	0.017	94.2	ug/L	288	Standard
	Mn	55	1076.7	4.6	**-0.0038**	0.003	66.0	ug/L	1080	Standard
	Co	59	139.0	13.4	**0.0034**	0.002	58.6	ug/L	117	Standard
	Ni	60	70.3	12.1	**0.0005**	0.003	612.0	ug/L	68	Standard
	Cu	65	143.7	5.3	**-0.0020**	0.004	211.2	ug/L	141	Standard
	Zn	66	155.3	13.6	**-0.0013**	0.018	1424.9	ug/L	138	Standard
>	**Ge**	72	289496.2	1.5				ug/L	283230	Standard
	As	75	-170.5	28.8	**0.0054**	0.046	855.7	ug/L	-198	Standard
	Se	82	24.6	32.2	**0.0016**	0.081	5078.8	ug/L	21	Standard
	Se-1	77	120.7	11.2	**-0.1627**	0.164	100.8	ug/L	131	Standard
>	**Ga**	71	573.3	5.0				mg/L	607	Standard
	Rb	85	16.7	34.6				ug/L	30	Standard
	Y	89	255316.7	1.0				ug/L	251555	Standard
>	**Rh**	103	320.0	4.1				ug/L	335	Standard
	Mo	98	196.3	4.4	**0.0435**	0.002	3.8	ug/L	13	Standard
	Ag	107	85.7	17.9	**0.0036**	0.002	63.9	ug/L	36	Standard
	Cd	111	71.5	17.8	**0.0022**	0.004	161.9	mg/L	49	Standard
	Cd	114	202.5	1.9	**-0.0012**	0.000	12.0	ug/L	170	Standard
>	**In**	115	794603.3	1.2				ug/L	727802	Standard
	Sn	118	877.4	6.6	**0.0224**	0.004	17.9	ug/L	471	Standard
	Sb	123	2411.7	7.9	**0.2630**	0.018	7.0	ug/L	39	Standard
	Ba	135	44.7	20.1	**-0.0022**	0.002	83.3	ug/L	25	Standard
	Ce	140	27.3	10.6				ug/L	25	Standard
>	**Tb**	159	1127209.8	0.7				ug/L	1071747	Standard
	Ho	165	13.3	37.7				ug/L	13	Standard
	Tl	203	64.3	28.9	**0.0026**	0.001	39.9	ug/L	5	Standard
	Tl	205	161.0	42.5	**0.0040**	0.002	41.8	ug/L	10	Standard
	Pb	206	420.3	6.7	**-0.0008**	0.002	239.0	ug/L	382	Standard
	Pb	207	344.3	4.0	**0.0020**	0.001	52.4	ug/L	306	Standard
	Pb	208	1646.0	4.9	**0.0020**	0.001	72.4	ug/L	1443	Standard
	U	238	77.7	29.8	**0.0046**	0.001	30.9	ug/L	5	Standard
>	**Bi**	209	587537.5	0.5				ug/L	561075	Standard

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Na	23	451.7	11.2	**-0.0104**	0.003	25.5	mg/L	288	Standard
Mg	24	415.0	30.4	**0.0009**	0.000	19.6	mg/L	218	Standard
K	39	153.3	28.5	**0.0240**	0.040	166.6	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.5766**	3.088	86.3	mg/L	3	Standard
Fe	54	514.4	25.8	**-0.0015**	0.030	1921.8	mg/L	550	Standard
Fe	57	2000.1	8.0	**0.0039**	0.003	65.3	mg/L	1772	Standard
Sc-1	45	339136.1	2.1				mg/L	330668	Standard
Cl	35	5.7	36.7				ug/L	5	Standard
Kr	83	39.7	14.9				ug/L	38	Standard
Br	81	396.7	11.1				ug/L	344	Standard
P	31	339.2	16.0				ug/L	312	Standard
S	34	6005.4	1.2				ug/L	5594	Standard
Sr	88	50.0	36.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		102.213	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	109.179
	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	104.716
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Sunday, July 29, 2012 11:03:21
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: JYH 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	7	8947.6	3.5	**-2.3042**	51.502	2235.1	ug/L	9465	Standard
	Be	9	21.7	26.6	**-0.0080**	0.004	46.2	ug/L	10	Standard
	Al	27	6201.3	8.9	**-0.1375**	0.055	39.7	ug/L	7870	Standard
>	**Sc**	45	328582.1	3.2				ug/L	330668	Standard
	Ti	47	67.7	8.4	**0.0159**	0.004	24.4	ug/L	53	Standard
	V	51	6080.2	1.0	**0.3460**	0.012	3.6	ug/L	2687	Standard
	Cr	52	13249.5	1.3	**0.6461**	0.012	1.9	ug/L	8408	Standard
	Cr	53	1260.9	5.8	**0.7763**	0.065	8.4	ug/L	288	Standard
	Mn	55	7725.3	2.4	**0.5123**	0.024	4.7	ug/L	1080	Standard
	Co	59	3443.1	2.8	**0.4086**	0.013	3.2	ug/L	117	Standard
	Ni	60	3689.1	2.2	**1.5842**	0.043	2.7	ug/L	68	Standard
	Cu	65	1728.4	2.3	**0.7490**	0.006	0.8	ug/L	141	Standard
	Zn	66	8049.8	3.1	**7.9077**	0.278	3.5	ug/L	138	Standard
>	**Ge**	72	280377.7	2.0				ug/L	283230	Standard
	As	75	240.8	12.5	**0.4170**	0.027	6.5	ug/L	-198	Standard
	Se	82	56.2	12.1	**0.3301**	0.059	17.7	ug/L	21	Standard
	Se-1	77	139.3	5.2	**0.1647**	0.091	55.3	ug/L	131	Standard
>	**Ga**	71	548.3	19.6				mg/L	607	Standard
	Rb	85	16.7	17.3				ug/L	30	Standard
	Y	89	241359.1	1.3				ug/L	251555	Standard
>	**Rh**	103	311.7	12.5				ug/L	335	Standard
	Mo	98	120.3	55.0	**0.0256**	0.018	69.4	ug/L	13	Standard
	Ag	107	2607.2	4.6	**0.3954**	0.016	4.0	ug/L	36	Standard
	Cd	111	927.7	6.6	**0.2621**	0.016	6.2	mg/L	49	Standard
	Cd	114	2710.4	4.3	**0.2493**	0.013	5.0	ug/L	170	Standard
>	**In**	115	751716.2	1.5				ug/L	727802	Standard
	Sn	118	690.3	16.6	**0.0107**	0.009	88.8	ug/L	471	Standard
	Sb	123	3974.8	2.6	**0.4571**	0.017	3.8	ug/L	39	Standard
	Ba	135	3195.3	3.3	**0.6969**	0.026	3.8	ug/L	25	Standard
	Ce	140	42.0	26.8				ug/L	25	Standard
>	**Tb**	159	1086172.7	1.7				ug/L	1071747	Standard
	Ho	165	13.0	13.3				ug/L	13	Standard
	Tl	203	1422.1	7.5	**0.0830**	0.006	7.3	ug/L	5	Standard
	Tl	205	3239.7	9.2	**0.0821**	0.007	8.8	ug/L	10	Standard
	Pb	206	2991.0	3.9	**0.1970**	0.007	3.7	ug/L	382	Standard
	Pb	207	2491.2	3.9	**0.1999**	0.009	4.7	ug/L	306	Standard
	Pb	208	11732.8	1.6	**0.1998**	0.004	2.2	ug/L	1443	Standard
	U	238	6118.9	0.5	**0.3952**	0.007	1.8	ug/L	5	Standard
>	**Bi**	209	570459.8	1.4				ug/L	561075	Standard

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	Na	23	835.0	63.4	**0.0137**	0.033	243.0	mg/L	288	Standard
	Mg	24	1148.4	86.6	**0.0021**	0.002	76.9	mg/L	218	Standard
	K	39	125.0	14.4	**0.0029**	0.019	663.7	mg/L	125	Standard
	Ca	43	1.7	173.2	**-3.5970**	3.053	84.9	mg/L	3	Standard
	Fe	54	524.9	3.8	**0.0051**	0.009	172.0	mg/L	550	Standard
	Fe	57	1895.1	8.7	**0.0031**	0.004	127.6	mg/L	1772	Standard
>	**Sc-1**	45	328582.1	3.2				mg/L	330668	Standard
	Cl	35	3.3	45.8				ug/L	5	Standard
	Kr	83	36.8	7.8				ug/L	38	Standard
	Br	81	405.8	5.2				ug/L	344	Standard
	P	31	365.0	5.4				ug/L	312	Standard
	S	34	5799.4	2.5				ug/L	5594	Standard
	Sr	88	26.7	10.8				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27			
>	Sc	45			
	Ti	47			
	V	51	86.507		
	Cr	52	80.766		
	Cr	53			
	Mn	55	102.457		
	Co	59	102.148		
	Ni	60	99.014		
	Cu	65	93.622		
	Zn	66	126.523		
>	Ge	72		98.993	
	As	75	104.246		
	Se	82	82.527		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107	98.857		

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	Cd	111	109.220	
	Cd	114		
>	In	115		103.286
	Sn	118		
	Sb	123	114.282	
	Ba	135	92.915	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	103.704	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	99.905	
	U	238	98.800	
>	Bi	209		101.673
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 8
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Method 6020 - Summary Report

Sample ID: PBW 6P WG404095-03
Sample Date/Time: Sunday, July 29, 2012 11:10:18
Number of Replicates: 3
Autosampler Position: 401
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	8840.9	1.7	**-19.9649**	47.003	235.4	ug/L	9465	Standard
	Be	9	6.7	114.6	**-0.0172**	0.005	26.6	ug/L	10	Standard
	Al	27	8727.5	1.9	**0.0429**	0.013	30.3	ug/L	7870	Standard
>	**Sc**	45	328056.9	3.9				ug/L	330668	Standard
	Ti	47	46.0	26.4	**-0.0024**	0.011	464.7	ug/L	53	Standard
	V	51	2332.7	3.4	**-0.0369**	0.011	29.9	ug/L	2687	Standard
	Cr	52	7361.8	1.6	**-0.1097**	0.036	33.2	ug/L	8408	Standard
	Cr	53	230.8	3.8	**-0.0168**	0.008	47.3	ug/L	288	Standard
	Mn	55	1048.7	5.2	**-0.0022**	0.006	284.5	ug/L	1080	Standard
	Co	59	111.7	6.8	**0.0007**	0.001	151.2	ug/L	117	Standard
	Ni	60	246.0	6.5	**0.0797**	0.008	9.9	ug/L	68	Standard
	Cu	65	128.7	5.8	**-0.0063**	0.004	63.1	ug/L	141	Standard
	Zn	66	1670.8	4.7	**1.5404**	0.039	2.5	ug/L	138	Standard
>	**Ge**	72	277016.9	2.6				ug/L	283230	Standard
	As	75	-175.3	7.8	**-0.0075**	0.015	202.0	ug/L	-198	Standard
	Se	82	22.0	10.7	**-0.0158**	0.025	160.2	ug/L	21	Standard
	Se-1	77	125.3	8.0	**-0.0129**	0.195	1509.9	ug/L	131	Standard
>	**Ga**	71	571.7	4.5				mg/L	607	Standard
	Rb	85	10.0					ug/L	30	Standard
	Y	89	238297.9	4.0				ug/L	251555	Standard
>	**Rh**	103	333.3	6.1				ug/L	335	Standard
	Mo	98	36.5	39.7	**0.0031**	0.005	147.1	ug/L	13	Standard
	Ag	107	50.7	18.3	**-0.0010**	0.001	151.0	ug/L	36	Standard
	Cd	111	52.2	11.0	**-0.0022**	0.001	52.9	mg/L	49	Standard
	Cd	114	163.5	2.0	**-0.0036**	0.001	25.2	ug/L	170	Standard
>	**In**	115	738857.1	4.4				ug/L	727802	Standard
	Sn	118	613.3	2.3	**0.0052**	0.004	67.3	ug/L	471	Standard
	Sb	123	342.9	24.1	**0.0421**	0.012	27.4	ug/L	39	Standard
	Ba	135	36.7	16.4	**-0.0033**	0.001	31.8	ug/L	25	Standard
	Ce	140	31.7	28.7				ug/L	25	Standard
>	**Tb**	159	1070080.1	4.4				ug/L	1071747	Standard
	Ho	165	12.0	16.7				ug/L	13	Standard
	Tl	203	16.7	24.2	**-0.0001**	0.000	433.4	ug/L	5	Standard
	Tl	205	44.7	14.9	**0.0012**	0.000	14.6	ug/L	10	Standard
	Pb	206	393.3	4.1	**-0.0013**	0.001	101.0	ug/L	382	Standard
	Pb	207	291.0	7.8	**-0.0014**	0.002	173.6	ug/L	306	Standard
	Pb	208	1473.4	6.3	**0.0001**	0.001	712.9	ug/L	1443	Standard
	U	238	7.0	24.7	**0.0002**	0.000	56.7	ug/L	5	Standard
>	**Bi**	209	559024.2	3.7				ug/L	561075	Standard

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Na	23	356.7	6.6	**-0.0151**	0.002	12.8	mg/L	288	Standard
Mg	24	276.7	8.1	**0.0007**	0.000	3.8	mg/L	218	Standard
K	39	126.7	21.7	**0.0045**	0.026	586.1	mg/L	125	Standard
Ca	43	6.7	114.6	**1.7259**	8.173	473.5	mg/L	3	Standard
Fe	54	545.9	11.1	**0.0106**	0.019	181.7	mg/L	550	Standard
Fe	57	1688.4	5.2	**-0.0009**	0.003	321.4	mg/L	1772	Standard
> **Sc-1**	45	328056.9	3.9				mg/L	330668	Standard
Cl	35	4.3	13.3				ug/L	5	Standard
Kr	83	36.6	5.0				ug/L	38	Standard
Br	81	391.7	4.3				ug/L	344	Standard
P	31	352.5	9.3				ug/L	312	Standard
S	34	5805.3	1.4				ug/L	5594	Standard
Sr	88	43.3	17.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		97.806	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	101.519
	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	99.634
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 6P WG404095-03
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Method 6020 - Summary Report

Sample ID: LCSW 6P WG404095-04
Sample Date/Time: Sunday, July 29, 2012 11:13:27
Number of Replicates: 3
Autosampler Position: 402
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9184.5	2.2	**-33.2727**	69.633	209.3	ug/L	9465	Standard
	Be	9	43246.6	2.0	**25.0463**	0.775	3.1	ug/L	10	Standard
	Al	27	417884.7	4.4	**27.9262**	0.080	0.3	ug/L	7870	Standard
>	**Sc**	45	343497.6	4.1				ug/L	330668	Standard
	Ti	47	91.3	2.8	**0.0330**	0.003	9.1	ug/L	53	Standard
	V	51	246778.5	2.6	**23.9885**	0.404	1.7	ug/L	2687	Standard
	Cr	52	205483.8	2.3	**24.5199**	0.573	2.3	ug/L	8408	Standard
	Cr	53	34482.6	5.2	**25.2058**	0.794	3.2	ug/L	288	Standard
	Mn	55	352614.1	2.9	**25.9097**	0.375	1.4	ug/L	1080	Standard
	Co	59	221670.7	2.4	**25.9133**	0.225	0.9	ug/L	117	Standard
	Ni	60	59337.3	2.6	**24.7540**	0.437	1.8	ug/L	68	Standard
	Cu	65	56393.5	3.3	**25.3830**	0.270	1.1	ug/L	141	Standard
	Zn	66	27744.0	1.8	**26.3786**	0.528	2.0	ug/L	138	Standard
>	**Ge**	72	293589.8	3.0				ug/L	283230	Standard
	As	75	24777.1	2.6	**24.2064**	0.584	2.4	ug/L	-198	Standard
	Se	82	2430.5	2.4	**23.4811**	0.439	1.9	ug/L	21	Standard
	Se-1	77	1771.4	4.0	**22.6830**	0.679	3.0	ug/L	131	Standard
>	**Ga**	71	685.0	14.9				mg/L	607	Standard
	Rb	85	43.3	69.6				ug/L	30	Standard
	Y	89	259833.3	2.6				ug/L	251555	Standard
>	**Rh**	103	370.0	3.6				ug/L	335	Standard
	Mo	98	119.6	79.7	**0.0237**	0.025	104.7	ug/L	13	Standard
	Ag	107	156377.7	3.2	**22.7971**	0.519	2.3	ug/L	36	Standard
	Cd	111	90362.1	2.3	**25.6662**	0.379	1.5	mg/L	49	Standard
	Cd	114	260299.7	1.4	**24.3137**	0.159	0.7	ug/L	170	Standard
>	**In**	115	799474.1	1.0				ug/L	727802	Standard
	Sn	118	878.0	17.8	**0.0221**	0.013	58.3	ug/L	471	Standard
	Sb	123	224203.9	2.1	**24.1424**	0.331	1.4	ug/L	39	Standard
	Ba	135	113653.8	1.8	**23.6741**	0.229	1.0	ug/L	25	Standard
	Ce	140	200.7	3.3				ug/L	25	Standard
>	**Tb**	159	1134219.7	0.6				ug/L	1071747	Standard
	Ho	165	17.7	14.2				ug/L	13	Standard
	Tl	203	423490.2	1.7	**24.4404**	0.147	0.6	ug/L	5	Standard
	Tl	205	978344.5	1.8	**24.2088**	0.182	0.8	ug/L	10	Standard
	Pb	206	329206.0	1.8	**24.5985**	0.169	0.7	ug/L	382	Standard
	Pb	207	280505.4	3.1	**25.1023**	0.509	2.0	ug/L	306	Standard
	Pb	208	1296428.9	2.2	**24.6864**	0.265	1.1	ug/L	1443	Standard
	U	238	392255.3	2.7	**24.7555**	0.402	1.6	ug/L	5	Standard
>	**Bi**	209	583975.0	1.1				ug/L	561075	Standard

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Na	23	920.0	13.5	**0.0159**	0.009	56.5	mg/L	288	Standard
Mg	24	2703.6	6.0	**0.0042**	0.000	9.4	mg/L	218	Standard
K	39	141.7	7.3	**0.0118**	0.006	47.5	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	762.6	3.6	**0.0544**	0.011	20.4	mg/L	550	Standard
Fe	57	2096.8	3.9	**0.0053**	0.003	53.4	mg/L	1772	Standard
> **Sc-1**	45	343497.6	4.1				mg/L	330668	Standard
Cl	35	3.3	17.3				ug/L	5	Standard
Kr	83	39.9	7.5				ug/L	38	Standard
Br	81	454.2	5.1				ug/L	344	Standard
P	31	494.2	4.6				ug/L	312	Standard
S	34	6000.4	5.4				ug/L	5594	Standard
Sr	88	51.7	31.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		103.658	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	109.848
	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	104.081
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 6P WG404095-04
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Method 6020 - Summary Report

Sample ID: L1207063602 WG404095-01
Sample Date/Time: Sunday, July 29, 2012 11:16:37
Number of Replicates: 3
Autosampler Position: 403
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	393306.8	6.6	**65676.7642**	667.639	1.0	ug/L	9465	Standard
	Be	9	21.7	26.6	**-0.0099**	0.003	28.9	ug/L	10	Standard
	Al	27	208791.8	7.1	**12.2715**	0.175	1.4	ug/L	7870	Standard
>	**Sc**	45	380508.8	5.7				ug/L	330668	Standard
	Ti	47	239.7	6.5	**0.1551**	0.009	5.6	ug/L	53	Standard
	V	51	3483.3	5.5	**0.0601**	0.011	17.9	ug/L	2687	Standard
	Cr	52	14495.3	5.5	**0.7112**	0.033	4.6	ug/L	8408	Standard
	Cr	53	1227.5	8.7	**0.7007**	0.045	6.4	ug/L	288	Standard
	Mn	55	1326155.8	2.8	**97.0904**	2.521	2.6	ug/L	1080	Standard
	Co	59	5340.9	4.8	**0.6074**	0.009	1.5	ug/L	117	Standard
	Ni	60	18891.5	10.7	**7.7916**	0.409	5.3	ug/L	68	Standard
	Cu	65	1733.8	5.8	**0.7092**	0.004	0.6	ug/L	141	Standard
	Zn	66	2844.9	6.8	**2.5484**	0.064	2.5	ug/L	138	Standard
>	**Ge**	72	295615.6	5.5				ug/L	283230	Standard
	As	75	2815.2	4.2	**2.8853**	0.039	1.3	ug/L	-198	Standard
	Se	82	223.4	9.2	**1.9237**	0.190	9.9	ug/L	21	Standard
	Se-1	77	208.7	6.6	**1.0142**	0.087	8.6	ug/L	131	Standard
>	**Ga**	71	796.7	11.7				mg/L	607	Standard
	Rb	85	51465.6	0.8				ug/L	30	Standard
	Y	89	277326.6	5.5				ug/L	251555	Standard
>	**Rh**	103	518.3	11.2				ug/L	335	Standard
	Mo	98	634.9	4.2	**0.1439**	0.005	3.5	ug/L	13	Standard
	Ag	107	108.0	28.8	**0.0056**	0.004	69.3	ug/L	36	Standard
	Cd	111	295.5	4.7	**0.0597**	0.004	6.7	mg/L	49	Standard
	Cd	114	785.3	3.3	**0.0479**	0.001	2.5	ug/L	170	Standard
>	**In**	115	862013.5	2.2				ug/L	727802	Standard
	Sn	118	783.4	4.0	**0.0101**	0.002	18.6	ug/L	471	Standard
	Sb	123	1505.2	2.9	**0.1521**	0.004	2.5	ug/L	39	Standard
	Ba	135	26829.7	2.5	**5.1742**	0.035	0.7	ug/L	25	Standard
	Ce	140	730.0	7.4				ug/L	25	Standard
>	**Tb**	159	1232083.6	1.5				ug/L	1071747	Standard
	Ho	165	48.0	14.6				ug/L	13	Standard
	Tl	203	236199.8	1.5	**14.0981**	0.103	0.7	ug/L	5	Standard
	Tl	205	549141.2	1.4	**14.0542**	0.139	1.0	ug/L	10	Standard
	Pb	206	515.7	11.9	**0.0078**	0.004	50.2	ug/L	382	Standard
	Pb	207	442.3	7.4	**0.0123**	0.002	16.9	ug/L	306	Standard
	Pb	208	2022.4	8.9	**0.0106**	0.003	24.8	ug/L	1443	Standard
	U	238	351.7	31.6	**0.0226**	0.007	29.4	ug/L	5	Standard
>	**Bi**	209	564717.4	2.2				ug/L	561075	Standard

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Na	23	153721.1	2.2	**7.8091**	0.598	7.7	mg/L	288	Standard
Mg	24	11570507.7	3.0	**15.1154**	0.563	3.7	mg/L	218	Standard
K	39	905.0	11.6	**0.5872**	0.068	11.7	mg/L	125	Standard
Ca	43	463.3	17.4	**424.2349**	51.897	12.2	mg/L	3	Standard
Fe	54	521.1	20.7	**-0.0134**	0.019	137.9	mg/L	550	Standard
Fe	57	56652.1	14.0	**0.9391**	0.084	9.0	mg/L	1772	Standard
Sc-1	45	380508.8	5.7				mg/L	330668	Standard
Cl	35	8.3	42.1				ug/L	5	Standard
Kr	83	54.7	1.6				ug/L	38	Standard
Br	81	1020.9	5.4				ug/L	344	Standard
P	31	472.5	16.8				ug/L	312	Standard
S	34	361874.3	3.7				ug/L	5594	Standard
Sr	88	961.7	5.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		104.373	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	118.441
	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	100.649
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063602 WG404095-01
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Method 6020 - Summary Report

Sample ID: L1207063602DP WG404095-05
Sample Date/Time: Sunday, July 29, 2012 11:19:47
Number of Replicates: 3
Autosampler Position: 404
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	368936.4	2.6	**65075.5922**	2122.567	3.3	ug/L	9465	Standard
	Be	9	15.0	88.2	**-0.0130**	0.007	56.2	ug/L	10	Standard
	Al	27	170231.1	1.5	**10.4931**	0.279	2.7	ug/L	7870	Standard
>	**Sc**	45	360309.3	1.3				ug/L	330668	Standard
	Ti	47	229.0	11.8	**0.1565**	0.024	15.2	ug/L	53	Standard
	V	51	3205.8	3.3	**0.0498**	0.011	21.4	ug/L	2687	Standard
	Cr	52	13284.5	0.9	**0.6499**	0.015	2.3	ug/L	8408	Standard
	Cr	53	1134.2	2.2	**0.6777**	0.021	3.0	ug/L	288	Standard
	Mn	55	1216214.9	0.9	**93.7524**	1.014	1.1	ug/L	1080	Standard
	Co	59	5042.5	1.9	**0.6041**	0.011	1.8	ug/L	117	Standard
	Ni	60	16540.7	2.3	**7.2007**	0.168	2.3	ug/L	68	Standard
	Cu	65	1554.4	3.3	**0.6665**	0.025	3.8	ug/L	141	Standard
	Zn	66	2559.2	2.3	**2.4090**	0.056	2.3	ug/L	138	Standard
>	**Ge**	72	280489.1	0.2				ug/L	283230	Standard
	As	75	2667.8	2.0	**2.8806**	0.058	2.0	ug/L	-198	Standard
	Se	82	215.8	4.7	**1.9615**	0.102	5.2	ug/L	21	Standard
	Se-1	77	193.7	6.5	**0.9521**	0.186	19.5	ug/L	131	Standard
>	**Ga**	71	715.0	9.7				mg/L	607	Standard
	Rb	85	48196.6	1.8				ug/L	30	Standard
	Y	89	266914.5	2.1				ug/L	251555	Standard
>	**Rh**	103	576.7	14.0				ug/L	335	Standard
	Mo	98	548.9	6.2	**0.1269**	0.010	7.8	ug/L	13	Standard
	Ag	107	56.0	8.2	**-0.0012**	0.001	44.2	ug/L	36	Standard
	Cd	111	269.7	7.4	**0.0546**	0.005	9.4	mg/L	49	Standard
	Cd	114	729.2	1.9	**0.0446**	0.000	0.9	ug/L	170	Standard
>	**In**	115	840694.6	1.5				ug/L	727802	Standard
	Sn	118	738.4	4.7	**0.0082**	0.002	26.7	ug/L	471	Standard
	Sb	123	440.7	8.4	**0.0469**	0.003	6.9	ug/L	39	Standard
	Ba	135	24925.5	1.9	**4.9283**	0.025	0.5	ug/L	25	Standard
	Ce	140	638.3	3.3				ug/L	25	Standard
>	**Tb**	159	1215431.0	2.4				ug/L	1071747	Standard
	Ho	165	47.7	15.7				ug/L	13	Standard
	Tl	203	225283.3	1.4	**13.6400**	0.068	0.5	ug/L	5	Standard
	Tl	205	518720.0	1.4	**13.4663**	0.058	0.4	ug/L	10	Standard
	Pb	206	423.3	1.8	**0.0011**	0.001	45.0	ug/L	382	Standard
	Pb	207	349.0	5.8	**0.0042**	0.002	38.5	ug/L	306	Standard
	Pb	208	1630.0	0.5	**0.0034**	0.000	10.0	ug/L	1443	Standard
	U	238	220.3	1.1	**0.0144**	0.000	1.0	ug/L	5	Standard
>	**Bi**	209	556632.2	1.0				ug/L	561075	Standard

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Na	23	155655.5	0.9	**8.3305**	0.180	2.2	mg/L	288	Standard
Mg	24	11171603.6	1.8	**15.3977**	0.474	3.1	mg/L	218	Standard
K	39	948.4	2.4	**0.6619**	0.026	3.9	mg/L	125	Standard
Ca	43	440.0	12.3	**427.0466**	51.007	11.9	mg/L	3	Standard
Fe	54	658.5	10.7	**0.0230**	0.013	58.7	mg/L	550	Standard
Fe	57	48668.0	0.7	**0.8513**	0.015	1.8	mg/L	1772	Standard
Sc-1	45	360309.3	1.3				mg/L	330668	Standard
Cl	35	10.0	20.0				ug/L	5	Standard
Kr	83	56.2	7.6				ug/L	38	Standard
Br	81	1101.7	3.2				ug/L	344	Standard
P	31	400.0	6.0				ug/L	312	Standard
S	34	339212.4	1.6				ug/L	5594	Standard
Sr	88	826.7	6.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.032	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207063602DP WG404095-05
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	Cd	111	
	Cd	114	
>	In	115	115.511
	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	99.208
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063602DP WG404095-05
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063602S WG404095-06
Sample Date/Time: Sunday, July 29, 2012 11:22:57
Number of Replicates: 3
Autosampler Position: 405
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	393638.8	1.8	**67413.7621**	721.837	1.1	ug/L	9465	Standard
	Be	9	48475.8	1.7	**25.9487**	0.328	1.3	ug/L	10	Standard
	Al	27	577241.1	1.1	**35.8447**	0.193	0.5	ug/L	7870	Standard
>	**Sc**	45	371387.3	1.6				ug/L	330668	Standard
	Ti	47	295.0	3.2	**0.2075**	0.007	3.6	ug/L	53	Standard
	V	51	251116.2	3.2	**24.9135**	0.754	3.0	ug/L	2687	Standard
	Cr	52	207185.7	2.0	**25.2499**	0.509	2.0	ug/L	8408	Standard
	Cr	53	34669.6	1.6	**25.8716**	0.407	1.6	ug/L	288	Standard
	Mn	55	1672203.1	0.8	**125.6874**	0.909	0.7	ug/L	1080	Standard
	Co	59	241618.3	1.6	**28.8184**	0.424	1.5	ug/L	117	Standard
	Ni	60	73647.6	2.5	**31.3514**	0.737	2.4	ug/L	68	Standard
	Cu	65	52375.4	1.2	**24.0518**	0.246	1.0	ug/L	141	Standard
	Zn	66	27650.2	1.9	**26.8197**	0.571	2.1	ug/L	138	Standard
>	**Ge**	72	287725.9	0.4				ug/L	283230	Standard
	As	75	30465.6	1.5	**30.3178**	0.431	1.4	ug/L	-198	Standard
	Se	82	3234.6	1.7	**31.9656**	0.470	1.5	ug/L	21	Standard
	Se-1	77	2246.2	2.9	**29.8921**	0.883	3.0	ug/L	131	Standard
>	**Ga**	71	878.4	5.3				mg/L	607	Standard
	Rb	85	52253.4	3.4				ug/L	30	Standard
	Y	89	274628.7	1.7				ug/L	251555	Standard
>	**Rh**	103	546.7	8.3				ug/L	335	Standard
	Mo	98	598.4	4.4	**0.1357**	0.005	3.7	ug/L	13	Standard
	Ag	107	169140.9	0.7	**22.9398**	0.168	0.7	ug/L	36	Standard
	Cd	111	108711.2	1.3	**28.7272**	0.383	1.3	mg/L	49	Standard
	Cd	114	288973.0	0.9	**25.1090**	0.161	0.6	ug/L	170	Standard
>	**In**	115	859506.3	1.3				ug/L	727802	Standard
	Sn	118	876.4	0.4	**0.0171**	0.001	3.9	ug/L	471	Standard
	Sb	123	255564.6	1.5	**25.5980**	0.045	0.2	ug/L	39	Standard
	Ba	135	144559.1	1.5	**28.0120**	0.245	0.9	ug/L	25	Standard
	Ce	140	1439.4	3.0				ug/L	25	Standard
>	**Tb**	159	1224976.1	0.8				ug/L	1071747	Standard
	Ho	165	91.7	10.6				ug/L	13	Standard
	Tl	203	667561.9	1.1	**40.0358**	0.301	0.8	ug/L	5	Standard
	Tl	205	1537376.9	1.0	**39.5319**	0.228	0.6	ug/L	10	Standard
	Pb	206	329437.9	1.1	**25.5811**	0.142	0.6	ug/L	382	Standard
	Pb	207	276701.2	1.6	**25.7337**	0.181	0.7	ug/L	306	Standard
	Pb	208	1288571.7	1.1	**25.4993**	0.137	0.5	ug/L	1443	Standard
	U	238	443119.3	0.9	**29.0636**	0.312	1.1	ug/L	5	Standard
>	**Bi**	209	562005.9	1.2				ug/L	561075	Standard

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Na	23	156660.8	0.5	**8.1335**	0.159	2.0	mg/L	288	Standard
Mg	24	11529893.1	1.6	**15.4138**	0.156	1.0	mg/L	218	Standard
K	39	963.4	7.4	**0.6507**	0.059	9.0	mg/L	125	Standard
Ca	43	475.0	9.4	**447.3805**	36.160	8.1	mg/L	3	Standard
Fe	54	558.1	10.1	**-0.0025**	0.012	476.6	mg/L	550	Standard
Fe	57	52514.4	5.7	**0.8923**	0.038	4.3	mg/L	1772	Standard
Sc-1	45	371387.3	1.6				mg/L	330668	Standard
Cl	35	8.3	25.0				ug/L	5	Standard
Kr	83	60.6	3.7				ug/L	38	Standard
Br	81	1062.5	0.8				ug/L	344	Standard
P	31	474.2	3.1				ug/L	312	Standard
S	34	358117.3	1.2				ug/L	5594	Standard
Sr	88	933.4	12.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		101.587	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207063602S WG404095-06
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Cd	111	
Cd	114	
> In	115	118.096
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	100.166
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1207063602S WG404095-06
Report Date/Time: Sunday, July 29, 2012 11:25:27
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Method 6020 - Summary Report

Sample ID: L1207063901
Sample Date/Time: Sunday, July 29, 2012 11:26:06
Number of Replicates: 3
Autosampler Position: 406
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	53822.1	0.4	**6462.9071**	73.553	1.1	ug/L	9465	Standard
	Be	9	25.0	52.9	**-0.0095**	0.006	65.3	ug/L	10	Standard
	Al	27	233192.5	0.6	**12.2396**	0.042	0.3	ug/L	7870	Standard
>	**Sc**	45	426249.3	0.5				ug/L	330668	Standard
	Ti	47	1995.1	7.9	**1.5269**	0.120	7.9	ug/L	53	Standard
	V	51	23685.0	2.1	**1.9210**	0.020	1.0	ug/L	2687	Standard
	Cr	52	16137.6	1.6	**0.8178**	0.010	1.2	ug/L	8408	Standard
	Cr	53	2744.4	4.6	**1.7150**	0.103	6.0	ug/L	288	Standard
	Mn	55	18181.6	1.0	**1.1825**	0.010	0.8	ug/L	1080	Standard
	Co	59	538.7	2.3	**0.0464**	0.001	2.6	ug/L	117	Standard
	Ni	60	1757.8	4.0	**0.6644**	0.021	3.1	ug/L	68	Standard
	Cu	65	1168.0	5.5	**0.4303**	0.021	4.9	ug/L	141	Standard
	Zn	66	5980.8	0.4	**5.2531**	0.081	1.5	ug/L	138	Standard
>	**Ge**	72	310606.8	1.3				ug/L	283230	Standard
	As	75	509.5	11.7	**0.6393**	0.050	7.8	ug/L	-198	Standard
	Se	82	317.1	3.0	**2.6819**	0.051	1.9	ug/L	21	Standard
	Se-1	77	186.0	4.2	**0.5787**	0.077	13.3	ug/L	131	Standard
>	**Ga**	71	735.0	1.8				mg/L	607	Standard
	Rb	85	13747.9	3.4				ug/L	30	Standard
	Y	89	287600.9	1.4				ug/L	251555	Standard
>	**Rh**	103	450.0	10.0				ug/L	335	Standard
	Mo	98	4015.6	1.0	**0.8880**	0.012	1.3	ug/L	13	Standard
	Ag	107	214.0	6.9	**0.0182**	0.002	12.3	ug/L	36	Standard
	Cd	111	111.7	9.4	**0.0093**	0.003	32.9	mg/L	49	Standard
	Cd	114	351.2	13.4	**0.0083**	0.004	43.4	ug/L	170	Standard
>	**In**	115	920574.2	2.2				ug/L	727802	Standard
	Sn	118	2290.8	3.0	**0.1101**	0.005	4.7	ug/L	471	Standard
	Sb	123	3033.3	4.9	**0.2853**	0.008	2.7	ug/L	39	Standard
	Ba	135	201498.1	0.9	**36.4652**	0.462	1.3	ug/L	25	Standard
	Ce	140	2224.5	2.4				ug/L	25	Standard
>	**Tb**	159	1273399.1	0.9				ug/L	1071747	Standard
	Ho	165	50.7	3.0				ug/L	13	Standard
	Tl	203	665.3	4.1	**0.0340**	0.002	5.5	ug/L	5	Standard
	Tl	205	1495.1	4.4	**0.0338**	0.002	5.6	ug/L	10	Standard
	Pb	206	2160.2	3.3	**0.1153**	0.003	3.0	ug/L	382	Standard
	Pb	207	1751.4	0.7	**0.1145**	0.001	0.7	ug/L	306	Standard
	Pb	208	8257.9	1.7	**0.1144**	0.001	1.1	ug/L	1443	Standard
	U	238	3632.1	2.4	**0.2089**	0.005	2.6	ug/L	5	Standard
>	**Bi**	209	640233.4	1.2				ug/L	561075	Standard

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⌈	**Na**	23	146865.0	0.7	**6.6356**	0.048	0.7	mg/L	288	Standard
|	**Mg**	24	2114069.4	21.5	**2.4628**	0.532	21.6	mg/L	218	Standard
|	**K**	39	1108.4	3.8	**0.6524**	0.030	4.5	mg/L	125	Standard
|	**Ca**	43	35.0	24.7	**23.7266**	7.202	30.4	mg/L	3	Standard
|	**Fe**	54	793.3	7.0	**0.0258**	0.010	40.4	mg/L	550	Standard
|	**Fe**	57	9743.1	8.7	**0.1151**	0.013	11.4	mg/L	1772	Standard
⌊>	**Sc-1**	45	426249.3	0.5				mg/L	330668	Standard
	Cl	35	42.0	8.6				ug/L	5	Standard
	Kr	83	38.1	14.4				ug/L	38	Standard
	Br	81	8403.2	2.3				ug/L	344	Standard
	P	31	362.5	3.6				ug/L	312	Standard
	S	34	20309.4	2.0				ug/L	5594	Standard
	Sr	88	436.7	7.6				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		109.666	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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Cd	111	
Cd	114	
> In	115	126.487
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	114.108
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
In 115 Int Std for sample	In	115	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1207063901PS WG404829-01
Sample Date/Time: Sunday, July 29, 2012 11:29:16
Number of Replicates: 3
Autosampler Position: 407
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	53358.8	2.3	**6221.9652**	123.933	2.0	ug/L	9465	Standard
	Be	9	100584.5	1.7	**45.9578**	0.877	1.9	ug/L	10	Standard
	Al	27	959406.6	1.0	**51.0748**	0.495	1.0	ug/L	7870	Standard
>	**Sc**	45	435256.8	0.8				ug/L	330668	Standard
	Ti	47	2062.8	13.7	**1.5371**	0.220	14.3	ug/L	53	Standard
	V	51	546245.2	0.4	**49.1264**	0.238	0.5	ug/L	2687	Standard
	Cr	52	434080.7	0.5	**48.6535**	0.310	0.6	ug/L	8408	Standard
	Cr	53	75918.9	0.9	**51.2647**	0.432	0.8	ug/L	288	Standard
	Mn	55	793972.0	0.8	**53.7517**	0.579	1.1	ug/L	1080	Standard
	Co	59	481243.8	0.8	**51.7569**	0.526	1.0	ug/L	117	Standard
	Ni	60	125565.5	1.1	**48.2047**	0.586	1.2	ug/L	68	Standard
	Cu	65	116158.6	1.5	**48.1570**	0.818	1.7	ug/L	141	Standard
	Zn	66	58267.5	0.7	**51.0856**	0.435	0.9	ug/L	138	Standard
>	**Ge**	72	319164.2	0.3				ug/L	283230	Standard
	As	75	54816.4	1.1	**49.0709**	0.652	1.3	ug/L	-198	Standard
	Se	82	5672.6	1.7	**50.6790**	0.792	1.6	ug/L	21	Standard
	Se-1	77	3909.8	3.0	**47.9670**	1.594	3.3	ug/L	131	Standard
>	**Ga**	71	748.4	8.4				mg/L	607	Standard
	Rb	85	13621.1	0.5				ug/L	30	Standard
	Y	89	290895.5	2.6				ug/L	251555	Standard
>	**Rh**	103	496.7	9.1				ug/L	335	Standard
	Mo	98	4017.0	2.2	**0.8805**	0.014	1.6	ug/L	13	Standard
	Ag	107	404642.3	13.4	**50.8234**	6.929	13.6	ug/L	36	Standard
	Cd	111	219395.4	1.3	**53.6819**	0.618	1.2	mg/L	49	Standard
	Cd	114	594940.8	0.9	**47.8708**	0.333	0.7	ug/L	170	Standard
>	**In**	115	928479.8	0.7				ug/L	727802	Standard
	Sn	118	2701.6	1.5	**0.1367**	0.002	1.5	ug/L	471	Standard
	Sb	123	532934.0	0.4	**49.4159**	0.494	1.0	ug/L	39	Standard
	Ba	135	447932.2	1.0	**80.3715**	0.626	0.8	ug/L	25	Standard
	Ce	140	2248.8	0.7				ug/L	25	Standard
>	**Tb**	159	1283226.1	0.3				ug/L	1071747	Standard
	Ho	165	51.0	2.0				ug/L	13	Standard
	Tl	203	910299.4	0.7	**48.6110**	0.531	1.1	ug/L	5	Standard
	Tl	205	2223825.7	0.7	**50.9175**	0.671	1.3	ug/L	10	Standard
	Pb	206	704596.9	0.6	**48.7457**	0.438	0.9	ug/L	382	Standard
	Pb	207	599118.5	1.2	**49.6440**	0.897	1.8	ug/L	306	Standard
	Pb	208	2771094.4	0.9	**48.8548**	0.598	1.2	ug/L	1443	Standard
	U	238	924394.5	0.4	**53.9830**	0.287	0.5	ug/L	5	Standard
>	**Bi**	209	631181.4	0.7				ug/L	561075	Standard

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	Na	23	144277.0	0.2	**6.3825**	0.036	0.6	mg/L	288	Standard
	Mg	24	1851028.8	23.6	**2.1094**	0.481	22.8	mg/L	218	Standard
	K	39	1090.0	10.8	**0.6241**	0.076	12.3	mg/L	125	Standard
	Ca	43	51.7	22.3	**36.6943**	9.444	25.7	mg/L	3	Standard
	Fe	54	1034.6	13.9	**0.0664**	0.025	37.1	mg/L	550	Standard
	Fe	57	11254.2	4.0	**0.1348**	0.006	4.2	mg/L	1772	Standard
>	**Sc-1**	45	435256.8	0.8				mg/L	330668	Standard
	Cl	35	34.0	2.9				ug/L	5	Standard
	Kr	83	41.6	8.0				ug/L	38	Standard
	Br	81	9046.0	7.3				ug/L	344	Standard
	P	31	493.3	5.9				ug/L	312	Standard
	S	34	20048.3	1.3				ug/L	5594	Standard
	Sr	88	413.3	7.8				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		112.687	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	127.573
	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	112.495
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
In 115 Int Std for sample	In	115	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1207063901SDL WG404829-02
Sample Date/Time: Sunday, July 29, 2012 11:32:25
Number of Replicates: 3
Autosampler Position: 408
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	10393.6	3.5	**138.9779**	95.757	68.9	ug/L	9465	Standard
	Be	9	23.3	12.4	**-0.0081**	0.002	21.8	ug/L	10	Standard
	Al	27	15804.9	0.9	**0.4664**	0.013	2.7	ug/L	7870	Standard
>	**Sc**	45	353705.4	2.1				ug/L	330668	Standard
	Ti	47	46.0	2.2	**-0.0048**	0.001	24.5	ug/L	53	Standard
	V	51	2661.6	0.4	**-0.0188**	0.003	14.0	ug/L	2687	Standard
	Cr	52	8106.8	0.6	**-0.0737**	0.013	18.1	ug/L	8408	Standard
	Cr	53	282.5	6.4	**0.0108**	0.014	126.5	ug/L	288	Standard
	Mn	55	4612.7	1.2	**0.2553**	0.006	2.3	ug/L	1080	Standard
	Co	59	162.3	35.6	**0.0059**	0.007	117.5	ug/L	117	Standard
	Ni	60	239.3	6.4	**0.0706**	0.006	9.2	ug/L	68	Standard
	Cu	65	208.3	2.2	**0.0261**	0.003	11.1	ug/L	141	Standard
	Zn	66	3320.0	1.7	**3.0176**	0.046	1.5	ug/L	138	Standard
>	**Ge**	72	294005.2	0.9				ug/L	283230	Standard
	As	75	-191.3	17.3	**-0.0128**	0.033	261.7	ug/L	-198	Standard
	Se	82	27.4	33.5	**0.0234**	0.087	371.4	ug/L	21	Standard
	Se-1	77	117.0	5.1	**-0.2380**	0.074	30.9	ug/L	131	Standard
>	**Ga**	71	610.0	3.8				mg/L	607	Standard
	Rb	85	31.7	63.8				ug/L	30	Standard
	Y	89	261226.7	2.2				ug/L	251555	Standard
>	**Rh**	103	361.7	14.7				ug/L	335	Standard
	Mo	98	49.3	15.6	**0.0046**	0.002	42.0	ug/L	13	Standard
	Ag	107	157.7	10.7	**0.0125**	0.002	19.8	ug/L	36	Standard
	Cd	111	94.9	32.9	**0.0069**	0.008	122.3	mg/L	49	Standard
	Cd	114	261.8	17.9	**0.0026**	0.004	162.6	ug/L	170	Standard
>	**In**	115	858605.4	1.4				ug/L	727802	Standard
	Sn	118	742.0	5.8	**0.0073**	0.004	52.9	ug/L	471	Standard
	Sb	123	2102.1	3.2	**0.2126**	0.006	2.7	ug/L	39	Standard
	Ba	135	143.7	57.3	**0.0164**	0.016	98.6	ug/L	25	Standard
	Ce	140	40.3	1.4				ug/L	25	Standard
>	**Tb**	159	1205430.4	0.9				ug/L	1071747	Standard
	Ho	165	13.3	21.7				ug/L	13	Standard
	Tl	203	176.0	64.0	**0.0085**	0.006	72.0	ug/L	5	Standard
	Tl	205	397.0	62.0	**0.0092**	0.006	61.8	ug/L	10	Standard
	Pb	206	596.3	10.0	**0.0098**	0.004	43.1	ug/L	382	Standard
	Pb	207	490.3	21.7	**0.0125**	0.009	70.4	ug/L	306	Standard
	Pb	208	2264.4	14.0	**0.0113**	0.006	50.0	ug/L	1443	Standard
	U	238	123.0	49.4	**0.0070**	0.004	50.9	ug/L	5	Standard
>	**Bi**	209	622661.3	1.2				ug/L	561075	Standard

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Na	23	628.3	12.1	**-0.0018**	0.005	277.3	mg/L	288	Standard
Mg	24	735.0	49.3	**0.0013**	0.001	40.4	mg/L	218	Standard
K	39	116.7	24.4	**-0.0122**	0.024	197.1	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.7086**	2.860	77.1	mg/L	3	Standard
Fe	54	567.7	9.7	**0.0056**	0.013	230.9	mg/L	550	Standard
Fe	57	2096.8	4.1	**0.0041**	0.002	58.3	mg/L	1772	Standard
Sc-1	45	353705.4	2.1				mg/L	330668	Standard
Cl	35	3.0	88.2				ug/L	5	Standard
Kr	83	37.7	26.4				ug/L	38	Standard
Br	81	595.8	16.1				ug/L	344	Standard
P	31	355.0	4.4				ug/L	312	Standard
S	34	6204.6	2.4				ug/L	5594	Standard
Sr	88	43.3	33.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		103.805	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	117.972
	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	110.976
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063901SDL WG404829-02
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 11:35:37
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: JYH 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	7	9623.1	2.1	**6.4935**	28.826	443.9	ug/L	9465	Standard
	Be	9	87049.6	3.9	**49.2316**	1.358	2.8	ug/L	10	Standard
	Al	27	664906.5	0.6	**43.7425**	0.314	0.7	ug/L	7870	Standard
>	**Sc**	45	351562.3	1.2				ug/L	330668	Standard
	Ti	47	114479.6	1.2	**97.0074**	1.298	1.3	ug/L	53	Standard
	V	51	479172.0	0.2	**47.6928**	0.429	0.9	ug/L	2687	Standard
	Cr	52	380210.9	1.3	**47.1359**	0.538	1.1	ug/L	8408	Standard
	Cr	53	64326.4	3.3	**48.0593**	1.178	2.5	ug/L	288	Standard
	Mn	55	697693.6	1.1	**52.2765**	0.005	0.0	ug/L	1080	Standard
	Co	59	433080.5	0.8	**51.5586**	0.920	1.8	ug/L	117	Standard
	Ni	60	110480.7	0.6	**46.9493**	0.790	1.7	ug/L	68	Standard
	Cu	65	103419.4	0.7	**47.4592**	0.745	1.6	ug/L	141	Standard
	Zn	66	49297.1	0.9	**47.8316**	0.631	1.3	ug/L	138	Standard
>	**Ge**	72	288358.3	1.1				ug/L	283230	Standard
	As	75	49331.2	0.5	**48.8818**	0.543	1.1	ug/L	-198	Standard
	Se	82	5023.2	0.5	**49.6695**	0.303	0.6	ug/L	21	Standard
	Se-1	77	3631.4	3.2	**49.3541**	1.196	2.4	ug/L	131	Standard
>	**Ga**	71	615.0	13.7				mg/L	607	Standard
	Rb	85	695.0	5.7				ug/L	30	Standard
	Y	89	257289.2	3.1				ug/L	251555	Standard
>	**Rh**	103	380.0	17.4				ug/L	335	Standard
	Mo	98	350180.1	1.4	**88.8012**	1.277	1.4	ug/L	13	Standard
	Ag	107	323659.9	0.8	**46.6439**	0.649	1.4	ug/L	36	Standard
	Cd	111	193206.0	0.7	**54.2585**	0.948	1.7	mg/L	49	Standard
	Cd	114	540394.8	0.4	**49.9040**	0.514	1.0	ug/L	170	Standard
>	**In**	115	809056.0	1.0				ug/L	727802	Standard
	Sn	118	635512.9	0.7	**49.6761**	0.586	1.2	ug/L	471	Standard
	Sb	123	478784.1	0.3	**50.9495**	0.579	1.1	ug/L	39	Standard
	Ba	135	236433.4	0.2	**48.6842**	0.605	1.2	ug/L	25	Standard
	Ce	140	883.7	2.2				ug/L	25	Standard
>	**Tb**	159	1170949.0	0.8				ug/L	1071747	Standard
	Ho	165	18.3	3.1				ug/L	13	Standard
	Tl	203	842684.9	0.1	**47.8164**	0.116	0.2	ug/L	5	Standard
	Tl	205	1951734.6	0.7	**47.4828**	0.249	0.5	ug/L	10	Standard
	Pb	206	654711.3	0.4	**48.1288**	0.140	0.3	ug/L	382	Standard
	Pb	207	557182.3	0.2	**49.0560**	0.043	0.1	ug/L	306	Standard
	Pb	208	2579610.9	0.7	**48.3241**	0.247	0.5	ug/L	1443	Standard
	U	238	817339.5	0.7	**50.7187**	0.300	0.6	ug/L	5	Standard
>	**Bi**	209	593987.3	0.2				ug/L	561075	Standard

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Na	23	114848.7	1.9	**6.2892**	0.049	0.8	mg/L	288	Standard
Mg	24	3245665.8	1.0	**4.5840**	0.059	1.3	mg/L	218	Standard
K	39	5214.2	0.7	**4.2336**	0.081	1.9	mg/L	125	Standard
Ca	43	21.7	13.3	**16.4704**	2.892	17.6	mg/L	3	Standard
Fe	54	20432.6	2.4	**4.4659**	0.091	2.0	mg/L	550	Standard
Fe	57	288137.5	4.5	**5.3433**	0.305	5.7	mg/L	1772	Standard
Sc-1	45	351562.3	1.2				mg/L	330668	Standard
Cl	35	3.3	75.5				ug/L	5	Standard
Kr	83	40.6	7.8				ug/L	38	Standard
Br	81	480.8	5.7				ug/L	344	Standard
P	31	380.8	0.8				ug/L	312	Standard
S	34	6036.2	3.7				ug/L	5594	Standard
Sr	88	48.3	23.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	87.485		
Sc	45			
Ti	47	97.007		
V	51	95.386		
Cr	52	94.272		
Cr	53			
Mn	55	104.553		
Co	59	103.117		
Ni	60	93.899		
Cu	65	94.918		
Zn	66	95.663		
Ge	72		101.811	
As	75	97.764		
Se	82	99.339		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	88.801		
Ag	107	93.288		

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	Cd	111	108.517	
	Cd	114		
>	In	115		111.164
	Sn	118	99.352	
	Sb	123	101.899	
	Ba	135	97.368	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.633	
	Tl	205		
	Pb	206	96.258	
	Pb	207	98.112	
	Pb	208	96.648	
	U	238	101.437	
>	Bi	209		105.866
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Al	27	
QC Std 6	Mo	98	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 11:38:47
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: JYH 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	7	9514.7	3.2	**34.8808**	67.539	193.6	ug/L	9465	Standard
	Be	9	30.0	44.1	**-0.0039**	0.007	191.0	ug/L	10	Standard
	Al	27	7725.3	2.5	**-0.0518**	0.016	31.1	ug/L	7870	Standard
>	**Sc**	45	342263.7	2.1				ug/L	330668	Standard
	Ti	47	63.3	14.3	**0.0101**	0.007	72.5	ug/L	53	Standard
	V	51	2257.9	2.0	**-0.0563**	0.004	6.7	ug/L	2687	Standard
	Cr	52	7053.6	1.2	**-0.1962**	0.009	4.5	ug/L	8408	Standard
	Cr	53	247.5	9.0	**-0.0133**	0.015	113.3	ug/L	288	Standard
	Mn	55	1178.7	4.9	**0.0033**	0.004	117.8	ug/L	1080	Standard
	Co	59	154.3	5.9	**0.0051**	0.001	19.8	ug/L	117	Standard
	Ni	60	74.3	20.4	**0.0020**	0.006	303.2	ug/L	68	Standard
	Cu	65	149.0	3.1	**-0.0000**	0.002	5589.8	ug/L	141	Standard
	Zn	66	167.3	2.8	**0.0096**	0.005	53.7	ug/L	138	Standard
>	**Ge**	72	291162.4	0.8				ug/L	283230	Standard
	As	75	-186.2	10.8	**-0.0093**	0.018	196.9	ug/L	-198	Standard
	Se	82	18.1	5.8	**-0.0645**	0.012	18.4	ug/L	21	Standard
	Se-1	77	106.3	4.7	**-0.3712**	0.058	15.6	ug/L	131	Standard
>	**Ga**	71	610.0	8.1				mg/L	607	Standard
	Rb	85	20.0	25.0				ug/L	30	Standard
	Y	89	257927.0	1.0				ug/L	251555	Standard
>	**Rh**	103	376.7	11.3				ug/L	335	Standard
	Mo	98	175.9	11.7	**0.0362**	0.005	14.7	ug/L	13	Standard
	Ag	107	100.3	23.6	**0.0051**	0.003	67.1	ug/L	36	Standard
	Cd	111	76.6	10.6	**0.0026**	0.002	90.6	mg/L	49	Standard
	Cd	114	249.2	15.7	**0.0022**	0.004	169.7	ug/L	170	Standard
>	**In**	115	833119.7	0.8				ug/L	727802	Standard
	Sn	118	937.7	2.4	**0.0238**	0.001	5.8	ug/L	471	Standard
	Sb	123	2646.5	2.2	**0.2753**	0.008	2.9	ug/L	39	Standard
	Ba	135	55.7	24.3	**-0.0004**	0.003	751.7	ug/L	25	Standard
	Ce	140	30.7	21.7				ug/L	25	Standard
>	**Tb**	159	1161572.3	0.2				ug/L	1071747	Standard
	Ho	165	14.0	31.1				ug/L	13	Standard
	Tl	203	133.0	36.6	**0.0063**	0.003	42.1	ug/L	5	Standard
	Tl	205	310.0	41.2	**0.0074**	0.003	40.5	ug/L	10	Standard
	Pb	206	506.3	10.0	**0.0042**	0.003	80.7	ug/L	382	Standard
	Pb	207	433.0	4.2	**0.0086**	0.002	18.4	ug/L	306	Standard
	Pb	208	1954.4	8.6	**0.0065**	0.003	44.2	ug/L	1443	Standard
	U	238	135.7	31.1	**0.0080**	0.003	31.5	ug/L	5	Standard
>	**Bi**	209	609066.7	0.8				ug/L	561075	Standard

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⌈	**Na**	23	385.0	11.2	**-0.0144**	0.002	16.5	mg/L	288	Standard
|	**Mg**	24	658.3	48.4	**0.0012**	0.000	36.6	mg/L	218	Standard
|	**K**	39	103.3	22.9	**-0.0206**	0.020	95.2	mg/L	125	Standard
|	**Ca**	43	6.7	173.2	**1.4165**	11.736	828.6	mg/L	3	Standard
|	**Fe**	54	471.3	8.1	**-0.0124**	0.009	74.1	mg/L	550	Standard
|	**Fe**	57	1896.8	3.8	**0.0016**	0.002	131.9	mg/L	1772	Standard
⌊>	**Sc-1**	45	342263.7	2.1				mg/L	330668	Standard
	Cl	35	4.0	25.0				ug/L	5	Standard
	Kr	83	42.0	1.4				ug/L	38	Standard
	Br	81	436.7	7.0				ug/L	344	Standard
	P	31	349.2	12.9				ug/L	312	Standard
	S	34	5779.4	1.5				ug/L	5594	Standard
	Sr	88	40.0	33.1				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		102.801	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	114.471
	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	108.553
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1207062765
Sample Date/Time: Sunday, July 29, 2012 11:42:00
Number of Replicates: 3
Autosampler Position: 409
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9763.1	3.7	**6.0533**	73.145	1208.4	ug/L	9465	Standard
	Be	9	33.3	60.6	**-0.0026**	0.011	422.0	ug/L	10	Standard
	Al	27	406842.0	2.5	**26.1383**	0.555	2.1	ug/L	7870	Standard
>	**Sc**	45	356807.5	0.5				ug/L	330668	Standard
	Ti	47	423.3	3.1	**0.3053**	0.012	3.8	ug/L	53	Standard
	V	51	2981.9	4.9	**0.0096**	0.013	135.7	ug/L	2687	Standard
	Cr	52	10699.4	2.3	**0.2351**	0.034	14.4	ug/L	8408	Standard
	Cr	53	735.9	5.5	**0.3389**	0.031	9.2	ug/L	288	Standard
	Mn	55	12751.7	4.9	**0.8446**	0.041	4.9	ug/L	1080	Standard
	Co	59	562.0	33.1	**0.0518**	0.021	40.7	ug/L	117	Standard
	Ni	60	1270.1	2.5	**0.4950**	0.015	3.0	ug/L	68	Standard
	Cu	65	3810.5	0.4	**1.6319**	0.009	0.6	ug/L	141	Standard
	Zn	66	4193.9	2.1	**3.8106**	0.074	2.0	ug/L	138	Standard
>	**Ge**	72	297054.4	0.7				ug/L	283230	Standard
	As	75	-163.9	22.8	**0.0155**	0.037	237.2	ug/L	-198	Standard
	Se	82	27.3	10.2	**0.0200**	0.028	138.0	ug/L	21	Standard
	Se-1	77	124.0	6.1	**-0.1580**	0.113	71.6	ug/L	131	Standard
>	**Ga**	71	580.0	2.3				mg/L	607	Standard
	Rb	85	328.3	16.7				ug/L	30	Standard
	Y	89	263898.4	0.4				ug/L	251555	Standard
>	**Rh**	103	393.3	20.4				ug/L	335	Standard
	Mo	98	170.2	2.2	**0.0348**	0.001	3.1	ug/L	13	Standard
	Ag	107	97.7	26.3	**0.0047**	0.004	75.2	ug/L	36	Standard
	Cd	111	117.3	10.1	**0.0138**	0.003	22.6	mg/L	49	Standard
	Cd	114	384.0	23.3	**0.0143**	0.008	55.7	ug/L	170	Standard
>	**In**	115	831845.8	0.4				ug/L	727802	Standard
	Sn	118	1428.1	12.6	**0.0612**	0.013	22.0	ug/L	471	Standard
	Sb	123	906.6	29.1	**0.0956**	0.027	28.5	ug/L	39	Standard
	Ba	135	1788.1	4.9	**0.3466**	0.017	4.8	ug/L	25	Standard
	Ce	140	1819.8	1.4				ug/L	25	Standard
>	**Tb**	159	1191042.1	0.3				ug/L	1071747	Standard
	Ho	165	48.7	11.3				ug/L	13	Standard
	Tl	203	524.0	91.3	**0.0276**	0.026	95.1	ug/L	5	Standard
	Tl	205	1137.1	90.3	**0.0267**	0.024	90.5	ug/L	10	Standard
	Pb	206	2721.6	13.6	**0.1607**	0.027	16.8	ug/L	382	Standard
	Pb	207	2195.8	14.6	**0.1576**	0.028	17.6	ug/L	306	Standard
	Pb	208	10246.4	12.7	**0.1557**	0.024	15.4	ug/L	1443	Standard
	U	238	279.7	75.5	**0.0165**	0.013	76.9	ug/L	5	Standard
>	**Bi**	209	616969.3	0.4				ug/L	561075	Standard

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Na	23	45237.6	5.7	**2.4187**	0.138	5.7	mg/L	288	Standard
Mg	24	5876.2	34.7	**0.0085**	0.003	33.2	mg/L	218	Standard
K	39	173.3	8.3	**0.0334**	0.013	37.4	mg/L	125	Standard
Ca	43	5.0	0.0	**-0.3958**	0.025	6.4	mg/L	3	Standard
Fe	54	633.5	10.6	**0.0190**	0.014	74.8	mg/L	550	Standard
Fe	57	2545.2	8.0	**0.0120**	0.004	29.4	mg/L	1772	Standard
Sc-1	45	356807.5	0.5				mg/L	330668	Standard
Cl	35	4.0	25.0				ug/L	5	Standard
Kr	83	35.7	14.8				ug/L	38	Standard
Br	81	462.5	5.9				ug/L	344	Standard
P	31	640.0	3.2				ug/L	312	Standard
S	34	5834.5	1.1				ug/L	5594	Standard
Sr	88	50.0	26.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		104.881	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	114.296
	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	109.962
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207062766
Sample Date/Time: Sunday, July 29, 2012 11:45:09
Number of Replicates: 3
Autosampler Position: 410
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	10050.0	5.9	**132.2562**	154.060	116.5	ug/L	9465	Standard
	Be	9	25.0	80.0	**-0.0066**	0.012	180.6	ug/L	10	Standard
	Al	27	63079.4	0.9	**3.7243**	0.063	1.7	ug/L	7870	Standard
>	**Sc**	45	343426.4	2.2				ug/L	330668	Standard
	Ti	47	177.7	10.9	**0.1069**	0.016	14.9	ug/L	53	Standard
	V	51	2579.8	7.0	**-0.0228**	0.020	89.6	ug/L	2687	Standard
	Cr	52	11751.9	1.1	**0.4025**	0.029	7.2	ug/L	8408	Standard
	Cr	53	958.4	2.6	**0.5192**	0.023	4.4	ug/L	288	Standard
	Mn	55	4111.9	1.2	**0.2231**	0.003	1.2	ug/L	1080	Standard
	Co	59	336.7	9.5	**0.0268**	0.003	12.8	ug/L	117	Standard
	Ni	60	892.0	1.6	**0.3485**	0.003	0.9	ug/L	68	Standard
	Cu	65	1222.0	3.8	**0.4915**	0.020	4.0	ug/L	141	Standard
	Zn	66	1957.5	1.8	**1.7462**	0.048	2.8	ug/L	138	Standard
>	**Ge**	72	289510.2	0.9				ug/L	283230	Standard
	As	75	-166.6	5.1	**0.0089**	0.010	109.4	ug/L	-198	Standard
	Se	82	22.8	40.2	**-0.0181**	0.089	491.4	ug/L	21	Standard
	Se-1	77	123.3	11.8	**-0.1234**	0.204	165.5	ug/L	131	Standard
>	**Ga**	71	603.3	9.7				mg/L	607	Standard
	Rb	85	98.3	19.3				ug/L	30	Standard
	Y	89	258784.8	1.1				ug/L	251555	Standard
>	**Rh**	103	386.7	3.7				ug/L	335	Standard
	Mo	98	180.0	7.0	**0.0375**	0.003	8.1	ug/L	13	Standard
	Ag	107	66.3	17.3	**0.0004**	0.002	403.8	ug/L	36	Standard
	Cd	111	80.2	8.3	**0.0038**	0.002	47.8	mg/L	49	Standard
	Cd	114	234.8	5.5	**0.0010**	0.001	110.6	ug/L	170	Standard
>	**In**	115	826314.9	0.3				ug/L	727802	Standard
	Sn	118	777.7	3.9	**0.0121**	0.002	19.1	ug/L	471	Standard
	Sb	123	388.8	22.0	**0.0423**	0.009	21.0	ug/L	39	Standard
	Ba	135	710.3	2.8	**0.1317**	0.004	3.2	ug/L	25	Standard
	Ce	140	305.3	1.3				ug/L	25	Standard
>	**Tb**	159	1164605.9	0.6				ug/L	1071747	Standard
	Ho	165	17.7	26.7				ug/L	13	Standard
	Tl	203	42.0	15.6	**0.0013**	0.000	27.4	ug/L	5	Standard
	Tl	205	92.3	34.4	**0.0022**	0.001	33.6	ug/L	10	Standard
	Pb	206	494.3	6.0	**0.0033**	0.002	56.7	ug/L	382	Standard
	Pb	207	403.3	3.7	**0.0060**	0.001	22.6	ug/L	306	Standard
	Pb	208	1872.0	2.5	**0.0050**	0.001	12.4	ug/L	1443	Standard
	U	238	23.3	21.1	**0.0012**	0.000	24.8	ug/L	5	Standard
>	**Bi**	209	609506.5	0.7				ug/L	561075	Standard

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Na	23	8757.5	3.6	**0.4580**	0.029	6.2	mg/L	288	Standard
Mg	24	1231.7	9.0	**0.0021**	0.000	9.5	mg/L	218	Standard
K	39	131.7	34.2	**0.0029**	0.036	1243.3	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.6106**	3.029	83.9	mg/L	3	Standard
Fe	54	617.0	5.3	**0.0207**	0.008	38.0	mg/L	550	Standard
Fe	57	2716.9	10.0	**0.0172**	0.006	34.2	mg/L	1772	Standard
> **Sc-1**	45	343426.4	2.2				mg/L	330668	Standard
Cl	35	5.3	60.3				ug/L	5	Standard
Kr	83	32.8	5.2				ug/L	38	Standard
Br	81	456.7	1.7				ug/L	344	Standard
P	31	412.5	3.1				ug/L	312	Standard
S	34	5877.0	3.6				ug/L	5594	Standard
Sr	88	36.7	55.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		102.217	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	113.536
	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	108.632
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063601
Sample Date/Time: Sunday, July 29, 2012 11:48:17
Number of Replicates: 3
Autosampler Position: 411
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	355958.9	3.2	**66361.1366**	3026.562	4.6	ug/L	9465	Standard
	Be	9	16.7	69.3	**-0.0115**	0.007	58.8	ug/L	10	Standard
	Al	27	235784.1	1.7	**15.6169**	0.279	1.8	ug/L	7870	Standard
>	**Sc**	45	341150.1	1.5				ug/L	330668	Standard
	Ti	47	254.0	14.6	**0.1922**	0.035	18.4	ug/L	53	Standard
	V	51	3174.7	0.8	**0.0671**	0.005	6.8	ug/L	2687	Standard
	Cr	52	12976.2	1.0	**0.7156**	0.025	3.5	ug/L	8408	Standard
	Cr	53	1069.2	4.1	**0.6793**	0.040	5.9	ug/L	288	Standard
	Mn	55	1230270.8	1.4	**100.7807**	1.943	1.9	ug/L	1080	Standard
	Co	59	5221.9	0.3	**0.6661**	0.003	0.4	ug/L	117	Standard
	Ni	60	16347.8	2.6	**7.5628**	0.160	2.1	ug/L	68	Standard
	Cu	65	1655.4	2.8	**0.7631**	0.019	2.6	ug/L	141	Standard
	Zn	66	2956.6	3.1	**2.9915**	0.083	2.8	ug/L	138	Standard
>	**Ge**	72	263974.4	0.5				ug/L	283230	Standard
	As	75	2766.1	0.7	**3.1561**	0.035	1.1	ug/L	-198	Standard
	Se	82	214.7	4.6	**2.0879**	0.115	5.5	ug/L	21	Standard
	Se-1	77	201.3	2.0	**1.2456**	0.051	4.1	ug/L	131	Standard
>	**Ga**	71	758.4	8.5				mg/L	607	Standard
	Rb	85	47011.2	1.1				ug/L	30	Standard
	Y	89	244470.8	2.8				ug/L	251555	Standard
>	**Rh**	103	485.0	13.9				ug/L	335	Standard
	Mo	98	580.6	4.9	**0.1475**	0.007	4.6	ug/L	13	Standard
	Ag	107	68.3	14.4	**0.0014**	0.001	106.7	ug/L	36	Standard
	Cd	111	274.3	8.1	**0.0627**	0.007	11.2	mg/L	49	Standard
	Cd	114	787.1	3.7	**0.0562**	0.003	5.1	ug/L	170	Standard
>	**In**	115	769991.1	0.6				ug/L	727802	Standard
	Sn	118	756.0	2.5	**0.0147**	0.002	11.2	ug/L	471	Standard
	Sb	123	358.3	6.6	**0.0419**	0.003	6.3	ug/L	39	Standard
	Ba	135	25887.1	0.4	**5.5903**	0.023	0.4	ug/L	25	Standard
	Ce	140	1299.1	3.9				ug/L	25	Standard
>	**Tb**	159	1143957.0	0.3				ug/L	1071747	Standard
	Ho	165	56.7	13.2				ug/L	13	Standard
	Tl	203	225408.4	0.6	**14.5720**	0.131	0.9	ug/L	5	Standard
	Tl	205	523431.3	0.9	**14.5085**	0.061	0.4	ug/L	10	Standard
	Pb	206	602.7	4.1	**0.0184**	0.003	13.7	ug/L	382	Standard
	Pb	207	491.7	2.1	**0.0207**	0.001	5.3	ug/L	306	Standard
	Pb	208	2303.1	1.8	**0.0200**	0.001	7.5	ug/L	1443	Standard
	U	238	245.7	5.9	**0.0171**	0.001	6.8	ug/L	5	Standard
>	**Bi**	209	521371.6	1.3				ug/L	561075	Standard

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Na	23	151840.5	1.5	**8.5823**	0.036	0.4	mg/L	288	Standard
Mg	24	11337393.6	0.4	**16.5012**	0.186	1.1	mg/L	218	Standard
K	39	923.4	11.4	**0.6830**	0.083	12.1	mg/L	125	Standard
Ca	43	425.0	5.1	**435.7744**	16.319	3.7	mg/L	3	Standard
Fe	54	493.8	10.0	**-0.0068**	0.013	195.5	mg/L	550	Standard
Fe	57	47268.6	1.9	**0.8740**	0.004	0.5	mg/L	1772	Standard
Sc-1	45	341150.1	1.5				mg/L	330668	Standard
Cl	35	8.0	25.0				ug/L	5	Standard
Kr	83	52.7	4.9				ug/L	38	Standard
Br	81	861.7	5.4				ug/L	344	Standard
P	31	445.0	6.8				ug/L	312	Standard
S	34	356519.1	0.3				ug/L	5594	Standard
Sr	88	835.0	8.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.201	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	105.797
	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	92.924
	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	

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: L1207063902 WG404095-02
Sample Date/Time: Sunday, July 29, 2012 11:51:26
Number of Replicates: 3
Autosampler Position: 412
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	31399.2	2.5	**3452.4017**	145.264	4.2	ug/L	9465	Standard
	Be	9	25.0	52.9	**-0.0085**	0.007	79.7	ug/L	10	Standard
	Al	27	103680.3	2.2	**5.6210**	0.110	2.0	ug/L	7870	Standard
>	**Sc**	45	391755.3	1.1				ug/L	330668	Standard
	Ti	47	1181.0	3.5	**0.9502**	0.040	4.2	ug/L	53	Standard
	V	51	15308.2	1.9	**1.2402**	0.036	2.9	ug/L	2687	Standard
	Cr	52	9422.6	1.8	**0.1033**	0.025	24.4	ug/L	8408	Standard
	Cr	53	1030.9	3.3	**0.5701**	0.025	4.3	ug/L	288	Standard
	Mn	55	13887.0	1.1	**0.9496**	0.017	1.8	ug/L	1080	Standard
	Co	59	334.3	7.5	**0.0264**	0.003	10.5	ug/L	117	Standard
	Ni	60	1310.1	3.7	**0.5232**	0.017	3.3	ug/L	68	Standard
	Cu	65	1515.4	1.3	**0.6229**	0.005	0.8	ug/L	141	Standard
	Zn	66	89051.9	0.7	**85.8238**	0.574	0.7	ug/L	138	Standard
>	**Ge**	72	290700.0	0.7				ug/L	283230	Standard
	As	75	15.1	297.7	**0.1876**	0.044	23.4	ug/L	-198	Standard
	Se	82	112.0	0.3	**0.8606**	0.009	1.1	ug/L	21	Standard
	Se-1	77	166.7	9.7	**0.4762**	0.235	49.4	ug/L	131	Standard
>	**Ga**	71	638.3	3.2				mg/L	607	Standard
	Rb	85	1483.4	1.7				ug/L	30	Standard
	Y	89	258451.0	1.5				ug/L	251555	Standard
>	**Rh**	103	420.0	4.3				ug/L	335	Standard
	Mo	98	8066.1	1.2	**1.9728**	0.029	1.5	ug/L	13	Standard
	Ag	107	67.0	3.0	**0.0004**	0.000	63.4	ug/L	36	Standard
	Cd	111	115.6	12.0	**0.0132**	0.004	29.6	mg/L	49	Standard
	Cd	114	356.9	11.1	**0.0117**	0.003	27.9	ug/L	170	Standard
>	**In**	115	835879.7	1.0				ug/L	727802	Standard
	Sn	118	1099.0	4.1	**0.0358**	0.003	7.9	ug/L	471	Standard
	Sb	123	286.1	12.5	**0.0313**	0.004	12.3	ug/L	39	Standard
	Ba	135	137246.8	0.5	**27.3488**	0.389	1.4	ug/L	25	Standard
	Ce	140	1171.0	2.6				ug/L	25	Standard
>	**Tb**	159	1188569.3	0.4				ug/L	1071747	Standard
	Ho	165	30.7	19.1				ug/L	13	Standard
	Tl	203	351.7	7.7	**0.0188**	0.001	7.8	ug/L	5	Standard
	Tl	205	800.0	4.0	**0.0194**	0.001	3.6	ug/L	10	Standard
	Pb	206	1563.1	0.9	**0.0823**	0.001	1.5	ug/L	382	Standard
	Pb	207	1261.4	0.6	**0.0819**	0.000	0.6	ug/L	306	Standard
	Pb	208	6000.1	0.6	**0.0827**	0.001	0.7	ug/L	1443	Standard
	U	238	1279.4	1.5	**0.0788**	0.001	1.4	ug/L	5	Standard
>	**Bi**	209	596856.9	0.4				ug/L	561075	Standard

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	Na	23	139761.7	0.8	**6.8722**	0.051	0.7	mg/L	288	Standard
	Mg	24	1436120.9	1.4	**1.8206**	0.046	2.5	mg/L	218	Standard
	K	39	1000.0	3.5	**0.6385**	0.026	4.0	mg/L	125	Standard
	Ca	43	25.0	34.6	**17.2118**	7.714	44.8	mg/L	3	Standard
	Fe	54	555.4	11.4	**-0.0091**	0.014	150.4	mg/L	550	Standard
	Fe	57	4447.3	4.5	**0.0397**	0.003	7.9	mg/L	1772	Standard
>	**Sc-1**	45	391755.3	1.1				mg/L	330668	Standard
	Cl	35	22.3	18.1				ug/L	5	Standard
	Kr	83	36.3	6.9				ug/L	38	Standard
	Br	81	1640.9	8.1				ug/L	344	Standard
	P	31	559.2	5.0				ug/L	312	Standard
	S	34	17353.3	0.5				ug/L	5594	Standard
	Sr	88	253.3	9.3				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		102.638	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

Sample ID: L1207063902 WG404095-02
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	Cd	111	
	Cd	114	
>	In	115	114.850
	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	106.377
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063902S WG404095-07
Sample Date/Time: Sunday, July 29, 2012 11:54:36
Number of Replicates: 3
Autosampler Position: 413
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	32693.6	2.4	**3620.4886**	175.308	4.8	ug/L	9465	Standard
	Be	9	48902.1	1.9	**24.5980**	0.662	2.7	ug/L	10	Standard
	Al	27	434142.3	0.9	**25.1620**	0.443	1.8	ug/L	7870	Standard
>	**Sc**	45	395322.9	2.5				ug/L	330668	Standard
	Ti	47	1277.7	15.0	**1.0004**	0.155	15.5	ug/L	53	Standard
	V	51	267134.9	0.5	**25.4900**	0.112	0.4	ug/L	2687	Standard
	Cr	52	207829.8	1.0	**24.3153**	0.214	0.9	ug/L	8408	Standard
	Cr	53	35252.6	1.1	**25.2901**	0.297	1.2	ug/L	288	Standard
	Mn	55	377159.2	0.4	**27.1917**	0.197	0.7	ug/L	1080	Standard
	Co	59	228271.3	1.5	**26.1766**	0.270	1.0	ug/L	117	Standard
	Ni	60	60047.1	1.0	**24.5715**	0.088	0.4	ug/L	68	Standard
	Cu	65	56517.5	0.2	**24.9586**	0.245	1.0	ug/L	141	Standard
	Zn	66	35704.4	1.6	**33.3327**	0.256	0.8	ug/L	138	Standard
>	**Ge**	72	299248.7	0.8				ug/L	283230	Standard
	As	75	27035.1	1.5	**25.8927**	0.204	0.8	ug/L	-198	Standard
	Se	82	2795.0	0.1	**26.5181**	0.202	0.8	ug/L	21	Standard
	Se-1	77	2061.8	0.3	**26.1665**	0.316	1.2	ug/L	131	Standard
>	**Ga**	71	626.7	7.2				mg/L	607	Standard
	Rb	85	1586.8	7.1				ug/L	30	Standard
	Y	89	264812.9	1.7				ug/L	251555	Standard
>	**Rh**	103	410.0	9.2				ug/L	335	Standard
	Mo	98	8346.0	1.0	**2.0095**	0.021	1.0	ug/L	13	Standard
	Ag	107	163283.2	1.0	**22.4152**	0.281	1.3	ug/L	36	Standard
	Cd	111	105161.8	0.7	**28.1281**	0.320	1.1	mg/L	49	Standard
	Cd	114	289855.2	1.0	**25.4939**	0.376	1.5	ug/L	170	Standard
>	**In**	115	849127.8	0.6				ug/L	727802	Standard
	Sn	118	1286.7	11.2	**0.0485**	0.011	22.1	ug/L	471	Standard
	Sb	123	251218.9	1.3	**25.4719**	0.432	1.7	ug/L	39	Standard
	Ba	135	258954.1	1.3	**50.8048**	0.959	1.9	ug/L	25	Standard
	Ce	140	885.0	6.3				ug/L	25	Standard
>	**Tb**	159	1195092.4	0.5				ug/L	1071747	Standard
	Ho	165	27.7	11.6				ug/L	13	Standard
	Tl	203	442399.7	0.0	**24.7915**	0.169	0.7	ug/L	5	Standard
	Tl	205	1022895.5	0.3	**24.5774**	0.185	0.8	ug/L	10	Standard
	Pb	206	342765.9	0.7	**24.8692**	0.186	0.7	ug/L	382	Standard
	Pb	207	290812.6	1.3	**25.2715**	0.177	0.7	ug/L	306	Standard
	Pb	208	1352733.8	0.8	**25.0121**	0.048	0.2	ug/L	1443	Standard
	U	238	424557.3	1.3	**26.0173**	0.165	0.6	ug/L	5	Standard
>	**Bi**	209	601457.1	0.7				ug/L	561075	Standard

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Na	23	138742.4	1.1	**6.7614**	0.110	1.6	mg/L	288	Standard
Mg	24	1437593.9	1.5	**1.8060**	0.018	1.0	mg/L	218	Standard
K	39	905.0	8.7	**0.5626**	0.076	13.5	mg/L	125	Standard
Ca	43	26.7	47.2	**18.4248**	10.991	59.7	mg/L	3	Standard
Fe	54	559.3	2.7	**-0.0094**	0.004	45.4	mg/L	550	Standard
Fe	57	4449.0	6.7	**0.0390**	0.003	8.3	mg/L	1772	Standard
Sc-1	45	395322.9	2.5				mg/L	330668	Standard
Cl	35	18.3	20.7				ug/L	5	Standard
Kr	83	40.9	9.4				ug/L	38	Standard
Br	81	1530.9	7.5				ug/L	344	Standard
P	31	576.7	13.5				ug/L	312	Standard
S	34	17474.2	2.6				ug/L	5594	Standard
Sr	88	291.7	13.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		105.656	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	116.670
	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	107.197
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063902SD WG404095-08
Sample Date/Time: Sunday, July 29, 2012 11:57:46
Number of Replicates: 3
Autosampler Position: 414
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	30649.3	2.0	**3621.9961**	147.492	4.1	ug/L	9465	Standard
	Be	9	47255.3	1.9	**25.3677**	0.864	3.4	ug/L	10	Standard
	Al	27	549122.5	1.9	**34.1654**	0.970	2.8	ug/L	7870	Standard
>	**Sc**	45	370430.8	1.5				ug/L	330668	Standard
	Ti	47	1766.4	2.5	**1.4808**	0.071	4.8	ug/L	53	Standard
	V	51	256959.2	1.0	**25.8915**	0.771	3.0	ug/L	2687	Standard
	Cr	52	200516.5	1.0	**24.7846**	0.487	2.0	ug/L	8408	Standard
	Cr	53	34251.2	0.8	**25.9430**	0.454	1.7	ug/L	288	Standard
	Mn	55	360651.7	1.8	**27.4592**	1.171	4.3	ug/L	1080	Standard
	Co	59	220529.7	0.7	**26.7029**	0.850	3.2	ug/L	117	Standard
	Ni	60	57847.2	0.2	**24.9931**	0.686	2.7	ug/L	68	Standard
	Cu	65	54539.0	1.0	**25.4237**	0.380	1.5	ug/L	141	Standard
	Zn	66	34810.6	0.8	**34.3208**	1.129	3.3	ug/L	138	Standard
>	**Ge**	72	283558.8	2.5				ug/L	283230	Standard
	As	75	26094.0	0.7	**26.3853**	0.829	3.1	ug/L	-198	Standard
	Se	82	2706.3	1.6	**27.1103**	0.632	2.3	ug/L	21	Standard
	Se-1	77	1984.1	1.8	**26.6167**	1.055	4.0	ug/L	131	Standard
>	**Ga**	71	611.7	4.9				mg/L	607	Standard
	Rb	85	1743.4	4.5				ug/L	30	Standard
	Y	89	256105.1	1.7				ug/L	251555	Standard
>	**Rh**	103	378.3	12.7				ug/L	335	Standard
	Mo	98	8077.2	0.4	**2.0377**	0.021	1.0	ug/L	13	Standard
	Ag	107	157479.9	0.6	**22.6507**	0.283	1.2	ug/L	36	Standard
	Cd	111	100682.5	1.5	**28.2153**	0.511	1.8	mg/L	49	Standard
	Cd	114	278609.7	0.5	**25.6741**	0.278	1.1	ug/L	170	Standard
>	**In**	115	810455.1	0.6				ug/L	727802	Standard
	Sn	118	1362.1	1.7	**0.0590**	0.002	4.0	ug/L	471	Standard
	Sb	123	248924.1	0.7	**26.4428**	0.226	0.9	ug/L	39	Standard
	Ba	135	252964.9	0.4	**51.9953**	0.253	0.5	ug/L	25	Standard
	Ce	140	1791.4	3.7				ug/L	25	Standard
>	**Tb**	159	1150626.5	0.7				ug/L	1071747	Standard
	Ho	165	30.0	12.0				ug/L	13	Standard
	Tl	203	429001.2	0.8	**24.9428**	0.211	0.8	ug/L	5	Standard
	Tl	205	989031.9	0.2	**24.6554**	0.086	0.3	ug/L	10	Standard
	Pb	206	332149.9	0.5	**25.0039**	0.160	0.6	ug/L	382	Standard
	Pb	207	281691.2	0.6	**25.3989**	0.169	0.7	ug/L	306	Standard
	Pb	208	1306475.9	0.0	**25.0642**	0.048	0.2	ug/L	1443	Standard
	U	238	415000.8	0.7	**26.3873**	0.132	0.5	ug/L	5	Standard
>	**Bi**	209	579688.5	0.2				ug/L	561075	Standard

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Na	23	138646.5	0.6	**7.2120**	0.077	1.1	mg/L	288	Standard
Mg	24	1435486.5	2.1	**1.9245**	0.049	2.6	mg/L	218	Standard
K	39	928.4	3.6	**0.6249**	0.029	4.6	mg/L	125	Standard
Ca	43	26.7	21.7	**20.0907**	5.203	25.9	mg/L	3	Standard
Fe	54	584.0	8.1	**0.0033**	0.010	314.6	mg/L	550	Standard
Fe	57	4670.7	2.3	**0.0479**	0.003	6.6	mg/L	1772	Standard
> **Sc-1**	45	370430.8	1.5				mg/L	330668	Standard
Cl	35	26.7	5.7				ug/L	5	Standard
Kr	83	37.4	3.7				ug/L	38	Standard
Br	81	1981.8	1.2				ug/L	344	Standard
P	31	563.3	3.3				ug/L	312	Standard
S	34	16997.0	1.2				ug/L	5594	Standard
Sr	88	283.3	8.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.116	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.357
	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	103.317
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063902SD WG404095-08
Report Date/Time: Sunday, July 29, 2012 12:00:17
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063903
Sample Date/Time: Sunday, July 29, 2012 12:00:57
Number of Replicates: 3
Autosampler Position: 415
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	32899.0	2.7	**3738.5354**	83.555	2.2	ug/L	9465	Standard
	Be	9	23.3	44.6	**-0.0093**	0.005	57.4	ug/L	10	Standard
	Al	27	60529.0	1.7	**3.0655**	0.110	3.6	ug/L	7870	Standard
>	**Sc**	45	389113.9	1.5				ug/L	330668	Standard
	Ti	47	1034.7	4.1	**0.8155**	0.048	5.8	ug/L	53	Standard
	V	51	17193.3	2.2	**1.4044**	0.057	4.1	ug/L	2687	Standard
	Cr	52	84647.5	0.8	**9.4228**	0.214	2.3	ug/L	8408	Standard
	Cr	53	14143.3	0.7	**10.1869**	0.201	2.0	ug/L	288	Standard
	Mn	55	15191.6	1.1	**1.0314**	0.023	2.2	ug/L	1080	Standard
	Co	59	832.4	2.7	**0.0839**	0.004	4.4	ug/L	117	Standard
	Ni	60	102423.0	1.0	**42.5838**	0.787	1.8	ug/L	68	Standard
	Cu	65	2348.8	2.1	**0.9881**	0.008	0.8	ug/L	141	Standard
	Zn	66	4404.0	0.5	**4.0427**	0.065	1.6	ug/L	138	Standard
>	**Ge**	72	294720.1	1.4				ug/L	283230	Standard
	As	75	42.3	58.1	**0.2138**	0.024	11.4	ug/L	-198	Standard
	Se	82	120.2	3.8	**0.9255**	0.057	6.2	ug/L	21	Standard
	Se-1	77	180.3	7.4	**0.6336**	0.205	32.4	ug/L	131	Standard
>	**Ga**	71	616.7	12.4				mg/L	607	Standard
	Rb	85	1651.8	4.1				ug/L	30	Standard
	Y	89	256269.1	0.8				ug/L	251555	Standard
>	**Rh**	103	380.0	5.7				ug/L	335	Standard
	Mo	98	7090.8	1.7	**1.7519**	0.028	1.6	ug/L	13	Standard
	Ag	107	94.0	8.7	**0.0043**	0.001	27.2	ug/L	36	Standard
	Cd	111	112.6	18.6	**0.0127**	0.006	45.7	mg/L	49	Standard
	Cd	114	328.1	3.7	**0.0094**	0.001	11.7	ug/L	170	Standard
>	**In**	115	827062.0	0.1				ug/L	727802	Standard
	Sn	118	805.0	7.0	**0.0142**	0.004	30.0	ug/L	471	Standard
	Sb	123	726.5	3.5	**0.0774**	0.003	3.3	ug/L	39	Standard
	Ba	135	148884.3	0.7	**29.9826**	0.243	0.8	ug/L	25	Standard
	Ce	140	314.3	0.7				ug/L	25	Standard
>	**Tb**	159	1177357.0	0.8				ug/L	1071747	Standard
	Ho	165	18.0	5.6				ug/L	13	Standard
	Tl	203	433.7	6.6	**0.0238**	0.001	6.1	ug/L	5	Standard
	Tl	205	969.7	4.9	**0.0239**	0.001	4.0	ug/L	10	Standard
	Pb	206	1124.7	4.3	**0.0516**	0.003	5.6	ug/L	382	Standard
	Pb	207	911.0	4.3	**0.0525**	0.003	5.5	ug/L	306	Standard
	Pb	208	4295.6	5.3	**0.0522**	0.004	7.1	ug/L	1443	Standard
	U	238	1890.8	4.4	**0.1185**	0.004	3.7	ug/L	5	Standard
>	**Bi**	209	587050.4	1.0				ug/L	561075	Standard

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	Na	23	139060.3	0.9	**6.8853**	0.154	2.2	mg/L	288	Standard
	Mg	24	1460348.2	0.4	**1.8637**	0.021	1.1	mg/L	218	Standard
	K	39	1005.0	4.8	**0.6477**	0.046	7.0	mg/L	125	Standard
	Ca	43	28.3	20.4	**20.3895**	4.874	23.9	mg/L	3	Standard
	Fe	54	857.8	8.6	**0.0528**	0.013	25.5	mg/L	550	Standard
	Fe	57	9629.7	2.3	**0.1275**	0.003	2.2	mg/L	1772	Standard
>	**Sc-1**	45	389113.9	1.5				mg/L	330668	Standard
	Cl	35	21.0	14.3				ug/L	5	Standard
	Kr	83	36.8	13.6				ug/L	38	Standard
	Br	81	1682.6	1.3				ug/L	344	Standard
	P	31	435.0	10.2				ug/L	312	Standard
	S	34	16961.2	1.2				ug/L	5594	Standard
	Sr	88	255.0	17.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		104.057	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	113.638
	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	104.630
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064001
Sample Date/Time: Sunday, July 29, 2012 12:04:07
Number of Replicates: 3
Autosampler Position: 416
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	60206.1	0.8	**9023.1578**	186.193	2.1	ug/L	9465	Standard
	Be	9	31.7	107.5	**-0.0040**	0.019	469.6	ug/L	10	Standard
	Al	27	75554.7	3.1	**4.2867**	0.199	4.7	ug/L	7870	Standard
>	**Sc**	45	363854.3	1.4				ug/L	330668	Standard
	Ti	47	1055.0	25.1	**0.8517**	0.225	26.4	ug/L	53	Standard
	V	51	35043.7	1.0	**3.2299**	0.011	0.3	ug/L	2687	Standard
	Cr	52	20923.4	0.5	**1.5729**	0.027	1.7	ug/L	8408	Standard
	Cr	53	2796.1	3.2	**1.9021**	0.076	4.0	ug/L	288	Standard
	Mn	55	4295.3	1.8	**0.2383**	0.003	1.5	ug/L	1080	Standard
	Co	59	273.3	6.9	**0.0194**	0.002	10.5	ug/L	117	Standard
	Ni	60	1634.1	8.7	**0.6657**	0.056	8.4	ug/L	68	Standard
	Cu	65	1007.4	3.0	**0.3953**	0.013	3.2	ug/L	141	Standard
	Zn	66	4710.7	1.2	**4.4359**	0.067	1.5	ug/L	138	Standard
>	**Ge**	72	288201.9	0.7				ug/L	283230	Standard
	As	75	884.4	1.2	**1.0464**	0.013	1.3	ug/L	-198	Standard
	Se	82	103.6	7.9	**0.7873**	0.081	10.3	ug/L	21	Standard
	Se-1	77	156.3	11.4	**0.3490**	0.239	68.4	ug/L	131	Standard
>	**Ga**	71	645.0	8.9				mg/L	607	Standard
	Rb	85	9733.1	3.9				ug/L	30	Standard
	Y	89	257515.0	0.9				ug/L	251555	Standard
>	**Rh**	103	388.3	9.7				ug/L	335	Standard
	Mo	98	6337.4	2.3	**1.5905**	0.056	3.5	ug/L	13	Standard
	Ag	107	86.3	37.0	**0.0034**	0.004	131.5	ug/L	36	Standard
	Cd	111	91.1	6.0	**0.0072**	0.002	21.2	mg/L	49	Standard
	Cd	114	276.3	19.7	**0.0051**	0.005	91.4	ug/L	170	Standard
>	**In**	115	814145.6	1.6				ug/L	727802	Standard
	Sn	118	897.7	3.3	**0.0224**	0.003	15.1	ug/L	471	Standard
	Sb	123	564.0	5.8	**0.0615**	0.004	7.0	ug/L	39	Standard
	Ba	135	105823.9	0.6	**21.6481**	0.226	1.0	ug/L	25	Standard
	Ce	140	549.7	4.3				ug/L	25	Standard
>	**Tb**	159	1157929.7	1.1				ug/L	1071747	Standard
	Ho	165	22.7	14.2				ug/L	13	Standard
	Tl	203	320.0	10.8	**0.0175**	0.002	11.7	ug/L	5	Standard
	Tl	205	742.4	12.4	**0.0184**	0.002	12.1	ug/L	10	Standard
	Pb	206	797.7	2.2	**0.0277**	0.001	3.1	ug/L	382	Standard
	Pb	207	662.7	4.0	**0.0309**	0.002	7.8	ug/L	306	Standard
	Pb	208	3068.8	2.9	**0.0294**	0.002	5.7	ug/L	1443	Standard
	U	238	5871.5	1.7	**0.3711**	0.003	0.9	ug/L	5	Standard
>	**Bi**	209	582848.0	0.8				ug/L	561075	Standard

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	Na	23	132969.3	1.0	**7.0417**	0.169	2.4	mg/L	288	Standard
	Mg	24	1002051.8	1.0	**1.3678**	0.031	2.2	mg/L	218	Standard
	K	39	1051.7	4.5	**0.7377**	0.049	6.6	mg/L	125	Standard
	Ca	43	35.0	51.5	**28.6502**	17.418	60.8	mg/L	3	Standard
	Fe	54	554.2	2.7	**-0.0009**	0.003	325.2	mg/L	550	Standard
	Fe	57	4444.0	4.0	**0.0454**	0.004	9.3	mg/L	1772	Standard
>	**Sc-1**	45	363854.3	1.4				mg/L	330668	Standard
	Cl	35	12.3	44.7				ug/L	5	Standard
	Kr	83	36.9	6.2				ug/L	38	Standard
	Br	81	1560.1	2.5				ug/L	344	Standard
	P	31	323.3	1.9				ug/L	312	Standard
	S	34	15202.6	2.1				ug/L	5594	Standard
	Sr	88	390.0	3.8				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		101.756	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.864
	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	103.881
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207064001
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Method 6020 - Summary Report

Sample ID: L1207064002
Sample Date/Time: Sunday, July 29, 2012 12:07:17
Number of Replicates: 3
Autosampler Position: 417
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	60925.6	1.1	**8799.0695**	132.786	1.5	ug/L	9465	Standard
	Be	9	61.7	24.8	**0.0115**	0.008	73.1	ug/L	10	Standard
	Al	27	730815.0	1.8	**44.9758**	1.000	2.2	ug/L	7870	Standard
>	**Sc**	45	375966.1	1.0				ug/L	330668	Standard
	Ti	47	1599.4	6.2	**1.3122**	0.071	5.4	ug/L	53	Standard
	V	51	80465.0	1.1	**7.7746**	0.123	1.6	ug/L	2687	Standard
	Cr	52	11656.8	0.6	**0.3960**	0.008	1.9	ug/L	8408	Standard
	Cr	53	1370.1	1.3	**0.8308**	0.021	2.6	ug/L	288	Standard
	Mn	55	78541.4	0.7	**5.8098**	0.084	1.4	ug/L	1080	Standard
	Co	59	701.0	0.9	**0.0704**	0.002	2.4	ug/L	117	Standard
	Ni	60	1105.7	2.3	**0.4408**	0.008	1.7	ug/L	68	Standard
	Cu	65	2018.5	2.2	**0.8595**	0.012	1.4	ug/L	141	Standard
	Zn	66	9944.9	0.6	**9.5264**	0.044	0.5	ug/L	138	Standard
>	**Ge**	72	288401.8	1.1				ug/L	283230	Standard
	As	75	3152.8	1.9	**3.2849**	0.035	1.1	ug/L	-198	Standard
	Se	82	114.7	4.5	**0.8964**	0.059	6.6	ug/L	21	Standard
	Se-1	77	154.3	9.6	**0.3212**	0.223	69.4	ug/L	131	Standard
>	**Ga**	71	771.7	6.5				mg/L	607	Standard
	Rb	85	4855.8	5.6				ug/L	30	Standard
	Y	89	262738.6	1.1				ug/L	251555	Standard
>	**Rh**	103	378.3	15.0				ug/L	335	Standard
	Mo	98	7524.1	2.3	**1.8772**	0.051	2.7	ug/L	13	Standard
	Ag	107	207.7	8.9	**0.0206**	0.003	12.8	ug/L	36	Standard
	Cd	111	213.9	9.7	**0.0411**	0.006	14.4	mg/L	49	Standard
	Cd	114	683.7	5.0	**0.0422**	0.003	7.2	ug/L	170	Standard
>	**In**	115	819302.1	0.5				ug/L	727802	Standard
	Sn	118	2645.6	1.8	**0.1570**	0.003	2.0	ug/L	471	Standard
	Sb	123	1236.5	5.0	**0.1317**	0.007	5.1	ug/L	39	Standard
	Ba	135	173132.3	1.1	**35.1995**	0.544	1.5	ug/L	25	Standard
	Ce	140	8178.5	0.5				ug/L	25	Standard
>	**Tb**	159	1164881.4	0.1				ug/L	1071747	Standard
	Ho	165	110.0	0.9				ug/L	13	Standard
	Tl	203	690.3	3.8	**0.0385**	0.002	4.1	ug/L	5	Standard
	Tl	205	1599.8	2.7	**0.0394**	0.002	3.8	ug/L	10	Standard
	Pb	206	4863.1	1.6	**0.3292**	0.003	1.0	ug/L	382	Standard
	Pb	207	4000.2	1.3	**0.3273**	0.002	0.6	ug/L	306	Standard
	Pb	208	18520.1	0.8	**0.3215**	0.003	0.9	ug/L	1443	Standard
	U	238	10186.8	1.6	**0.6383**	0.006	0.9	ug/L	5	Standard
>	**Bi**	209	588072.9	1.6				ug/L	561075	Standard

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Na	23	131723.5	0.8	**6.7481**	0.015	0.2	mg/L	288	Standard
Mg	24	536989.2	2.0	**0.7094**	0.011	1.6	mg/L	218	Standard
K	39	1010.0	1.8	**0.6776**	0.006	0.9	mg/L	125	Standard
Ca	43	18.3	56.8	**11.9178**	9.780	82.1	mg/L	3	Standard
Fe	54	761.8	4.6	**0.0388**	0.008	21.8	mg/L	550	Standard
Fe	57	6613.1	5.1	**0.0806**	0.005	6.3	mg/L	1772	Standard
Sc-1	45	375966.1	1.0				mg/L	330668	Standard
Cl	35	16.7	21.1				ug/L	5	Standard
Kr	83	36.1	16.4				ug/L	38	Standard
Br	81	1565.9	11.4				ug/L	344	Standard
P	31	385.8	1.6				ug/L	312	Standard
S	34	11996.4	1.4				ug/L	5594	Standard
Sr	88	273.3	17.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		101.826	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	112.572
	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	104.812
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064003
Sample Date/Time: Sunday, July 29, 2012 12:10:26
Number of Replicates: 3
Autosampler Position: 418
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	49092.8	1.6	**6573.7816**	449.661	6.8	ug/L	9465	Standard
	Be	9	26.7	92.5	**-0.0076**	0.012	165.0	ug/L	10	Standard
	Al	27	669017.2	2.2	**40.2693**	1.692	4.2	ug/L	7870	Standard
>	**Sc**	45	384145.0	3.8				ug/L	330668	Standard
	Ti	47	2591.6	1.3	**2.1468**	0.032	1.5	ug/L	53	Standard
	V	51	20780.7	0.9	**1.7935**	0.005	0.3	ug/L	2687	Standard
	Cr	52	13031.3	1.0	**0.5652**	0.011	1.9	ug/L	8408	Standard
	Cr	53	2716.9	2.6	**1.8353**	0.075	4.1	ug/L	288	Standard
	Mn	55	29050.2	1.6	**2.0893**	0.059	2.8	ug/L	1080	Standard
	Co	59	639.7	2.9	**0.0628**	0.003	4.9	ug/L	117	Standard
	Ni	60	1757.4	7.5	**0.7154**	0.052	7.3	ug/L	68	Standard
	Cu	65	888.7	7.3	**0.3391**	0.027	8.0	ug/L	141	Standard
	Zn	66	10398.6	0.6	**9.9371**	0.124	1.3	ug/L	138	Standard
>	**Ge**	72	289293.6	1.1				ug/L	283230	Standard
	As	75	200.0	22.7	**0.3694**	0.043	11.8	ug/L	-198	Standard
	Se	82	171.0	6.2	**1.4496**	0.090	6.2	ug/L	21	Standard
	Se-1	77	210.3	12.2	**1.1035**	0.392	35.5	ug/L	131	Standard
>	**Ga**	71	740.0	9.7				mg/L	607	Standard
	Rb	85	11682.8	2.7				ug/L	30	Standard
	Y	89	255456.2	2.2				ug/L	251555	Standard
>	**Rh**	103	405.0	11.8				ug/L	335	Standard
	Mo	98	4879.6	0.7	**1.2255**	0.024	2.0	ug/L	13	Standard
	Ag	107	191.0	8.9	**0.0185**	0.003	14.2	ug/L	36	Standard
	Cd	111	115.6	8.7	**0.0141**	0.003	21.7	mg/L	49	Standard
	Cd	114	353.4	2.3	**0.0123**	0.001	9.5	ug/L	170	Standard
>	**In**	115	812321.4	1.4				ug/L	727802	Standard
	Sn	118	1190.4	3.4	**0.0454**	0.004	9.0	ug/L	471	Standard
	Sb	123	289.3	11.4	**0.0325**	0.004	11.9	ug/L	39	Standard
	Ba	135	129507.9	1.2	**26.5585**	0.683	2.6	ug/L	25	Standard
	Ce	140	8410.3	0.7				ug/L	25	Standard
>	**Tb**	159	1167139.9	1.4				ug/L	1071747	Standard
	Ho	165	127.7	13.8				ug/L	13	Standard
	Tl	203	551.7	7.0	**0.0310**	0.002	7.3	ug/L	5	Standard
	Tl	205	1278.7	5.2	**0.0319**	0.002	5.2	ug/L	10	Standard
	Pb	206	1355.4	1.4	**0.0701**	0.001	2.1	ug/L	382	Standard
	Pb	207	1106.7	1.7	**0.0713**	0.002	2.4	ug/L	306	Standard
	Pb	208	5169.0	1.7	**0.0701**	0.002	2.4	ug/L	1443	Standard
	U	238	4452.7	2.0	**0.2830**	0.006	2.0	ug/L	5	Standard
>	**Bi**	209	579421.2	0.0				ug/L	561075	Standard

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Na	23	140653.2	0.6	**7.0598**	0.238	3.4	mg/L	288	Standard
Mg	24	2635591.6	0.9	**3.4095**	0.118	3.5	mg/L	218	Standard
K	39	1075.0	9.9	**0.7132**	0.114	16.0	mg/L	125	Standard
Ca	43	45.0	0.0	**36.1758**	1.625	4.5	mg/L	3	Standard
Fe	54	691.6	3.3	**0.0212**	0.010	44.8	mg/L	550	Standard
Fe	57	8040.5	1.5	**0.1027**	0.007	7.2	mg/L	1772	Standard
Sc-1	45	384145.0	3.8				mg/L	330668	Standard
Cl	35	49.0	8.2				ug/L	5	Standard
Kr	83	37.7	21.2				ug/L	38	Standard
Br	81	3342.9	6.2				ug/L	344	Standard
P	31	350.8	4.5				ug/L	312	Standard
S	34	16632.5	0.5				ug/L	5594	Standard
Sr	88	350.0	24.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		102.141	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.613
	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	103.270
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 12:13:38
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: JYH 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	7	9329.5	1.2	**23.8206**	49.204	206.6	ug/L	9465	Standard
	Be	9	87493.7	2.5	**51.5441**	1.757	3.4	ug/L	10	Standard
	Al	27	660485.1	3.0	**45.2620**	1.396	3.1	ug/L	7870	Standard
>	**Sc**	45	337665.1	1.6				ug/L	330668	Standard
	Ti	47	115298.0	0.7	**97.9030**	1.073	1.1	ug/L	53	Standard
	V	51	476640.0	0.6	**47.5355**	0.160	0.3	ug/L	2687	Standard
	Cr	52	379147.7	0.7	**47.1023**	0.614	1.3	ug/L	8408	Standard
	Cr	53	64277.7	1.0	**48.1287**	0.347	0.7	ug/L	288	Standard
	Mn	55	702097.0	0.6	**52.7166**	0.111	0.2	ug/L	1080	Standard
	Co	59	433764.5	0.5	**51.7411**	0.059	0.1	ug/L	117	Standard
	Ni	60	111906.8	1.1	**47.6492**	0.504	1.1	ug/L	68	Standard
	Cu	65	105115.4	0.4	**48.3344**	0.133	0.3	ug/L	141	Standard
	Zn	66	49908.7	1.2	**48.5243**	0.472	1.0	ug/L	138	Standard
>	**Ge**	72	287759.9	0.6				ug/L	283230	Standard
	As	75	49819.6	0.4	**49.4641**	0.440	0.9	ug/L	-198	Standard
	Se	82	5051.6	0.9	**50.0531**	0.188	0.4	ug/L	21	Standard
	Se-1	77	3624.4	3.5	**49.3700**	1.829	3.7	ug/L	131	Standard
>	**Ga**	71	583.3	2.6				mg/L	607	Standard
	Rb	85	721.7	11.0				ug/L	30	Standard
	Y	89	257160.9	1.4				ug/L	251555	Standard
>	**Rh**	103	315.0	8.8				ug/L	335	Standard
	Mo	98	349788.9	0.8	**88.3534**	0.491	0.6	ug/L	13	Standard
	Ag	107	324681.4	1.5	**46.6077**	0.887	1.9	ug/L	36	Standard
	Cd	111	194932.6	0.8	**54.5256**	0.638	1.2	mg/L	49	Standard
	Cd	114	543705.1	0.9	**50.0128**	0.642	1.3	ug/L	170	Standard
>	**In**	115	812221.2	0.6				ug/L	727802	Standard
	Sn	118	633460.0	0.8	**49.3187**	0.099	0.2	ug/L	471	Standard
	Sb	123	472923.2	0.6	**50.1279**	0.556	1.1	ug/L	39	Standard
	Ba	135	235344.7	0.7	**48.2677**	0.372	0.8	ug/L	25	Standard
	Ce	140	873.7	1.7				ug/L	25	Standard
>	**Tb**	159	1162825.5	1.1				ug/L	1071747	Standard
	Ho	165	21.0	9.5				ug/L	13	Standard
	Tl	203	841288.7	0.5	**48.2807**	0.077	0.2	ug/L	5	Standard
	Tl	205	1933329.9	0.4	**47.5710**	0.085	0.2	ug/L	10	Standard
	Pb	206	649438.1	0.9	**48.2845**	0.297	0.6	ug/L	382	Standard
	Pb	207	553464.9	0.5	**49.2837**	0.147	0.3	ug/L	306	Standard
	Pb	208	2555676.1	0.5	**48.4212**	0.077	0.2	ug/L	1443	Standard
	U	238	815556.7	0.8	**51.1846**	0.347	0.7	ug/L	5	Standard
>	**Bi**	209	587298.0	0.3				ug/L	561075	Standard

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Na	23	112899.1	1.0	**6.4388**	0.094	1.5	mg/L	288	Standard
Mg	24	3235135.5	0.5	**4.7577**	0.079	1.7	mg/L	218	Standard
K	39	5349.3	6.7	**4.5269**	0.250	5.5	mg/L	125	Standard
Ca	43	13.3	78.1	**8.6847**	11.005	126.7	mg/L	3	Standard
Fe	54	20974.9	1.3	**4.7830**	0.138	2.9	mg/L	550	Standard
Fe	57	299151.9	2.1	**5.7761**	0.078	1.3	mg/L	1772	Standard
Sc-1	45	337665.1	1.6				mg/L	330668	Standard
Cl	35	3.3	34.6				ug/L	5	Standard
Kr	83	37.9	0.5				ug/L	38	Standard
Br	81	547.5	5.8				ug/L	344	Standard
P	31	391.7	10.9				ug/L	312	Standard
S	34	6038.7	0.8				ug/L	5594	Standard
Sr	88	41.7	13.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	90.524		
Sc	45			
Ti	47	97.903		
V	51	95.071		
Cr	52	94.205		
Cr	53			
Mn	55	105.433		
Co	59	103.482		
Ni	60	95.298		
Cu	65	96.669		
Zn	66	97.049		
Ge	72		101.599	
As	75	98.928		
Se	82	100.106		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	88.353		
Ag	107	93.215		

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	Cd	111	109.051	
	Cd	114		
>	In	115		111.599
	Sn	118	98.637	
	Sb	123	100.256	
	Ba	135	96.535	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.561	
	Tl	205		
	Pb	206	96.569	
	Pb	207	98.567	
	Pb	208	96.842	
	U	238	102.369	
>	Bi	209		104.674
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mo	98	

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 12:16:08
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 12:16:48
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: JYH 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	7	9207.8	2.7	**6.9343**	31.166	449.4	ug/L	9465	Standard
	Be	9	26.7	71.0	**-0.0056**	0.011	195.9	ug/L	10	Standard
	Al	27	7707.0	7.2	**-0.0444**	0.024	53.3	ug/L	7870	Standard
>	**Sc**	45	336357.8	2.9				ug/L	330668	Standard
	Ti	47	75.7	22.2	**0.0226**	0.016	68.8	ug/L	53	Standard
	V	51	2382.9	5.3	**-0.0364**	0.011	30.5	ug/L	2687	Standard
	Cr	52	7183.4	2.5	**-0.1511**	0.017	11.2	ug/L	8408	Standard
	Cr	53	271.7	5.2	**0.0112**	0.011	94.4	ug/L	288	Standard
	Mn	55	1326.1	11.6	**0.0175**	0.012	66.6	ug/L	1080	Standard
	Co	59	214.3	35.2	**0.0130**	0.009	70.5	ug/L	117	Standard
	Ni	60	95.3	30.9	**0.0123**	0.013	107.7	ug/L	68	Standard
	Cu	65	173.0	9.1	**0.0135**	0.009	63.6	ug/L	141	Standard
	Zn	66	173.0	16.1	**0.0207**	0.030	146.5	ug/L	138	Standard
>	**Ge**	72	282145.1	1.4				ug/L	283230	Standard
	As	75	-173.1	10.1	**-0.0020**	0.018	887.5	ug/L	-198	Standard
	Se	82	24.1	23.9	**0.0014**	0.056	3984.1	ug/L	21	Standard
	Se-1	77	121.0	8.1	**-0.1131**	0.119	105.1	ug/L	131	Standard
>	**Ga**	71	608.3	12.4				mg/L	607	Standard
	Rb	85	28.3	100.3				ug/L	30	Standard
	Y	89	256059.1	1.2				ug/L	251555	Standard
>	**Rh**	103	375.0	3.5				ug/L	335	Standard
	Mo	98	388.5	58.0	**0.0917**	0.057	62.3	ug/L	13	Standard
	Ag	107	289.3	77.2	**0.0329**	0.032	97.8	ug/L	36	Standard
	Cd	111	186.4	71.0	**0.0342**	0.037	108.5	mg/L	49	Standard
	Cd	114	507.7	62.2	**0.0268**	0.029	108.7	ug/L	170	Standard
>	**In**	115	807561.1	1.5				ug/L	727802	Standard
	Sn	118	1167.7	19.2	**0.0441**	0.018	40.3	ug/L	471	Standard
	Sb	123	2592.5	5.2	**0.2783**	0.018	6.6	ug/L	39	Standard
	Ba	135	207.7	82.9	**0.0314**	0.035	112.7	ug/L	25	Standard
	Ce	140	30.0	26.5				ug/L	25	Standard
>	**Tb**	159	1147147.9	0.3				ug/L	1071747	Standard
	Ho	165	18.3	26.9				ug/L	13	Standard
	Tl	203	320.7	73.0	**0.0172**	0.013	76.3	ug/L	5	Standard
	Tl	205	720.4	68.8	**0.0176**	0.012	67.6	ug/L	10	Standard
	Pb	206	588.7	25.6	**0.0114**	0.011	97.5	ug/L	382	Standard
	Pb	207	493.7	25.4	**0.0150**	0.011	72.5	ug/L	306	Standard
	Pb	208	2314.4	25.3	**0.0144**	0.011	75.6	ug/L	1443	Standard
	U	238	219.3	49.7	**0.0135**	0.007	50.7	ug/L	5	Standard
>	**Bi**	209	591432.0	2.1				ug/L	561075	Standard

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Na	23	656.7	44.0	**0.0013**	0.015	1186.3	mg/L	288	Standard
Mg	24	1503.4	55.3	**0.0025**	0.001	47.0	mg/L	218	Standard
K	39	135.0	9.8	**0.0086**	0.010	120.8	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.6595**	2.945	80.5	mg/L	3	Standard
Fe	54	526.9	8.0	**0.0028**	0.013	481.0	mg/L	550	Standard
Fe	57	1985.1	9.1	**0.0039**	0.003	65.9	mg/L	1772	Standard
Sc-1	45	336357.8	2.9				mg/L	330668	Standard
Cl	35	3.7	15.7				ug/L	5	Standard
Kr	83	39.4	11.8				ug/L	38	Standard
Br	81	438.3	8.0				ug/L	344	Standard
P	31	327.5	12.3				ug/L	312	Standard
S	34	5911.2	1.4				ug/L	5594	Standard
Sr	88	50.0	20.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.617	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	110.959
	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	105.410
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1207080304
Sample Date/Time: Sunday, July 29, 2012 12:21:05
Number of Replicates: 3
Autosampler Position: 419
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	43256.7	3.3	**5771.2235**	156.606	2.7	ug/L	9465	Standard
	Be	9	40.0	25.0	**0.0001**	0.005	10071.2	ug/L	10	Standard
	Al	27	1842385.0	1.8	**114.9281**	3.570	3.1	ug/L	7870	Standard
>	**Sc**	45	373896.3	1.7				ug/L	330668	Standard
	Ti	47	4719.7	4.7	**3.9926**	0.171	4.3	ug/L	53	Standard
	V	51	21485.8	1.4	**1.8900**	0.048	2.5	ug/L	2687	Standard
	Cr	52	19615.7	1.2	**1.4273**	0.003	0.2	ug/L	8408	Standard
	Cr	53	3438.7	3.5	**2.4057**	0.092	3.8	ug/L	288	Standard
	Mn	55	22220.9	0.8	**1.5982**	0.027	1.7	ug/L	1080	Standard
	Co	59	706.7	2.0	**0.0718**	0.001	1.7	ug/L	117	Standard
	Ni	60	1463.7	2.1	**0.5985**	0.006	1.1	ug/L	68	Standard
	Cu	65	709.3	1.1	**0.2610**	0.004	1.7	ug/L	141	Standard
	Zn	66	3166.0	3.0	**2.9565**	0.071	2.4	ug/L	138	Standard
>	**Ge**	72	285847.7	1.1				ug/L	283230	Standard
	As	75	577.2	1.8	**0.7477**	0.017	2.2	ug/L	-198	Standard
	Se	82	320.5	2.0	**2.9696**	0.033	1.1	ug/L	21	Standard
	Se-1	77	191.3	10.7	**0.8661**	0.290	33.5	ug/L	131	Standard
>	**Ga**	71	841.7	5.4				mg/L	607	Standard
	Rb	85	12975.6	1.9				ug/L	30	Standard
	Y	89	252019.7	2.7				ug/L	251555	Standard
>	**Rh**	103	431.7	7.4				ug/L	335	Standard
	Mo	98	4166.6	0.8	**1.0490**	0.018	1.7	ug/L	13	Standard
	Ag	107	66.0	7.6	**0.0005**	0.001	132.4	ug/L	36	Standard
	Cd	111	125.0	2.8	**0.0168**	0.001	7.2	mg/L	49	Standard
	Cd	114	344.3	7.4	**0.0116**	0.002	18.3	ug/L	170	Standard
>	**In**	115	809477.6	0.9				ug/L	727802	Standard
	Sn	118	1044.7	4.5	**0.0342**	0.003	8.7	ug/L	471	Standard
	Sb	123	737.8	15.2	**0.0802**	0.011	14.1	ug/L	39	Standard
	Ba	135	201851.2	1.4	**41.5353**	0.281	0.7	ug/L	25	Standard
	Ce	140	19140.8	2.3				ug/L	25	Standard
>	**Tb**	159	1152627.6	0.5				ug/L	1071747	Standard
	Ho	165	249.3	2.9				ug/L	13	Standard
	Tl	203	598.7	4.5	**0.0338**	0.002	4.9	ug/L	5	Standard
	Tl	205	1373.1	4.0	**0.0343**	0.002	4.6	ug/L	10	Standard
	Pb	206	1803.1	1.3	**0.1038**	0.002	2.4	ug/L	382	Standard
	Pb	207	1491.7	1.6	**0.1060**	0.003	2.8	ug/L	306	Standard
	Pb	208	7051.3	2.3	**0.1063**	0.004	3.8	ug/L	1443	Standard
	U	238	2647.9	1.8	**0.1682**	0.003	1.8	ug/L	5	Standard
>	**Bi**	209	579643.4	0.6				ug/L	561075	Standard

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Na	23	135291.4	0.6	**6.9713**	0.088	1.3	mg/L	288	Standard
Mg	24	1346612.7	1.5	**1.7885**	0.028	1.5	mg/L	218	Standard
K	39	1188.4	2.9	**0.8215**	0.012	1.4	mg/L	125	Standard
Ca	43	21.7	48.0	**15.2057**	10.021	65.9	mg/L	3	Standard
Fe	54	1203.2	10.3	**0.1332**	0.031	23.0	mg/L	550	Standard
Fe	57	13382.6	3.3	**0.2000**	0.006	3.0	mg/L	1772	Standard
Sc-1	45	373896.3	1.7				mg/L	330668	Standard
Cl	35	36.3	6.9				ug/L	5	Standard
Kr	83	38.6	13.9				ug/L	38	Standard
Br	81	9027.7	3.2				ug/L	344	Standard
P	31	1280.9	4.0				ug/L	312	Standard
S	34	14378.5	0.9				ug/L	5594	Standard
Sr	88	341.7	3.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.924	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.222
	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	103.309
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207080305
Sample Date/Time: Sunday, July 29, 2012 12:24:14
Number of Replicates: 3
Autosampler Position: 420
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	48074.5	3.5	**6622.4721**	130.200	2.0	ug/L	9465	Standard
	Be	9	20.0	43.3	**-0.0105**	0.005	45.3	ug/L	10	Standard
	Al	27	113723.6	1.2	**6.5571**	0.105	1.6	ug/L	7870	Standard
>	**Sc**	45	373451.6	2.6				ug/L	330668	Standard
	Ti	47	1326.1	2.1	**1.0839**	0.019	1.7	ug/L	53	Standard
	V	51	14858.4	0.7	**1.2112**	0.012	1.0	ug/L	2687	Standard
	Cr	52	15510.9	1.8	**0.8901**	0.034	3.8	ug/L	8408	Standard
	Cr	53	2952.8	8.3	**2.0233**	0.170	8.4	ug/L	288	Standard
	Mn	55	4192.6	0.8	**0.2312**	0.006	2.4	ug/L	1080	Standard
	Co	59	636.7	7.0	**0.0629**	0.005	7.5	ug/L	117	Standard
	Ni	60	2131.5	3.4	**0.8796**	0.039	4.5	ug/L	68	Standard
	Cu	65	479.7	6.5	**0.1532**	0.015	9.9	ug/L	141	Standard
	Zn	66	2165.2	1.8	**1.9610**	0.029	1.5	ug/L	138	Standard
>	**Ge**	72	287618.4	1.0				ug/L	283230	Standard
	As	75	1106.3	4.0	**1.2678**	0.044	3.5	ug/L	-198	Standard
	Se	82	615.5	3.5	**5.8890**	0.237	4.0	ug/L	21	Standard
	Se-1	77	199.3	4.3	**0.9620**	0.103	10.8	ug/L	131	Standard
>	**Ga**	71	595.0	6.3				mg/L	607	Standard
	Rb	85	11644.5	3.5				ug/L	30	Standard
	Y	89	254948.8	0.8				ug/L	251555	Standard
>	**Rh**	103	383.3	17.6				ug/L	335	Standard
	Mo	98	2459.5	1.9	**0.6126**	0.014	2.3	ug/L	13	Standard
	Ag	107	64.0	2.7	**0.0002**	0.000	118.7	ug/L	36	Standard
	Cd	111	125.1	5.6	**0.0167**	0.003	15.6	mg/L	49	Standard
	Cd	114	364.5	4.5	**0.0132**	0.001	9.4	ug/L	170	Standard
>	**In**	115	814425.2	1.9				ug/L	727802	Standard
	Sn	118	1025.0	7.1	**0.0322**	0.004	13.3	ug/L	471	Standard
	Sb	123	1611.6	4.4	**0.1721**	0.004	2.5	ug/L	39	Standard
	Ba	135	113813.9	1.4	**23.2745**	0.129	0.6	ug/L	25	Standard
	Ce	140	1307.7	5.9				ug/L	25	Standard
>	**Tb**	159	1166726.9	1.1				ug/L	1071747	Standard
	Ho	165	27.3	16.5				ug/L	13	Standard
	Tl	203	708.0	2.4	**0.0404**	0.001	1.7	ug/L	5	Standard
	Tl	205	1629.1	3.7	**0.0409**	0.001	3.0	ug/L	10	Standard
	Pb	206	857.0	5.3	**0.0329**	0.003	8.9	ug/L	382	Standard
	Pb	207	713.4	6.3	**0.0361**	0.004	9.9	ug/L	306	Standard
	Pb	208	3374.5	3.0	**0.0360**	0.001	4.1	ug/L	1443	Standard
	U	238	3420.4	1.1	**0.2186**	0.001	0.4	ug/L	5	Standard
>	**Bi**	209	576212.3	0.8				ug/L	561075	Standard

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Na	23	141967.0	0.9	**7.3269**	0.122	1.7	mg/L	288	Standard
Mg	24	2759289.5	1.4	**3.6693**	0.051	1.4	mg/L	218	Standard
K	39	1190.0	3.9	**0.8240**	0.027	3.3	mg/L	125	Standard
Ca	43	50.0	17.3	**42.1385**	8.719	20.7	mg/L	3	Standard
Fe	54	808.3	5.9	**0.0499**	0.014	28.7	mg/L	550	Standard
Fe	57	9985.0	7.5	**0.1405**	0.010	6.9	mg/L	1772	Standard
Sc-1	45	373451.6	2.6				mg/L	330668	Standard
Cl	35	52.0	15.0				ug/L	5	Standard
Kr	83	39.6	9.3				ug/L	38	Standard
Br	81	20242.7	3.1				ug/L	344	Standard
P	31	1289.2	2.4				ug/L	312	Standard
S	34	21081.3	0.6				ug/L	5594	Standard
Sr	88	486.7	2.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		101.550	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.902
	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	102.698
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207080306
Sample Date/Time: Sunday, July 29, 2012 12:27:24
Number of Replicates: 3
Autosampler Position: 421
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	62450.2	4.0	**8561.2736**	397.122	4.6	ug/L	9465	Standard
	Be	9	31.7	24.1	**-0.0052**	0.004	77.5	ug/L	10	Standard
	Al	27	1217093.2	2.6	**71.7901**	2.659	3.7	ug/L	7870	Standard
>	**Sc**	45	394214.6	1.1				ug/L	330668	Standard
	Ti	47	3720.1	3.2	**3.0565**	0.091	3.0	ug/L	53	Standard
	V	51	16940.2	1.0	**1.3868**	0.022	1.6	ug/L	2687	Standard
	Cr	52	15540.3	0.8	**0.8550**	0.018	2.1	ug/L	8408	Standard
	Cr	53	3231.2	3.9	**2.1860**	0.104	4.8	ug/L	288	Standard
	Mn	55	49268.6	1.0	**3.5502**	0.046	1.3	ug/L	1080	Standard
	Co	59	1094.0	2.0	**0.1149**	0.002	1.9	ug/L	117	Standard
	Ni	60	3256.4	6.7	**1.3316**	0.090	6.8	ug/L	68	Standard
	Cu	65	703.7	6.6	**0.2501**	0.023	9.0	ug/L	141	Standard
	Zn	66	12406.4	1.1	**11.7175**	0.188	1.6	ug/L	138	Standard
>	**Ge**	72	293370.7	0.5				ug/L	283230	Standard
	As	75	1839.2	5.0	**1.9577**	0.092	4.7	ug/L	-198	Standard
	Se	82	991.0	3.4	**9.4359**	0.364	3.9	ug/L	21	Standard
	Se-1	77	198.3	3.6	**0.8935**	0.109	12.1	ug/L	131	Standard
>	**Ga**	71	760.0	10.3				mg/L	607	Standard
	Rb	85	15845.0	2.9				ug/L	30	Standard
	Y	89	266479.7	0.7				ug/L	251555	Standard
>	**Rh**	103	446.7	6.6				ug/L	335	Standard
	Mo	98	1782.2	3.2	**0.4290**	0.018	4.3	ug/L	13	Standard
	Ag	107	218.0	7.3	**0.0213**	0.002	9.4	ug/L	36	Standard
	Cd	111	74.1	11.1	**0.0018**	0.002	124.8	mg/L	49	Standard
	Cd	114	244.2	11.1	**0.0016**	0.003	171.9	ug/L	170	Standard
>	**In**	115	838642.6	1.6				ug/L	727802	Standard
	Sn	118	4490.7	2.6	**0.2915**	0.009	3.0	ug/L	471	Standard
	Sb	123	409.8	19.6	**0.0438**	0.008	18.4	ug/L	39	Standard
	Ba	135	93666.3	0.3	**18.6009**	0.293	1.6	ug/L	25	Standard
	Ce	140	12316.3	0.4				ug/L	25	Standard
>	**Tb**	159	1190903.0	1.3				ug/L	1071747	Standard
	Ho	165	212.7	9.5				ug/L	13	Standard
	Tl	203	700.0	3.7	**0.0395**	0.001	3.3	ug/L	5	Standard
	Tl	205	1648.1	3.7	**0.0409**	0.001	2.8	ug/L	10	Standard
	Pb	206	2845.9	2.1	**0.1816**	0.003	1.8	ug/L	382	Standard
	Pb	207	2335.5	2.3	**0.1814**	0.004	2.3	ug/L	306	Standard
	Pb	208	10985.6	1.9	**0.1810**	0.003	1.5	ug/L	1443	Standard
	U	238	8161.2	1.5	**0.5167**	0.005	0.9	ug/L	5	Standard
>	**Bi**	209	581908.4	0.9				ug/L	561075	Standard

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Na	23	147622.3	0.6	**7.2156**	0.095	1.3	mg/L	288	Standard
Mg	24	3796295.4	2.4	**4.7824**	0.166	3.5	mg/L	218	Standard
K	39	1431.7	2.5	**0.9543**	0.018	1.9	mg/L	125	Standard
Ca	43	76.7	52.3	**63.8035**	36.750	57.6	mg/L	3	Standard
Fe	54	1157.6	4.0	**0.1106**	0.009	8.2	mg/L	550	Standard
Fe	57	16458.9	4.5	**0.2391**	0.013	5.5	mg/L	1772	Standard
> **Sc-1**	45	394214.6	1.1				mg/L	330668	Standard
Cl	35	58.3	17.3				ug/L	5	Standard
Kr	83	40.7	12.1				ug/L	38	Standard
Br	81	33022.6	3.2				ug/L	344	Standard
P	31	1200.9	5.5				ug/L	312	Standard
S	34	30719.4	0.6				ug/L	5594	Standard
Sr	88	605.0	6.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		103.580	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	115.230
	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	103.713
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207080307
Sample Date/Time: Sunday, July 29, 2012 12:30:33
Number of Replicates: 3
Autosampler Position: 422
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	60599.3	0.6	**8427.8902**	90.677	1.1	ug/L	9465	Standard
	Be	9	55.0	72.2	**0.0071**	0.021	289.8	ug/L	10	Standard
	Al	27	875863.8	1.7	**52.3812**	0.736	1.4	ug/L	7870	Standard
>	**Sc**	45	387540.4	0.6				ug/L	330668	Standard
	Ti	47	3283.0	5.7	**2.7140**	0.174	6.4	ug/L	53	Standard
	V	51	16219.8	1.4	**1.3280**	0.017	1.3	ug/L	2687	Standard
	Cr	52	15453.5	0.5	**0.8589**	0.014	1.7	ug/L	8408	Standard
	Cr	53	3040.3	2.9	**2.0624**	0.079	3.8	ug/L	288	Standard
	Mn	55	44655.0	0.8	**3.2350**	0.040	1.2	ug/L	1080	Standard
	Co	59	1113.0	3.4	**0.1181**	0.004	3.2	ug/L	117	Standard
	Ni	60	2952.0	1.3	**1.2138**	0.008	0.7	ug/L	68	Standard
	Cu	65	816.4	5.5	**0.3037**	0.019	6.3	ug/L	141	Standard
	Zn	66	12323.7	1.9	**11.7274**	0.175	1.5	ug/L	138	Standard
>	**Ge**	72	291148.8	0.7				ug/L	283230	Standard
	As	75	1436.1	3.4	**1.5770**	0.046	2.9	ug/L	-198	Standard
	Se	82	782.5	0.7	**7.4574**	0.096	1.3	ug/L	21	Standard
	Se-1	77	215.7	5.1	**1.1565**	0.153	13.3	ug/L	131	Standard
>	**Ga**	71	706.7	11.4				mg/L	607	Standard
	Rb	85	15202.6	2.8				ug/L	30	Standard
	Y	89	257397.1	2.3				ug/L	251555	Standard
>	**Rh**	103	430.0	24.3				ug/L	335	Standard
	Mo	98	1708.0	2.6	**0.4170**	0.020	4.8	ug/L	13	Standard
	Ag	107	276.7	29.3	**0.0300**	0.011	37.4	ug/L	36	Standard
	Cd	111	118.9	30.3	**0.0144**	0.010	67.8	mg/L	49	Standard
	Cd	114	302.6	22.6	**0.0072**	0.006	88.1	ug/L	170	Standard
>	**In**	115	826770.8	2.1				ug/L	727802	Standard
	Sn	118	4129.9	0.2	**0.2689**	0.007	2.6	ug/L	471	Standard
	Sb	123	393.4	10.4	**0.0428**	0.005	10.7	ug/L	39	Standard
	Ba	135	89870.8	0.9	**18.1077**	0.539	3.0	ug/L	25	Standard
	Ce	140	12367.7	2.1				ug/L	25	Standard
>	**Tb**	159	1176027.0	1.8				ug/L	1071747	Standard
	Ho	165	206.7	4.9				ug/L	13	Standard
	Tl	203	846.4	25.2	**0.0482**	0.012	24.6	ug/L	5	Standard
	Tl	205	1903.8	20.1	**0.0475**	0.009	19.0	ug/L	10	Standard
	Pb	206	2689.2	4.5	**0.1709**	0.009	5.4	ug/L	382	Standard
	Pb	207	2218.8	4.8	**0.1720**	0.009	5.5	ug/L	306	Standard
	Pb	208	10499.4	3.3	**0.1728**	0.007	4.2	ug/L	1443	Standard
	U	238	8029.1	3.7	**0.5110**	0.012	2.4	ug/L	5	Standard
>	**Bi**	209	578887.7	2.4				ug/L	561075	Standard

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Na	23	146597.5	0.6	**7.2888**	0.076	1.0	mg/L	288	Standard
Mg	24	3644917.5	2.6	**4.6693**	0.096	2.1	mg/L	218	Standard
K	39	1301.7	12.3	**0.8748**	0.125	14.3	mg/L	125	Standard
Ca	43	60.0	16.7	**49.5036**	9.362	18.9	mg/L	3	Standard
Fe	54	1105.9	10.1	**0.1041**	0.023	22.2	mg/L	550	Standard
Fe	57	16303.8	1.5	**0.2411**	0.003	1.4	mg/L	1772	Standard
Sc-1	45	387540.4	0.6				mg/L	330668	Standard
Cl	35	50.3	14.1				ug/L	5	Standard
Kr	83	41.1	1.2				ug/L	38	Standard
Br	81	26360.4	3.8				ug/L	344	Standard
P	31	1092.5	3.6				ug/L	312	Standard
S	34	29318.3	0.7				ug/L	5594	Standard
Sr	88	550.0	8.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		102.796	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	113.598
	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	103.175
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207063602 WG404095-01
Sample Date/Time: Sunday, July 29, 2012 12:33:43
Number of Replicates: 3
Autosampler Position: 423
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	45304.4	4.8	**7987.8134**	197.795	2.5	ug/L	9465	Standard
	Be	9	15.0	33.3	**-0.0113**	0.004	31.2	ug/L	10	Standard
	Al	27	25875.4	3.8	**1.4228**	0.065	4.6	ug/L	7870	Standard
>	**Sc**	45	302687.2	3.2				ug/L	330668	Standard
	Ti	47	61.0	15.6	**0.0141**	0.009	66.5	ug/L	53	Standard
	V	51	2388.1	6.2	**-0.0162**	0.016	96.8	ug/L	2687	Standard
	Cr	52	7607.9	4.3	**-0.0167**	0.044	260.8	ug/L	8408	Standard
	Cr	53	324.2	13.8	**0.0712**	0.034	47.2	ug/L	288	Standard
	Mn	55	130711.3	2.7	**10.7465**	0.157	1.5	ug/L	1080	Standard
	Co	59	627.7	4.0	**0.0694**	0.004	6.1	ug/L	117	Standard
	Ni	60	1674.4	7.7	**0.7566**	0.055	7.3	ug/L	68	Standard
	Cu	65	260.7	14.5	**0.0643**	0.017	27.0	ug/L	141	Standard
	Zn	66	1246.7	5.6	**1.1877**	0.059	5.0	ug/L	138	Standard
>	**Ge**	72	261140.8	1.3				ug/L	283230	Standard
	As	75	170.5	10.8	**0.3585**	0.019	5.4	ug/L	-198	Standard
	Se	82	46.1	3.8	**0.2633**	0.025	9.4	ug/L	21	Standard
	Se-1	77	122.0	6.7	**0.0433**	0.112	257.8	ug/L	131	Standard
>	**Ga**	71	533.3	13.6				mg/L	607	Standard
	Rb	85	4892.5	2.7				ug/L	30	Standard
	Y	89	230210.7	0.1				ug/L	251555	Standard
>	**Rh**	103	306.7	13.7				ug/L	335	Standard
	Mo	98	77.5	12.4	**0.0140**	0.002	16.9	ug/L	13	Standard
	Ag	107	43.3	8.1	**-0.0022**	0.001	28.3	ug/L	36	Standard
	Cd	111	52.8	19.2	**-0.0023**	0.003	135.7	mg/L	49	Standard
	Cd	114	137.8	4.4	**-0.0065**	0.000	6.3	ug/L	170	Standard
>	**In**	115	751123.2	1.4				ug/L	727802	Standard
	Sn	118	518.0	3.9	**-0.0038**	0.002	58.2	ug/L	471	Standard
	Sb	123	78.6	39.6	**0.0108**	0.003	31.9	ug/L	39	Standard
	Ba	135	2837.3	1.8	**0.6179**	0.011	1.8	ug/L	25	Standard
	Ce	140	98.7	6.2				ug/L	25	Standard
>	**Tb**	159	1085983.9	1.0				ug/L	1071747	Standard
	Ho	165	15.7	3.7				ug/L	13	Standard
	Tl	203	26043.0	2.8	**1.5621**	0.022	1.4	ug/L	5	Standard
	Tl	205	60655.6	3.2	**1.5609**	0.031	2.0	ug/L	10	Standard
	Pb	206	375.7	2.0	**-0.0029**	0.001	18.8	ug/L	382	Standard
	Pb	207	324.0	0.8	**0.0016**	0.000	25.2	ug/L	306	Standard
	Pb	208	1431.0	3.6	**-0.0008**	0.001	153.8	ug/L	1443	Standard
	U	238	24.0	29.2	**0.0013**	0.000	32.3	ug/L	5	Standard
>	**Bi**	209	561469.3	1.5				ug/L	561075	Standard

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Na	23	64483.7	3.9	**4.0891**	0.107	2.6	mg/L	288	Standard
Mg	24	945335.8	2.6	**1.5512**	0.031	2.0	mg/L	218	Standard
K	39	221.7	8.5	**0.1061**	0.025	23.2	mg/L	125	Standard
Ca	43	56.7	13.5	**61.1363**	10.538	17.2	mg/L	3	Standard
Fe	54	203.8	15.9	**-0.0681**	0.008	11.1	mg/L	550	Standard
Fe	57	7190.1	10.6	**0.1210**	0.015	12.8	mg/L	1772	Standard
Sc-1	45	302687.2	3.2				mg/L	330668	Standard
Cl	35	3.7	68.6				ug/L	5	Standard
Kr	83	35.3	9.3				ug/L	38	Standard
Br	81	705.0	16.6				ug/L	344	Standard
P	31	131.7	5.8				ug/L	312	Standard
S	34	46879.2	4.7				ug/L	5594	Standard
Sr	88	110.0	4.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.201	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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Cd	111	
Cd	114	
> In	115	103.204
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	100.070
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207063602DP WG404095-05
Sample Date/Time: Sunday, July 29, 2012 12:36:52
Number of Replicates: 3
Autosampler Position: 424
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	37407.8	2.2	**6949.6584**	314.003	4.5	ug/L	9465	Standard
	Be	9	31.7	118.5	**0.0011**	0.026	2378.2	ug/L	10	Standard
	Al	27	21058.0	4.5	**1.1824**	0.065	5.5	ug/L	7870	Standard
>	**Sc**	45	279824.0	1.4				ug/L	330668	Standard
	Ti	47	70.7	55.6	**0.0307**	0.041	133.5	ug/L	53	Standard
	V	51	2357.8	4.0	**0.0105**	0.013	118.5	ug/L	2687	Standard
	Cr	52	7364.1	2.0	**0.0679**	0.027	39.9	ug/L	8408	Standard
	Cr	53	298.3	9.7	**0.0785**	0.026	33.3	ug/L	288	Standard
	Mn	55	106896.2	2.4	**9.7945**	0.250	2.6	ug/L	1080	Standard
	Co	59	526.0	4.6	**0.0640**	0.004	6.0	ug/L	117	Standard
	Ni	60	1369.1	5.1	**0.6876**	0.038	5.5	ug/L	68	Standard
	Cu	65	232.7	1.4	**0.0638**	0.002	3.5	ug/L	141	Standard
	Zn	66	1123.7	9.9	**1.1950**	0.133	11.1	ug/L	138	Standard
>	**Ge**	72	234175.5	0.4				ug/L	283230	Standard
	As	75	137.0	10.1	**0.3393**	0.017	5.0	ug/L	-198	Standard
	Se	82	40.4	18.6	**0.2513**	0.093	36.8	ug/L	21	Standard
	Se-1	77	106.7	14.5	**-0.0032**	0.273	8526.8	ug/L	131	Standard
>	**Ga**	71	485.0	11.7				mg/L	607	Standard
	Rb	85	3928.8	4.1				ug/L	30	Standard
	Y	89	205951.0	2.8				ug/L	251555	Standard
>	**Rh**	103	306.7	10.0				ug/L	335	Standard
	Mo	98	60.7	10.6	**0.0109**	0.002	17.8	ug/L	13	Standard
	Ag	107	51.7	42.5	**-0.0002**	0.004	1694.3	ug/L	36	Standard
	Cd	111	44.9	44.7	**-0.0035**	0.007	191.8	mg/L	49	Standard
	Cd	114	140.7	23.7	**-0.0050**	0.004	75.1	ug/L	170	Standard
>	**In**	115	690803.3	0.8				ug/L	727802	Standard
	Sn	118	371.3	2.5	**-0.0134**	0.001	4.7	ug/L	471	Standard
	Sb	123	84.3	17.2	**0.0123**	0.002	14.7	ug/L	39	Standard
	Ba	135	2336.5	2.1	**0.5521**	0.015	2.7	ug/L	25	Standard
	Ce	140	81.0	13.7				ug/L	25	Standard
>	**Tb**	159	1006442.7	0.9				ug/L	1071747	Standard
	Ho	165	16.3	9.4				ug/L	13	Standard
	Tl	203	21782.7	2.9	**1.3903**	0.021	1.5	ug/L	5	Standard
	Tl	205	50822.5	3.0	**1.3918**	0.027	2.0	ug/L	10	Standard
	Pb	206	352.0	10.4	**-0.0029**	0.003	108.8	ug/L	382	Standard
	Pb	207	294.0	4.4	**0.0005**	0.002	323.9	ug/L	306	Standard
	Pb	208	1340.4	6.5	**-0.0009**	0.002	222.3	ug/L	1443	Standard
	U	238	169.0	150.7	**0.0116**	0.018	153.9	ug/L	5	Standard
>	**Bi**	209	527623.9	1.5				ug/L	561075	Standard

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Na	23	57903.8	2.9	**3.9702**	0.069	1.7	mg/L	288	Standard
Mg	24	809054.3	1.6	**1.4359**	0.032	2.2	mg/L	218	Standard
K	39	208.3	11.1	**0.1093**	0.027	24.9	mg/L	125	Standard
Ca	43	46.7	40.6	**53.9204**	24.586	45.6	mg/L	3	Standard
Fe	54	204.4	24.0	**-0.0634**	0.014	22.8	mg/L	550	Standard
Fe	57	6398.0	2.8	**0.1152**	0.006	5.3	mg/L	1772	Standard
Sc-1	45	279824.0	1.4				mg/L	330668	Standard
Cl	35	5.0	52.9				ug/L	5	Standard
Kr	83	37.1	15.1				ug/L	38	Standard
Br	81	414.2	6.1				ug/L	344	Standard
P	31	133.3	10.8				ug/L	312	Standard
S	34	40920.2	1.5				ug/L	5594	Standard
Sr	88	100.0	5.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		82.680	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207063602DP WG404095-05
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	Cd	111	
	Cd	114	
>	In	115	94.916
	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	94.038
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063602DP WG404095-05
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Method 6020 - Summary Report

Sample ID: L1207063602S WG404095-06
Sample Date/Time: Sunday, July 29, 2012 12:40:01
Number of Replicates: 3
Autosampler Position: 425
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	37123.8	4.6	**6974.6252**	484.338	6.9	ug/L	9465	Standard
	Be	9	4067.2	6.7	**2.9067**	0.296	10.2	ug/L	10	Standard
	Al	27	53079.5	0.5	**3.9128**	0.147	3.7	ug/L	7870	Standard
>	**Sc**	45	277016.4	3.5				ug/L	330668	Standard
	Ti	47	60.0	14.5	**0.0188**	0.008	45.3	ug/L	53	Standard
	V	51	22152.4	1.6	**2.4186**	0.019	0.8	ug/L	2687	Standard
	Cr	52	23031.2	1.3	**2.4725**	0.051	2.1	ug/L	8408	Standard
	Cr	53	3000.3	1.6	**2.5424**	0.044	1.7	ug/L	288	Standard
	Mn	55	132057.7	0.7	**11.9772**	0.063	0.5	ug/L	1080	Standard
	Co	59	19066.0	1.8	**2.7502**	0.081	3.0	ug/L	117	Standard
	Ni	60	5924.8	5.0	**3.0368**	0.162	5.3	ug/L	68	Standard
	Cu	65	4620.7	2.2	**2.5165**	0.072	2.9	ug/L	141	Standard
	Zn	66	3646.8	1.2	**4.1681**	0.072	1.7	ug/L	138	Standard
>	**Ge**	72	236948.9	1.2				ug/L	283230	Standard
	As	75	2433.5	2.7	**3.0966**	0.071	2.3	ug/L	-198	Standard
	Se	82	303.1	4.7	**3.4219**	0.158	4.6	ug/L	21	Standard
	Se-1	77	288.0	3.6	**3.0872**	0.176	5.7	ug/L	131	Standard
>	**Ga**	71	500.0	4.4				mg/L	607	Standard
	Rb	85	3880.5	1.9				ug/L	30	Standard
	Y	89	205379.5	1.7				ug/L	251555	Standard
>	**Rh**	103	313.3	6.4				ug/L	335	Standard
	Mo	98	66.9	7.5	**0.0128**	0.002	13.2	ug/L	13	Standard
	Ag	107	12739.4	1.0	**2.1529**	0.005	0.2	ug/L	36	Standard
	Cd	111	9114.2	1.8	**2.9959**	0.028	0.9	mg/L	49	Standard
	Cd	114	25442.1	0.9	**2.7472**	0.029	1.1	ug/L	170	Standard
>	**In**	115	687145.8	1.1				ug/L	727802	Standard
	Sn	118	384.3	5.7	**-0.0120**	0.002	18.5	ug/L	471	Standard
	Sb	123	19627.2	1.2	**2.4607**	0.011	0.4	ug/L	39	Standard
	Ba	135	12108.8	1.3	**2.9249**	0.052	1.8	ug/L	25	Standard
	Ce	140	154.0	4.5				ug/L	25	Standard
>	**Tb**	159	1006426.9	0.8				ug/L	1071747	Standard
	Ho	165	17.3	16.7				ug/L	13	Standard
	Tl	203	59202.1	0.1	**3.7409**	0.004	0.1	ug/L	5	Standard
	Tl	205	138841.2	0.4	**3.7626**	0.012	0.3	ug/L	10	Standard
	Pb	206	30254.2	0.5	**2.4469**	0.014	0.6	ug/L	382	Standard
	Pb	207	25467.4	0.4	**2.4704**	0.008	0.3	ug/L	306	Standard
	Pb	208	118430.4	0.2	**2.4436**	0.008	0.3	ug/L	1443	Standard
	U	238	35436.7	1.1	**2.4492**	0.024	1.0	ug/L	5	Standard
>	**Bi**	209	533249.8	0.1				ug/L	561075	Standard

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Na	23	56453.3	1.9	**3.9115**	0.075	1.9	mg/L	288	Standard
Mg	24	794190.7	1.0	**1.4247**	0.049	3.5	mg/L	218	Standard
K	39	203.3	20.9	**0.1057**	0.043	40.6	mg/L	125	Standard
Ca	43	51.7	55.9	**60.8318**	37.232	61.2	mg/L	3	Standard
Fe	54	192.6	8.2	**-0.0663**	0.003	5.2	mg/L	550	Standard
Fe	57	5882.8	3.2	**0.1047**	0.008	8.0	mg/L	1772	Standard
Sc-1	45	277016.4	3.5				mg/L	330668	Standard
Cl	35	6.3	71.2				ug/L	5	Standard
Kr	83	36.7	6.9				ug/L	38	Standard
Br	81	361.7	10.1				ug/L	344	Standard
P	31	149.2	1.9				ug/L	312	Standard
S	34	39231.6	1.4				ug/L	5594	Standard
Sr	88	106.7	28.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		83.660	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207063602S WG404095-06
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	Cd	111	
	Cd	114	
>	In	115	94.414
	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	95.041
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207063602S WG404095-06
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Method 6020 - Summary Report

Sample ID: L1207063601
Sample Date/Time: Sunday, July 29, 2012 12:43:12
Number of Replicates: 3
Autosampler Position: 426
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	38970.1	4.8	**7388.1939**	305.074	4.1	ug/L	9465	Standard
	Be	9	11.7	65.5	**-0.0128**	0.006	43.5	ug/L	10	Standard
	Al	27	26337.9	3.5	**1.6437**	0.048	2.9	ug/L	7870	Standard
>	**Sc**	45	277389.9	1.5				ug/L	330668	Standard
	Ti	47	59.3	7.0	**0.0183**	0.004	20.9	ug/L	53	Standard
	V	51	2340.3	1.9	**0.0060**	0.004	67.8	ug/L	2687	Standard
	Cr	52	7342.8	2.0	**0.0552**	0.013	23.3	ug/L	8408	Standard
	Cr	53	273.3	6.7	**0.0533**	0.016	30.3	ug/L	288	Standard
	Mn	55	108727.5	1.8	**9.8819**	0.087	0.9	ug/L	1080	Standard
	Co	59	556.7	4.6	**0.0678**	0.003	4.4	ug/L	117	Standard
	Ni	60	1413.7	6.6	**0.7047**	0.042	5.9	ug/L	68	Standard
	Cu	65	223.7	3.6	**0.0577**	0.005	8.3	ug/L	141	Standard
	Zn	66	1081.7	3.9	**1.1340**	0.040	3.5	ug/L	138	Standard
>	**Ge**	72	236082.8	0.9				ug/L	283230	Standard
	As	75	139.2	14.4	**0.3405**	0.023	6.9	ug/L	-198	Standard
	Se	82	41.9	18.1	**0.2647**	0.089	33.8	ug/L	21	Standard
	Se-1	77	111.7	14.4	**0.0660**	0.260	393.6	ug/L	131	Standard
>	**Ga**	71	520.0	8.8				mg/L	607	Standard
	Rb	85	4098.9	0.4				ug/L	30	Standard
	Y	89	206378.7	3.3				ug/L	251555	Standard
>	**Rh**	103	288.3	32.2				ug/L	335	Standard
	Mo	98	58.0	2.5	**0.0104**	0.001	6.1	ug/L	13	Standard
	Ag	107	52.0	1.9	**-0.0000**	0.000	440.7	ug/L	36	Standard
	Cd	111	43.5	3.5	**-0.0037**	0.000	13.0	mg/L	49	Standard
	Cd	114	117.2	0.7	**-0.0073**	0.000	3.5	ug/L	170	Standard
>	**In**	115	679309.0	1.4				ug/L	727802	Standard
	Sn	118	392.0	5.2	**-0.0109**	0.001	12.7	ug/L	471	Standard
	Sb	123	551.3	13.2	**0.0716**	0.009	12.2	ug/L	39	Standard
	Ba	135	2465.5	4.9	**0.5932**	0.028	4.7	ug/L	25	Standard
	Ce	140	152.7	9.5				ug/L	25	Standard
>	**Tb**	159	999007.9	1.3				ug/L	1071747	Standard
	Ho	165	12.7	16.4				ug/L	13	Standard
	Tl	203	22321.4	3.3	**1.4253**	0.035	2.4	ug/L	5	Standard
	Tl	205	51662.0	2.8	**1.4154**	0.027	1.9	ug/L	10	Standard
	Pb	206	363.3	6.5	**-0.0020**	0.002	84.3	ug/L	382	Standard
	Pb	207	319.7	2.1	**0.0031**	0.001	23.2	ug/L	306	Standard
	Pb	208	1432.7	1.5	**0.0010**	0.000	26.9	ug/L	1443	Standard
	U	238	35.3	24.1	**0.0022**	0.001	27.1	ug/L	5	Standard
>	**Bi**	209	527399.0	0.9				ug/L	561075	Standard

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Na	23	58496.2	4.1	**4.0489**	0.214	5.3	mg/L	288	Standard
Mg	24	844703.4	2.9	**1.5119**	0.022	1.5	mg/L	218	Standard
K	39	206.7	21.8	**0.1091**	0.047	43.1	mg/L	125	Standard
Ca	43	41.7	36.7	**48.0144**	20.012	41.7	mg/L	3	Standard
Fe	54	191.6	30.0	**-0.0667**	0.016	24.4	mg/L	550	Standard
Fe	57	6217.9	4.7	**0.1122**	0.005	4.5	mg/L	1772	Standard
Sc-1	45	277389.9	1.5				mg/L	330668	Standard
Cl	35	5.0	20.0				ug/L	5	Standard
Kr	83	33.0	13.4				ug/L	38	Standard
Br	81	340.8	6.7				ug/L	344	Standard
P	31	142.5	6.3				ug/L	312	Standard
S	34	42016.5	2.9				ug/L	5594	Standard
Sr	88	136.7	23.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		83.354	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	93.337
	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	93.998
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 12:46:24
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: JYH 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	7	8702.5	2.2	**-17.2843**	8.603	49.8	ug/L	9465	Standard
	Be	9	83162.6	0.8	**51.3433**	1.173	2.3	ug/L	10	Standard
	Al	27	631096.7	2.4	**45.3306**	1.439	3.2	ug/L	7870	Standard
>	**Sc**	45	322205.6	1.8				ug/L	330668	Standard
	Ti	47	108429.3	0.7	**98.3548**	1.705	1.7	ug/L	53	Standard
	V	51	454703.3	0.3	**48.4474**	0.517	1.1	ug/L	2687	Standard
	Cr	52	363990.6	0.1	**48.3304**	0.537	1.1	ug/L	8408	Standard
	Cr	53	60711.4	1.5	**48.5631**	0.957	2.0	ug/L	288	Standard
	Mn	55	655588.8	0.5	**52.5817**	0.350	0.7	ug/L	1080	Standard
	Co	59	407435.9	0.5	**51.9186**	0.799	1.5	ug/L	117	Standard
	Ni	60	104726.0	0.1	**47.6340**	0.475	1.0	ug/L	68	Standard
	Cu	65	98582.3	0.6	**48.4247**	0.742	1.5	ug/L	141	Standard
	Zn	66	47170.3	0.2	**48.9927**	0.460	0.9	ug/L	138	Standard
>	**Ge**	72	269398.1	1.1				ug/L	283230	Standard
	As	75	47548.1	0.6	**50.4273**	0.814	1.6	ug/L	-198	Standard
	Se	82	4846.9	1.9	**51.3141**	1.418	2.8	ug/L	21	Standard
	Se-1	77	3457.7	3.6	**50.3346**	1.354	2.7	ug/L	131	Standard
>	**Ga**	71	586.7	17.6				mg/L	607	Standard
	Rb	85	730.0	9.4				ug/L	30	Standard
	Y	89	238633.1	1.3				ug/L	251555	Standard
>	**Rh**	103	356.7	11.3				ug/L	335	Standard
	Mo	98	334887.6	0.5	**88.9258**	1.507	1.7	ug/L	13	Standard
	Ag	107	308535.0	1.2	**46.5630**	1.250	2.7	ug/L	36	Standard
	Cd	111	181996.1	0.7	**53.5121**	0.716	1.3	mg/L	49	Standard
	Cd	114	518333.7	1.0	**50.1179**	0.622	1.2	ug/L	170	Standard
>	**In**	115	772744.2	1.6				ug/L	727802	Standard
	Sn	118	603596.5	1.0	**49.3980**	0.348	0.7	ug/L	471	Standard
	Sb	123	456520.2	0.2	**50.8666**	0.706	1.4	ug/L	39	Standard
	Ba	135	227950.3	0.5	**49.1452**	0.623	1.3	ug/L	25	Standard
	Ce	140	859.4	4.0				ug/L	25	Standard
>	**Tb**	159	1107406.9	0.8				ug/L	1071747	Standard
	Ho	165	18.0	41.9				ug/L	13	Standard
	Tl	203	813784.9	0.7	**48.0501**	0.175	0.4	ug/L	5	Standard
	Tl	205	1873372.9	0.5	**47.4262**	0.102	0.2	ug/L	10	Standard
	Pb	206	631300.5	0.3	**48.2915**	0.034	0.1	ug/L	382	Standard
	Pb	207	535728.7	0.3	**49.0817**	0.193	0.4	ug/L	306	Standard
	Pb	208	2472369.1	0.2	**48.1952**	0.118	0.2	ug/L	1443	Standard
	U	238	778726.0	0.8	**50.2836**	0.224	0.4	ug/L	5	Standard
>	**Bi**	209	570820.9	0.3				ug/L	561075	Standard

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Na	23	112801.7	0.5	**6.7441**	0.116	1.7	mg/L	288	Standard
Mg	24	3134656.3	2.5	**4.8307**	0.114	2.4	mg/L	218	Standard
K	39	5102.5	1.8	**4.5287**	0.150	3.3	mg/L	125	Standard
Ca	43	13.3	21.7	**9.3034**	3.199	34.4	mg/L	3	Standard
Fe	54	19855.7	1.5	**4.7434**	0.094	2.0	mg/L	550	Standard
Fe	57	260651.9	2.2	**5.2725**	0.162	3.1	mg/L	1772	Standard
Sc-1	45	322205.6	1.8				mg/L	330668	Standard
Cl	35	5.0	0.0				ug/L	5	Standard
Kr	83	38.1	3.3				ug/L	38	Standard
Br	81	414.2	9.6				ug/L	344	Standard
P	31	365.8	8.9				ug/L	312	Standard
S	34	6176.3	3.2				ug/L	5594	Standard
Sr	88	35.0	42.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	90.661		
Sc	45			
Ti	47	98.355		
V	51	96.895		
Cr	52	96.661		
Cr	53			
Mn	55	105.163		
Co	59	103.837		
Ni	60	95.268		
Cu	65	96.849		
Zn	66	97.985		
Ge	72		95.116	
As	75	100.855		
Se	82	102.628		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	88.926		
Ag	107	93.126		

Sample ID: QC Std 6
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	Cd	111	107.024	
	Cd	114		
>	In	115		106.175
	Sn	118	98.796	
	Sb	123	101.733	
	Ba	135	98.290	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.100	
	Tl	205		
	Pb	206	96.583	
	Pb	207	98.163	
	Pb	208	96.390	
	U	238	100.567	
>	Bi	209		101.737
	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		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mo	98	

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 12:48:56
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 12:49:35
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: JYH 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	7	8470.7	3.4	**-55.2235**	33.580	60.8	ug/L	9465	Standard
	Be	9	15.0	66.7	**-0.0120**	0.006	51.1	ug/L	10	Standard
	Al	27	7181.7	2.0	**-0.0557**	0.014	24.5	ug/L	7870	Standard
>	**Sc**	45	320503.8	2.2				ug/L	330668	Standard
	Ti	47	50.0	5.3	**0.0028**	0.003	107.9	ug/L	53	Standard
	V	51	2154.3	1.2	**-0.0465**	0.007	14.9	ug/L	2687	Standard
	Cr	52	6801.2	0.3	**-0.1478**	0.022	14.7	ug/L	8408	Standard
	Cr	53	216.7	13.8	**-0.0212**	0.023	106.6	ug/L	288	Standard
	Mn	55	1047.4	2.7	**0.0009**	0.001	157.6	ug/L	1080	Standard
	Co	59	115.7	7.0	**0.0018**	0.001	43.6	ug/L	117	Standard
	Ni	60	66.3	13.7	**0.0013**	0.004	325.9	ug/L	68	Standard
	Cu	65	148.0	11.3	**0.0059**	0.009	154.3	ug/L	141	Standard
	Zn	66	154.7	4.9	**0.0114**	0.010	85.6	ug/L	138	Standard
>	**Ge**	72	266310.9	2.4				ug/L	283230	Standard
	As	75	-175.2	13.5	**-0.0148**	0.027	185.1	ug/L	-198	Standard
	Se	82	25.9	5.8	**0.0360**	0.015	41.0	ug/L	21	Standard
	Se-1	77	110.3	1.9	**-0.1703**	0.063	37.0	ug/L	131	Standard
>	**Ga**	71	613.3	10.3				mg/L	607	Standard
	Rb	85	16.7	45.8				ug/L	30	Standard
	Y	89	241086.6	1.7				ug/L	251555	Standard
>	**Rh**	103	278.3	17.7				ug/L	335	Standard
	Mo	98	179.2	7.9	**0.0409**	0.003	8.5	ug/L	13	Standard
	Ag	107	81.3	11.7	**0.0034**	0.002	44.9	ug/L	36	Standard
	Cd	111	67.9	15.8	**0.0019**	0.003	171.8	mg/L	49	Standard
	Cd	114	209.1	7.9	**0.0002**	0.002	700.0	ug/L	170	Standard
>	**In**	115	765050.4	0.8				ug/L	727802	Standard
	Sn	118	853.0	7.2	**0.0232**	0.006	23.8	ug/L	471	Standard
	Sb	123	2387.5	8.0	**0.2705**	0.022	8.3	ug/L	39	Standard
	Ba	135	39.0	11.8	**-0.0030**	0.001	35.5	ug/L	25	Standard
	Ce	140	23.7	14.8				ug/L	25	Standard
>	**Tb**	159	1087882.9	1.1				ug/L	1071747	Standard
	Ho	165	13.3	11.5				ug/L	13	Standard
	Tl	203	70.3	15.9	**0.0031**	0.001	19.9	ug/L	5	Standard
	Tl	205	141.0	19.3	**0.0036**	0.001	17.8	ug/L	10	Standard
	Pb	206	395.7	8.1	**-0.0019**	0.002	99.9	ug/L	382	Standard
	Pb	207	352.7	2.8	**0.0036**	0.002	45.4	ug/L	306	Standard
	Pb	208	1591.7	3.1	**0.0018**	0.001	28.7	ug/L	1443	Standard
	U	238	86.0	9.2	**0.0053**	0.001	10.9	ug/L	5	Standard
>	**Bi**	209	572118.9	2.3				ug/L	561075	Standard

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Na	23	291.7	10.5	**-0.0186**	0.002	8.1	mg/L	288	Standard
Mg	24	443.3	9.6	**0.0010**	0.000	7.0	mg/L	218	Standard
K	39	128.3	20.0	**0.0084**	0.023	277.6	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	529.9	8.1	**0.0093**	0.008	91.4	mg/L	550	Standard
Fe	57	1836.8	4.2	**0.0028**	0.001	38.8	mg/L	1772	Standard
Sc-1	45	320503.8	2.2				mg/L	330668	Standard
Cl	35	4.7	24.7				ug/L	5	Standard
Kr	83	30.1	13.1				ug/L	38	Standard
Br	81	373.3	5.0				ug/L	344	Standard
P	31	368.3	11.7				ug/L	312	Standard
S	34	5865.3	3.1				ug/L	5594	Standard
Sr	88	46.7	16.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.026	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	105.118
	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	101.968
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: PBW 59 WG403906-02
Sample Date/Time: Sunday, July 29, 2012 13:08:20
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: JYH 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	7	8594.1	5.4	**-25.3762**	98.955	390.0	ug/L	9465	Standard
	Be	9	11.7	49.5	**-0.0140**	0.004	25.6	ug/L	10	Standard
	Al	27	7281.8	4.2	**-0.0471**	0.023	48.8	ug/L	7870	Standard
>	**Sc**	45	319701.0	0.3				ug/L	330668	Standard
	Ti	47	53.7	7.5	**0.0052**	0.004	76.2	ug/L	53	Standard
	V	51	2350.5	3.9	**-0.0305**	0.012	39.2	ug/L	2687	Standard
	Cr	52	7305.8	0.9	**-0.0993**	0.022	22.3	ug/L	8408	Standard
	Cr	53	222.5	5.1	**-0.0200**	0.010	47.8	ug/L	288	Standard
	Mn	55	1000.7	3.4	**-0.0046**	0.002	44.7	ug/L	1080	Standard
	Co	59	98.0	13.3	**-0.0007**	0.002	222.2	ug/L	117	Standard
	Ni	60	129.7	3.9	**0.0292**	0.001	5.1	ug/L	68	Standard
	Cu	65	136.3	5.0	**-0.0014**	0.004	256.6	ug/L	141	Standard
	Zn	66	715.7	3.4	**0.5872**	0.030	5.1	ug/L	138	Standard
>	**Ge**	72	271883.0	1.4				ug/L	283230	Standard
	As	75	-175.2	5.0	**-0.0108**	0.011	106.5	ug/L	-198	Standard
	Se	82	22.2	16.0	**-0.0096**	0.034	351.3	ug/L	21	Standard
	Se-1	77	124.3	5.8	**0.0049**	0.133	2714.5	ug/L	131	Standard
>	**Ga**	71	580.0	10.5				mg/L	607	Standard
	Rb	85	23.3	32.7				ug/L	30	Standard
	Y	89	240910.3	1.1				ug/L	251555	Standard
>	**Rh**	103	345.0	5.2				ug/L	335	Standard
	Mo	98	31.0	30.4	**0.0013**	0.003	201.4	ug/L	13	Standard
	Ag	107	45.7	17.0	**-0.0019**	0.001	63.8	ug/L	36	Standard
	Cd	111	62.3	2.4	**0.0005**	0.000	94.7	mg/L	49	Standard
	Cd	114	181.6	9.7	**-0.0022**	0.002	80.2	ug/L	170	Standard
>	**In**	115	754257.2	0.2				ug/L	727802	Standard
	Sn	118	600.0	13.3	**0.0029**	0.007	227.2	ug/L	471	Standard
	Sb	123	278.0	33.1	**0.0335**	0.010	31.2	ug/L	39	Standard
	Ba	135	34.7	16.4	**-0.0038**	0.001	32.9	ug/L	25	Standard
	Ce	140	28.0	12.9				ug/L	25	Standard
>	**Tb**	159	1086398.4	0.5				ug/L	1071747	Standard
	Ho	165	14.7	21.9				ug/L	13	Standard
	Tl	203	8.3	48.5	**-0.0006**	0.000	42.2	ug/L	5	Standard
	Tl	205	17.7	36.4	**0.0005**	0.000	34.4	ug/L	10	Standard
	Pb	206	384.0	3.0	**-0.0028**	0.001	30.3	ug/L	382	Standard
	Pb	207	299.0	3.0	**-0.0013**	0.001	63.3	ug/L	306	Standard
	Pb	208	1460.0	4.8	**-0.0008**	0.001	171.4	ug/L	1443	Standard
	U	238	5.3	57.3	**0.0001**	0.000	171.2	ug/L	5	Standard
>	**Bi**	209	572049.9	0.2				ug/L	561075	Standard

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⌈	**Na**	23	276.7	15.6	**-0.0195**	0.003	13.5	mg/L	288	Standard
|	**Mg**	24	216.7	16.4	**0.0006**	0.000	8.8	mg/L	218	Standard
|	**K**	39	143.3	11.2	**0.0224**	0.015	65.9	mg/L	125	Standard
|	**Ca**	43	1.7	173.2	**-3.5149**	3.195	90.9	mg/L	3	Standard
|	**Fe**	54	482.8	5.6	**-0.0019**	0.006	331.1	mg/L	550	Standard
|	**Fe**	57	1920.1	3.6	**0.0046**	0.001	29.2	mg/L	1772	Standard
⌊>	**Sc-1**	45	319701.0	0.3				mg/L	330668	Standard
	Cl	35	5.3	43.3				ug/L	5	Standard
	Kr	83	36.6	2.3				ug/L	38	Standard
	Br	81	410.8	7.6				ug/L	344	Standard
	P	31	334.2	12.9				ug/L	312	Standard
	S	34	5856.1	1.8				ug/L	5594	Standard
	Sr	88	58.3	4.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		95.994	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	103.635
	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	101.956
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: LCSW 59 WG403906-03
Sample Date/Time: Sunday, July 29, 2012 13:11:31
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: JYH 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	7	9391.2	5.3	**7.7866**	113.916	1463.0	ug/L	9465	Standard
	Be	9	44079.0	2.4	**25.5488**	0.717	2.8	ug/L	10	Standard
	Al	27	432449.0	1.7	**28.9668**	0.627	2.2	ug/L	7870	Standard
>	**Sc**	45	343009.5	1.1				ug/L	330668	Standard
	Ti	47	79.3	2.9	**0.0220**	0.001	5.0	ug/L	53	Standard
	V	51	251204.3	1.0	**24.0634**	0.151	0.6	ug/L	2687	Standard
	Cr	52	209395.7	0.6	**24.6249**	0.329	1.3	ug/L	8408	Standard
	Cr	53	35435.6	0.1	**25.5418**	0.443	1.7	ug/L	288	Standard
	Mn	55	365506.1	0.5	**26.4729**	0.537	2.0	ug/L	1080	Standard
	Co	59	225298.8	0.8	**25.9558**	0.343	1.3	ug/L	117	Standard
	Ni	60	60739.9	1.5	**24.9683**	0.153	0.6	ug/L	68	Standard
	Cu	65	57675.6	0.9	**25.5874**	0.238	0.9	ug/L	141	Standard
	Zn	66	29131.0	1.2	**27.2937**	0.150	0.6	ug/L	138	Standard
>	**Ge**	72	297907.0	1.6				ug/L	283230	Standard
	As	75	25632.7	1.0	**24.6707**	0.147	0.6	ug/L	-198	Standard
	Se	82	2506.0	3.2	**23.8550**	0.430	1.8	ug/L	21	Standard
	Se-1	77	1847.1	0.4	**23.3635**	0.321	1.4	ug/L	131	Standard
>	**Ga**	71	678.3	3.3				mg/L	607	Standard
	Rb	85	40.0	43.3				ug/L	30	Standard
	Y	89	257435.6	1.5				ug/L	251555	Standard
>	**Rh**	103	355.0	29.3				ug/L	335	Standard
	Mo	98	64.2	14.4	**0.0090**	0.002	24.0	ug/L	13	Standard
	Ag	107	161871.5	1.3	**23.1717**	0.249	1.1	ug/L	36	Standard
	Cd	111	95862.8	0.7	**26.7364**	0.185	0.7	mg/L	49	Standard
	Cd	114	273370.1	0.4	**25.0721**	0.234	0.9	ug/L	170	Standard
>	**In**	115	814309.1	1.1				ug/L	727802	Standard
	Sn	118	1292.4	5.4	**0.0530**	0.006	10.7	ug/L	471	Standard
	Sb	123	238951.0	0.7	**25.2661**	0.449	1.8	ug/L	39	Standard
	Ba	135	118151.2	0.3	**24.1662**	0.327	1.4	ug/L	25	Standard
	Ce	140	297.0	4.0				ug/L	25	Standard
>	**Tb**	159	1153628.1	0.4				ug/L	1071747	Standard
	Ho	165	16.7	15.1				ug/L	13	Standard
	Tl	203	443870.5	0.1	**25.0751**	0.129	0.5	ug/L	5	Standard
	Tl	205	1031877.2	0.7	**24.9939**	0.227	0.9	ug/L	10	Standard
	Pb	206	347362.4	0.5	**25.4073**	0.047	0.2	ug/L	382	Standard
	Pb	207	294669.5	0.6	**25.8163**	0.276	1.1	ug/L	306	Standard
	Pb	208	1367244.1	0.4	**25.4864**	0.185	0.7	ug/L	1443	Standard
	U	238	407868.3	0.7	**25.1982**	0.206	0.8	ug/L	5	Standard
>	**Bi**	209	596624.5	0.6				ug/L	561075	Standard

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Na	23	713.4	7.7	**0.0041**	0.003	77.0	mg/L	288	Standard
Mg	24	1691.8	5.3	**0.0027**	0.000	4.1	mg/L	218	Standard
K	39	163.3	4.7	**0.0306**	0.008	26.3	mg/L	125	Standard
Ca	43	8.3	34.6	**3.2655**	3.047	93.3	mg/L	3	Standard
Fe	54	734.2	12.9	**0.0477**	0.021	43.2	mg/L	550	Standard
Fe	57	2068.5	5.1	**0.0048**	0.002	51.4	mg/L	1772	Standard
> **Sc-1**	45	343009.5	1.1				mg/L	330668	Standard
Cl	35	6.0	16.7				ug/L	5	Standard
Kr	83	40.9	4.1				ug/L	38	Standard
Br	81	425.0	2.1				ug/L	344	Standard
P	31	479.2	5.4				ug/L	312	Standard
S	34	6038.7	1.5				ug/L	5594	Standard
Sr	88	55.0	18.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		105.182	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.886
	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	106.336
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207049112 WG403906-01
Sample Date/Time: Sunday, July 29, 2012 13:14:42
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: JYH 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	7	37199.0	2.6	**5108.7990**	48.596	1.0	ug/L	9465	Standard
	Be	9	45.0	29.4	**0.0042**	0.007	175.1	ug/L	10	Standard
	Al	27	65742.4	2.7	**3.7896**	0.018	0.5	ug/L	7870	Standard
>	**Sc**	45	352487.9	2.4				ug/L	330668	Standard
	Ti	47	1979.5	0.2	**1.8408**	0.050	2.7	ug/L	53	Standard
	V	51	30063.8	2.4	**3.0975**	0.035	1.1	ug/L	2687	Standard
	Cr	52	17120.0	4.5	**1.3544**	0.094	6.9	ug/L	8408	Standard
	Cr	53	739.2	8.5	**0.4253**	0.053	12.4	ug/L	288	Standard
	Mn	55	718111.2	2.5	**60.4020**	1.184	2.0	ug/L	1080	Standard
	Co	59	22184.9	3.0	**2.9514**	0.068	2.3	ug/L	117	Standard
	Ni	60	15336.1	2.4	**7.2882**	0.058	0.8	ug/L	68	Standard
	Cu	65	1419.1	6.9	**0.6634**	0.032	4.9	ug/L	141	Standard
	Zn	66	2734.2	3.5	**2.8342**	0.030	1.1	ug/L	138	Standard
>	**Ge**	72	256956.8	2.5				ug/L	283230	Standard
	As	75	825.5	3.5	**1.0872**	0.016	1.5	ug/L	-198	Standard
	Se	82	110.2	9.3	**0.9856**	0.109	11.0	ug/L	21	Standard
	Se-1	77	142.7	6.3	**0.4028**	0.151	37.5	ug/L	131	Standard
>	**Ga**	71	1001.7	11.3				mg/L	607	Standard
	Rb	85	16689.2	0.9				ug/L	30	Standard
	Y	89	233818.9	1.5				ug/L	251555	Standard
>	**Rh**	103	521.7	7.7				ug/L	335	Standard
	Mo	98	17417.5	1.9	**4.8136**	0.077	1.6	ug/L	13	Standard
	Ag	107	110.7	33.2	**0.0083**	0.005	62.0	ug/L	36	Standard
	Cd	111	84.9	24.7	**0.0076**	0.006	74.8	mg/L	49	Standard
	Cd	114	342.2	13.0	**0.0142**	0.003	23.1	ug/L	170	Standard
>	**In**	115	741585.2	3.5				ug/L	727802	Standard
	Sn	118	701.0	3.5	**0.0124**	0.000	3.4	ug/L	471	Standard
	Sb	123	2988.5	8.6	**0.3483**	0.018	5.1	ug/L	39	Standard
	Ba	135	151471.9	1.9	**34.0338**	0.559	1.6	ug/L	25	Standard
	Ce	140	422.7	7.6				ug/L	25	Standard
>	**Tb**	159	1094038.0	2.3				ug/L	1071747	Standard
	Ho	165	26.0	19.2				ug/L	13	Standard
	Tl	203	305.3	11.2	**0.0192**	0.002	9.9	ug/L	5	Standard
	Tl	205	695.3	14.8	**0.0198**	0.003	14.0	ug/L	10	Standard
	Pb	206	510.3	12.3	**0.0118**	0.004	37.3	ug/L	382	Standard
	Pb	207	426.0	10.1	**0.0152**	0.004	26.4	ug/L	306	Standard
	Pb	208	1968.4	9.8	**0.0139**	0.003	24.8	ug/L	1443	Standard
	U	238	36710.8	3.3	**2.6648**	0.015	0.6	ug/L	5	Standard
>	**Bi**	209	507686.0	2.8				ug/L	561075	Standard

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Na	23	123921.4	0.4	**6.7742**	0.185	2.7	mg/L	288	Standard
Mg	24	28033022.5	0.8	**39.4979**	0.943	2.4	mg/L	218	Standard
K	39	1861.8	5.5	**1.4377**	0.087	6.1	mg/L	125	Standard
Ca	43	361.7	7.6	**358.6056**	35.164	9.8	mg/L	3	Standard
Fe	54	617.1	3.3	**0.0171**	0.006	37.1	mg/L	550	Standard
Fe	57	31324.0	2.0	**0.5482**	0.008	1.5	mg/L	1772	Standard
Sc-1	45	352487.9	2.4				mg/L	330668	Standard
Cl	35	17.3	31.8				ug/L	5	Standard
Kr	83	48.6	3.5				ug/L	38	Standard
Br	81	1196.7	13.5				ug/L	344	Standard
P	31	6351.3	0.6				ug/L	312	Standard
S	34	273348.9	1.0				ug/L	5594	Standard
Sr	88	1115.0	9.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		90.724	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	101.894
	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	90.484
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207049112 WG403906-01
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Method 6020 - Summary Report

Sample ID: L1207049112S WG403906-04
Sample Date/Time: Sunday, July 29, 2012 13:17:51
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	38791.3	1.5	**5323.2233**	240.768	4.5	ug/L	9465	Standard
	Be	9	42564.7	2.3	**23.7258**	0.487	2.1	ug/L	10	Standard
	Al	27	375618.9	2.3	**24.1092**	0.883	3.7	ug/L	7870	Standard
>	**Sc**	45	356676.1	2.6				ug/L	330668	Standard
	Ti	47	1983.8	2.4	**1.8112**	0.039	2.1	ug/L	53	Standard
	V	51	257817.9	1.2	**28.1804**	0.391	1.4	ug/L	2687	Standard
	Cr	52	192664.7	2.5	**25.8595**	0.665	2.6	ug/L	8408	Standard
	Cr	53	31040.9	2.2	**25.4845**	0.656	2.6	ug/L	288	Standard
	Mn	55	1080668.1	0.8	**89.3448**	0.736	0.8	ug/L	1080	Standard
	Co	59	231928.8	1.1	**30.4367**	0.299	1.0	ug/L	117	Standard
	Ni	60	66680.8	1.4	**31.2319**	0.428	1.4	ug/L	68	Standard
	Cu	65	48320.9	1.3	**24.4154**	0.290	1.2	ug/L	141	Standard
	Zn	66	26547.6	0.8	**28.3399**	0.317	1.1	ug/L	138	Standard
>	**Ge**	72	261510.2	0.4				ug/L	283230	Standard
	As	75	27003.1	1.6	**29.5699**	0.409	1.4	ug/L	-198	Standard
	Se	82	2824.7	1.4	**30.7052**	0.424	1.4	ug/L	21	Standard
	Se-1	77	2020.1	2.3	**29.5594**	0.651	2.2	ug/L	131	Standard
>	**Ga**	71	1183.4	9.5				mg/L	607	Standard
	Rb	85	17390.0	5.6				ug/L	30	Standard
	Y	89	239200.2	1.0				ug/L	251555	Standard
>	**Rh**	103	556.7	8.3				ug/L	335	Standard
	Mo	98	18184.6	2.0	**4.9809**	0.124	2.5	ug/L	13	Standard
	Ag	107	148493.8	0.4	**23.1399**	0.230	1.0	ug/L	36	Standard
	Cd	111	96846.2	1.1	**29.4048**	0.402	1.4	mg/L	49	Standard
	Cd	114	261343.5	0.8	**26.0911**	0.054	0.2	ug/L	170	Standard
>	**In**	115	748050.0	0.6				ug/L	727802	Standard
	Sn	118	728.7	3.1	**0.0142**	0.002	14.9	ug/L	471	Standard
	Sb	123	239715.6	0.4	**27.5887**	0.130	0.5	ug/L	39	Standard
	Ba	135	262699.2	0.9	**58.5017**	0.446	0.8	ug/L	25	Standard
	Ce	140	480.3	10.3				ug/L	25	Standard
>	**Tb**	159	1096339.0	0.7				ug/L	1071747	Standard
	Ho	165	25.3	26.3				ug/L	13	Standard
	Tl	203	398966.9	0.4	**26.3571**	0.166	0.6	ug/L	5	Standard
	Tl	205	923306.8	1.4	**26.1544**	0.501	1.9	ug/L	10	Standard
	Pb	206	305009.2	1.5	**26.0918**	0.523	2.0	ug/L	382	Standard
	Pb	207	258679.6	1.6	**26.5051**	0.598	2.3	ug/L	306	Standard
	Pb	208	1197570.0	1.1	**26.1073**	0.417	1.6	ug/L	1443	Standard
	U	238	444210.6	0.9	**32.0947**	0.508	1.6	ug/L	5	Standard
>	**Bi**	209	510188.0	0.7				ug/L	561075	Standard

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Na	23	126373.4	2.5	**6.8303**	0.341	5.0	mg/L	288	Standard
Mg	24	28525047.7	3.2	**39.7086**	0.998	2.5	mg/L	218	Standard
K	39	1823.4	5.7	**1.3898**	0.121	8.7	mg/L	125	Standard
Ca	43	360.0	4.8	**352.0384**	8.817	2.5	mg/L	3	Standard
Fe	54	650.8	14.5	**0.0230**	0.022	94.3	mg/L	550	Standard
Fe	57	33777.6	4.0	**0.5863**	0.018	3.1	mg/L	1772	Standard
Sc-1	45	356676.1	2.6				mg/L	330668	Standard
Cl	35	19.0	13.9				ug/L	5	Standard
Kr	83	48.1	9.5				ug/L	38	Standard
Br	81	1305.1	6.7				ug/L	344	Standard
P	31	6422.2	3.0				ug/L	312	Standard
S	34	279632.2	1.5				ug/L	5594	Standard
Sr	88	1313.4	6.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.331	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207049112S WG403906-04
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	Cd	111	
	Cd	114	
>	In	115	102.782
	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	90.930
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207049112S WG403906-04
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Method 6020 - Summary Report

Sample ID: L1207049112SD WG403906-05
Sample Date/Time: Sunday, July 29, 2012 13:21:01
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	36985.1	0.1	**5141.5215**	156.043	3.0	ug/L	9465	Standard
	Be	9	40352.0	2.1	**22.9906**	0.455	2.0	ug/L	10	Standard
	Al	27	362753.2	1.3	**23.7858**	0.297	1.2	ug/L	7870	Standard
>	**Sc**	45	348933.5	2.3				ug/L	330668	Standard
	Ti	47	1926.1	1.0	**1.8046**	0.045	2.5	ug/L	53	Standard
	V	51	252796.0	1.5	**28.3520**	0.317	1.1	ug/L	2687	Standard
	Cr	52	189355.6	0.8	**26.0880**	0.361	1.4	ug/L	8408	Standard
	Cr	53	30710.3	1.1	**25.8715**	0.232	0.9	ug/L	288	Standard
	Mn	55	1062980.6	1.3	**90.1748**	1.261	1.4	ug/L	1080	Standard
	Co	59	226806.6	0.5	**30.5430**	0.479	1.6	ug/L	117	Standard
	Ni	60	65456.4	1.5	**31.4575**	0.404	1.3	ug/L	68	Standard
	Cu	65	47401.4	1.4	**24.5760**	0.360	1.5	ug/L	141	Standard
	Zn	66	25841.7	1.9	**28.3016**	0.085	0.3	ug/L	138	Standard
>	**Ge**	72	254899.1	2.0				ug/L	283230	Standard
	As	75	26508.4	2.0	**29.7804**	0.085	0.3	ug/L	-198	Standard
	Se	82	2664.5	3.9	**29.6984**	0.586	2.0	ug/L	21	Standard
	Se-1	77	1908.8	0.5	**28.6070**	0.644	2.3	ug/L	131	Standard
>	**Ga**	71	1161.7	4.1				mg/L	607	Standard
	Rb	85	17216.4	2.6				ug/L	30	Standard
	Y	89	228942.0	1.5				ug/L	251555	Standard
>	**Rh**	103	550.0	3.3				ug/L	335	Standard
	Mo	98	17487.7	1.2	**4.8657**	0.040	0.8	ug/L	13	Standard
	Ag	107	139863.7	1.5	**22.1397**	0.155	0.7	ug/L	36	Standard
	Cd	111	93786.7	0.6	**28.9289**	0.318	1.1	mg/L	49	Standard
	Cd	114	254582.3	2.1	**25.8187**	0.349	1.4	ug/L	170	Standard
>	**In**	115	736391.0	1.7				ug/L	727802	Standard
	Sn	118	643.7	3.6	**0.0079**	0.001	13.1	ug/L	471	Standard
	Sb	123	232596.1	1.0	**27.1949**	0.188	0.7	ug/L	39	Standard
	Ba	135	258434.5	0.8	**58.4711**	0.833	1.4	ug/L	25	Standard
	Ce	140	563.7	0.7				ug/L	25	Standard
>	**Tb**	159	1080548.3	1.1				ug/L	1071747	Standard
	Ho	165	25.7	24.7				ug/L	13	Standard
	Tl	203	388432.1	0.6	**26.1993**	0.279	1.1	ug/L	5	Standard
	Tl	205	896936.3	0.7	**25.9383**	0.196	0.8	ug/L	10	Standard
	Pb	206	296682.0	1.0	**25.9089**	0.156	0.6	ug/L	382	Standard
	Pb	207	249918.8	1.0	**26.1419**	0.309	1.2	ug/L	306	Standard
	Pb	208	1160990.9	0.9	**25.8383**	0.127	0.5	ug/L	1443	Standard
	U	238	431339.4	0.5	**31.8165**	0.272	0.9	ug/L	5	Standard
>	**Bi**	209	499741.1	1.4				ug/L	561075	Standard

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Na	23	123313.2	1.7	**6.8109**	0.268	3.9	mg/L	288	Standard
Mg	24	28592487.7	2.1	**40.7028**	1.539	3.8	mg/L	218	Standard
K	39	1851.8	2.4	**1.4458**	0.071	4.9	mg/L	125	Standard
Ca	43	390.0	14.1	**390.0657**	50.080	12.8	mg/L	3	Standard
Fe	54	657.4	18.8	**0.0272**	0.025	91.2	mg/L	550	Standard
Fe	57	33745.9	5.4	**0.5993**	0.023	3.8	mg/L	1772	Standard
Sc-1	45	348933.5	2.3				mg/L	330668	Standard
Cl	35	18.3	12.6				ug/L	5	Standard
Kr	83	48.3	6.0				ug/L	38	Standard
Br	81	976.7	2.6				ug/L	344	Standard
P	31	6635.6	1.5				ug/L	312	Standard
S	34	278732.3	0.9				ug/L	5594	Standard
Sr	88	1206.7	5.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		89.997	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207049112SD WG403906-05
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	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

101.180

89.068

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207049107
Sample Date/Time: Sunday, July 29, 2012 13:24:10
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	35571.7	2.0	**4993.1071**	68.830	1.4	ug/L	9465	Standard
	Be	9	46.7	12.4	**0.0059**	0.004	66.4	ug/L	10	Standard
	Al	27	346065.6	3.5	**23.0737**	0.691	3.0	ug/L	7870	Standard
>	**Sc**	45	342865.8	2.4				ug/L	330668	Standard
	Ti	47	2292.2	4.0	**2.2106**	0.120	5.4	ug/L	53	Standard
	V	51	6471.7	2.2	**0.4709**	0.007	1.5	ug/L	2687	Standard
	Cr	52	13358.2	0.9	**0.8819**	0.011	1.3	ug/L	8408	Standard
	Cr	53	839.2	7.2	**0.5325**	0.045	8.5	ug/L	288	Standard
	Mn	55	758013.8	1.0	**65.8789**	1.525	2.3	ug/L	1080	Standard
	Co	59	2244.5	1.6	**0.2967**	0.003	1.1	ug/L	117	Standard
	Ni	60	29792.3	1.2	**14.6579**	0.328	2.2	ug/L	68	Standard
	Cu	65	1721.1	4.7	**0.8492**	0.048	5.6	ug/L	141	Standard
	Zn	66	12697.7	2.1	**14.1788**	0.450	3.2	ug/L	138	Standard
>	**Ge**	72	248736.0	1.4				ug/L	283230	Standard
	As	75	113.3	23.7	**0.3023**	0.030	9.8	ug/L	-198	Standard
	Se	82	1361.1	2.4	**15.4404**	0.587	3.8	ug/L	21	Standard
	Se-1	77	1045.0	2.8	**15.2302**	0.396	2.6	ug/L	131	Standard
>	**Ga**	71	635.0	3.9				mg/L	607	Standard
	Rb	85	21411.8	2.7				ug/L	30	Standard
	Y	89	230681.4	1.6				ug/L	251555	Standard
>	**Rh**	103	513.3	6.8				ug/L	335	Standard
	Mo	98	7848.3	1.0	**2.2400**	0.009	0.4	ug/L	13	Standard
	Ag	107	102.0	4.9	**0.0076**	0.001	12.0	ug/L	36	Standard
	Cd	111	299.5	6.0	**0.0767**	0.005	7.1	mg/L	49	Standard
	Cd	114	924.2	4.4	**0.0762**	0.005	6.7	ug/L	170	Standard
>	**In**	115	716592.8	0.9				ug/L	727802	Standard
	Sn	118	712.7	6.9	**0.0155**	0.004	26.3	ug/L	471	Standard
	Sb	123	1965.0	2.1	**0.2379**	0.006	2.3	ug/L	39	Standard
	Ba	135	103748.7	0.2	**24.1126**	0.181	0.7	ug/L	25	Standard
	Ce	140	1533.7	1.1				ug/L	25	Standard
>	**Tb**	159	1070580.7	0.3				ug/L	1071747	Standard
	Ho	165	56.7	14.3				ug/L	13	Standard
	Tl	203	441.3	18.9	**0.0291**	0.006	19.1	ug/L	5	Standard
	Tl	205	1008.0	14.9	**0.0296**	0.004	14.3	ug/L	10	Standard
	Pb	206	662.7	12.0	**0.0267**	0.007	25.1	ug/L	382	Standard
	Pb	207	535.7	5.1	**0.0283**	0.003	9.3	ug/L	306	Standard
	Pb	208	2571.4	8.9	**0.0289**	0.005	16.6	ug/L	1443	Standard
	U	238	32173.8	0.7	**2.4077**	0.025	1.0	ug/L	5	Standard
>	**Bi**	209	492508.8	0.6				ug/L	561075	Standard

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Na	23	118787.2	1.4	**6.6736**	0.075	1.1	mg/L	288	Standard
Mg	24	29917257.8	1.8	**43.3261**	0.521	1.2	mg/L	218	Standard
K	39	2006.8	4.9	**1.6043**	0.059	3.7	mg/L	125	Standard
Ca	43	363.3	5.7	**370.4980**	30.376	8.2	mg/L	3	Standard
Fe	54	656.7	5.2	**0.0300**	0.006	19.3	mg/L	550	Standard
Fe	57	35025.4	1.7	**0.6353**	0.007	1.0	mg/L	1772	Standard
Sc-1	45	342865.8	2.4				mg/L	330668	Standard
Cl	35	13.7	29.6				ug/L	5	Standard
Kr	83	52.9	2.6				ug/L	38	Standard
Br	81	775.9	3.8				ug/L	344	Standard
P	31	7631.1	1.6				ug/L	312	Standard
S	34	287204.1	0.9				ug/L	5594	Standard
Sr	88	1163.4	10.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		87.821	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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Cd	111	
Cd	114	
> In	115	98.460
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	87.779
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207049108
Sample Date/Time: Sunday, July 29, 2012 13:27:19
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	35322.8	2.5	**4726.6656**	121.816	2.6	ug/L	9465	Standard
	Be	9	31.7	18.2	**-0.0034**	0.003	93.6	ug/L	10	Standard
	Al	27	56169.0	2.5	**3.1332**	0.043	1.4	ug/L	7870	Standard
>	**Sc**	45	354368.4	1.4				ug/L	330668	Standard
	Ti	47	1606.4	3.7	**1.4528**	0.025	1.8	ug/L	53	Standard
	V	51	5702.9	1.9	**0.3472**	0.013	3.7	ug/L	2687	Standard
	Cr	52	13382.9	1.2	**0.7828**	0.022	2.8	ug/L	8408	Standard
	Cr	53	544.2	7.4	**0.2518**	0.039	15.6	ug/L	288	Standard
	Mn	55	746637.2	2.3	**61.4788**	0.420	0.7	ug/L	1080	Standard
	Co	59	6965.3	1.5	**0.8982**	0.012	1.4	ug/L	117	Standard
	Ni	60	16913.4	2.7	**7.8714**	0.119	1.5	ug/L	68	Standard
	Cu	65	1505.4	3.4	**0.6921**	0.015	2.1	ug/L	141	Standard
	Zn	66	2538.9	2.9	**2.5631**	0.043	1.7	ug/L	138	Standard
>	**Ge**	72	262451.8	2.0				ug/L	283230	Standard
	As	75	22.0	339.2	**0.1969**	0.081	41.3	ug/L	-198	Standard
	Se	82	1029.1	0.1	**10.9950**	0.229	2.1	ug/L	21	Standard
	Se-1	77	798.7	0.9	**10.5223**	0.167	1.6	ug/L	131	Standard
>	**Ga**	71	556.7	3.2				mg/L	607	Standard
	Rb	85	20480.5	3.3				ug/L	30	Standard
	Y	89	240537.8	1.2				ug/L	251555	Standard
>	**Rh**	103	518.3	7.4				ug/L	335	Standard
	Mo	98	5434.7	1.2	**1.5080**	0.020	1.3	ug/L	13	Standard
	Ag	107	57.7	8.2	**0.0002**	0.001	439.2	ug/L	36	Standard
	Cd	111	72.3	28.0	**0.0041**	0.006	155.5	mg/L	49	Standard
	Cd	114	227.9	5.3	**0.0029**	0.001	42.9	ug/L	170	Standard
>	**In**	115	735971.5	0.6				ug/L	727802	Standard
	Sn	118	599.3	10.9	**0.0041**	0.006	142.0	ug/L	471	Standard
	Sb	123	824.6	7.4	**0.0983**	0.008	7.9	ug/L	39	Standard
	Ba	135	101629.4	1.2	**22.9983**	0.414	1.8	ug/L	25	Standard
	Ce	140	285.7	6.6				ug/L	25	Standard
>	**Tb**	159	1086018.9	0.8				ug/L	1071747	Standard
	Ho	165	21.0	37.2				ug/L	13	Standard
	Tl	203	217.7	6.8	**0.0135**	0.001	8.3	ug/L	5	Standard
	Tl	205	513.0	7.4	**0.0147**	0.001	7.8	ug/L	10	Standard
	Pb	206	408.0	2.1	**0.0033**	0.000	14.0	ug/L	382	Standard
	Pb	207	341.3	7.6	**0.0068**	0.003	44.0	ug/L	306	Standard
	Pb	208	1608.4	2.0	**0.0063**	0.000	5.9	ug/L	1443	Standard
	U	238	30909.5	1.1	**2.2590**	0.006	0.2	ug/L	5	Standard
>	**Bi**	209	504286.2	1.0				ug/L	561075	Standard

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Na	23	115940.2	0.5	**6.3002**	0.118	1.9	mg/L	288	Standard
Mg	24	29564762.1	3.1	**41.4149**	0.792	1.9	mg/L	218	Standard
K	39	2040.1	4.7	**1.5762**	0.064	4.1	mg/L	125	Standard
Ca	43	368.3	9.5	**363.0644**	38.209	10.5	mg/L	3	Standard
Fe	54	574.9	9.3	**0.0069**	0.011	162.1	mg/L	550	Standard
Fe	57	33670.8	4.6	**0.5882**	0.020	3.4	mg/L	1772	Standard
Sc-1	45	354368.4	1.4				mg/L	330668	Standard
Cl	35	16.0	12.5				ug/L	5	Standard
Kr	83	51.1	2.3				ug/L	38	Standard
Br	81	780.9	1.3				ug/L	344	Standard
P	31	6409.7	1.4				ug/L	312	Standard
S	34	284927.6	1.0				ug/L	5594	Standard
Sr	88	1160.0	8.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.664	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	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

101.122

89.879

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207049108PS WG404852-01
Sample Date/Time: Sunday, July 29, 2012 13:30:29
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: JYH 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	7	41099.0	1.3	**5070.1033**	149.512	2.9	ug/L	9465	Standard
	Be	9	84045.8	0.9	**42.6754**	0.988	2.3	ug/L	10	Standard
	Al	27	720861.6	0.4	**42.5625**	1.425	3.3	ug/L	7870	Standard
>	**Sc**	45	391796.9	2.8				ug/L	330668	Standard
	Ti	47	1891.5	1.1	**1.5325**	0.030	2.0	ug/L	53	Standard
	V	51	492830.1	1.6	**48.1921**	0.122	0.3	ug/L	2687	Standard
	Cr	52	390934.2	0.4	**47.6324**	0.672	1.4	ug/L	8408	Standard
	Cr	53	65597.6	2.0	**48.1565**	0.661	1.4	ug/L	288	Standard
	Mn	55	1537356.7	0.8	**113.2895**	2.153	1.9	ug/L	1080	Standard
	Co	59	430793.4	0.1	**50.3884**	0.753	1.5	ug/L	117	Standard
	Ni	60	129182.1	0.9	**53.9364**	0.500	0.9	ug/L	68	Standard
	Cu	65	100816.0	0.9	**45.4492**	0.366	0.8	ug/L	141	Standard
	Zn	66	50332.1	1.1	**47.9816**	0.620	1.3	ug/L	138	Standard
>	**Ge**	72	293499.4	1.4				ug/L	283230	Standard
	As	75	51480.6	0.8	**50.1129**	0.351	0.7	ug/L	-198	Standard
	Se	82	6428.4	0.5	**62.5179**	0.788	1.3	ug/L	21	Standard
	Se-1	77	4589.4	1.7	**61.7417**	1.099	1.8	ug/L	131	Standard
>	**Ga**	71	726.7	2.4				mg/L	607	Standard
	Rb	85	22613.5	2.7				ug/L	30	Standard
	Y	89	268612.4	1.9				ug/L	251555	Standard
>	**Rh**	103	688.3	4.4				ug/L	335	Standard
	Mo	98	6261.2	0.7	**1.5757**	0.022	1.4	ug/L	13	Standard
	Ag	107	302038.5	0.2	**43.3863**	0.440	1.0	ug/L	36	Standard
	Cd	111	182998.4	0.9	**51.2193**	0.202	0.4	mg/L	49	Standard
	Cd	114	504697.6	0.5	**46.4553**	0.461	1.0	ug/L	170	Standard
>	**In**	115	811667.6	0.8				ug/L	727802	Standard
	Sn	118	1830.8	8.0	**0.0954**	0.013	13.2	ug/L	471	Standard
	Sb	123	455338.6	1.1	**48.2945**	0.203	0.4	ug/L	39	Standard
	Ba	135	326084.4	0.8	**66.9273**	0.284	0.4	ug/L	25	Standard
	Ce	140	372.7	8.3				ug/L	25	Standard
>	**Tb**	159	1177638.1	0.3				ug/L	1071747	Standard
	Ho	165	23.7	20.8				ug/L	13	Standard
	Tl	203	782112.4	0.7	**49.4864**	0.245	0.5	ug/L	5	Standard
	Tl	205	1804551.1	0.6	**48.9544**	0.126	0.3	ug/L	10	Standard
	Pb	206	591255.1	0.1	**48.4667**	0.217	0.4	ug/L	382	Standard
	Pb	207	498452.3	0.8	**48.9356**	0.360	0.7	ug/L	306	Standard
	Pb	208	2309825.1	0.6	**48.2499**	0.242	0.5	ug/L	1443	Standard
	U	238	828434.5	0.6	**57.3247**	0.518	0.9	ug/L	5	Standard
>	**Bi**	209	532687.3	0.5				ug/L	561075	Standard

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Na	23	119874.1	1.6	**5.8896**	0.074	1.2	mg/L	288	Standard
Mg	24	33011806.4	1.3	**41.8579**	1.502	3.6	mg/L	218	Standard
K	39	2275.2	11.0	**1.5954**	0.237	14.9	mg/L	125	Standard
Ca	43	408.3	12.9	**363.9642**	47.419	13.0	mg/L	3	Standard
Fe	54	772.3	10.6	**0.0342**	0.012	36.0	mg/L	550	Standard
Fe	57	40878.6	7.6	**0.6496**	0.049	7.5	mg/L	1772	Standard
Sc-1	45	391796.9	2.8				mg/L	330668	Standard
Cl	35	15.3	24.7				ug/L	5	Standard
Kr	83	56.2	1.2				ug/L	38	Standard
Br	81	855.9	7.3				ug/L	344	Standard
P	31	6725.7	3.3				ug/L	312	Standard
S	34	299947.7	1.3				ug/L	5594	Standard
Sr	88	1376.7	4.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		103.626	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.523
	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	94.940
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1207049108PS WG404852-01
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Method 6020 - Summary Report

Sample ID: L1207049108SDL WG404852-02
Sample Date/Time: Sunday, July 29, 2012 13:33:38
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: JYH 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	7	15115.9	2.5	**1051.5675**	72.593	6.9	ug/L	9465	Standard
	Be	9	38.3	7.5	**0.0007**	0.001	204.1	ug/L	10	Standard
	Al	27	34370.6	0.2	**1.7308**	0.038	2.2	ug/L	7870	Standard
>	**Sc**	45	348493.1	1.9				ug/L	330668	Standard
	Ti	47	406.7	2.7	**0.3056**	0.013	4.1	ug/L	53	Standard
	V	51	3610.4	4.1	**0.0855**	0.018	21.6	ug/L	2687	Standard
	Cr	52	9993.3	2.6	**0.1997**	0.047	23.4	ug/L	8408	Standard
	Cr	53	339.2	10.4	**0.0601**	0.025	41.5	ug/L	288	Standard
	Mn	55	164657.5	0.3	**12.4119**	0.111	0.9	ug/L	1080	Standard
	Co	59	1656.8	3.0	**0.1864**	0.007	4.0	ug/L	117	Standard
	Ni	60	4078.9	0.9	**1.7245**	0.030	1.7	ug/L	68	Standard
	Cu	65	593.0	1.8	**0.2077**	0.006	3.1	ug/L	141	Standard
	Zn	66	4184.6	1.6	**3.9671**	0.087	2.2	ug/L	138	Standard
>	**Ge**	72	285169.1	1.0				ug/L	283230	Standard
	As	75	-119.1	22.3	**0.0536**	0.028	52.1	ug/L	-198	Standard
	Se	82	225.0	4.5	**2.0176**	0.083	4.1	ug/L	21	Standard
	Se-1	77	259.7	9.5	**1.8497**	0.391	21.1	ug/L	131	Standard
>	**Ga**	71	665.0	5.9				mg/L	607	Standard
	Rb	85	4035.5	2.2				ug/L	30	Standard
	Y	89	247393.6	1.2				ug/L	251555	Standard
>	**Rh**	103	345.0	10.9				ug/L	335	Standard
	Mo	98	1176.7	1.3	**0.3091**	0.002	0.6	ug/L	13	Standard
	Ag	107	118.3	5.4	**0.0091**	0.001	12.5	ug/L	36	Standard
	Cd	111	90.8	14.1	**0.0088**	0.004	45.4	mg/L	49	Standard
	Cd	114	290.3	3.9	**0.0082**	0.001	10.7	ug/L	170	Standard
>	**In**	115	763420.6	1.3				ug/L	727802	Standard
	Sn	118	1168.4	4.0	**0.0494**	0.003	6.3	ug/L	471	Standard
	Sb	123	2044.9	8.6	**0.2325**	0.022	9.4	ug/L	39	Standard
	Ba	135	21500.9	0.8	**4.6818**	0.086	1.8	ug/L	25	Standard
	Ce	140	120.7	18.5				ug/L	25	Standard
>	**Tb**	159	1131741.5	1.1				ug/L	1071747	Standard
	Ho	165	17.7	8.6				ug/L	13	Standard
	Tl	203	447.3	71.8	**0.0260**	0.020	76.1	ug/L	5	Standard
	Tl	205	976.4	69.6	**0.0254**	0.018	70.8	ug/L	10	Standard
	Pb	206	828.4	22.4	**0.0326**	0.015	47.0	ug/L	382	Standard
	Pb	207	655.3	19.5	**0.0327**	0.013	39.0	ug/L	306	Standard
	Pb	208	3097.1	21.3	**0.0325**	0.014	43.0	ug/L	1443	Standard
	U	238	6382.3	1.3	**0.4198**	0.008	1.9	ug/L	5	Standard
>	**Bi**	209	560204.7	1.2				ug/L	561075	Standard

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Na	23	54773.9	3.8	**3.0071**	0.092	3.1	mg/L	288	Standard
Mg	24	6621301.3	3.0	**9.4379**	0.428	4.5	mg/L	218	Standard
K	39	493.3	2.6	**0.3056**	0.010	3.2	mg/L	125	Standard
Ca	43	76.7	35.9	**72.8868**	28.978	39.8	mg/L	3	Standard
Fe	54	555.8	5.0	**0.0047**	0.006	120.3	mg/L	550	Standard
Fe	57	9319.5	2.0	**0.1407**	0.005	3.3	mg/L	1772	Standard
> **Sc-1**	45	348493.1	1.9				mg/L	330668	Standard
Cl	35	9.0	11.1				ug/L	5	Standard
Kr	83	39.6	4.2				ug/L	38	Standard
Br	81	470.8	3.2				ug/L	344	Standard
P	31	1546.7	4.6				ug/L	312	Standard
S	34	66678.9	0.1				ug/L	5594	Standard
Sr	88	246.7	6.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.685	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207049108SDL WG404852-02
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	Cd	111	
	Cd	114	
>	In	115	104.894
	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	99.845
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207049108SDL WG404852-02
Report Date/Time: Sunday, July 29, 2012 13:36:09
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 13:36:50
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: JYH 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	7	8585.8	5.3	**-86.6883**	76.985	88.8	ug/L	9465	Standard
	Be	9	83941.9	0.5	**50.4614**	0.810	1.6	ug/L	10	Standard
	Al	27	665061.6	2.8	**46.5178**	0.731	1.6	ug/L	7870	Standard
>	**Sc**	45	330863.9	1.3				ug/L	330668	Standard
	Ti	47	114073.5	0.2	**99.1353**	1.291	1.3	ug/L	53	Standard
	V	51	472605.7	0.8	**48.2426**	0.545	1.1	ug/L	2687	Standard
	Cr	52	382224.0	0.8	**48.6358**	1.081	2.2	ug/L	8408	Standard
	Cr	53	64217.5	2.3	**49.2122**	0.926	1.9	ug/L	288	Standard
	Mn	55	670719.3	2.1	**51.5366**	0.906	1.8	ug/L	1080	Standard
	Co	59	410491.4	0.6	**50.1148**	0.729	1.5	ug/L	117	Standard
	Ni	60	111286.2	1.0	**48.5020**	1.087	2.2	ug/L	68	Standard
	Cu	65	103534.2	1.1	**48.7306**	1.187	2.4	ug/L	141	Standard
	Zn	66	49790.7	1.1	**49.5537**	1.118	2.3	ug/L	138	Standard
>	**Ge**	72	281192.7	1.5				ug/L	283230	Standard
	As	75	49138.3	1.3	**49.9298**	0.855	1.7	ug/L	-198	Standard
	Se	82	4918.1	0.7	**49.8737**	0.638	1.3	ug/L	21	Standard
	Se-1	77	3561.8	2.7	**49.6557**	1.022	2.1	ug/L	131	Standard
>	**Ga**	71	566.7	12.2				mg/L	607	Standard
	Rb	85	758.4	5.3				ug/L	30	Standard
	Y	89	247924.0	1.8				ug/L	251555	Standard
>	**Rh**	103	368.3	4.4				ug/L	335	Standard
	Mo	98	340317.3	1.2	**92.3518**	1.185	1.3	ug/L	13	Standard
	Ag	107	300674.0	2.2	**46.3673**	1.040	2.2	ug/L	36	Standard
	Cd	111	170132.8	2.1	**51.1225**	1.020	2.0	mg/L	49	Standard
	Cd	114	498070.0	1.6	**49.2179**	0.717	1.5	ug/L	170	Standard
>	**In**	115	756024.6	0.3				ug/L	727802	Standard
	Sn	118	578640.8	1.7	**48.3981**	0.723	1.5	ug/L	471	Standard
	Sb	123	429096.5	1.1	**48.8611**	0.483	1.0	ug/L	39	Standard
	Ba	135	225567.5	1.3	**49.7005**	0.597	1.2	ug/L	25	Standard
	Ce	140	831.7	1.8				ug/L	25	Standard
>	**Tb**	159	1121593.8	0.9				ug/L	1071747	Standard
	Ho	165	17.7	37.7				ug/L	13	Standard
	Tl	203	806277.2	1.4	**48.5951**	0.625	1.3	ug/L	5	Standard
	Tl	205	1860800.1	0.4	**48.0857**	0.057	0.1	ug/L	10	Standard
	Pb	206	626524.4	1.7	**48.9202**	0.707	1.4	ug/L	382	Standard
	Pb	207	530270.8	1.2	**49.5896**	0.546	1.1	ug/L	306	Standard
	Pb	208	2455025.9	1.5	**48.8499**	0.632	1.3	ug/L	1443	Standard
	U	238	757943.7	0.4	**49.9579**	0.158	0.3	ug/L	5	Standard
>	**Bi**	209	559214.9	0.3				ug/L	561075	Standard

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Na	23	106684.3	0.1	**6.2082**	0.087	1.4	mg/L	288	Standard
Mg	24	3267465.0	1.4	**4.9032**	0.042	0.9	mg/L	218	Standard
K	39	5771.1	1.5	**4.9984**	0.138	2.8	mg/L	125	Standard
Ca	43	16.7	62.4	**12.5732**	11.321	90.0	mg/L	3	Standard
Fe	54	21131.4	0.2	**4.9201**	0.052	1.1	mg/L	550	Standard
Fe	57	268412.2	3.8	**5.2880**	0.256	4.8	mg/L	1772	Standard
Sc-1	45	330863.9	1.3				mg/L	330668	Standard
Cl	35	4.3	66.6				ug/L	5	Standard
Kr	83	39.8	7.0				ug/L	38	Standard
Br	81	367.5	4.7				ug/L	344	Standard
P	31	326.7	3.1				ug/L	312	Standard
S	34	5663.6	1.1				ug/L	5594	Standard
Sr	88	45.0	55.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	93.036		
Sc	45			
Ti	47	99.135		
V	51	96.485		
Cr	52	97.272		
Cr	53			
Mn	55	103.073		
Co	59	100.230		
Ni	60	97.004		
Cu	65	97.461		
Zn	66	99.107		
Ge	72		99.281	
As	75	99.860		
Se	82	99.747		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	92.352		
Ag	107	92.735		

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	Cd	111	102.245
	Cd	114	
>	In	115	103.878
	Sn	118	96.796
	Sb	123	97.722
	Ba	135	99.401
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	97.190
	Tl	205	
	Pb	206	97.840
	Pb	207	99.179
	Pb	208	97.700
	U	238	99.916
>	Bi	209	99.668
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 13:40:00
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: JYH 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	7	8695.8	1.0	**-63.9434**	20.380	31.9	ug/L	9465	Standard
	Be	9	85.0	127.7	**0.0301**	0.065	217.8	ug/L	10	Standard
	Al	27	8243.9	7.3	**0.0032**	0.043	1331.7	ug/L	7870	Standard
>	**Sc**	45	330751.5	1.3				ug/L	330668	Standard
	Ti	47	115.3	68.2	**0.0563**	0.068	120.0	ug/L	53	Standard
	V	51	2391.2	2.5	**-0.0365**	0.006	15.4	ug/L	2687	Standard
	Cr	52	7535.9	0.9	**-0.1096**	0.006	5.9	ug/L	8408	Standard
	Cr	53	280.0	38.0	**0.0166**	0.081	487.1	ug/L	288	Standard
	Mn	55	1243.7	13.8	**0.0107**	0.013	121.0	ug/L	1080	Standard
	Co	59	163.0	14.4	**0.0066**	0.003	42.3	ug/L	117	Standard
	Ni	60	156.3	97.1	**0.0383**	0.065	170.9	ug/L	68	Standard
	Cu	65	235.3	52.0	**0.0422**	0.057	135.3	ug/L	141	Standard
	Zn	66	206.7	22.2	**0.0529**	0.045	85.2	ug/L	138	Standard
>	**Ge**	72	283371.3	0.2				ug/L	283230	Standard
	As	75	-130.6	44.8	**0.0414**	0.059	142.6	ug/L	-198	Standard
	Se	82	25.8	19.7	**0.0180**	0.051	284.3	ug/L	21	Standard
	Se-1	77	115.0	6.9	**-0.2057**	0.113	54.8	ug/L	131	Standard
>	**Ga**	71	591.7	6.1				mg/L	607	Standard
	Rb	85	25.0	52.9				ug/L	30	Standard
	Y	89	247463.9	2.9				ug/L	251555	Standard
>	**Rh**	103	355.0	6.1				ug/L	335	Standard
	Mo	98	244.3	28.2	**0.0613**	0.020	32.3	ug/L	13	Standard
	Ag	107	140.7	50.7	**0.0135**	0.012	85.6	ug/L	36	Standard
	Cd	111	90.4	40.4	**0.0098**	0.012	117.6	mg/L	49	Standard
	Cd	114	272.6	39.4	**0.0076**	0.011	146.4	ug/L	170	Standard
>	**In**	115	733112.1	1.0				ug/L	727802	Standard
	Sn	118	897.7	8.5	**0.0301**	0.007	24.1	ug/L	471	Standard
	Sb	123	2291.4	2.2	**0.2709**	0.008	3.1	ug/L	39	Standard
	Ba	135	82.7	63.3	**0.0073**	0.012	164.3	ug/L	25	Standard
	Ce	140	26.7	21.3				ug/L	25	Standard
>	**Tb**	159	1082926.6	0.7				ug/L	1071747	Standard
	Ho	165	11.3	28.4				ug/L	13	Standard
	Tl	203	146.3	84.0	**0.0077**	0.007	95.9	ug/L	5	Standard
	Tl	205	351.0	66.2	**0.0091**	0.006	66.4	ug/L	10	Standard
	Pb	206	473.7	20.6	**0.0047**	0.008	164.1	ug/L	382	Standard
	Pb	207	413.3	11.0	**0.0098**	0.004	44.8	ug/L	306	Standard
	Pb	208	1840.4	17.3	**0.0072**	0.006	89.3	ug/L	1443	Standard
	U	238	193.7	80.1	**0.0125**	0.010	81.9	ug/L	5	Standard
>	**Bi**	209	562631.6	0.8				ug/L	561075	Standard

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⌈	**Na**	23	598.4	86.4	**-0.0011**	0.030	2654.7	mg/L	288	Standard
|	**Mg**	24	15505.3	163.2	**0.0236**	0.038	161.2	mg/L	218	Standard
|	**K**	39	146.7	16.1	**0.0212**	0.022	106.0	mg/L	125	Standard
|	**Ca**	43	5.0	173.2	**0.0089**	9.298	104451.0	mg/L	3	Standard
|	**Fe**	54	536.7	7.8	**0.0070**	0.011	163.1	mg/L	550	Standard
|	**Fe**	57	2065.1	12.6	**0.0062**	0.005	82.0	mg/L	1772	Standard
⌊>	**Sc-1**	45	330751.5	1.3				mg/L	330668	Standard
	Cl	35	1.3	114.6				ug/L	5	Standard
	Kr	83	34.0	2.6				ug/L	38	Standard
	Br	81	342.5	1.5				ug/L	344	Standard
	P	31	326.7	12.9				ug/L	312	Standard
	S	34	5970.3	6.0				ug/L	5594	Standard
	Sr	88	45.0	19.2				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		100.050	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	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

100.730

100.277

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: L1207049109
Sample Date/Time: Sunday, July 29, 2012 13:44:50
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13089.0	1.7	**1146.7205**	73.013	6.4	ug/L	9465	Standard
	Be	9	13.3	78.1	**-0.0121**	0.007	59.5	ug/L	10	Standard
	Al	27	73823.8	9.6	**5.3437**	0.549	10.3	ug/L	7870	Standard
>	**Sc**	45	291952.7	0.8				ug/L	330668	Standard
	Ti	47	551.7	2.9	**0.4985**	0.021	4.3	ug/L	53	Standard
	V	51	3037.9	2.3	**0.0720**	0.010	13.9	ug/L	2687	Standard
	Cr	52	8976.7	1.3	**0.2360**	0.022	9.2	ug/L	8408	Standard
	Cr	53	250.0	16.8	**0.0205**	0.040	196.5	ug/L	288	Standard
	Mn	55	135425.9	0.3	**11.6843**	0.157	1.3	ug/L	1080	Standard
	Co	59	736.7	2.8	**0.0884**	0.003	3.1	ug/L	117	Standard
	Ni	60	2750.2	0.5	**1.3248**	0.024	1.8	ug/L	68	Standard
	Cu	65	487.0	5.2	**0.1913**	0.014	7.1	ug/L	141	Standard
	Zn	66	1852.4	2.2	**1.9356**	0.014	0.7	ug/L	138	Standard
>	**Ge**	72	249064.7	1.5				ug/L	283230	Standard
	As	75	-56.1	44.2	**0.1085**	0.028	26.0	ug/L	-198	Standard
	Se	82	115.3	6.1	**1.0824**	0.064	5.9	ug/L	21	Standard
	Se-1	77	166.0	12.4	**0.8548**	0.334	39.1	ug/L	131	Standard
>	**Ga**	71	570.0	4.9				mg/L	607	Standard
	Rb	85	2868.6	1.6				ug/L	30	Standard
	Y	89	214028.4	2.5				ug/L	251555	Standard
>	**Rh**	103	286.7	8.2				ug/L	335	Standard
	Mo	98	549.7	6.8	**0.1636**	0.011	6.4	ug/L	13	Standard
	Ag	107	50.0	22.7	**-0.0001**	0.002	1369.2	ug/L	36	Standard
	Cd	111	40.0	11.4	**-0.0045**	0.002	36.1	mg/L	49	Standard
	Cd	114	144.4	6.4	**-0.0039**	0.001	25.8	ug/L	170	Standard
>	**In**	115	660494.4	0.7				ug/L	727802	Standard
	Sn	118	517.7	11.0	**0.0022**	0.005	240.8	ug/L	471	Standard
	Sb	123	540.4	21.3	**0.0722**	0.015	20.1	ug/L	39	Standard
	Ba	135	39413.5	1.4	**9.9308**	0.081	0.8	ug/L	25	Standard
	Ce	140	553.0	3.8				ug/L	25	Standard
>	**Tb**	159	1009489.0	0.5				ug/L	1071747	Standard
	Ho	165	20.0	15.0				ug/L	13	Standard
	Tl	203	121.7	17.4	**0.0070**	0.001	19.4	ug/L	5	Standard
	Tl	205	292.3	10.2	**0.0083**	0.001	9.6	ug/L	10	Standard
	Pb	206	422.7	7.5	**0.0041**	0.003	61.1	ug/L	382	Standard
	Pb	207	359.0	5.3	**0.0082**	0.002	25.9	ug/L	306	Standard
	Pb	208	1684.7	3.4	**0.0076**	0.001	14.0	ug/L	1443	Standard
	U	238	3287.0	0.6	**0.2375**	0.001	0.6	ug/L	5	Standard
>	**Bi**	209	509607.6	0.6				ug/L	561075	Standard

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Na	23	51699.8	3.4	**3.3928**	0.118	3.5	mg/L	288	Standard
Mg	24	6010749.1	0.4	**10.2222**	0.117	1.1	mg/L	218	Standard
K	39	551.7	4.5	**0.4445**	0.029	6.5	mg/L	125	Standard
Ca	43	63.3	19.9	**71.4103**	14.761	20.7	mg/L	3	Standard
Fe	54	302.8	17.6	**-0.0392**	0.015	38.6	mg/L	550	Standard
Fe	57	7353.5	1.3	**0.1304**	0.003	2.4	mg/L	1772	Standard
Sc-1	45	291952.7	0.8				mg/L	330668	Standard
Cl	35	7.7	30.1				ug/L	5	Standard
Kr	83	34.0	2.0				ug/L	38	Standard
Br	81	348.3	9.1				ug/L	344	Standard
P	31	1755.1	5.0				ug/L	312	Standard
S	34	65118.8	0.7				ug/L	5594	Standard
Sr	88	208.3	18.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		87.937	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.752
	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	90.827
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207049110
Sample Date/Time: Sunday, July 29, 2012 13:47:59
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13264.1	2.5	**1157.8496**	90.209	7.8	ug/L	9465	Standard
	Be	9	13.3	57.3	**-0.0122**	0.005	42.2	ug/L	10	Standard
	Al	27	24009.0	2.0	**1.3283**	0.052	3.9	ug/L	7870	Standard
>	**Sc**	45	294739.3	0.9				ug/L	330668	Standard
	Ti	47	432.0	4.4	**0.3760**	0.021	5.5	ug/L	53	Standard
	V	51	3040.0	3.5	**0.0681**	0.014	20.8	ug/L	2687	Standard
	Cr	52	9118.7	1.8	**0.2412**	0.031	12.9	ug/L	8408	Standard
	Cr	53	273.3	4.7	**0.0375**	0.010	26.1	ug/L	288	Standard
	Mn	55	145277.6	1.2	**12.3914**	0.227	1.8	ug/L	1080	Standard
	Co	59	1402.1	0.1	**0.1779**	0.001	0.8	ug/L	117	Standard
	Ni	60	2507.2	0.9	**1.1905**	0.012	1.0	ug/L	68	Standard
	Cu	65	404.7	5.8	**0.1450**	0.013	9.3	ug/L	141	Standard
	Zn	66	1171.4	4.4	**1.1529**	0.062	5.4	ug/L	138	Standard
>	**Ge**	72	252022.4	0.6				ug/L	283230	Standard
	As	75	-92.2	1.4	**0.0685**	0.001	1.9	ug/L	-198	Standard
	Se	82	114.4	3.1	**1.0575**	0.038	3.6	ug/L	21	Standard
	Se-1	77	166.0	5.7	**0.8229**	0.161	19.5	ug/L	131	Standard
>	**Ga**	71	618.3	6.9				mg/L	607	Standard
	Rb	85	2865.3	5.5				ug/L	30	Standard
	Y	89	217109.5	0.4				ug/L	251555	Standard
>	**Rh**	103	355.0	8.8				ug/L	335	Standard
	Mo	98	499.4	1.3	**0.1487**	0.002	1.4	ug/L	13	Standard
	Ag	107	41.7	28.6	**-0.0016**	0.002	136.2	ug/L	36	Standard
	Cd	111	26.5	19.4	**-0.0091**	0.002	19.8	mg/L	49	Standard
	Cd	114	101.0	5.5	**-0.0087**	0.001	7.5	ug/L	170	Standard
>	**In**	115	657366.6	0.4				ug/L	727802	Standard
	Sn	118	423.3	7.9	**-0.0067**	0.003	50.3	ug/L	471	Standard
	Sb	123	306.7	15.2	**0.0420**	0.006	14.6	ug/L	39	Standard
	Ba	135	42128.2	2.1	**10.6665**	0.220	2.1	ug/L	25	Standard
	Ce	140	113.3	9.8				ug/L	25	Standard
>	**Tb**	159	999233.4	0.2				ug/L	1071747	Standard
	Ho	165	15.0	35.3				ug/L	13	Standard
	Tl	203	133.7	2.2	**0.0077**	0.000	2.9	ug/L	5	Standard
	Tl	205	282.0	3.7	**0.0080**	0.000	3.4	ug/L	10	Standard
	Pb	206	350.0	2.8	**-0.0023**	0.001	27.7	ug/L	382	Standard
	Pb	207	295.7	4.0	**0.0015**	0.001	70.0	ug/L	306	Standard
	Pb	208	1356.0	5.6	**0.0002**	0.001	751.7	ug/L	1443	Standard
	U	238	3645.4	2.3	**0.2616**	0.007	2.8	ug/L	5	Standard
>	**Bi**	209	513308.6	0.9				ug/L	561075	Standard

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Na	23	53828.8	2.9	**3.5002**	0.100	2.8	mg/L	288	Standard
Mg	24	6433625.1	1.9	**10.8368**	0.129	1.2	mg/L	218	Standard
K	39	528.3	14.3	**0.4155**	0.070	16.9	mg/L	125	Standard
Ca	43	93.3	44.6	**107.0371**	50.822	47.5	mg/L	3	Standard
Fe	54	300.7	12.7	**-0.0406**	0.010	24.3	mg/L	550	Standard
Fe	57	8085.5	4.2	**0.1452**	0.009	6.1	mg/L	1772	Standard
> **Sc-1**	45	294739.3	0.9				mg/L	330668	Standard
Cl	35	3.0	33.3				ug/L	5	Standard
Kr	83	33.2	20.6				ug/L	38	Standard
Br	81	400.8	2.2				ug/L	344	Standard
P	31	1665.1	2.9				ug/L	312	Standard
S	34	69106.4	1.0				ug/L	5594	Standard
Sr	88	238.3	15.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		88.982	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.322
	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	91.487
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207049111
Sample Date/Time: Sunday, July 29, 2012 13:51:08
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13109.0	2.8	**1127.9284**	58.325	5.2	ug/L	9465	Standard
	Be	9	16.7	34.6	**-0.0100**	0.004	36.5	ug/L	10	Standard
	Al	27	54432.8	5.6	**3.7509**	0.092	2.4	ug/L	7870	Standard
>	**Sc**	45	294397.8	4.3				ug/L	330668	Standard
	Ti	47	618.0	5.8	**0.5770**	0.026	4.4	ug/L	53	Standard
	V	51	8679.1	4.9	**0.7482**	0.024	3.2	ug/L	2687	Standard
	Cr	52	9790.8	4.2	**0.3876**	0.023	6.1	ug/L	8408	Standard
	Cr	53	325.0	3.4	**0.0916**	0.004	4.9	ug/L	288	Standard
	Mn	55	145219.3	4.7	**12.8147**	0.285	2.2	ug/L	1080	Standard
	Co	59	1616.4	7.1	**0.2146**	0.012	5.4	ug/L	117	Standard
	Ni	60	4182.6	3.5	**2.0759**	0.017	0.8	ug/L	68	Standard
	Cu	65	590.3	7.9	**0.2530**	0.016	6.4	ug/L	141	Standard
	Zn	66	2829.9	5.3	**3.1077**	0.084	2.7	ug/L	138	Standard
>	**Ge**	72	243566.6	3.0				ug/L	283230	Standard
	As	75	57.4	9.5	**0.2398**	0.006	2.6	ug/L	-198	Standard
	Se	82	62.2	3.2	**0.4900**	0.045	9.3	ug/L	21	Standard
	Se-1	77	138.7	10.5	**0.4654**	0.311	66.9	ug/L	131	Standard
>	**Ga**	71	700.0	4.3				mg/L	607	Standard
	Rb	85	3653.8	7.7				ug/L	30	Standard
	Y	89	211812.6	2.7				ug/L	251555	Standard
>	**Rh**	103	316.7	27.1				ug/L	335	Standard
	Mo	98	3664.0	5.6	**1.1526**	0.041	3.6	ug/L	13	Standard
	Ag	107	47.0	7.7	**-0.0005**	0.001	122.0	ug/L	36	Standard
	Cd	111	69.9	21.5	**0.0062**	0.005	79.2	mg/L	49	Standard
	Cd	114	260.1	13.3	**0.0098**	0.004	39.1	ug/L	170	Standard
>	**In**	115	647894.8	2.3				ug/L	727802	Standard
	Sn	118	445.3	11.0	**-0.0040**	0.004	100.7	ug/L	471	Standard
	Sb	123	731.6	12.0	**0.0990**	0.011	11.2	ug/L	39	Standard
	Ba	135	32368.6	3.4	**8.3114**	0.112	1.4	ug/L	25	Standard
	Ce	140	535.3	10.4				ug/L	25	Standard
>	**Tb**	159	979331.9	1.1				ug/L	1071747	Standard
	Ho	165	25.3	25.7				ug/L	13	Standard
	Tl	203	231.3	33.6	**0.0142**	0.005	33.9	ug/L	5	Standard
	Tl	205	527.3	40.9	**0.0149**	0.006	38.7	ug/L	10	Standard
	Pb	206	449.3	16.2	**0.0065**	0.006	86.2	ug/L	382	Standard
	Pb	207	348.0	16.3	**0.0071**	0.005	70.4	ug/L	306	Standard
	Pb	208	1698.0	13.7	**0.0079**	0.004	54.8	ug/L	1443	Standard
	U	238	7115.3	5.2	**0.5155**	0.014	2.8	ug/L	5	Standard
>	**Bi**	209	508289.5	2.5				ug/L	561075	Standard

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Na	23	56316.1	1.3	**3.6711**	0.112	3.1	mg/L	288	Standard
Mg	24	6469141.2	4.2	**10.9107**	0.132	1.2	mg/L	218	Standard
K	39	521.7	11.7	**0.4096**	0.052	12.7	mg/L	125	Standard
Ca	43	81.7	12.7	**93.0213**	13.482	14.5	mg/L	3	Standard
Fe	54	308.2	8.5	**-0.0385**	0.005	13.6	mg/L	550	Standard
Fe	57	7992.1	5.7	**0.1433**	0.009	6.2	mg/L	1772	Standard
Sc-1	45	294397.8	4.3				mg/L	330668	Standard
Cl	35	3.7	31.5				ug/L	5	Standard
Kr	83	37.0	5.6				ug/L	38	Standard
Br	81	351.7	3.9				ug/L	344	Standard
P	31	2202.7	5.9				ug/L	312	Standard
S	34	70073.5	4.1				ug/L	5594	Standard
Sr	88	210.0	15.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		85.996	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.021
	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	90.592
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053701
Sample Date/Time: Sunday, July 29, 2012 13:54:19
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	26501.5	1.0	**4185.2291**	89.635	2.1	ug/L	9465	Standard
	Be	9	18.3	56.8	**-0.0086**	0.007	82.3	ug/L	10	Standard
	Al	27	1008921.1	1.3	**80.9395**	0.459	0.6	ug/L	7870	Standard
>	**Sc**	45	290022.9	0.8				ug/L	330668	Standard
	Ti	47	2792.9	2.2	**2.7480**	0.068	2.5	ug/L	53	Standard
	V	51	12767.9	1.9	**1.2268**	0.038	3.1	ug/L	2687	Standard
	Cr	52	10027.0	2.4	**0.4168**	0.029	6.9	ug/L	8408	Standard
	Cr	53	880.0	6.7	**0.5813**	0.054	9.3	ug/L	288	Standard
	Mn	55	16143.6	1.2	**1.3441**	0.027	2.0	ug/L	1080	Standard
	Co	59	505.3	4.1	**0.0578**	0.003	5.8	ug/L	117	Standard
	Ni	60	703.3	2.7	**0.3233**	0.011	3.4	ug/L	68	Standard
	Cu	65	308.0	5.4	**0.0990**	0.008	8.3	ug/L	141	Standard
	Zn	66	1476.7	3.9	**1.5429**	0.075	4.9	ug/L	138	Standard
>	**Ge**	72	244614.2	0.7				ug/L	283230	Standard
	As	75	162.3	16.2	**0.3616**	0.031	8.5	ug/L	-198	Standard
	Se	82	38.0	16.1	**0.2024**	0.074	36.7	ug/L	21	Standard
	Se-1	77	122.0	3.3	**0.1722**	0.065	37.8	ug/L	131	Standard
>	**Ga**	71	508.3	17.4				mg/L	607	Standard
	Rb	85	1140.0	5.4				ug/L	30	Standard
	Y	89	213928.1	0.8				ug/L	251555	Standard
>	**Rh**	103	286.7	16.1				ug/L	335	Standard
	Mo	98	1120.9	4.3	**0.3453**	0.017	4.9	ug/L	13	Standard
	Ag	107	42.3	7.2	**-0.0014**	0.001	38.8	ug/L	36	Standard
	Cd	111	30.6	22.3	**-0.0076**	0.002	30.3	mg/L	49	Standard
	Cd	114	102.2	5.4	**-0.0085**	0.001	7.5	ug/L	170	Standard
>	**In**	115	652590.3	0.7				ug/L	727802	Standard
	Sn	118	428.0	5.4	**-0.0059**	0.002	33.5	ug/L	471	Standard
	Sb	123	224.7	11.9	**0.0314**	0.004	11.9	ug/L	39	Standard
	Ba	135	120109.5	0.6	**30.6561**	0.346	1.1	ug/L	25	Standard
	Ce	140	5877.5	0.4				ug/L	25	Standard
>	**Tb**	159	985462.9	0.1				ug/L	1071747	Standard
	Ho	165	91.7	12.0				ug/L	13	Standard
	Tl	203	337.7	14.0	**0.0209**	0.003	14.3	ug/L	5	Standard
	Tl	205	752.0	10.4	**0.0210**	0.002	10.0	ug/L	10	Standard
	Pb	206	669.0	2.9	**0.0243**	0.001	6.0	ug/L	382	Standard
	Pb	207	539.0	5.3	**0.0258**	0.003	12.2	ug/L	306	Standard
	Pb	208	2596.8	1.6	**0.0266**	0.001	4.1	ug/L	1443	Standard
	U	238	3142.7	1.3	**0.2233**	0.004	1.7	ug/L	5	Standard
>	**Bi**	209	518199.4	0.5				ug/L	561075	Standard

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Na	23	97959.0	0.7	**6.5045**	0.087	1.3	mg/L	288	Standard
Mg	24	545111.9	1.2	**0.9334**	0.011	1.2	mg/L	218	Standard
K	39	320.0	12.4	**0.2142**	0.040	18.8	mg/L	125	Standard
Ca	43	13.3	86.6	**10.9840**	14.154	128.9	mg/L	3	Standard
Fe	54	547.8	4.8	**0.0280**	0.008	29.5	mg/L	550	Standard
Fe	57	5789.4	2.8	**0.0961**	0.003	3.4	mg/L	1772	Standard
Sc-1	45	290022.9	0.8				mg/L	330668	Standard
Cl	35	15.0	17.6				ug/L	5	Standard
Kr	83	32.2	7.0				ug/L	38	Standard
Br	81	438.3	4.7				ug/L	344	Standard
P	31	241.7	6.2				ug/L	312	Standard
S	34	6221.3	2.8				ug/L	5594	Standard
Sr	88	160.0	9.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.366	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.666
	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	92.358
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053702
Sample Date/Time: Sunday, July 29, 2012 13:57:29
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	25269.4	3.8	**3936.4015**	183.678	4.7	ug/L	9465	Standard
	Be	9	10.0	132.3	**-0.0143**	0.009	64.9	ug/L	10	Standard
	Al	27	14520.3	4.0	**0.5982**	0.035	5.9	ug/L	7870	Standard
>	**Sc**	45	288531.6	1.1				ug/L	330668	Standard
	Ti	47	207.3	1.9	**0.1637**	0.009	5.3	ug/L	53	Standard
	V	51	10537.2	1.0	**0.9609**	0.030	3.1	ug/L	2687	Standard
	Cr	52	8455.7	0.8	**0.1795**	0.037	20.4	ug/L	8408	Standard
	Cr	53	685.0	5.1	**0.4081**	0.047	11.5	ug/L	288	Standard
	Mn	55	986.7	2.2	**0.0028**	0.002	64.5	ug/L	1080	Standard
	Co	59	190.3	3.4	**0.0135**	0.001	5.1	ug/L	117	Standard
	Ni	60	389.0	1.0	**0.1653**	0.003	2.1	ug/L	68	Standard
	Cu	65	254.3	10.6	**0.0694**	0.012	16.6	ug/L	141	Standard
	Zn	66	1602.8	3.4	**1.6833**	0.067	4.0	ug/L	138	Standard
>	**Ge**	72	245212.6	2.7				ug/L	283230	Standard
	As	75	123.2	32.3	**0.3164**	0.050	15.7	ug/L	-198	Standard
	Se	82	33.2	13.4	**0.1455**	0.058	39.9	ug/L	21	Standard
	Se-1	77	122.7	8.3	**0.1765**	0.123	69.9	ug/L	131	Standard
>	**Ga**	71	475.0	15.9				mg/L	607	Standard
	Rb	85	106.7	21.7				ug/L	30	Standard
	Y	89	207832.5	1.0				ug/L	251555	Standard
>	**Rh**	103	305.0	1.6				ug/L	335	Standard
	Mo	98	1075.2	3.5	**0.3404**	0.015	4.3	ug/L	13	Standard
	Ag	107	37.3	9.4	**-0.0021**	0.001	29.4	ug/L	36	Standard
	Cd	111	23.1	30.8	**-0.0100**	0.002	24.8	mg/L	49	Standard
	Cd	114	78.1	2.6	**-0.0110**	0.000	2.0	ug/L	170	Standard
>	**In**	115	634873.5	0.7				ug/L	727802	Standard
	Sn	118	381.3	5.5	**-0.0094**	0.002	24.6	ug/L	471	Standard
	Sb	123	174.4	13.3	**0.0255**	0.003	13.0	ug/L	39	Standard
	Ba	135	111581.8	1.9	**29.2762**	0.782	2.7	ug/L	25	Standard
	Ce	140	119.7	4.6				ug/L	25	Standard
>	**Tb**	159	965309.8	0.7				ug/L	1071747	Standard
	Ho	165	12.3	9.4				ug/L	13	Standard
	Tl	203	333.7	10.1	**0.0208**	0.002	11.1	ug/L	5	Standard
	Tl	205	767.7	3.5	**0.0215**	0.001	3.9	ug/L	10	Standard
	Pb	206	393.7	3.3	**0.0012**	0.001	81.8	ug/L	382	Standard
	Pb	207	302.0	7.8	**0.0020**	0.002	113.4	ug/L	306	Standard
	Pb	208	1450.0	2.7	**0.0021**	0.001	34.0	ug/L	1443	Standard
	U	238	2896.6	4.0	**0.2068**	0.009	4.5	ug/L	5	Standard
>	**Bi**	209	515867.7	0.5				ug/L	561075	Standard

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Na	23	97811.5	2.3	**6.5275**	0.094	1.4	mg/L	288	Standard
Mg	24	529699.8	3.3	**0.9116**	0.021	2.3	mg/L	218	Standard
K	39	278.3	7.5	**0.1736**	0.023	13.1	mg/L	125	Standard
Ca	43	15.0	88.2	**13.0099**	16.180	124.4	mg/L	3	Standard
Fe	54	232.9	11.7	**-0.0574**	0.007	12.8	mg/L	550	Standard
Fe	57	2185.2	0.9	**0.0149**	0.001	6.7	mg/L	1772	Standard
Sc-1	45	288531.6	1.1				mg/L	330668	Standard
Cl	35	14.3	35.1				ug/L	5	Standard
Kr	83	36.3	5.1				ug/L	38	Standard
Br	81	461.7	8.9				ug/L	344	Standard
P	31	192.5	6.5				ug/L	312	Standard
S	34	6162.9	1.0				ug/L	5594	Standard
Sr	88	141.7	5.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.577	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	87.232
	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	91.943
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053703
Sample Date/Time: Sunday, July 29, 2012 14:00:39
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	22563.5	1.7	**3274.7045**	142.786	4.4	ug/L	9465	Standard
	Be	9	21.7	35.3	**-0.0064**	0.005	78.9	ug/L	10	Standard
	Al	27	1735783.9	1.6	**139.0104**	3.492	2.5	ug/L	7870	Standard
>	**Sc**	45	291457.0	1.5				ug/L	330668	Standard
	Ti	47	4574.4	1.6	**4.4950**	0.111	2.5	ug/L	53	Standard
	V	51	18429.7	2.5	**1.8790**	0.067	3.6	ug/L	2687	Standard
	Cr	52	9876.2	1.6	**0.3836**	0.035	9.2	ug/L	8408	Standard
	Cr	53	930.9	7.4	**0.6205**	0.067	10.7	ug/L	288	Standard
	Mn	55	37272.1	2.7	**3.1894**	0.111	3.5	ug/L	1080	Standard
	Co	59	694.7	3.1	**0.0837**	0.002	2.7	ug/L	117	Standard
	Ni	60	1024.4	2.1	**0.4804**	0.012	2.5	ug/L	68	Standard
	Cu	65	400.0	4.0	**0.1472**	0.008	5.5	ug/L	141	Standard
	Zn	66	1735.4	3.5	**1.8250**	0.079	4.3	ug/L	138	Standard
>	**Ge**	72	246432.3	0.8				ug/L	283230	Standard
	As	75	303.0	1.2	**0.5228**	0.002	0.4	ug/L	-198	Standard
	Se	82	32.0	10.6	**0.1288**	0.037	28.5	ug/L	21	Standard
	Se-1	77	134.0	3.9	**0.3553**	0.086	24.3	ug/L	131	Standard
>	**Ga**	71	708.3	9.2				mg/L	607	Standard
	Rb	85	2070.1	2.2				ug/L	30	Standard
	Y	89	214557.0	1.5				ug/L	251555	Standard
>	**Rh**	103	300.0	23.5				ug/L	335	Standard
	Mo	98	1210.8	4.5	**0.3827**	0.020	5.3	ug/L	13	Standard
	Ag	107	46.7	21.0	**-0.0004**	0.002	446.4	ug/L	36	Standard
	Cd	111	51.4	31.0	**0.0001**	0.006	6599.6	mg/L	49	Standard
	Cd	114	152.2	12.6	**-0.0024**	0.002	98.6	ug/L	170	Standard
>	**In**	115	637325.9	0.8				ug/L	727802	Standard
	Sn	118	539.3	6.9	**0.0062**	0.004	64.9	ug/L	471	Standard
	Sb	123	2001.5	4.7	**0.2722**	0.014	5.3	ug/L	39	Standard
	Ba	135	130826.8	1.8	**34.1951**	0.856	2.5	ug/L	25	Standard
	Ce	140	9202.8	0.8				ug/L	25	Standard
>	**Tb**	159	972290.6	1.3				ug/L	1071747	Standard
	Ho	165	163.0	12.3				ug/L	13	Standard
	Tl	203	388.0	1.7	**0.0242**	0.000	0.9	ug/L	5	Standard
	Tl	205	880.4	8.6	**0.0246**	0.002	8.6	ug/L	10	Standard
	Pb	206	932.0	3.6	**0.0465**	0.004	7.8	ug/L	382	Standard
	Pb	207	758.4	2.0	**0.0479**	0.002	4.6	ug/L	306	Standard
	Pb	208	3593.5	1.6	**0.0480**	0.002	4.1	ug/L	1443	Standard
	U	238	2841.6	2.3	**0.2019**	0.007	3.4	ug/L	5	Standard
>	**Bi**	209	518330.1	1.0				ug/L	561075	Standard

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	Na	23	92922.4	0.6	**6.1383**	0.106	1.7	mg/L	288	Standard
	Mg	24	521632.8	0.8	**0.8890**	0.021	2.3	mg/L	218	Standard
	K	39	305.0	7.1	**0.1978**	0.026	13.4	mg/L	125	Standard
	Ca	43	8.3	69.3	**4.7494**	6.957	146.5	mg/L	3	Standard
	Fe	54	793.3	7.8	**0.0936**	0.015	15.7	mg/L	550	Standard
	Fe	57	7947.1	2.0	**0.1441**	0.005	3.3	mg/L	1772	Standard
>	**Sc-1**	45	291457.0	1.5				mg/L	330668	Standard
	Cl	35	15.7	19.5				ug/L	5	Standard
	Kr	83	32.8	6.8				ug/L	38	Standard
	Br	81	389.2	19.3				ug/L	344	Standard
	P	31	242.5	12.9				ug/L	312	Standard
	S	34	6044.5	1.5				ug/L	5594	Standard
	Sr	88	148.3	17.3				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		87.008	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	87.569
	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	92.382
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053704
Sample Date/Time: Sunday, July 29, 2012 14:03:49
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	20053.3	1.8	**2720.1218**	154.065	5.7	ug/L	9465	Standard
	Be	9	36.7	139.3	**0.0042**	0.036	839.5	ug/L	10	Standard
	Al	27	20774.5	15.8	**1.0951**	0.293	26.8	ug/L	7870	Standard
>	**Sc**	45	290988.1	1.6				ug/L	330668	Standard
	Ti	47	246.0	12.6	**0.1987**	0.032	16.2	ug/L	53	Standard
	V	51	13935.2	1.4	**1.3361**	0.022	1.6	ug/L	2687	Standard
	Cr	52	8043.8	2.8	**0.0999**	0.039	39.4	ug/L	8408	Standard
	Cr	53	535.0	5.5	**0.2680**	0.027	10.2	ug/L	288	Standard
	Mn	55	1231.1	6.5	**0.0228**	0.007	31.8	ug/L	1080	Standard
	Co	59	214.0	30.0	**0.0165**	0.009	55.3	ug/L	117	Standard
	Ni	60	380.0	7.8	**0.1580**	0.016	10.0	ug/L	68	Standard
	Cu	65	243.3	25.1	**0.0619**	0.034	54.2	ug/L	141	Standard
	Zn	66	1238.7	2.2	**1.2451**	0.033	2.7	ug/L	138	Standard
>	**Ge**	72	248899.1	0.7				ug/L	283230	Standard
	As	75	191.9	12.2	**0.3923**	0.027	6.9	ug/L	-198	Standard
	Se	82	27.8	7.5	**0.0775**	0.024	31.0	ug/L	21	Standard
	Se-1	77	121.0	9.2	**0.1214**	0.188	155.0	ug/L	131	Standard
>	**Ga**	71	551.7	14.1				mg/L	607	Standard
	Rb	85	368.3	11.5				ug/L	30	Standard
	Y	89	214288.3	1.5				ug/L	251555	Standard
>	**Rh**	103	303.3	13.4				ug/L	335	Standard
	Mo	98	1140.4	1.5	**0.3630**	0.006	1.7	ug/L	13	Standard
	Ag	107	67.7	40.1	**0.0035**	0.005	142.6	ug/L	36	Standard
	Cd	111	32.3	33.5	**-0.0067**	0.004	58.5	mg/L	49	Standard
	Cd	114	120.0	20.8	**-0.0060**	0.003	49.5	ug/L	170	Standard
>	**In**	115	632217.2	0.2				ug/L	727802	Standard
	Sn	118	396.7	4.5	**-0.0077**	0.002	23.7	ug/L	471	Standard
	Sb	123	377.3	3.9	**0.0532**	0.002	3.5	ug/L	39	Standard
	Ba	135	113382.4	1.6	**29.8696**	0.419	1.4	ug/L	25	Standard
	Ce	140	151.0	2.0				ug/L	25	Standard
>	**Tb**	159	960996.3	0.3				ug/L	1071747	Standard
	Ho	165	11.7	34.6				ug/L	13	Standard
	Tl	203	301.0	1.4	**0.0187**	0.000	2.0	ug/L	5	Standard
	Tl	205	735.7	3.6	**0.0208**	0.001	4.5	ug/L	10	Standard
	Pb	206	379.0	4.0	**0.0002**	0.002	678.7	ug/L	382	Standard
	Pb	207	317.0	3.6	**0.0037**	0.002	41.5	ug/L	306	Standard
	Pb	208	1513.4	4.8	**0.0037**	0.002	53.0	ug/L	1443	Standard
	U	238	2911.0	19.7	**0.2094**	0.043	20.7	ug/L	5	Standard
>	**Bi**	209	512431.7	1.2				ug/L	561075	Standard

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Na	23	90751.0	1.6	**6.0028**	0.012	0.2	mg/L	288	Standard
Mg	24	470168.8	0.9	**0.8027**	0.020	2.5	mg/L	218	Standard
K	39	285.0	3.0	**0.1780**	0.012	6.9	mg/L	125	Standard
Ca	43	11.7	107.9	**8.6949**	15.128	174.0	mg/L	3	Standard
Fe	54	254.4	14.8	**-0.0521**	0.010	19.9	mg/L	550	Standard
Fe	57	2065.1	9.2	**0.0118**	0.005	40.1	mg/L	1772	Standard
Sc-1	45	290988.1	1.6				mg/L	330668	Standard
Cl	35	13.0	20.4				ug/L	5	Standard
Kr	83	35.4	3.6				ug/L	38	Standard
Br	81	445.8	5.8				ug/L	344	Standard
P	31	151.7	14.0				ug/L	312	Standard
S	34	6044.5	2.2				ug/L	5594	Standard
Sr	88	133.3	13.2				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		87.879	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	86.867
	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	91.330
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053705
Sample Date/Time: Sunday, July 29, 2012 14:06:58
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: JYH 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	7	22984.1	2.9	**3310.3576**	228.521	6.9	ug/L	9465	Standard
	Be	9	26.7	28.6	**-0.0032**	0.005	152.2	ug/L	10	Standard
	Al	27	1407314.7	3.2	**111.3172**	5.359	4.8	ug/L	7870	Standard
>	**Sc**	45	294875.5	1.6				ug/L	330668	Standard
	Ti	47	3544.4	2.6	**3.4384**	0.151	4.4	ug/L	53	Standard
	V	51	20069.1	2.3	**2.0477**	0.093	4.6	ug/L	2687	Standard
	Cr	52	8960.6	0.6	**0.2343**	0.030	12.7	ug/L	8408	Standard
	Cr	53	749.2	3.4	**0.4537**	0.010	2.3	ug/L	288	Standard
	Mn	55	50959.6	0.5	**4.3460**	0.103	2.4	ug/L	1080	Standard
	Co	59	795.4	1.7	**0.0966**	0.003	3.1	ug/L	117	Standard
	Ni	60	1180.7	3.3	**0.5524**	0.026	4.7	ug/L	68	Standard
	Cu	65	451.7	4.5	**0.1727**	0.015	8.6	ug/L	141	Standard
	Zn	66	6069.2	2.6	**6.6922**	0.281	4.2	ug/L	138	Standard
>	**Ge**	72	248992.3	1.8				ug/L	283230	Standard
	As	75	315.7	10.1	**0.5340**	0.042	7.8	ug/L	-198	Standard
	Se	82	30.4	21.5	**0.1082**	0.082	75.5	ug/L	21	Standard
	Se-1	77	124.3	11.3	**0.1741**	0.216	124.2	ug/L	131	Standard
>	**Ga**	71	640.0	6.1				mg/L	607	Standard
	Rb	85	1771.8	0.6				ug/L	30	Standard
	Y	89	219400.9	2.1				ug/L	251555	Standard
>	**Rh**	103	296.7	7.8				ug/L	335	Standard
	Mo	98	585.8	1.8	**0.1822**	0.003	1.5	ug/L	13	Standard
	Ag	107	43.3	13.5	**-0.0010**	0.001	107.5	ug/L	36	Standard
	Cd	111	38.3	15.4	**-0.0046**	0.002	47.9	mg/L	49	Standard
	Cd	114	98.9	14.9	**-0.0086**	0.002	21.1	ug/L	170	Standard
>	**In**	115	634759.3	0.6				ug/L	727802	Standard
	Sn	118	562.0	5.6	**0.0086**	0.003	39.3	ug/L	471	Standard
	Sb	123	138.7	9.9	**0.0206**	0.002	9.4	ug/L	39	Standard
	Ba	135	180826.7	1.2	**47.4571**	0.822	1.7	ug/L	25	Standard
	Ce	140	10867.9	0.7				ug/L	25	Standard
>	**Tb**	159	968687.3	0.2				ug/L	1071747	Standard
	Ho	165	203.7	1.5				ug/L	13	Standard
	Tl	203	330.3	2.9	**0.0204**	0.000	2.2	ug/L	5	Standard
	Tl	205	760.0	8.4	**0.0212**	0.002	8.4	ug/L	10	Standard
	Pb	206	1005.0	2.6	**0.0525**	0.003	4.8	ug/L	382	Standard
	Pb	207	862.7	5.3	**0.0583**	0.004	7.0	ug/L	306	Standard
	Pb	208	3916.2	1.7	**0.0548**	0.001	2.3	ug/L	1443	Standard
	U	238	4355.3	3.0	**0.3090**	0.008	2.5	ug/L	5	Standard
>	**Bi**	209	519143.1	0.9				ug/L	561075	Standard

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	Na	23	96214.6	2.3	**6.2818**	0.090	1.4	mg/L	288	Standard
	Mg	24	515918.5	0.6	**0.8690**	0.011	1.3	mg/L	218	Standard
	K	39	213.3	25.8	**0.1034**	0.057	55.0	mg/L	125	Standard
	Ca	43	23.3	12.4	**22.7039**	3.815	16.8	mg/L	3	Standard
	Fe	54	704.3	4.7	**0.0675**	0.012	17.3	mg/L	550	Standard
	Fe	57	7038.3	4.0	**0.1219**	0.009	7.1	mg/L	1772	Standard
>	**Sc-1**	45	294875.5	1.6				mg/L	330668	Standard
	Cl	35	14.3	17.6				ug/L	5	Standard
	Kr	83	33.3	10.5				ug/L	38	Standard
	Br	81	531.7	5.2				ug/L	344	Standard
	P	31	235.0	3.7				ug/L	312	Standard
	S	34	6127.1	1.4				ug/L	5594	Standard
	Sr	88	151.7	10.1				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		87.912	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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Cd	111	
Cd	114	
> In	115	87.216
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	92.526
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053706
Sample Date/Time: Sunday, July 29, 2012 14:10:08
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: JYH 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	7	23341.3	0.9	**3497.6343**	268.507	7.7	ug/L	9465	Standard
	Be	9	8.3	34.6	**-0.0155**	0.002	13.3	ug/L	10	Standard
	Al	27	12948.9	3.3	**0.4707**	0.074	15.8	ug/L	7870	Standard
>	**Sc**	45	289261.0	5.7				ug/L	330668	Standard
	Ti	47	243.0	5.3	**0.2027**	0.015	7.3	ug/L	53	Standard
	V	51	18740.8	2.9	**1.9572**	0.052	2.7	ug/L	2687	Standard
	Cr	52	7473.2	0.9	**0.0483**	0.023	47.0	ug/L	8408	Standard
	Cr	53	442.5	8.3	**0.1990**	0.035	17.7	ug/L	288	Standard
	Mn	55	1575.4	5.5	**0.0568**	0.009	16.1	ug/L	1080	Standard
	Co	59	182.3	6.4	**0.0128**	0.001	8.2	ug/L	117	Standard
	Ni	60	471.7	6.1	**0.2102**	0.020	9.6	ug/L	68	Standard
	Cu	65	219.3	4.6	**0.0524**	0.005	9.8	ug/L	141	Standard
	Zn	66	1097.7	1.9	**1.1224**	0.014	1.2	ug/L	138	Standard
>	**Ge**	72	241845.4	2.7				ug/L	283230	Standard
	As	75	269.7	11.6	**0.4898**	0.029	6.0	ug/L	-198	Standard
	Se	82	32.5	8.1	**0.1419**	0.031	22.0	ug/L	21	Standard
	Se-1	77	134.0	8.3	**0.3952**	0.133	33.6	ug/L	131	Standard
>	**Ga**	71	496.7	5.9				mg/L	607	Standard
	Rb	85	245.0	12.7				ug/L	30	Standard
	Y	89	211358.6	3.7				ug/L	251555	Standard
>	**Rh**	103	333.3	16.5				ug/L	335	Standard
	Mo	98	617.6	4.4	**0.1957**	0.002	0.9	ug/L	13	Standard
	Ag	107	36.3	17.5	**-0.0022**	0.001	41.8	ug/L	36	Standard
	Cd	111	22.9	21.8	**-0.0100**	0.002	15.4	mg/L	49	Standard
	Cd	114	93.0	6.8	**-0.0091**	0.000	3.3	ug/L	170	Standard
>	**In**	115	624616.3	4.3				ug/L	727802	Standard
	Sn	118	359.7	12.1	**-0.0111**	0.003	26.3	ug/L	471	Standard
	Sb	123	128.2	26.2	**0.0194**	0.004	20.7	ug/L	39	Standard
	Ba	135	178501.5	1.5	**47.6428**	1.354	2.8	ug/L	25	Standard
	Ce	140	111.0	9.5				ug/L	25	Standard
>	**Tb**	159	946141.4	4.0				ug/L	1071747	Standard
	Ho	165	15.0	11.5				ug/L	13	Standard
	Tl	203	347.3	9.6	**0.0218**	0.001	5.7	ug/L	5	Standard
	Tl	205	750.4	5.9	**0.0212**	0.001	4.0	ug/L	10	Standard
	Pb	206	346.7	9.0	**-0.0025**	0.002	74.6	ug/L	382	Standard
	Pb	207	281.3	4.2	**0.0002**	0.002	806.4	ug/L	306	Standard
	Pb	208	1396.7	4.8	**0.0012**	0.000	13.9	ug/L	1443	Standard
	U	238	4574.0	1.8	**0.3300**	0.009	2.6	ug/L	5	Standard
>	**Bi**	209	510962.7	4.3				ug/L	561075	Standard

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	Na	23	96501.4	2.2	**6.4429**	0.502	7.8	mg/L	288	Standard
	Mg	24	533157.2	2.0	**0.9173**	0.052	5.7	mg/L	218	Standard
	K	39	183.3	16.4	**0.0775**	0.034	44.4	mg/L	125	Standard
	Ca	43	21.7	48.0	**21.6861**	14.046	64.8	mg/L	3	Standard
	Fe	54	253.0	15.4	**-0.0515**	0.015	28.7	mg/L	550	Standard
	Fe	57	2328.5	8.9	**0.0183**	0.007	40.0	mg/L	1772	Standard
>	**Sc-1**	45	289261.0	5.7				mg/L	330668	Standard
	Cl	35	16.7	22.7				ug/L	5	Standard
	Kr	83	40.1	10.5				ug/L	38	Standard
	Br	81	584.2	8.9				ug/L	344	Standard
	P	31	178.3	6.9				ug/L	312	Standard
	S	34	6279.6	1.5				ug/L	5594	Standard
	Sr	88	183.3	11.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		85.388	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	85.822
	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	91.068
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207053707
Sample Date/Time: Sunday, July 29, 2012 14:13:17
Number of Replicates: 3
Autosampler Position: 319
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	28359.9	2.2	**4548.1890**	113.679	2.5	ug/L	9465	Standard
	Be	9	1.7	173.2	**-0.0201**	0.002	9.8	ug/L	10	Standard
	Al	27	31263.9	2.2	**1.9240**	0.073	3.8	ug/L	7870	Standard
>	**Sc**	45	292530.4	0.7				ug/L	330668	Standard
	Ti	47	263.3	12.6	**0.2190**	0.032	14.6	ug/L	53	Standard
	V	51	4829.7	4.3	**0.2875**	0.022	7.6	ug/L	2687	Standard
	Cr	52	11387.3	3.8	**0.6135**	0.057	9.4	ug/L	8408	Standard
	Cr	53	1738.4	12.4	**1.3340**	0.185	13.8	ug/L	288	Standard
	Mn	55	6670.5	1.1	**0.5036**	0.004	0.9	ug/L	1080	Standard
	Co	59	221.0	7.7	**0.0178**	0.002	12.7	ug/L	117	Standard
	Ni	60	495.0	2.1	**0.2179**	0.006	2.8	ug/L	68	Standard
	Cu	65	284.3	3.6	**0.0856**	0.005	5.8	ug/L	141	Standard
	Zn	66	1563.7	3.0	**1.6357**	0.061	3.7	ug/L	138	Standard
>	**Ge**	72	245568.4	0.5				ug/L	283230	Standard
	As	75	179.0	38.3	**0.3801**	0.079	20.7	ug/L	-198	Standard
	Se	82	61.4	8.0	**0.4729**	0.054	11.5	ug/L	21	Standard
	Se-1	77	153.7	13.4	**0.6877**	0.331	48.1	ug/L	131	Standard
>	**Ga**	71	505.0	3.6				mg/L	607	Standard
	Rb	85	3278.7	2.3				ug/L	30	Standard
	Y	89	210135.9	2.2				ug/L	251555	Standard
>	**Rh**	103	338.3	6.2				ug/L	335	Standard
	Mo	98	1487.8	1.7	**0.4819**	0.005	1.1	ug/L	13	Standard
	Ag	107	40.0	7.5	**-0.0015**	0.001	35.0	ug/L	36	Standard
	Cd	111	34.4	10.5	**-0.0057**	0.001	23.1	mg/L	49	Standard
	Cd	114	116.6	12.7	**-0.0062**	0.002	29.8	ug/L	170	Standard
>	**In**	115	624176.1	0.7				ug/L	727802	Standard
	Sn	118	625.3	1.9	**0.0160**	0.001	5.0	ug/L	471	Standard
	Sb	123	757.1	2.1	**0.1062**	0.002	1.5	ug/L	39	Standard
	Ba	135	11351.3	1.1	**3.0186**	0.015	0.5	ug/L	25	Standard
	Ce	140	153.7	13.1				ug/L	25	Standard
>	**Tb**	159	957143.4	0.9				ug/L	1071747	Standard
	Ho	165	17.3	8.8				ug/L	13	Standard
	Tl	203	386.3	4.5	**0.0245**	0.001	4.8	ug/L	5	Standard
	Tl	205	919.7	4.5	**0.0261**	0.001	5.2	ug/L	10	Standard
	Pb	206	420.3	1.3	**0.0040**	0.001	15.4	ug/L	382	Standard
	Pb	207	376.7	5.7	**0.0100**	0.002	23.1	ug/L	306	Standard
	Pb	208	1665.0	1.7	**0.0072**	0.001	11.8	ug/L	1443	Standard
	U	238	2157.5	1.7	**0.1559**	0.003	2.1	ug/L	5	Standard
>	**Bi**	209	509469.8	0.8				ug/L	561075	Standard

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Na	23	128781.7	0.6	**8.4884**	0.024	0.3	mg/L	288	Standard
Mg	24	1311789.2	2.3	**2.2269**	0.067	3.0	mg/L	218	Standard
K	39	1476.7	4.6	**1.3687**	0.059	4.3	mg/L	125	Standard
Ca	43	13.3	108.3	**10.8561**	17.636	162.5	mg/L	3	Standard
Fe	54	264.3	8.2	**-0.0498**	0.006	12.0	mg/L	550	Standard
Fe	57	2368.5	8.2	**0.0183**	0.004	21.6	mg/L	1772	Standard
> **Sc-1**	45	292530.4	0.7				mg/L	330668	Standard
Cl	35	50.7	14.8				ug/L	5	Standard
Kr	83	36.2	12.5				ug/L	38	Standard
Br	81	970.9	7.1				ug/L	344	Standard
P	31	273.3	8.9				ug/L	312	Standard
S	34	8243.9	2.0				ug/L	5594	Standard
Sr	88	141.7	14.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.703	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	85.762
	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	90.802
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 14:16:29
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: JYH 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	7	8582.4	4.1	**5.5551**	59.636	1073.6	ug/L	9465	Standard
	Be	9	76958.4	3.2	**48.7942**	1.534	3.1	ug/L	10	Standard
	Al	27	649872.7	1.4	**47.9767**	0.915	1.9	ug/L	7870	Standard
>	**Sc**	45	313660.2	0.8				ug/L	330668	Standard
	Ti	47	107548.4	1.6	**98.4081**	0.653	0.7	ug/L	53	Standard
	V	51	444508.8	0.9	**47.7755**	0.120	0.3	ug/L	2687	Standard
	Cr	52	357167.6	0.9	**47.8324**	0.233	0.5	ug/L	8408	Standard
	Cr	53	59837.9	0.1	**48.2879**	0.477	1.0	ug/L	288	Standard
	Mn	55	608819.0	1.0	**49.2581**	0.368	0.7	ug/L	1080	Standard
	Co	59	373972.7	0.5	**48.0739**	0.283	0.6	ug/L	117	Standard
	Ni	60	104352.1	0.7	**47.8840**	0.191	0.4	ug/L	68	Standard
	Cu	65	96629.2	0.4	**47.8851**	0.534	1.1	ug/L	141	Standard
	Zn	66	46965.3	1.1	**49.2110**	0.165	0.3	ug/L	138	Standard
>	**Ge**	72	267021.5	0.9				ug/L	283230	Standard
	As	75	46153.4	1.5	**49.3800**	0.331	0.7	ug/L	-198	Standard
	Se	82	4710.8	0.8	**50.3044**	0.187	0.4	ug/L	21	Standard
	Se-1	77	3440.1	3.0	**50.5321**	1.097	2.2	ug/L	131	Standard
>	**Ga**	71	598.3	8.4				mg/L	607	Standard
	Rb	85	680.0	8.4				ug/L	30	Standard
	Y	89	237507.9	5.9				ug/L	251555	Standard
>	**Rh**	103	328.3	11.5				ug/L	335	Standard
	Mo	98	324867.3	0.8	**97.5970**	0.316	0.3	ug/L	13	Standard
	Ag	107	301771.0	0.8	**51.5254**	0.943	1.8	ug/L	36	Standard
	Cd	111	150811.9	0.5	**50.1724**	0.663	1.3	mg/L	49	Standard
	Cd	114	459168.5	0.8	**50.2336**	0.437	0.9	ug/L	170	Standard
>	**In**	115	682925.3	1.1				ug/L	727802	Standard
	Sn	118	531244.3	0.6	**49.1936**	0.288	0.6	ug/L	471	Standard
	Sb	123	393584.6	0.7	**49.6182**	0.563	1.1	ug/L	39	Standard
	Ba	135	212107.4	1.0	**51.7388**	0.303	0.6	ug/L	25	Standard
	Ce	140	796.0	3.7				ug/L	25	Standard
>	**Tb**	159	1034352.6	1.1				ug/L	1071747	Standard
	Ho	165	18.7	11.2				ug/L	13	Standard
	Tl	203	760493.9	0.7	**47.6794**	0.450	0.9	ug/L	5	Standard
	Tl	205	1765719.4	0.4	**47.4642**	0.427	0.9	ug/L	10	Standard
	Pb	206	594742.2	1.1	**48.3046**	0.176	0.4	ug/L	382	Standard
	Pb	207	503170.9	0.4	**48.9501**	0.678	1.4	ug/L	306	Standard
	Pb	208	2331784.3	0.6	**48.2639**	0.413	0.9	ug/L	1443	Standard
	U	238	708636.3	0.7	**48.5910**	0.934	1.9	ug/L	5	Standard
>	**Bi**	209	537629.2	1.3				ug/L	561075	Standard

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Na	23	103841.3	1.3	**6.3744**	0.067	1.1	mg/L	288	Standard
Mg	24	3035350.3	2.4	**4.8047**	0.106	2.2	mg/L	218	Standard
K	39	5401.0	1.5	**4.9321**	0.080	1.6	mg/L	125	Standard
Ca	43	11.7	99.0	**7.7644**	12.917	166.4	mg/L	3	Standard
Fe	54	20141.0	1.4	**4.9469**	0.044	0.9	mg/L	550	Standard
Fe	57	237699.2	4.5	**4.9353**	0.207	4.2	mg/L	1772	Standard
Sc-1	45	313660.2	0.8				mg/L	330668	Standard
Cl	35	5.0	52.9				ug/L	5	Standard
Kr	83	38.6	6.5				ug/L	38	Standard
Br	81	348.3	16.4				ug/L	344	Standard
P	31	351.7	9.0				ug/L	312	Standard
S	34	6088.7	2.6				ug/L	5594	Standard
Sr	88	45.0	44.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	95.953		
Sc	45			
Ti	47	98.408		
V	51	95.551		
Cr	52	95.665		
Cr	53			
Mn	55	98.516		
Co	59	96.148		
Ni	60	95.768		
Cu	65	95.770		
Zn	66	98.422		
Ge	72		94.277	
As	75	98.760		
Se	82	100.609		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	97.597		
Ag	107	103.051		

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	Cd	111	100.345	
	Cd	114		
>	In	115		93.834
	Sn	118	98.387	
	Sb	123	99.236	
	Ba	135	103.478	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.359	
	Tl	205		
	Pb	206	96.609	
	Pb	207	97.900	
	Pb	208	96.528	
	U	238	97.182	
>	Bi	209		95.821
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 14:19:39
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: JYH 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	7	7965.4	1.3	**-84.5133**	12.025	14.2	ug/L	9465	Standard
	Be	9	48.3	70.4	**0.0102**	0.022	216.6	ug/L	10	Standard
	Al	27	7373.5	3.4	**-0.0173**	0.022	130.2	ug/L	7870	Standard
>	**Sc**	45	306618.2	0.8				ug/L	330668	Standard
	Ti	47	107.0	47.1	**0.0566**	0.047	82.8	ug/L	53	Standard
	V	51	2311.1	2.3	**-0.0256**	0.007	26.3	ug/L	2687	Standard
	Cr	52	7117.7	2.4	**-0.0890**	0.031	34.6	ug/L	8408	Standard
	Cr	53	285.0	9.5	**0.0381**	0.022	57.6	ug/L	288	Standard
	Mn	55	1140.7	5.4	**0.0099**	0.004	45.1	ug/L	1080	Standard
	Co	59	171.0	21.4	**0.0093**	0.005	49.9	ug/L	117	Standard
	Ni	60	109.7	38.3	**0.0220**	0.020	88.8	ug/L	68	Standard
	Cu	65	207.7	18.0	**0.0371**	0.019	50.4	ug/L	141	Standard
	Zn	66	171.7	11.6	**0.0320**	0.021	64.0	ug/L	138	Standard
>	**Ge**	72	262141.0	0.7				ug/L	283230	Standard
	As	75	-158.5	18.0	**0.0007**	0.030	4276.4	ug/L	-198	Standard
	Se	82	21.8	22.8	**-0.0043**	0.056	1279.5	ug/L	21	Standard
	Se-1	77	116.3	12.3	**-0.0516**	0.218	423.2	ug/L	131	Standard
>	**Ga**	71	553.3	12.5				mg/L	607	Standard
	Rb	85	30.0	92.8				ug/L	30	Standard
	Y	89	226539.4	0.8				ug/L	251555	Standard
>	**Rh**	103	273.3	2.8				ug/L	335	Standard
	Mo	98	227.1	22.1	**0.0619**	0.014	22.8	ug/L	13	Standard
	Ag	107	134.7	34.2	**0.0143**	0.008	53.7	ug/L	36	Standard
	Cd	111	83.5	32.9	**0.0098**	0.009	90.9	mg/L	49	Standard
	Cd	114	253.5	26.5	**0.0079**	0.007	89.8	ug/L	170	Standard
>	**In**	115	673334.2	1.9				ug/L	727802	Standard
	Sn	118	862.0	7.9	**0.0335**	0.005	14.5	ug/L	471	Standard
	Sb	123	2180.9	5.5	**0.2805**	0.010	3.5	ug/L	39	Standard
	Ba	135	81.3	31.6	**0.0085**	0.006	70.7	ug/L	25	Standard
	Ce	140	30.0	12.0				ug/L	25	Standard
>	**Tb**	159	1004513.9	1.7				ug/L	1071747	Standard
	Ho	165	10.3	34.0				ug/L	13	Standard
	Tl	203	140.7	41.4	**0.0077**	0.004	47.0	ug/L	5	Standard
	Tl	205	359.7	45.7	**0.0097**	0.004	45.5	ug/L	10	Standard
	Pb	206	465.3	14.1	**0.0057**	0.005	93.9	ug/L	382	Standard
	Pb	207	381.0	9.2	**0.0084**	0.003	40.4	ug/L	306	Standard
	Pb	208	1760.0	9.6	**0.0072**	0.003	48.7	ug/L	1443	Standard
	U	238	193.3	71.3	**0.0130**	0.009	72.5	ug/L	5	Standard
>	**Bi**	209	538621.5	0.1				ug/L	561075	Standard

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	Na	23	558.3	49.4	**-0.0010**	0.017	1816.6	mg/L	288	Standard
	Mg	24	1370.1	54.6	**0.0025**	0.001	48.9	mg/L	218	Standard
	K	39	115.0	4.3	**0.0009**	0.004	425.6	mg/L	125	Standard
	Ca	43	1.7	173.2	**-3.4395**	3.326	96.7	mg/L	3	Standard
	Fe	54	525.2	7.8	**0.0140**	0.010	67.9	mg/L	550	Standard
	Fe	57	1706.8	4.8	**0.0017**	0.002	109.8	mg/L	1772	Standard
>	**Sc-1**	45	306618.2	0.8				mg/L	330668	Standard
	Cl	35	3.7	41.7				ug/L	5	Standard
	Kr	83	37.9	12.9				ug/L	38	Standard
	Br	81	307.5	10.6				ug/L	344	Standard
	P	31	302.5	7.9				ug/L	312	Standard
	S	34	5811.1	0.2				ug/L	5594	Standard
	Sr	88	45.0	11.1				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		92.554	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	92.516
	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	95.998
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207053708
Sample Date/Time: Sunday, July 29, 2012 14:22:51
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: JYH 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	7	26518.2	0.9	**4450.3502**	208.357	4.7	ug/L	9465	Standard
	Be	9	11.7	65.5	**-0.0129**	0.005	41.0	ug/L	10	Standard
	Al	27	22758.8	3.1	**1.3392**	0.104	7.8	ug/L	7870	Standard
>	**Sc**	45	278003.4	2.7				ug/L	330668	Standard
	Ti	47	196.0	6.9	**0.1570**	0.015	9.5	ug/L	53	Standard
	V	51	4630.6	4.1	**0.2780**	0.022	8.0	ug/L	2687	Standard
	Cr	52	10488.0	2.0	**0.5195**	0.037	7.1	ug/L	8408	Standard
	Cr	53	1671.8	17.6	**1.3125**	0.259	19.7	ug/L	288	Standard
	Mn	55	5861.5	3.8	**0.4455**	0.022	5.0	ug/L	1080	Standard
	Co	59	403.3	11.6	**0.0447**	0.007	15.0	ug/L	117	Standard
	Ni	60	480.0	5.0	**0.2165**	0.013	6.0	ug/L	68	Standard
	Cu	65	277.7	4.9	**0.0858**	0.007	8.6	ug/L	141	Standard
	Zn	66	1423.7	2.1	**1.5167**	0.024	1.6	ug/L	138	Standard
>	**Ge**	72	239482.5	0.7				ug/L	283230	Standard
	As	75	176.4	6.7	**0.3825**	0.015	4.0	ug/L	-198	Standard
	Se	82	52.3	4.3	**0.3824**	0.023	6.0	ug/L	21	Standard
	Se-1	77	144.7	10.7	**0.5995**	0.247	41.2	ug/L	131	Standard
>	**Ga**	71	491.7	12.1				mg/L	607	Standard
	Rb	85	3200.3	1.7				ug/L	30	Standard
	Y	89	207150.2	2.1				ug/L	251555	Standard
>	**Rh**	103	286.7	15.6				ug/L	335	Standard
	Mo	98	1613.3	7.0	**0.5317**	0.037	6.9	ug/L	13	Standard
	Ag	107	146.3	114.6	**0.0187**	0.032	169.0	ug/L	36	Standard
	Cd	111	85.5	107.0	**0.0133**	0.034	253.2	mg/L	49	Standard
	Cd	114	249.7	89.4	**0.0101**	0.027	267.0	ug/L	170	Standard
>	**In**	115	614263.9	1.0				ug/L	727802	Standard
	Sn	118	843.4	15.7	**0.0394**	0.013	33.3	ug/L	471	Standard
	Sb	123	1003.2	10.6	**0.1424**	0.015	10.4	ug/L	39	Standard
	Ba	135	12721.7	0.9	**3.4396**	0.063	1.8	ug/L	25	Standard
	Ce	140	108.3	6.1				ug/L	25	Standard
>	**Tb**	159	952490.8	0.7				ug/L	1071747	Standard
	Ho	165	14.7	25.8				ug/L	13	Standard
	Tl	203	493.7	26.6	**0.0320**	0.009	27.7	ug/L	5	Standard
	Tl	205	1160.0	26.4	**0.0333**	0.009	26.7	ug/L	10	Standard
	Pb	206	491.7	21.6	**0.0106**	0.009	87.9	ug/L	382	Standard
	Pb	207	409.3	24.5	**0.0139**	0.011	75.8	ug/L	306	Standard
	Pb	208	1920.7	21.7	**0.0133**	0.009	70.1	ug/L	1443	Standard
	U	238	2141.2	6.0	**0.1565**	0.010	6.6	ug/L	5	Standard
>	**Bi**	209	503625.3	0.8				ug/L	561075	Standard

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Na	23	128613.6	0.8	**8.9253**	0.190	2.1	mg/L	288	Standard
Mg	24	1295231.4	0.9	**2.3148**	0.083	3.6	mg/L	218	Standard
K	39	1320.1	6.0	**1.2828**	0.109	8.5	mg/L	125	Standard
Ca	43	15.0	57.7	**13.6242**	10.566	77.6	mg/L	3	Standard
Fe	54	237.2	21.9	**-0.0537**	0.015	27.5	mg/L	550	Standard
Fe	57	2281.8	4.4	**0.0191**	0.004	19.1	mg/L	1772	Standard
Sc-1	45	278003.4	2.7				mg/L	330668	Standard
Cl	35	48.3	6.3				ug/L	5	Standard
Kr	83	34.3	17.3				ug/L	38	Standard
Br	81	976.7	7.0				ug/L	344	Standard
P	31	284.2	20.4				ug/L	312	Standard
S	34	7339.3	5.5				ug/L	5594	Standard
Sr	88	146.7	12.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		84.554	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	84.400
	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	89.761
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053709
Sample Date/Time: Sunday, July 29, 2012 14:26:01
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: JYH 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	7	22092.8	2.6	**3396.3497**	65.388	1.9	ug/L	9465	Standard
	Be	9	20.0	25.0	**-0.0069**	0.003	49.2	ug/L	10	Standard
	Al	27	776571.3	2.7	**64.7390**	0.896	1.4	ug/L	7870	Standard
>	**Sc**	45	278571.2	1.4				ug/L	330668	Standard
	Ti	47	1757.4	1.8	**1.7637**	0.047	2.7	ug/L	53	Standard
	V	51	12333.6	1.4	**1.2172**	0.030	2.4	ug/L	2687	Standard
	Cr	52	9378.9	1.9	**0.3601**	0.013	3.5	ug/L	8408	Standard
	Cr	53	1021.7	9.0	**0.7330**	0.093	12.7	ug/L	288	Standard
	Mn	55	14945.7	2.4	**1.2761**	0.045	3.5	ug/L	1080	Standard
	Co	59	437.0	6.9	**0.0500**	0.005	9.6	ug/L	117	Standard
	Ni	60	621.0	2.2	**0.2910**	0.009	3.1	ug/L	68	Standard
	Cu	65	257.3	3.9	**0.0756**	0.007	8.9	ug/L	141	Standard
	Zn	66	1277.1	3.6	**1.3554**	0.047	3.5	ug/L	138	Standard
>	**Ge**	72	237801.4	1.1				ug/L	283230	Standard
	As	75	130.7	24.9	**0.3292**	0.039	11.7	ug/L	-198	Standard
	Se	82	33.3	8.4	**0.1581**	0.030	18.8	ug/L	21	Standard
	Se-1	77	121.7	14.0	**0.2243**	0.287	127.8	ug/L	131	Standard
>	**Ga**	71	516.7	6.9				mg/L	607	Standard
	Rb	85	1325.1	5.6				ug/L	30	Standard
	Y	89	210924.7	0.6				ug/L	251555	Standard
>	**Rh**	103	285.0	18.2				ug/L	335	Standard
	Mo	98	778.4	3.4	**0.2498**	0.009	3.6	ug/L	13	Standard
	Ag	107	47.0	27.8	**-0.0002**	0.002	1588.8	ug/L	36	Standard
	Cd	111	43.1	50.3	**-0.0026**	0.008	302.7	mg/L	49	Standard
	Cd	114	158.4	56.9	**-0.0012**	0.011	858.8	ug/L	170	Standard
>	**In**	115	621608.7	1.0				ug/L	727802	Standard
	Sn	118	519.3	30.0	**0.0054**	0.015	284.9	ug/L	471	Standard
	Sb	123	348.7	42.4	**0.0499**	0.020	39.8	ug/L	39	Standard
	Ba	135	107838.9	2.3	**28.8915**	0.385	1.3	ug/L	25	Standard
	Ce	140	3958.9	0.9				ug/L	25	Standard
>	**Tb**	159	948737.7	0.8				ug/L	1071747	Standard
	Ho	165	87.3	1.7				ug/L	13	Standard
	Tl	203	524.7	30.8	**0.0344**	0.011	31.9	ug/L	5	Standard
	Tl	205	1098.4	24.2	**0.0318**	0.008	24.4	ug/L	10	Standard
	Pb	206	620.0	10.4	**0.0222**	0.006	25.7	ug/L	382	Standard
	Pb	207	497.0	9.6	**0.0235**	0.005	21.9	ug/L	306	Standard
	Pb	208	2412.7	9.8	**0.0246**	0.005	22.0	ug/L	1443	Standard
	U	238	3265.4	2.1	**0.2409**	0.005	2.1	ug/L	5	Standard
>	**Bi**	209	499244.2	0.4				ug/L	561075	Standard

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	Na	23	97623.5	1.0	**6.7509**	0.146	2.2	mg/L	288	Standard
	Mg	24	572429.5	0.1	**1.0206**	0.014	1.4	mg/L	218	Standard
	K	39	313.3	13.4	**0.2204**	0.044	19.8	mg/L	125	Standard
	Ca	43	8.3	91.7	**5.3253**	9.810	184.2	mg/L	3	Standard
	Fe	54	507.6	12.1	**0.0229**	0.019	84.1	mg/L	550	Standard
	Fe	57	4599.0	2.3	**0.0735**	0.001	1.7	mg/L	1772	Standard
>	**Sc-1**	45	278571.2	1.4				mg/L	330668	Standard
	Cl	35	21.3	7.2				ug/L	5	Standard
	Kr	83	37.4	15.2				ug/L	38	Standard
	Br	81	465.8	2.5				ug/L	344	Standard
	P	31	188.3	15.4				ug/L	312	Standard
	S	34	6324.7	1.9				ug/L	5594	Standard
	Sr	88	161.7	17.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		83.961	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	85.409
	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	88.980
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053710
Sample Date/Time: Sunday, July 29, 2012 14:29:11
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: JYH 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	7	22785.5	2.8	**3565.1095**	372.521	10.4	ug/L	9465	Standard
	Be	9	5.0	100.0	**-0.0175**	0.004	21.3	ug/L	10	Standard
	Al	27	14585.4	4.4	**0.6462**	0.067	10.3	ug/L	7870	Standard
>	**Sc**	45	278816.9	4.4				ug/L	330668	Standard
	Ti	47	240.3	11.1	**0.1984**	0.023	11.4	ug/L	53	Standard
	V	51	12107.8	1.2	**1.1584**	0.016	1.3	ug/L	2687	Standard
	Cr	52	8660.8	2.6	**0.2211**	0.008	3.5	ug/L	8408	Standard
	Cr	53	856.7	11.0	**0.5656**	0.082	14.4	ug/L	288	Standard
	Mn	55	1742.1	5.3	**0.0709**	0.008	11.2	ug/L	1080	Standard
	Co	59	238.0	2.8	**0.0205**	0.002	7.8	ug/L	117	Standard
	Ni	60	510.3	6.8	**0.2282**	0.017	7.3	ug/L	68	Standard
	Cu	65	161.0	13.6	**0.0200**	0.012	59.7	ug/L	141	Standard
	Zn	66	1224.4	1.2	**1.2626**	0.022	1.8	ug/L	138	Standard
>	**Ge**	72	243008.2	2.1				ug/L	283230	Standard
	As	75	167.5	9.6	**0.3688**	0.016	4.4	ug/L	-198	Standard
	Se	82	38.3	7.2	**0.2090**	0.042	20.1	ug/L	21	Standard
	Se-1	77	123.3	11.6	**0.2092**	0.251	119.8	ug/L	131	Standard
>	**Ga**	71	518.3	7.2				mg/L	607	Standard
	Rb	85	678.3	4.9				ug/L	30	Standard
	Y	89	204539.8	1.0				ug/L	251555	Standard
>	**Rh**	103	276.7	12.3				ug/L	335	Standard
	Mo	98	824.5	1.6	**0.2619**	0.002	0.9	ug/L	13	Standard
	Ag	107	30.3	14.9	**-0.0033**	0.001	27.5	ug/L	36	Standard
	Cd	111	24.4	22.6	**-0.0095**	0.002	21.9	mg/L	49	Standard
	Cd	114	96.0	6.7	**-0.0088**	0.001	7.9	ug/L	170	Standard
>	**In**	115	628842.3	1.6				ug/L	727802	Standard
	Sn	118	374.0	3.7	**-0.0098**	0.001	11.5	ug/L	471	Standard
	Sb	123	217.5	10.7	**0.0315**	0.003	8.8	ug/L	39	Standard
	Ba	135	109198.2	2.0	**28.9235**	0.528	1.8	ug/L	25	Standard
	Ce	140	90.7	9.9				ug/L	25	Standard
>	**Tb**	159	951331.8	0.5				ug/L	1071747	Standard
	Ho	165	9.3	6.2				ug/L	13	Standard
	Tl	203	372.0	4.3	**0.0237**	0.001	4.9	ug/L	5	Standard
	Tl	205	841.4	2.1	**0.0240**	0.000	1.1	ug/L	10	Standard
	Pb	206	367.0	3.3	**-0.0005**	0.001	244.4	ug/L	382	Standard
	Pb	207	291.7	6.3	**0.0014**	0.002	112.0	ug/L	306	Standard
	Pb	208	1430.4	1.0	**0.0022**	0.000	11.6	ug/L	1443	Standard
	U	238	3360.7	3.6	**0.2440**	0.006	2.6	ug/L	5	Standard
>	**Bi**	209	507168.4	1.0				ug/L	561075	Standard

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Na	23	98925.3	1.1	**6.8424**	0.291	4.3	mg/L	288	Standard
Mg	24	594043.2	1.6	**1.0599**	0.063	6.0	mg/L	218	Standard
K	39	340.0	9.2	**0.2495**	0.049	19.5	mg/L	125	Standard
Ca	43	20.0	25.0	**20.2685**	7.483	36.9	mg/L	3	Standard
Fe	54	230.7	1.0	**-0.0557**	0.003	6.2	mg/L	550	Standard
Fe	57	2190.2	7.7	**0.0167**	0.002	10.1	mg/L	1772	Standard
Sc-1	45	278816.9	4.4				mg/L	330668	Standard
Cl	35	17.0	31.1				ug/L	5	Standard
Kr	83	34.9	8.7				ug/L	38	Standard
Br	81	553.3	8.2				ug/L	344	Standard
P	31	186.7	12.1				ug/L	312	Standard
S	34	6341.3	4.0				ug/L	5594	Standard
Sr	88	191.7	14.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		85.799	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	86.403
	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	90.392
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053711
Sample Date/Time: Sunday, July 29, 2012 14:32:20
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: JYH 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	7	28900.9	2.2	**4628.8253**	231.618	5.0	ug/L	9465	Standard
	Be	9	90.0	38.5	**0.0398**	0.024	61.0	ug/L	10	Standard
	Al	27	12666756.5	0.6	**1007.6986**	24.560	2.4	ug/L	7870	Standard
>	**Sc**	45	294488.3	1.8				ug/L	330668	Standard
	Ti	47	18094.5	1.4	**18.1469**	0.363	2.0	ug/L	53	Standard
	V	51	34525.7	2.6	**3.8196**	0.160	4.2	ug/L	2687	Standard
	Cr	52	19774.6	2.5	**1.8918**	0.086	4.5	ug/L	8408	Standard
	Cr	53	2618.6	1.8	**2.1323**	0.011	0.5	ug/L	288	Standard
	Mn	55	587797.9	1.3	**52.2362**	1.485	2.8	ug/L	1080	Standard
	Co	59	7146.4	2.4	**0.9957**	0.012	1.2	ug/L	117	Standard
	Ni	60	5934.8	0.8	**2.9629**	0.025	0.8	ug/L	68	Standard
	Cu	65	2366.9	3.5	**1.2215**	0.025	2.0	ug/L	141	Standard
	Zn	66	15505.3	1.4	**17.7456**	0.443	2.5	ug/L	138	Standard
>	**Ge**	72	243197.9	1.6				ug/L	283230	Standard
	As	75	525.1	4.7	**0.7878**	0.036	4.6	ug/L	-198	Standard
	Se	82	32.8	11.7	**0.1433**	0.047	32.5	ug/L	21	Standard
	Se-1	77	129.7	3.6	**0.3134**	0.113	36.2	ug/L	131	Standard
>	**Ga**	71	1920.1	11.1				mg/L	607	Standard
	Rb	85	18064.1	2.3				ug/L	30	Standard
	Y	89	224109.0	1.9				ug/L	251555	Standard
>	**Rh**	103	293.3	8.7				ug/L	335	Standard
	Mo	98	881.8	2.1	**0.2838**	0.007	2.4	ug/L	13	Standard
	Ag	107	54.3	11.8	**0.0012**	0.001	96.8	ug/L	36	Standard
	Cd	111	59.5	8.0	**0.0035**	0.002	46.7	mg/L	49	Standard
	Cd	114	188.4	11.2	**0.0024**	0.003	107.5	ug/L	170	Standard
>	**In**	115	621875.4	0.5				ug/L	727802	Standard
	Sn	118	855.0	5.9	**0.0396**	0.006	14.0	ug/L	471	Standard
	Sb	123	291.5	16.7	**0.0422**	0.007	16.3	ug/L	39	Standard
	Ba	135	163765.1	1.7	**43.8687**	0.933	2.1	ug/L	25	Standard
	Ce	140	165415.8	0.9				ug/L	25	Standard
>	**Tb**	159	955962.6	1.0				ug/L	1071747	Standard
	Ho	165	2617.9	2.0				ug/L	13	Standard
	Tl	203	469.3	6.2	**0.0299**	0.002	8.3	ug/L	5	Standard
	Tl	205	1056.7	3.0	**0.0299**	0.001	4.6	ug/L	10	Standard
	Pb	206	8536.7	1.3	**0.6981**	0.023	3.3	ug/L	382	Standard
	Pb	207	6857.9	1.8	**0.6739**	0.027	4.0	ug/L	306	Standard
	Pb	208	32330.4	1.2	**0.6754**	0.021	3.1	ug/L	1443	Standard
	U	238	3149.0	2.1	**0.2269**	0.000	0.1	ug/L	5	Standard
>	**Bi**	209	511054.5	2.0				ug/L	561075	Standard

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Na	23	95506.8	1.7	**6.2446**	0.123	2.0	mg/L	288	Standard
Mg	24	733764.4	2.8	**1.2379**	0.053	4.3	mg/L	218	Standard
K	39	470.0	7.4	**0.3583**	0.032	8.8	mg/L	125	Standard
Ca	43	23.3	32.7	**22.8112**	9.559	41.9	mg/L	3	Standard
Fe	54	4870.0	1.5	**1.1846**	0.043	3.6	mg/L	550	Standard
Fe	57	53649.9	4.5	**1.1611**	0.075	6.5	mg/L	1772	Standard
Sc-1	45	294488.3	1.8				mg/L	330668	Standard
Cl	35	16.3	12.7				ug/L	5	Standard
Kr	83	39.4	9.4				ug/L	38	Standard
Br	81	581.7	5.5				ug/L	344	Standard
P	31	1400.1	5.4				ug/L	312	Standard
S	34	5981.2	1.2				ug/L	5594	Standard
Sr	88	165.0	21.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		85.866	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207053711
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	Cd	111	
	Cd	114	
>	In	115	85.446
	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	91.085
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207053712
Sample Date/Time: Sunday, July 29, 2012 14:36:13
Number of Replicates: 3
Autosampler Position: 324
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	20814.3	5.7	**2991.5783**	104.520	3.5	ug/L	9465	Standard
	Be	9	11.7	49.5	**-0.0130**	0.004	32.4	ug/L	10	Standard
	Al	27	36656.0	3.3	**2.4422**	0.207	8.5	ug/L	7870	Standard
>	**Sc**	45	284608.9	3.7				ug/L	330668	Standard
	Ti	47	310.3	11.6	**0.2675**	0.036	13.6	ug/L	53	Standard
	V	51	9950.2	1.2	**0.8957**	0.012	1.4	ug/L	2687	Standard
	Cr	52	7650.9	2.5	**0.0632**	0.025	39.2	ug/L	8408	Standard
	Cr	53	570.8	3.9	**0.3085**	0.021	6.8	ug/L	288	Standard
	Mn	55	2851.9	0.9	**0.1684**	0.002	1.1	ug/L	1080	Standard
	Co	59	491.7	6.5	**0.0560**	0.005	8.3	ug/L	117	Standard
	Ni	60	330.7	4.1	**0.1367**	0.007	5.2	ug/L	68	Standard
	Cu	65	146.3	7.9	**0.0115**	0.006	53.9	ug/L	141	Standard
	Zn	66	1147.0	6.0	**1.1661**	0.075	6.4	ug/L	138	Standard
>	**Ge**	72	244271.7	0.3				ug/L	283230	Standard
	As	75	127.7	9.1	**0.3215**	0.014	4.2	ug/L	-198	Standard
	Se	82	33.0	7.5	**0.1445**	0.028	19.4	ug/L	21	Standard
	Se-1	77	103.0	4.4	**-0.1412**	0.079	56.0	ug/L	131	Standard
>	**Ga**	71	541.7	10.1				mg/L	607	Standard
	Rb	85	551.7	5.3				ug/L	30	Standard
	Y	89	209338.4	2.3				ug/L	251555	Standard
>	**Rh**	103	315.0	11.0				ug/L	335	Standard
	Mo	98	1093.0	3.7	**0.3511**	0.016	4.4	ug/L	13	Standard
	Ag	107	37.0	7.2	**-0.0021**	0.001	26.0	ug/L	36	Standard
	Cd	111	31.7	22.3	**-0.0068**	0.003	37.2	mg/L	49	Standard
	Cd	114	85.7	11.5	**-0.0100**	0.001	11.5	ug/L	170	Standard
>	**In**	115	626023.2	0.7				ug/L	727802	Standard
	Sn	118	471.3	9.9	**0.0002**	0.004	2084.0	ug/L	471	Standard
	Sb	123	180.9	12.9	**0.0267**	0.003	12.5	ug/L	39	Standard
	Ba	135	82919.6	1.2	**22.0586**	0.308	1.4	ug/L	25	Standard
	Ce	140	233.3	10.3				ug/L	25	Standard
>	**Tb**	159	954619.7	0.7				ug/L	1071747	Standard
	Ho	165	18.0	14.7				ug/L	13	Standard
	Tl	203	322.0	1.6	**0.0202**	0.000	0.8	ug/L	5	Standard
	Tl	205	761.7	16.0	**0.0215**	0.003	15.5	ug/L	10	Standard
	Pb	206	355.7	0.4	**-0.0017**	0.000	13.4	ug/L	382	Standard
	Pb	207	308.0	6.9	**0.0029**	0.002	71.2	ug/L	306	Standard
	Pb	208	1431.4	3.1	**0.0020**	0.001	35.3	ug/L	1443	Standard
	U	238	2446.9	0.5	**0.1762**	0.002	1.2	ug/L	5	Standard
>	**Bi**	209	511204.3	0.9				ug/L	561075	Standard

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	Na	23	93603.3	1.1	**6.3372**	0.213	3.4	mg/L	288	Standard
	Mg	24	514123.8	2.5	**0.8976**	0.024	2.7	mg/L	218	Standard
	K	39	268.3	12.7	**0.1665**	0.025	15.2	mg/L	125	Standard
	Ca	43	11.7	24.7	**9.2606**	4.200	45.3	mg/L	3	Standard
	Fe	54	241.3	10.5	**-0.0541**	0.008	14.1	mg/L	550	Standard
	Fe	57	2183.5	3.8	**0.0155**	0.001	5.9	mg/L	1772	Standard
>	**Sc-1**	45	284608.9	3.7				mg/L	330668	Standard
	Cl	35	15.7	35.2				ug/L	5	Standard
	Kr	83	32.9	10.4				ug/L	38	Standard
	Br	81	510.0	9.5				ug/L	344	Standard
	P	31	227.5	18.1				ug/L	312	Standard
	S	34	5773.6	2.6				ug/L	5594	Standard
	Sr	88	163.3	25.7				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		86.245	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	86.016
	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	91.112
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 14:39:24
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: JYH 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	7	8015.5	3.4	**-65.2777**	83.064	127.2	ug/L	9465	Standard
	Be	9	76646.7	0.8	**49.9596**	1.609	3.2	ug/L	10	Standard
	Al	27	636176.4	1.5	**48.2715**	1.114	2.3	ug/L	7870	Standard
>	**Sc**	45	305314.4	3.3				ug/L	330668	Standard
	Ti	47	107475.5	1.3	**97.8805**	0.869	0.9	ug/L	53	Standard
	V	51	447073.2	0.5	**47.8303**	0.850	1.8	ug/L	2687	Standard
	Cr	52	364354.4	1.7	**48.5777**	0.351	0.7	ug/L	8408	Standard
	Cr	53	60210.2	0.3	**48.3656**	1.089	2.3	ug/L	288	Standard
	Mn	55	609116.4	1.6	**49.0466**	0.337	0.7	ug/L	1080	Standard
	Co	59	376151.1	0.8	**48.1291**	0.826	1.7	ug/L	117	Standard
	Ni	60	104417.6	1.3	**47.6873**	0.530	1.1	ug/L	68	Standard
	Cu	65	98191.9	1.9	**48.4257**	0.618	1.3	ug/L	141	Standard
	Zn	66	47610.7	1.7	**49.6501**	0.245	0.5	ug/L	138	Standard
>	**Ge**	72	268323.1	2.2				ug/L	283230	Standard
	As	75	46658.5	1.6	**49.6840**	0.477	1.0	ug/L	-198	Standard
	Se	82	4771.4	2.2	**50.7075**	0.633	1.2	ug/L	21	Standard
	Se-1	77	3501.1	2.8	**51.2044**	0.371	0.7	ug/L	131	Standard
>	**Ga**	71	600.0	16.1				mg/L	607	Standard
	Rb	85	770.0	4.5				ug/L	30	Standard
	Y	89	236631.9	0.8				ug/L	251555	Standard
>	**Rh**	103	335.0	9.0				ug/L	335	Standard
	Mo	98	322100.0	0.2	**96.7222**	1.440	1.5	ug/L	13	Standard
	Ag	107	300462.8	1.0	**51.2765**	1.137	2.2	ug/L	36	Standard
	Cd	111	152024.9	0.4	**50.5504**	0.810	1.6	mg/L	49	Standard
	Cd	114	459767.4	0.9	**50.2726**	0.580	1.2	ug/L	170	Standard
>	**In**	115	683302.6	1.3				ug/L	727802	Standard
	Sn	118	531970.9	1.2	**49.2357**	0.747	1.5	ug/L	471	Standard
	Sb	123	394987.8	0.6	**49.7692**	0.650	1.3	ug/L	39	Standard
	Ba	135	210007.5	1.1	**51.1981**	0.153	0.3	ug/L	25	Standard
	Ce	140	820.7	2.0				ug/L	25	Standard
>	**Tb**	159	1027836.7	1.6				ug/L	1071747	Standard
	Ho	165	22.0	7.9				ug/L	13	Standard
	Tl	203	760638.1	0.4	**48.2295**	0.610	1.3	ug/L	5	Standard
	Tl	205	1753047.5	0.1	**47.6579**	0.570	1.2	ug/L	10	Standard
	Pb	206	592620.9	0.6	**48.6787**	0.336	0.7	ug/L	382	Standard
	Pb	207	500609.8	0.3	**49.2521**	0.695	1.4	ug/L	306	Standard
	Pb	208	2322602.7	0.2	**48.6195**	0.572	1.2	ug/L	1443	Standard
	U	238	695284.7	0.5	**48.2098**	0.318	0.7	ug/L	5	Standard
>	**Bi**	209	531612.6	1.2				ug/L	561075	Standard

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Na	23	102155.0	2.0	**6.4446**	0.097	1.5	mg/L	288	Standard
Mg	24	3041868.3	2.2	**4.9480**	0.076	1.5	mg/L	218	Standard
K	39	5366.0	0.9	**5.0402**	0.189	3.8	mg/L	125	Standard
Ca	43	8.3	34.6	**4.3863**	3.598	82.0	mg/L	3	Standard
Fe	54	19876.6	0.6	**5.0202**	0.138	2.8	mg/L	550	Standard
Fe	57	246204.5	1.5	**5.2593**	0.232	4.4	mg/L	1772	Standard
Sc-1	45	305314.4	3.3				mg/L	330668	Standard
Cl	35	4.0	66.1				ug/L	5	Standard
Kr	83	39.3	3.9				ug/L	38	Standard
Br	81	343.3	8.2				ug/L	344	Standard
P	31	378.3	2.1				ug/L	312	Standard
S	34	6159.6	1.4				ug/L	5594	Standard
Sr	88	60.0	43.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	96.543		
Sc	45			
Ti	47	97.880		
V	51	95.661		
Cr	52	97.155		
Cr	53			
Mn	55	98.093		
Co	59	96.258		
Ni	60	95.375		
Cu	65	96.851		
Zn	66	99.300		
Ge	72		94.737	
As	75	99.368		
Se	82	101.415		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.722		
Ag	107	102.553		

Sample ID: QC Std 6
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	Cd	111	101.101	
	Cd	114		
>	In	115		93.886
	Sn	118	98.471	
	Sb	123	99.538	
	Ba	135	102.396	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.459	
	Tl	205		
	Pb	206	97.357	
	Pb	207	98.504	
	Pb	208	97.239	
	U	238	96.420	
>	Bi	209		94.749
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 14:42:34
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: JYH 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	7	7712.0	1.8	**-118.4882**	51.630	43.6	ug/L	9465	Standard
	Be	9	38.3	27.2	**0.0040**	0.007	174.4	ug/L	10	Standard
	Al	27	7817.0	14.2	**0.0237**	0.086	364.1	ug/L	7870	Standard
>	**Sc**	45	303031.0	1.8				ug/L	330668	Standard
	Ti	47	83.7	20.8	**0.0350**	0.016	45.7	ug/L	53	Standard
	V	51	2359.7	4.2	**-0.0198**	0.010	52.6	ug/L	2687	Standard
	Cr	52	7201.0	1.0	**-0.0758**	0.007	9.3	ug/L	8408	Standard
	Cr	53	216.7	18.7	**-0.0180**	0.033	182.6	ug/L	288	Standard
	Mn	55	1223.4	15.5	**0.0169**	0.015	91.0	ug/L	1080	Standard
	Co	59	182.7	40.0	**0.0108**	0.010	87.9	ug/L	117	Standard
	Ni	60	75.0	19.4	**0.0059**	0.007	113.9	ug/L	68	Standard
	Cu	65	166.7	11.0	**0.0165**	0.009	54.6	ug/L	141	Standard
	Zn	66	147.3	7.3	**0.0063**	0.011	175.5	ug/L	138	Standard
>	**Ge**	72	261672.9	0.3				ug/L	283230	Standard
	As	75	-177.0	7.2	**-0.0199**	0.014	71.0	ug/L	-198	Standard
	Se	82	24.6	12.7	**0.0263**	0.034	129.9	ug/L	21	Standard
	Se-1	77	134.0	4.2	**0.2263**	0.081	35.8	ug/L	131	Standard
>	**Ga**	71	478.3	14.0				mg/L	607	Standard
	Rb	85	38.3	54.3				ug/L	30	Standard
	Y	89	228469.8	1.0				ug/L	251555	Standard
>	**Rh**	103	315.0	1.6				ug/L	335	Standard
	Mo	98	355.2	69.7	**0.1008**	0.076	74.9	ug/L	13	Standard
	Ag	107	212.0	105.8	**0.0277**	0.039	140.3	ug/L	36	Standard
	Cd	111	132.5	81.9	**0.0263**	0.037	139.1	mg/L	49	Standard
	Cd	114	376.4	78.2	**0.0215**	0.033	152.2	ug/L	170	Standard
>	**In**	115	675657.4	0.3				ug/L	727802	Standard
	Sn	118	965.4	30.0	**0.0431**	0.027	63.5	ug/L	471	Standard
	Sb	123	2208.7	10.8	**0.2833**	0.031	10.9	ug/L	39	Standard
	Ba	135	184.7	124.7	**0.0341**	0.057	167.0	ug/L	25	Standard
	Ce	140	63.7	88.9				ug/L	25	Standard
>	**Tb**	159	994917.7	0.4				ug/L	1071747	Standard
	Ho	165	13.7	18.4				ug/L	13	Standard
	Tl	203	238.3	104.2	**0.0140**	0.016	112.1	ug/L	5	Standard
	Tl	205	540.7	100.1	**0.0147**	0.015	100.0	ug/L	10	Standard
	Pb	206	523.0	32.4	**0.0108**	0.014	128.6	ug/L	382	Standard
	Pb	207	404.3	30.2	**0.0111**	0.012	108.3	ug/L	306	Standard
	Pb	208	1949.4	31.0	**0.0116**	0.013	109.4	ug/L	1443	Standard
	U	238	157.0	75.2	**0.0106**	0.008	76.8	ug/L	5	Standard
>	**Bi**	209	532388.0	0.3				ug/L	561075	Standard

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Na	23	405.0	25.2	**-0.0103**	0.007	64.5	mg/L	288	Standard
Mg	24	783.4	77.5	**0.0016**	0.001	63.4	mg/L	218	Standard
K	39	151.7	13.3	**0.0379**	0.021	56.0	mg/L	125	Standard
Ca	43	5.0	100.0	**0.5258**	5.854	1113.4	mg/L	3	Standard
Fe	54	509.7	7.6	**0.0116**	0.009	77.4	mg/L	550	Standard
Fe	57	1661.8	6.7	**0.0012**	0.002	154.8	mg/L	1772	Standard
Sc-1	45	303031.0	1.8				mg/L	330668	Standard
Cl	35	5.7	44.4				ug/L	5	Standard
Kr	83	40.1	1.3				ug/L	38	Standard
Br	81	322.5	10.9				ug/L	344	Standard
P	31	366.7	7.3				ug/L	312	Standard
S	34	5991.2	0.3				ug/L	5594	Standard
Sr	88	28.3	27.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.389	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	92.835
	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	94.887
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Sunday, July 29, 2012 14:45:47
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: JYH 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	7	7596.9	3.3	**-141.6956**	43.267	30.5	ug/L	9465	Standard
	Be	9	15.0	120.2	**-0.0113**	0.012	105.6	ug/L	10	Standard
	Al	27	4997.5	5.8	**-0.1937**	0.028	14.4	ug/L	7870	Standard
>	**Sc**	45	302622.7	1.5				ug/L	330668	Standard
	Ti	47	47.3	2.4	**0.0006**	0.000	81.9	ug/L	53	Standard
	V	51	5658.8	1.4	**0.3369**	0.016	4.8	ug/L	2687	Standard
	Cr	52	12539.2	1.6	**0.6499**	0.040	6.2	ug/L	8408	Standard
	Cr	53	1195.0	10.6	**0.7800**	0.112	14.3	ug/L	288	Standard
	Mn	55	6882.2	1.4	**0.4782**	0.003	0.6	ug/L	1080	Standard
	Co	59	3031.0	0.8	**0.3799**	0.006	1.6	ug/L	117	Standard
	Ni	60	3395.7	0.9	**1.5432**	0.028	1.8	ug/L	68	Standard
	Cu	65	1624.1	2.3	**0.7451**	0.028	3.8	ug/L	141	Standard
	Zn	66	6629.8	0.3	**6.8760**	0.082	1.2	ug/L	138	Standard
>	**Ge**	72	264790.3	1.3				ug/L	283230	Standard
	As	75	194.0	2.5	**0.3814**	0.008	2.1	ug/L	-198	Standard
	Se	82	56.1	16.0	**0.3640**	0.095	26.1	ug/L	21	Standard
	Se-1	77	149.0	3.7	**0.4321**	0.066	15.3	ug/L	131	Standard
>	**Ga**	71	551.7	3.7				mg/L	607	Standard
	Rb	85	13.3	21.7				ug/L	30	Standard
	Y	89	230622.5	2.3				ug/L	251555	Standard
>	**Rh**	103	323.3	23.5				ug/L	335	Standard
	Mo	98	50.9	9.6	**0.0085**	0.001	16.1	ug/L	13	Standard
	Ag	107	2263.2	2.5	**0.3861**	0.014	3.5	ug/L	36	Standard
	Cd	111	803.2	3.3	**0.2551**	0.012	4.8	mg/L	49	Standard
	Cd	114	2435.5	2.5	**0.2523**	0.009	3.4	ug/L	170	Standard
>	**In**	115	668099.1	1.2				ug/L	727802	Standard
	Sn	118	561.7	1.6	**0.0058**	0.001	23.3	ug/L	471	Standard
	Sb	123	3494.4	1.8	**0.4520**	0.004	0.8	ug/L	39	Standard
	Ba	135	2944.6	0.4	**0.7229**	0.006	0.8	ug/L	25	Standard
	Ce	140	20.3	15.8				ug/L	25	Standard
>	**Tb**	159	1005291.3	1.3				ug/L	1071747	Standard
	Ho	165	13.0	26.6				ug/L	13	Standard
	Tl	203	1231.7	3.0	**0.0766**	0.002	3.2	ug/L	5	Standard
	Tl	205	2856.9	3.2	**0.0772**	0.002	2.3	ug/L	10	Standard
	Pb	206	2744.9	2.8	**0.1923**	0.008	4.3	ug/L	382	Standard
	Pb	207	2284.5	1.7	**0.1949**	0.004	2.1	ug/L	306	Standard
	Pb	208	10525.4	0.9	**0.1900**	0.003	1.6	ug/L	1443	Standard
	U	238	5406.6	2.8	**0.3724**	0.007	1.9	ug/L	5	Standard
>	**Bi**	209	534730.7	1.1				ug/L	561075	Standard

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Na	23	263.3	15.8	**-0.0194**	0.002	12.5	mg/L	288	Standard
Mg	24	156.7	11.2	**0.0005**	0.000	4.6	mg/L	218	Standard
K	39	131.7	18.7	**0.0186**	0.025	132.7	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	595.1	6.4	**0.0341**	0.010	29.8	mg/L	550	Standard
Fe	57	1655.1	3.6	**0.0011**	0.001	69.5	mg/L	1772	Standard
Sc-1	45	302622.7	1.5				mg/L	330668	Standard
Cl	35	4.7	32.7				ug/L	5	Standard
Kr	83	34.4	22.0				ug/L	38	Standard
Br	81	312.5	5.6				ug/L	344	Standard
P	31	335.8	3.1				ug/L	312	Standard
S	34	5983.7	2.9				ug/L	5594	Standard
Sr	88	36.7	43.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51	84.234		
Cr	52	81.235		
Cr	53			
Mn	55	95.642		
Co	59	94.986		
Ni	60	96.451		
Cu	65	93.139		
Zn	66	110.016		
Ge	72		93.490	
As	75	95.344		
Se	82	90.993		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	96.535		

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	Cd	111	106.272	
	Cd	114		
>	In	115		91.797
	Sn	118		
	Sb	123	113.011	
	Ba	135	96.387	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.739	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	94.982	
	U	238	93.104	
>	Bi	209		95.305
	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		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 8
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Method 6020 - Summary Report

Sample ID: PBW 47 WG403907-02
Sample Date/Time: Sunday, July 29, 2012 15:03:13
Number of Replicates: 3
Autosampler Position: 401
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	7820.4	1.3	**-49.6493**	91.202	183.7	ug/L	9465	Standard
	Be	9	5.0	0.0	**-0.0178**	0.000	0.8	ug/L	10	Standard
	Al	27	6893.2	3.6	**-0.0340**	0.006	16.6	ug/L	7870	Standard
>	**Sc**	45	295406.9	4.2				ug/L	330668	Standard
	Ti	47	48.7	10.5	**0.0020**	0.005	250.0	ug/L	53	Standard
	V	51	2333.7	1.6	**-0.0250**	0.008	33.4	ug/L	2687	Standard
	Cr	52	7333.1	1.4	**-0.0668**	0.028	42.2	ug/L	8408	Standard
	Cr	53	235.0	17.6	**-0.0046**	0.034	747.5	ug/L	288	Standard
	Mn	55	1039.0	2.5	**0.0008**	0.001	156.0	ug/L	1080	Standard
	Co	59	107.3	10.0	**0.0009**	0.002	183.3	ug/L	117	Standard
	Ni	60	109.3	5.6	**0.0215**	0.002	10.6	ug/L	68	Standard
	Cu	65	132.0	15.4	**-0.0016**	0.010	663.9	ug/L	141	Standard
	Zn	66	652.7	4.5	**0.5419**	0.037	6.9	ug/L	138	Standard
>	**Ge**	72	264189.9	1.9				ug/L	283230	Standard
	As	75	-210.9	2.4	**-0.0546**	0.006	11.4	ug/L	-198	Standard
	Se	82	23.8	10.7	**0.0157**	0.032	206.4	ug/L	21	Standard
	Se-1	77	111.0	2.7	**-0.1470**	0.058	39.4	ug/L	131	Standard
>	**Ga**	71	620.0	10.1				mg/L	607	Standard
	Rb	85	18.3	41.7				ug/L	30	Standard
	Y	89	225981.2	0.9				ug/L	251555	Standard
>	**Rh**	103	333.3	15.4				ug/L	335	Standard
	Mo	98	33.9	42.5	**0.0032**	0.004	133.6	ug/L	13	Standard
	Ag	107	36.3	20.8	**-0.0026**	0.001	53.6	ug/L	36	Standard
	Cd	111	43.9	6.0	**-0.0034**	0.001	27.5	mg/L	49	Standard
	Cd	114	146.4	10.9	**-0.0039**	0.002	39.8	ug/L	170	Standard
>	**In**	115	669338.1	1.5				ug/L	727802	Standard
	Sn	118	543.0	6.4	**0.0039**	0.003	70.5	ug/L	471	Standard
	Sb	123	304.2	35.4	**0.0409**	0.014	33.2	ug/L	39	Standard
	Ba	135	25.0	8.0	**-0.0053**	0.000	9.1	ug/L	25	Standard
	Ce	140	26.7	12.1				ug/L	25	Standard
>	**Tb**	159	999095.8	0.9				ug/L	1071747	Standard
	Ho	165	11.7	13.1				ug/L	13	Standard
	Tl	203	11.0	55.3	**-0.0003**	0.000	114.3	ug/L	5	Standard
	Tl	205	28.0	28.6	**0.0008**	0.000	27.3	ug/L	10	Standard
	Pb	206	350.0	5.8	**-0.0032**	0.001	40.6	ug/L	382	Standard
	Pb	207	282.7	1.5	**-0.0007**	0.001	102.2	ug/L	306	Standard
	Pb	208	1326.0	2.1	**-0.0013**	0.000	25.3	ug/L	1443	Standard
	U	238	7.7	37.7	**0.0003**	0.000	68.4	ug/L	5	Standard
>	**Bi**	209	529668.8	1.4				ug/L	561075	Standard

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Na	23	280.0	12.9	**-0.0178**	0.003	14.0	mg/L	288	Standard
Mg	24	213.3	19.9	**0.0006**	0.000	10.2	mg/L	218	Standard
K	39	135.0	14.8	**0.0246**	0.015	59.6	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.4514**	3.305	95.8	mg/L	3	Standard
Fe	54	490.9	7.1	**0.0104**	0.014	135.8	mg/L	550	Standard
Fe	57	1626.8	8.3	**0.0013**	0.003	215.5	mg/L	1772	Standard
> **Sc-1**	45	295406.9	4.2				mg/L	330668	Standard
Cl	35	5.7	62.0				ug/L	5	Standard
Kr	83	39.0	17.1				ug/L	38	Standard
Br	81	340.8	10.3				ug/L	344	Standard
P	31	328.3	6.1				ug/L	312	Standard
S	34	5789.4	1.6				ug/L	5594	Standard
Sr	88	33.3	22.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.278	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	91.967
	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	94.402
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 47 WG403907-02
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Method 6020 - Summary Report

Sample ID: LCSS 47 WG403907-03
Sample Date/Time: Sunday, July 29, 2012 15:06:23
Number of Replicates: 3
Autosampler Position: 402
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9019.4	1.4	**9.3477**	39.128	418.6	ug/L	9465	Standard
	Be	9	39603.4	2.8	**23.9312**	0.882	3.7	ug/L	10	Standard
	Al	27	418904.4	1.5	**29.2541**	0.168	0.6	ug/L	7870	Standard
>	**Sc**	45	329048.7	1.8				ug/L	330668	Standard
	Ti	47	63.7	34.6	**0.0114**	0.019	163.4	ug/L	53	Standard
	V	51	246468.1	0.8	**24.6634**	0.445	1.8	ug/L	2687	Standard
	Cr	52	202134.8	0.6	**24.8330**	0.512	2.1	ug/L	8408	Standard
	Cr	53	33420.2	2.1	**25.1551**	0.861	3.4	ug/L	288	Standard
	Mn	55	338413.9	0.4	**25.5911**	0.444	1.7	ug/L	1080	Standard
	Co	59	206017.5	0.5	**24.7851**	0.445	1.8	ug/L	117	Standard
	Ni	60	57985.4	0.2	**24.8930**	0.312	1.3	ug/L	68	Standard
	Cu	65	54888.6	1.5	**25.4307**	0.619	2.4	ug/L	141	Standard
	Zn	66	27273.9	0.5	**26.6827**	0.340	1.3	ug/L	138	Standard
>	**Ge**	72	285282.0	1.4				ug/L	283230	Standard
	As	75	24053.5	0.3	**24.1803**	0.344	1.4	ug/L	-198	Standard
	Se	82	2414.4	1.9	**24.0054**	0.287	1.2	ug/L	21	Standard
	Se-1	77	1796.8	0.5	**23.7610**	0.307	1.3	ug/L	131	Standard
>	**Ga**	71	648.3	17.8				mg/L	607	Standard
	Rb	85	16.7	17.3				ug/L	30	Standard
	Y	89	248113.5	1.2				ug/L	251555	Standard
>	**Rh**	103	355.0	23.3				ug/L	335	Standard
	Mo	98	62.1	19.0	**0.0104**	0.003	32.4	ug/L	13	Standard
	Ag	107	149253.9	0.0	**23.9651**	0.132	0.6	ug/L	36	Standard
	Cd	111	80972.6	0.4	**25.3295**	0.176	0.7	mg/L	49	Standard
	Cd	114	243717.9	0.4	**25.0712**	0.251	1.0	ug/L	170	Standard
>	**In**	115	725986.5	0.6				ug/L	727802	Standard
	Sn	118	807.4	4.6	**0.0230**	0.004	15.8	ug/L	471	Standard
	Sb	123	207736.4	1.0	**24.6361**	0.378	1.5	ug/L	39	Standard
	Ba	135	108720.0	0.9	**24.9416**	0.345	1.4	ug/L	25	Standard
	Ce	140	286.0	3.5				ug/L	25	Standard
>	**Tb**	159	1073180.7	1.5				ug/L	1071747	Standard
	Ho	165	16.7	22.7				ug/L	13	Standard
	Tl	203	413988.9	1.0	**24.6876**	0.013	0.1	ug/L	5	Standard
	Tl	205	955558.6	0.7	**24.4328**	0.082	0.3	ug/L	10	Standard
	Pb	206	324110.3	0.7	**25.0261**	0.262	1.0	ug/L	382	Standard
	Pb	207	274938.6	1.2	**25.4260**	0.063	0.2	ug/L	306	Standard
	Pb	208	1271039.8	0.6	**25.0111**	0.202	0.8	ug/L	1443	Standard
	U	238	373089.8	0.9	**24.3321**	0.193	0.8	ug/L	5	Standard
>	**Bi**	209	565184.0	1.0				ug/L	561075	Standard

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Na	23	596.7	14.4	**-0.0011**	0.005	514.9	mg/L	288	Standard
Mg	24	751.7	1.7	**0.0014**	0.000	2.5	mg/L	218	Standard
K	39	123.3	26.1	**0.0009**	0.029	3117.0	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	776.7	7.9	**0.0652**	0.014	22.0	mg/L	550	Standard
Fe	57	1943.5	3.1	**0.0040**	0.001	28.0	mg/L	1772	Standard
Sc-1	45	329048.7	1.8				mg/L	330668	Standard
Cl	35	7.0	14.3				ug/L	5	Standard
Kr	83	35.3	3.4				ug/L	38	Standard
Br	81	389.2	1.0				ug/L	344	Standard
P	31	450.8	8.5				ug/L	312	Standard
S	34	5841.1	1.2				ug/L	5594	Standard
Sr	88	46.7	24.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.725	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.751
	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	100.732
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSS 47 WG403907-03
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Method 6020 - Summary Report

Sample ID: L1207059013 WG403907-01
Sample Date/Time: Sunday, July 29, 2012 15:09:32
Number of Replicates: 3
Autosampler Position: 403
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27052.5	2.8	**4713.6157**	143.495	3.0	ug/L	9465	Standard
	Be	9	15.0	88.2	**-0.0103**	0.010	93.7	ug/L	10	Standard
	Al	27	19150.4	0.8	**1.0695**	0.018	1.7	ug/L	7870	Standard
>	**Sc**	45	271925.1	0.6				ug/L	330668	Standard
	Ti	47	172.7	4.4	**0.1298**	0.007	5.6	ug/L	53	Standard
	V	51	5051.9	4.8	**0.3174**	0.029	9.2	ug/L	2687	Standard
	Cr	52	7982.4	4.6	**0.1139**	0.056	49.3	ug/L	8408	Standard
	Cr	53	660.8	13.8	**0.3887**	0.082	21.0	ug/L	288	Standard
	Mn	55	1825.8	9.2	**0.0776**	0.015	19.5	ug/L	1080	Standard
	Co	59	277.0	35.0	**0.0259**	0.014	53.0	ug/L	117	Standard
	Ni	60	318.3	8.1	**0.1307**	0.013	10.1	ug/L	68	Standard
	Cu	65	161.7	7.2	**0.0199**	0.006	31.8	ug/L	141	Standard
	Zn	66	1594.4	2.9	**1.6818**	0.056	3.3	ug/L	138	Standard
>	**Ge**	72	244068.8	0.1				ug/L	283230	Standard
	As	75	-31.4	135.8	**0.1361**	0.050	36.6	ug/L	-198	Standard
	Se	82	43.2	13.7	**0.2644**	0.070	26.3	ug/L	21	Standard
	Se-1	77	126.0	5.0	**0.2434**	0.104	42.6	ug/L	131	Standard
>	**Ga**	71	545.0	1.8				mg/L	607	Standard
	Rb	85	415.0	4.2				ug/L	30	Standard
	Y	89	205465.9	2.3				ug/L	251555	Standard
>	**Rh**	103	281.7	7.4				ug/L	335	Standard
	Mo	98	1086.0	2.3	**0.3592**	0.008	2.2	ug/L	13	Standard
	Ag	107	62.3	21.4	**0.0030**	0.003	85.5	ug/L	36	Standard
	Cd	111	71.4	13.9	**0.0084**	0.004	44.2	mg/L	49	Standard
	Cd	114	215.2	2.0	**0.0062**	0.001	8.2	ug/L	170	Standard
>	**In**	115	608236.9	0.1				ug/L	727802	Standard
	Sn	118	365.3	4.1	**-0.0094**	0.002	16.5	ug/L	471	Standard
	Sb	123	896.6	5.8	**0.1287**	0.007	5.8	ug/L	39	Standard
	Ba	135	31544.5	0.5	**8.6297**	0.047	0.5	ug/L	25	Standard
	Ce	140	193.0	2.3				ug/L	25	Standard
>	**Tb**	159	947326.6	0.8				ug/L	1071747	Standard
	Ho	165	11.7	34.6				ug/L	13	Standard
	Tl	203	439.0	29.0	**0.0285**	0.009	30.9	ug/L	5	Standard
	Tl	205	1136.0	43.9	**0.0328**	0.015	44.6	ug/L	10	Standard
	Pb	206	486.3	32.2	**0.0103**	0.014	135.4	ug/L	382	Standard
	Pb	207	424.0	38.4	**0.0156**	0.017	111.0	ug/L	306	Standard
	Pb	208	1948.7	39.5	**0.0141**	0.017	123.7	ug/L	1443	Standard
	U	238	5468.0	3.3	**0.4013**	0.016	4.1	ug/L	5	Standard
>	**Bi**	209	502110.7	1.0				ug/L	561075	Standard

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Na	23	102787.5	1.6	**7.2836**	0.143	2.0	mg/L	288	Standard
Mg	24	771569.1	2.0	**1.4091**	0.034	2.4	mg/L	218	Standard
K	39	173.3	10.9	**0.0777**	0.020	25.2	mg/L	125	Standard
Ca	43	5.0	0.0	**1.1537**	0.039	3.3	mg/L	3	Standard
Fe	54	188.2	12.1	**-0.0665**	0.006	9.6	mg/L	550	Standard
Fe	57	2046.8	6.7	**0.0146**	0.004	24.0	mg/L	1772	Standard
Sc-1	45	271925.1	0.6				mg/L	330668	Standard
Cl	35	13.7	41.6				ug/L	5	Standard
Kr	83	37.8	8.0				ug/L	38	Standard
Br	81	525.8	5.2				ug/L	344	Standard
P	31	215.8	7.4				ug/L	312	Standard
S	34	6610.6	4.3				ug/L	5594	Standard
Sr	88	158.3	1.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.173	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	83.572
	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	89.491
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207059013 WG403907-01
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Method 6020 - Summary Report

Sample ID: L1207059013S WG403907-04
Sample Date/Time: Sunday, July 29, 2012 15:12:42
Number of Replicates: 3
Autosampler Position: 404
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27924.1	3.4	**4856.2170**	151.350	3.1	ug/L	9465	Standard
	Be	9	7687.0	2.4	**5.5494**	0.211	3.8	ug/L	10	Standard
	Al	27	131537.4	4.0	**10.6425**	0.400	3.8	ug/L	7870	Standard
>	**Sc**	45	274668.2	2.4				ug/L	330668	Standard
	Ti	47	193.0	9.0	**0.1505**	0.017	11.4	ug/L	53	Standard
	V	51	45718.1	0.7	**5.1352**	0.021	0.4	ug/L	2687	Standard
	Cr	52	40313.2	1.5	**4.9670**	0.098	2.0	ug/L	8408	Standard
	Cr	53	6184.6	4.3	**5.2927**	0.220	4.1	ug/L	288	Standard
	Mn	55	59289.4	0.9	**5.1805**	0.048	0.9	ug/L	1080	Standard
	Co	59	34912.8	0.7	**4.9054**	0.032	0.6	ug/L	117	Standard
	Ni	60	9912.9	0.6	**4.9576**	0.040	0.8	ug/L	68	Standard
	Cu	65	9158.4	2.0	**4.9115**	0.096	2.0	ug/L	141	Standard
	Zn	66	6798.2	2.6	**7.6768**	0.190	2.5	ug/L	138	Standard
>	**Ge**	72	243709.7	0.3				ug/L	283230	Standard
	As	75	4728.4	0.1	**5.6964**	0.014	0.3	ug/L	-198	Standard
	Se	82	569.2	1.6	**6.4487**	0.124	1.9	ug/L	21	Standard
	Se-1	77	485.0	6.1	**6.2383**	0.511	8.2	ug/L	131	Standard
>	**Ga**	71	471.7	10.0				mg/L	607	Standard
	Rb	85	408.3	7.9				ug/L	30	Standard
	Y	89	209612.0	2.1				ug/L	251555	Standard
>	**Rh**	103	306.7	4.1				ug/L	335	Standard
	Mo	98	1089.4	4.0	**0.3583**	0.010	2.8	ug/L	13	Standard
	Ag	107	24335.2	0.3	**4.6322**	0.071	1.5	ug/L	36	Standard
	Cd	111	14604.4	0.6	**5.4097**	0.038	0.7	mg/L	49	Standard
	Cd	114	44979.6	2.0	**5.4773**	0.076	1.4	ug/L	170	Standard
>	**In**	115	611499.3	1.3				ug/L	727802	Standard
	Sn	118	389.3	6.4	**-0.0071**	0.002	31.7	ug/L	471	Standard
	Sb	123	38708.0	0.8	**5.4518**	0.096	1.8	ug/L	39	Standard
	Ba	135	51521.8	0.7	**14.0291**	0.268	1.9	ug/L	25	Standard
	Ce	140	1158.4	4.4				ug/L	25	Standard
>	**Tb**	159	946398.1	1.0				ug/L	1071747	Standard
	Ho	165	24.7	19.2				ug/L	13	Standard
	Tl	203	73566.2	0.7	**4.9539**	0.025	0.5	ug/L	5	Standard
	Tl	205	172018.0	0.8	**4.9675**	0.035	0.7	ug/L	10	Standard
	Pb	206	57280.1	0.5	**4.9693**	0.018	0.4	ug/L	382	Standard
	Pb	207	48134.3	0.1	**5.0046**	0.015	0.3	ug/L	306	Standard
	Pb	208	225117.1	0.4	**4.9795**	0.025	0.5	ug/L	1443	Standard
	U	238	69949.4	1.0	**5.1520**	0.047	0.9	ug/L	5	Standard
>	**Bi**	209	500421.4	0.3				ug/L	561075	Standard

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Na	23	102396.5	1.2	**7.1866**	0.254	3.5	mg/L	288	Standard
Mg	24	788746.6	1.4	**1.4265**	0.037	2.6	mg/L	218	Standard
K	39	218.3	7.4	**0.1237**	0.013	10.5	mg/L	125	Standard
Ca	43	13.3	94.4	**11.8958**	16.516	138.8	mg/L	3	Standard
Fe	54	262.7	7.9	**-0.0457**	0.005	10.9	mg/L	550	Standard
Fe	57	2155.2	3.5	**0.0167**	0.002	9.0	mg/L	1772	Standard
Sc-1	45	274668.2	2.4				mg/L	330668	Standard
Cl	35	20.3	27.1				ug/L	5	Standard
Kr	83	35.4	4.8				ug/L	38	Standard
Br	81	520.0	4.2				ug/L	344	Standard
P	31	202.5	13.4				ug/L	312	Standard
S	34	6894.9	1.9				ug/L	5594	Standard
Sr	88	146.7	2.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.047	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	84.020
	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	89.190
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207059013S WG403907-04
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Method 6020 - Summary Report

Sample ID: L1207059013SD WG403907-05
Sample Date/Time: Sunday, July 29, 2012 15:15:51
Number of Replicates: 3
Autosampler Position: 405
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27458.2	0.2	**4619.9179**	212.836	4.6	ug/L	9465	Standard
	Be	9	7495.2	1.2	**5.3022**	0.134	2.5	ug/L	10	Standard
	Al	27	78982.0	1.9	**6.0265**	0.189	3.1	ug/L	7870	Standard
>	**Sc**	45	280280.6	3.4				ug/L	330668	Standard
	Ti	47	193.0	7.2	**0.1503**	0.013	8.9	ug/L	53	Standard
	V	51	46022.0	1.5	**5.1665**	0.095	1.8	ug/L	2687	Standard
	Cr	52	40335.0	1.7	**4.9650**	0.118	2.4	ug/L	8408	Standard
	Cr	53	6279.6	1.9	**5.3727**	0.123	2.3	ug/L	288	Standard
	Mn	55	56931.4	1.8	**4.9668**	0.103	2.1	ug/L	1080	Standard
	Co	59	35121.0	1.7	**4.9304**	0.089	1.8	ug/L	117	Standard
	Ni	60	9999.3	1.2	**4.9965**	0.052	1.0	ug/L	68	Standard
	Cu	65	9416.3	1.0	**5.0472**	0.057	1.1	ug/L	141	Standard
	Zn	66	6439.0	1.8	**7.2571**	0.155	2.1	ug/L	138	Standard
>	**Ge**	72	243926.5	0.3				ug/L	283230	Standard
	As	75	4795.5	1.2	**5.7699**	0.082	1.4	ug/L	-198	Standard
	Se	82	571.8	0.8	**6.4735**	0.069	1.1	ug/L	21	Standard
	Se-1	77	474.3	5.5	**6.0516**	0.411	6.8	ug/L	131	Standard
>	**Ga**	71	510.0	10.2				mg/L	607	Standard
	Rb	85	383.3	6.2				ug/L	30	Standard
	Y	89	202288.3	1.6				ug/L	251555	Standard
>	**Rh**	103	295.0	24.0				ug/L	335	Standard
	Mo	98	1123.3	4.8	**0.3693**	0.021	5.8	ug/L	13	Standard
	Ag	107	25400.9	1.9	**4.8280**	0.136	2.8	ug/L	36	Standard
	Cd	111	14759.8	1.3	**5.4589**	0.102	1.9	mg/L	49	Standard
	Cd	114	44948.7	1.0	**5.4653**	0.085	1.5	ug/L	170	Standard
>	**In**	115	612472.8	1.1				ug/L	727802	Standard
	Sn	118	408.0	9.5	**-0.0052**	0.004	81.7	ug/L	471	Standard
	Sb	123	38666.0	1.1	**5.4372**	0.110	2.0	ug/L	39	Standard
	Ba	135	51065.6	0.9	**13.8820**	0.234	1.7	ug/L	25	Standard
	Ce	140	180.3	11.4				ug/L	25	Standard
>	**Tb**	159	946870.4	1.0				ug/L	1071747	Standard
	Ho	165	12.7	35.6				ug/L	13	Standard
	Tl	203	73844.2	1.1	**4.8879**	0.028	0.6	ug/L	5	Standard
	Tl	205	170141.7	1.0	**4.8299**	0.067	1.4	ug/L	10	Standard
	Pb	206	57228.2	1.2	**4.8803**	0.105	2.2	ug/L	382	Standard
	Pb	207	48653.7	1.2	**4.9724**	0.069	1.4	ug/L	306	Standard
	Pb	208	225444.1	0.8	**4.9018**	0.079	1.6	ug/L	1443	Standard
	U	238	69795.4	0.3	**5.0534**	0.059	1.2	ug/L	5	Standard
>	**Bi**	209	509107.2	1.3				ug/L	561075	Standard

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Na	23	102740.5	0.8	**7.0672**	0.241	3.4	mg/L	288	Standard
Mg	24	796551.5	2.7	**1.4123**	0.059	4.2	mg/L	218	Standard
K	39	211.7	11.7	**0.1124**	0.027	23.7	mg/L	125	Standard
Ca	43	6.7	114.6	**2.9782**	9.640	323.7	mg/L	3	Standard
Fe	54	240.6	19.4	**-0.0534**	0.012	23.3	mg/L	550	Standard
Fe	57	2206.8	5.3	**0.0169**	0.004	24.8	mg/L	1772	Standard
Sc-1	45	280280.6	3.4				mg/L	330668	Standard
Cl	35	15.0	37.1				ug/L	5	Standard
Kr	83	35.3	6.6				ug/L	38	Standard
Br	81	571.7	7.3				ug/L	344	Standard
P	31	212.5	16.2				ug/L	312	Standard
S	34	6983.3	3.8				ug/L	5594	Standard
Sr	88	171.7	8.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.123	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	84.154
	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	90.738
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207059001
Sample Date/Time: Sunday, July 29, 2012 15:19:02
Number of Replicates: 3
Autosampler Position: 406
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	16739.2	2.0	**2090.5697**	81.548	3.9	ug/L	9465	Standard
	Be	9	13.3	43.3	**-0.0118**	0.004	35.4	ug/L	10	Standard
	Al	27	888626.1	2.3	**73.2163**	3.093	4.2	ug/L	7870	Standard
>	**Sc**	45	282387.1	3.0				ug/L	330668	Standard
	Ti	47	2407.5	1.5	**2.3717**	0.031	1.3	ug/L	53	Standard
	V	51	19525.0	1.8	**2.0329**	0.058	2.9	ug/L	2687	Standard
	Cr	52	8205.9	1.3	**0.1494**	0.027	18.4	ug/L	8408	Standard
	Cr	53	841.7	4.5	**0.5499**	0.024	4.3	ug/L	288	Standard
	Mn	55	21665.5	0.7	**1.8397**	0.016	0.9	ug/L	1080	Standard
	Co	59	447.0	1.4	**0.0499**	0.002	3.0	ug/L	117	Standard
	Ni	60	489.3	4.8	**0.2169**	0.011	5.2	ug/L	68	Standard
	Cu	65	288.3	9.4	**0.0888**	0.013	14.2	ug/L	141	Standard
	Zn	66	1649.4	3.0	**1.7483**	0.077	4.4	ug/L	138	Standard
>	**Ge**	72	243712.6	1.3				ug/L	283230	Standard
	As	75	371.1	4.6	**0.6064**	0.023	3.7	ug/L	-198	Standard
	Se	82	36.0	4.1	**0.1803**	0.022	12.2	ug/L	21	Standard
	Se-1	77	122.7	3.4	**0.1908**	0.064	33.6	ug/L	131	Standard
>	**Ga**	71	568.3	5.4				mg/L	607	Standard
	Rb	85	1483.4	6.9				ug/L	30	Standard
	Y	89	209520.7	1.7				ug/L	251555	Standard
>	**Rh**	103	330.0	3.0				ug/L	335	Standard
	Mo	98	918.8	1.7	**0.2989**	0.005	1.6	ug/L	13	Standard
	Ag	107	43.7	29.1	**-0.0007**	0.002	365.4	ug/L	36	Standard
	Cd	111	32.5	7.1	**-0.0063**	0.001	15.6	mg/L	49	Standard
	Cd	114	98.3	7.2	**-0.0083**	0.001	9.0	ug/L	170	Standard
>	**In**	115	616057.2	1.3				ug/L	727802	Standard
	Sn	118	422.0	10.4	**-0.0041**	0.004	101.5	ug/L	471	Standard
	Sb	123	336.7	14.8	**0.0489**	0.007	15.3	ug/L	39	Standard
	Ba	135	98721.3	1.0	**26.6933**	0.571	2.1	ug/L	25	Standard
	Ce	140	4985.5	0.4				ug/L	25	Standard
>	**Tb**	159	951233.5	0.1				ug/L	1071747	Standard
	Ho	165	90.3	6.8				ug/L	13	Standard
	Tl	203	392.3	5.7	**0.0251**	0.002	6.2	ug/L	5	Standard
	Tl	205	960.0	6.7	**0.0274**	0.002	7.1	ug/L	10	Standard
	Pb	206	663.7	1.5	**0.0252**	0.001	4.3	ug/L	382	Standard
	Pb	207	537.7	4.5	**0.0269**	0.003	10.5	ug/L	306	Standard
	Pb	208	2558.4	2.7	**0.0270**	0.002	6.1	ug/L	1443	Standard
	U	238	1756.4	6.3	**0.1276**	0.008	6.7	ug/L	5	Standard
>	**Bi**	209	506523.3	0.6				ug/L	561075	Standard

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	Na	23	86472.8	2.1	**5.8955**	0.154	2.6	mg/L	288	Standard
	Mg	24	489236.7	0.6	**0.8610**	0.029	3.4	mg/L	218	Standard
	K	39	255.0	7.1	**0.1553**	0.011	6.9	mg/L	125	Standard
	Ca	43	15.0	88.2	**13.7303**	17.153	124.9	mg/L	3	Standard
	Fe	54	472.5	5.6	**0.0110**	0.008	72.9	mg/L	550	Standard
	Fe	57	4789.1	4.6	**0.0765**	0.005	6.8	mg/L	1772	Standard
>	**Sc-1**	45	282387.1	3.0				mg/L	330668	Standard
	Cl	35	19.3	31.2				ug/L	5	Standard
	Kr	83	33.9	7.1				ug/L	38	Standard
	Br	81	467.5	9.3				ug/L	344	Standard
	P	31	200.0	7.0				ug/L	312	Standard
	S	34	5801.9	1.7				ug/L	5594	Standard
	Sr	88	145.0	21.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		86.048	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	84.646
	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	90.277
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207059002
Sample Date/Time: Sunday, July 29, 2012 15:22:11
Number of Replicates: 3
Autosampler Position: 407
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	16460.6	1.2	**2016.6175**	83.813	4.2	ug/L	9465	Standard
	Be	9	8.3	34.6	**-0.0153**	0.002	13.5	ug/L	10	Standard
	Al	27	30200.1	4.4	**1.9196**	0.112	5.8	ug/L	7870	Standard
>	**Sc**	45	283049.6	1.1				ug/L	330668	Standard
	Ti	47	252.7	4.3	**0.2083**	0.008	3.8	ug/L	53	Standard
	V	51	17410.1	1.2	**1.7664**	0.007	0.4	ug/L	2687	Standard
	Cr	52	7492.9	1.4	**0.0336**	0.006	19.0	ug/L	8408	Standard
	Cr	53	595.0	12.4	**0.3273**	0.067	20.6	ug/L	288	Standard
	Mn	55	2978.0	2.7	**0.1781**	0.005	3.1	ug/L	1080	Standard
	Co	59	579.3	3.0	**0.0679**	0.003	4.0	ug/L	117	Standard
	Ni	60	397.0	8.2	**0.1688**	0.014	8.2	ug/L	68	Standard
	Cu	65	172.3	8.9	**0.0252**	0.009	36.4	ug/L	141	Standard
	Zn	66	1598.8	0.2	**1.6755**	0.018	1.1	ug/L	138	Standard
>	**Ge**	72	245582.1	1.2				ug/L	283230	Standard
	As	75	341.6	8.6	**0.5686**	0.032	5.7	ug/L	-198	Standard
	Se	82	34.8	10.7	**0.1631**	0.048	29.5	ug/L	21	Standard
	Se-1	77	124.0	5.8	**0.1967**	0.098	49.9	ug/L	131	Standard
>	**Ga**	71	518.3	11.2				mg/L	607	Standard
	Rb	85	540.0	16.7				ug/L	30	Standard
	Y	89	211420.0	1.4				ug/L	251555	Standard
>	**Rh**	103	320.0	6.8				ug/L	335	Standard
	Mo	98	921.6	4.3	**0.3002**	0.013	4.2	ug/L	13	Standard
	Ag	107	38.0	13.2	**-0.0018**	0.001	52.3	ug/L	36	Standard
	Cd	111	36.1	23.5	**-0.0049**	0.003	64.4	mg/L	49	Standard
	Cd	114	116.9	9.7	**-0.0060**	0.001	23.6	ug/L	170	Standard
>	**In**	115	615248.3	0.4				ug/L	727802	Standard
	Sn	118	378.0	4.8	**-0.0085**	0.002	22.1	ug/L	471	Standard
	Sb	123	188.0	13.2	**0.0281**	0.004	12.6	ug/L	39	Standard
	Ba	135	91669.2	1.1	**24.8145**	0.342	1.4	ug/L	25	Standard
	Ce	140	148.0	6.9				ug/L	25	Standard
>	**Tb**	159	945702.0	0.4				ug/L	1071747	Standard
	Ho	165	18.3	22.7				ug/L	13	Standard
	Tl	203	388.7	6.4	**0.0246**	0.002	6.6	ug/L	5	Standard
	Tl	205	875.4	1.1	**0.0248**	0.000	1.1	ug/L	10	Standard
	Pb	206	424.0	9.0	**0.0042**	0.003	72.1	ug/L	382	Standard
	Pb	207	360.7	1.4	**0.0084**	0.000	5.3	ug/L	306	Standard
	Pb	208	1685.0	2.2	**0.0076**	0.001	7.7	ug/L	1443	Standard
	U	238	1551.1	0.7	**0.1119**	0.001	0.8	ug/L	5	Standard
>	**Bi**	209	509708.2	0.6				ug/L	561075	Standard

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Na	23	86623.6	0.9	**5.8899**	0.015	0.2	mg/L	288	Standard
Mg	24	459256.7	0.9	**0.8059**	0.013	1.6	mg/L	218	Standard
K	39	216.7	14.1	**0.1154**	0.033	28.4	mg/L	125	Standard
Ca	43	6.7	43.3	**2.9589**	3.505	118.4	mg/L	3	Standard
Fe	54	268.3	19.6	**-0.0462**	0.015	33.1	mg/L	550	Standard
Fe	57	2065.1	5.2	**0.0131**	0.003	22.3	mg/L	1772	Standard
Sc-1	45	283049.6	1.1				mg/L	330668	Standard
Cl	35	15.0	54.6				ug/L	5	Standard
Kr	83	31.1	5.9				ug/L	38	Standard
Br	81	552.5	8.8				ug/L	344	Standard
P	31	161.7	3.9				ug/L	312	Standard
S	34	5674.4	1.3				ug/L	5594	Standard
Sr	88	163.3	16.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		86.708	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	84.535
	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	90.845
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207059002PS WG404853-01
Sample Date/Time: Sunday, July 29, 2012 15:25:27
Number of Replicates: 3
Autosampler Position: 408
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	18674.8	1.8	**1983.9543**	40.978	2.1	ug/L	9465	Standard
	Be	9	74318.5	0.8	**45.6406**	0.745	1.6	ug/L	10	Standard
	Al	27	656533.0	0.8	**46.9337**	0.907	1.9	ug/L	7870	Standard
>	**Sc**	45	323898.3	2.4				ug/L	330668	Standard
	Ti	47	359.3	6.3	**0.2758**	0.022	7.8	ug/L	53	Standard
	V	51	444317.8	0.4	**46.2746**	0.595	1.3	ug/L	2687	Standard
	Cr	52	349048.1	0.2	**45.2471**	0.588	1.3	ug/L	8408	Standard
	Cr	53	58742.8	0.6	**45.9298**	0.448	1.0	ug/L	288	Standard
	Mn	55	584206.7	0.5	**45.8053**	0.753	1.6	ug/L	1080	Standard
	Co	59	362566.1	0.6	**45.1687**	0.560	1.2	ug/L	117	Standard
	Ni	60	102205.2	0.3	**45.4520**	0.638	1.4	ug/L	68	Standard
	Cu	65	97136.7	1.1	**46.6509**	0.955	2.0	ug/L	141	Standard
	Zn	66	47953.8	0.3	**48.6962**	0.477	1.0	ug/L	138	Standard
>	**Ge**	72	275538.1	1.2				ug/L	283230	Standard
	As	75	45500.3	0.9	**47.1934**	0.948	2.0	ug/L	-198	Standard
	Se	82	4487.7	1.5	**46.4304**	1.162	2.5	ug/L	21	Standard
	Se-1	77	3327.0	3.0	**47.2672**	2.079	4.4	ug/L	131	Standard
>	**Ga**	71	606.7	21.5				mg/L	607	Standard
	Rb	85	600.0	5.8				ug/L	30	Standard
	Y	89	237676.7	1.8				ug/L	251555	Standard
>	**Rh**	103	363.3	12.0				ug/L	335	Standard
	Mo	98	1122.3	1.2	**0.3274**	0.006	1.9	ug/L	13	Standard
	Ag	107	263866.9	0.8	**44.6948**	0.675	1.5	ug/L	36	Standard
	Cd	111	143304.9	0.9	**47.2969**	0.669	1.4	mg/L	49	Standard
	Cd	114	435122.7	0.3	**47.2265**	0.371	0.8	ug/L	170	Standard
>	**In**	115	688343.5	0.7				ug/L	727802	Standard
	Sn	118	889.7	12.4	**0.0344**	0.010	29.7	ug/L	471	Standard
	Sb	123	376191.4	0.7	**47.0491**	0.098	0.2	ug/L	39	Standard
	Ba	135	291027.1	0.6	**70.4374**	0.842	1.2	ug/L	25	Standard
	Ce	140	224.7	20.1				ug/L	25	Standard
>	**Tb**	159	1035815.4	0.8				ug/L	1071747	Standard
	Ho	165	19.3	34.4				ug/L	13	Standard
	Tl	203	729226.6	0.7	**44.7890**	0.413	0.9	ug/L	5	Standard
	Tl	205	1688767.4	0.3	**44.4714**	0.091	0.2	ug/L	10	Standard
	Pb	206	568663.0	0.4	**45.2474**	0.400	0.9	ug/L	382	Standard
	Pb	207	481404.2	0.4	**45.8760**	0.319	0.7	ug/L	306	Standard
	Pb	208	2231836.9	0.3	**45.2538**	0.304	0.7	ug/L	1443	Standard
	U	238	671432.2	1.2	**45.0986**	0.525	1.2	ug/L	5	Standard
>	**Bi**	209	548766.5	0.5				ug/L	561075	Standard

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	Na	23	86813.0	1.5	**5.1564**	0.178	3.4	mg/L	288	Standard
	Mg	24	494386.4	0.3	**0.7584**	0.019	2.5	mg/L	218	Standard
	K	39	235.0	11.8	**0.1037**	0.027	25.9	mg/L	125	Standard
	Ca	43	8.3	69.3	**3.6586**	6.018	164.5	mg/L	3	Standard
	Fe	54	534.9	10.3	**0.0094**	0.016	166.7	mg/L	550	Standard
	Fe	57	2520.2	2.5	**0.0163**	0.001	5.4	mg/L	1772	Standard
>	**Sc-1**	45	323898.3	2.4				mg/L	330668	Standard
	Cl	35	19.0	10.5				ug/L	5	Standard
	Kr	83	38.8	5.9				ug/L	38	Standard
	Br	81	682.5	6.4				ug/L	344	Standard
	P	31	384.2	4.6				ug/L	312	Standard
	S	34	6068.7	2.1				ug/L	5594	Standard
	Sr	88	155.0	14.8				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		97.284	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	94.578
	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	97.806
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207059002SDL WG404853-02
Sample Date/Time: Sunday, July 29, 2012 15:28:36
Number of Replicates: 3
Autosampler Position: 409
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9724.8	3.0	**367.7592**	33.782	9.2	ug/L	9465	Standard
	Be	9	15.0	33.3	**-0.0111**	0.003	29.2	ug/L	10	Standard
	Al	27	18222.6	0.9	**0.8646**	0.033	3.8	ug/L	7870	Standard
>	**Sc**	45	295488.9	1.5				ug/L	330668	Standard
	Ti	47	112.7	10.3	**0.0631**	0.013	21.1	ug/L	53	Standard
	V	51	5351.9	1.1	**0.3145**	0.009	2.8	ug/L	2687	Standard
	Cr	52	7368.5	1.2	**-0.0450**	0.011	24.4	ug/L	8408	Standard
	Cr	53	360.8	11.7	**0.1031**	0.032	30.8	ug/L	288	Standard
	Mn	55	3149.3	2.4	**0.1782**	0.012	6.5	ug/L	1080	Standard
	Co	59	222.0	5.1	**0.0162**	0.001	5.6	ug/L	117	Standard
	Ni	60	209.7	13.6	**0.0696**	0.012	17.4	ug/L	68	Standard
	Cu	65	182.7	7.7	**0.0253**	0.007	27.6	ug/L	141	Standard
	Zn	66	2544.5	2.6	**2.5964**	0.021	0.8	ug/L	138	Standard
>	**Ge**	72	259858.5	2.2				ug/L	283230	Standard
	As	75	-64.8	35.1	**0.1014**	0.027	26.2	ug/L	-198	Standard
	Se	82	23.9	18.9	**0.0197**	0.047	236.4	ug/L	21	Standard
	Se-1	77	115.3	1.3	**-0.0505**	0.049	96.9	ug/L	131	Standard
>	**Ga**	71	578.3	10.1				mg/L	607	Standard
	Rb	85	131.7	9.6				ug/L	30	Standard
	Y	89	227268.7	1.3				ug/L	251555	Standard
>	**Rh**	103	321.7	2.4				ug/L	335	Standard
	Mo	98	224.1	1.6	**0.0626**	0.002	2.6	ug/L	13	Standard
	Ag	107	244.7	18.1	**0.0343**	0.008	23.6	ug/L	36	Standard
	Cd	111	58.8	24.2	**0.0020**	0.005	245.4	mg/L	49	Standard
	Cd	114	176.1	6.8	**-0.0002**	0.001	618.0	ug/L	170	Standard
>	**In**	115	659526.3	0.9				ug/L	727802	Standard
	Sn	118	579.3	3.5	**0.0082**	0.002	29.0	ug/L	471	Standard
	Sb	123	1916.7	4.2	**0.2519**	0.008	3.3	ug/L	39	Standard
	Ba	135	18128.8	1.9	**4.5682**	0.046	1.0	ug/L	25	Standard
	Ce	140	72.7	16.5				ug/L	25	Standard
>	**Tb**	159	993047.9	1.8				ug/L	1071747	Standard
	Ho	165	13.3	31.2				ug/L	13	Standard
	Tl	203	166.7	15.4	**0.0095**	0.002	17.3	ug/L	5	Standard
	Tl	205	363.0	7.5	**0.0099**	0.001	6.8	ug/L	10	Standard
	Pb	206	463.3	5.7	**0.0060**	0.002	41.1	ug/L	382	Standard
	Pb	207	367.7	6.5	**0.0076**	0.003	33.3	ug/L	306	Standard
	Pb	208	1777.0	1.8	**0.0080**	0.001	10.9	ug/L	1443	Standard
	U	238	384.0	3.6	**0.0264**	0.001	2.8	ug/L	5	Standard
>	**Bi**	209	531196.0	0.9				ug/L	561075	Standard

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Na	23	31046.8	2.3	**1.9986**	0.054	2.7	mg/L	288	Standard
Mg	24	97466.2	4.5	**0.1640**	0.007	4.0	mg/L	218	Standard
K	39	140.0	12.9	**0.0299**	0.018	61.2	mg/L	125	Standard
Ca	43	10.0	86.6	**6.5794**	10.253	155.8	mg/L	3	Standard
Fe	54	464.9	4.3	**0.0030**	0.004	123.4	mg/L	550	Standard
Fe	57	1576.7	9.7	**0.0002**	0.003	1546.9	mg/L	1772	Standard
Sc-1	45	295488.9	1.5				mg/L	330668	Standard
Cl	35	7.7	32.8				ug/L	5	Standard
Kr	83	34.7	7.3				ug/L	38	Standard
Br	81	397.5	4.5				ug/L	344	Standard
P	31	295.8	11.7				ug/L	312	Standard
S	34	5812.8	2.0				ug/L	5594	Standard
Sr	88	80.0	6.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		91.748	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.619
	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	94.675
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 15:31:48
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: JYH 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	7	7787.0	5.0	**-91.8621**	79.154	86.2	ug/L	9465	Standard
	Be	9	74886.5	3.9	**49.4775**	2.110	4.3	ug/L	10	Standard
	Al	27	633626.4	0.8	**48.7454**	0.403	0.8	ug/L	7870	Standard
>	**Sc**	45	301036.3	0.8				ug/L	330668	Standard
	Ti	47	104975.7	0.3	**97.8982**	1.775	1.8	ug/L	53	Standard
	V	51	440902.0	0.7	**48.2946**	0.496	1.0	ug/L	2687	Standard
	Cr	52	352053.2	0.6	**48.0558**	0.954	2.0	ug/L	8408	Standard
	Cr	53	59764.3	1.7	**49.1435**	0.105	0.2	ug/L	288	Standard
	Mn	55	597865.9	0.8	**49.2930**	0.366	0.7	ug/L	1080	Standard
	Co	59	366767.8	0.6	**48.0494**	0.885	1.8	ug/L	117	Standard
	Ni	60	102210.3	0.9	**47.7990**	0.957	2.0	ug/L	68	Standard
	Cu	65	96613.7	0.9	**48.7876**	0.376	0.8	ug/L	141	Standard
	Zn	66	47181.3	0.3	**50.3859**	0.636	1.3	ug/L	138	Standard
>	**Ge**	72	262048.7	1.5				ug/L	283230	Standard
	As	75	45661.0	1.1	**49.7850**	0.592	1.2	ug/L	-198	Standard
	Se	82	4621.7	0.8	**50.2949**	0.727	1.4	ug/L	21	Standard
	Se-1	77	3450.1	0.8	**51.6922**	0.475	0.9	ug/L	131	Standard
>	**Ga**	71	596.7	3.5				mg/L	607	Standard
	Rb	85	690.0	6.9				ug/L	30	Standard
	Y	89	223624.9	0.7				ug/L	251555	Standard
>	**Rh**	103	311.7	16.1				ug/L	335	Standard
	Mo	98	317152.4	0.3	**99.6776**	1.191	1.2	ug/L	13	Standard
	Ag	107	287057.1	1.5	**51.2643**	0.258	0.5	ug/L	36	Standard
	Cd	111	144090.0	0.7	**50.1484**	0.943	1.9	mg/L	49	Standard
	Cd	114	439615.6	1.1	**50.3179**	1.141	2.3	ug/L	170	Standard
>	**In**	115	652837.8	1.2				ug/L	727802	Standard
	Sn	118	512311.0	1.4	**49.6343**	1.227	2.5	ug/L	471	Standard
	Sb	123	380174.3	1.0	**50.1417**	1.082	2.2	ug/L	39	Standard
	Ba	135	201123.8	0.5	**51.3266**	0.862	1.7	ug/L	25	Standard
	Ce	140	784.0	1.5				ug/L	25	Standard
>	**Tb**	159	1002218.2	0.6				ug/L	1071747	Standard
	Ho	165	17.7	16.3				ug/L	13	Standard
	Tl	203	746529.3	0.2	**48.5121**	0.048	0.1	ug/L	5	Standard
	Tl	205	1717471.4	0.2	**47.8523**	0.228	0.5	ug/L	10	Standard
	Pb	206	575100.3	0.4	**48.4170**	0.328	0.7	ug/L	382	Standard
	Pb	207	489253.4	0.9	**49.3314**	0.471	1.0	ug/L	306	Standard
	Pb	208	2265879.2	0.3	**48.6123**	0.263	0.5	ug/L	1443	Standard
	U	238	682531.3	0.8	**48.5050**	0.461	0.9	ug/L	5	Standard
>	**Bi**	209	518663.4	0.3				ug/L	561075	Standard

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Na	23	100725.4	0.8	**6.4431**	0.084	1.3	mg/L	288	Standard
Mg	24	2972212.2	1.8	**4.9026**	0.123	2.5	mg/L	218	Standard
K	39	5546.0	3.2	**5.2853**	0.208	3.9	mg/L	125	Standard
Ca	43	20.0	25.0	**18.1875**	5.939	32.7	mg/L	3	Standard
Fe	54	19694.7	0.8	**5.0428**	0.072	1.4	mg/L	550	Standard
Fe	57	233208.4	4.5	**5.0477**	0.268	5.3	mg/L	1772	Standard
Sc-1	45	301036.3	0.8				mg/L	330668	Standard
Cl	35	5.0	34.6				ug/L	5	Standard
Kr	83	36.3	0.9				ug/L	38	Standard
Br	81	325.8	6.6				ug/L	344	Standard
P	31	374.2	8.7				ug/L	312	Standard
S	34	5852.0	1.6				ug/L	5594	Standard
Sr	88	38.3	7.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.491		
Sc	45			
Ti	47	97.898		
V	51	96.589		
Cr	52	96.112		
Cr	53			
Mn	55	98.586		
Co	59	96.099		
Ni	60	95.598		
Cu	65	97.575		
Zn	66	100.772		
Ge	72		92.522	
As	75	99.570		
Se	82	100.590		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	99.678		
Ag	107	102.529		

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	Cd	111	100.297	
	Cd	114		
>	In	115		89.700
	Sn	118	99.269	
	Sb	123	100.283	
	Ba	135	102.653	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.024	
	Tl	205		
	Pb	206	96.834	
	Pb	207	98.663	
	Pb	208	97.225	
	U	238	97.010	
>	Bi	209		92.441
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 15:34:58
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: JYH 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	7	7623.6	2.9	**-92.8405**	71.338	76.8	ug/L	9465	Standard
	Be	9	20.0	25.0	**-0.0077**	0.004	48.2	ug/L	10	Standard
	Al	27	7208.4	4.9	**-0.0086**	0.017	198.9	ug/L	7870	Standard
>	**Sc**	45	295064.8	2.4				ug/L	330668	Standard
	Ti	47	69.3	18.5	**0.0214**	0.011	53.8	ug/L	53	Standard
	V	51	2337.5	3.9	**-0.0234**	0.006	26.2	ug/L	2687	Standard
	Cr	52	6982.9	1.4	**-0.1103**	0.010	9.4	ug/L	8408	Standard
	Cr	53	238.3	3.4	**-0.0009**	0.006	672.2	ug/L	288	Standard
	Mn	55	1135.7	8.2	**0.0092**	0.006	68.0	ug/L	1080	Standard
	Co	59	178.0	27.7	**0.0101**	0.006	60.9	ug/L	117	Standard
	Ni	60	69.0	20.9	**0.0030**	0.007	236.4	ug/L	68	Standard
	Cu	65	137.0	9.1	**0.0013**	0.007	516.7	ug/L	141	Standard
	Zn	66	145.3	12.1	**0.0037**	0.021	568.6	ug/L	138	Standard
>	**Ge**	72	262788.7	1.6				ug/L	283230	Standard
	As	75	-177.8	8.6	**-0.0201**	0.019	95.7	ug/L	-198	Standard
	Se	82	25.3	14.5	**0.0331**	0.039	117.9	ug/L	21	Standard
	Se-1	77	111.3	17.5	**-0.1299**	0.329	252.9	ug/L	131	Standard
>	**Ga**	71	545.0	4.2				mg/L	607	Standard
	Rb	85	23.3	12.4				ug/L	30	Standard
	Y	89	226160.8	1.9				ug/L	251555	Standard
>	**Rh**	103	318.3	16.5				ug/L	335	Standard
	Mo	98	275.9	47.0	**0.0806**	0.041	51.0	ug/L	13	Standard
	Ag	107	254.3	47.4	**0.0370**	0.022	58.6	ug/L	36	Standard
	Cd	111	108.0	70.6	**0.0198**	0.027	135.4	mg/L	49	Standard
	Cd	114	316.2	47.1	**0.0164**	0.017	104.6	ug/L	170	Standard
>	**In**	115	645123.2	0.5				ug/L	727802	Standard
	Sn	118	900.4	4.6	**0.0409**	0.004	10.2	ug/L	471	Standard
	Sb	123	2256.8	2.2	**0.3030**	0.007	2.3	ug/L	39	Standard
	Ba	135	116.3	68.8	**0.0185**	0.021	111.2	ug/L	25	Standard
	Ce	140	20.3	7.5				ug/L	25	Standard
>	**Tb**	159	980578.1	0.6				ug/L	1071747	Standard
	Ho	165	11.7	51.7				ug/L	13	Standard
	Tl	203	216.0	62.8	**0.0127**	0.009	67.9	ug/L	5	Standard
	Tl	205	444.3	60.4	**0.0122**	0.007	60.0	ug/L	10	Standard
	Pb	206	498.7	20.8	**0.0092**	0.008	86.9	ug/L	382	Standard
	Pb	207	391.7	16.7	**0.0102**	0.006	57.9	ug/L	306	Standard
	Pb	208	1899.0	16.5	**0.0109**	0.006	55.5	ug/L	1443	Standard
	U	238	154.0	40.5	**0.0105**	0.004	40.3	ug/L	5	Standard
>	**Bi**	209	526112.2	2.1				ug/L	561075	Standard

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Na	23	398.3	26.4	**-0.0102**	0.006	62.1	mg/L	288	Standard
Mg	24	680.0	43.5	**0.0014**	0.000	33.4	mg/L	218	Standard
K	39	128.3	11.9	**0.0184**	0.014	75.6	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	516.4	16.3	**0.0169**	0.022	127.8	mg/L	550	Standard
Fe	57	1700.1	4.0	**0.0030**	0.002	75.3	mg/L	1772	Standard
Sc-1	45	295064.8	2.4				mg/L	330668	Standard
Cl	35	5.0	105.8				ug/L	5	Standard
Kr	83	38.3	3.1				ug/L	38	Standard
Br	81	310.0	4.8				ug/L	344	Standard
P	31	346.7	19.2				ug/L	312	Standard
S	34	5785.3	2.0				ug/L	5594	Standard
Sr	88	43.3	17.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.783	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: QC Std 7
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	Cd	111	
	Cd	114	
>	In	115	88.640
	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	93.769
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1207059003
Sample Date/Time: Sunday, July 29, 2012 15:38:10
Number of Replicates: 3
Autosampler Position: 410
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	20408.8	6.0	**3071.7044**	115.652	3.8	ug/L	9465	Standard
	Be	9	30.0	66.7	**0.0002**	0.014	5862.4	ug/L	10	Standard
	Al	27	194878.9	1.8	**16.0755**	0.667	4.1	ug/L	7870	Standard
>	**Sc**	45	274426.8	3.7				ug/L	330668	Standard
	Ti	47	737.0	2.8	**0.7239**	0.013	1.8	ug/L	53	Standard
	V	51	11448.3	5.1	**1.1260**	0.027	2.4	ug/L	2687	Standard
	Cr	52	7512.2	7.2	**0.0861**	0.046	53.5	ug/L	8408	Standard
	Cr	53	525.0	13.0	**0.2853**	0.048	16.8	ug/L	288	Standard
	Mn	55	3232.0	14.0	**0.2128**	0.033	15.5	ug/L	1080	Standard
	Co	59	360.7	57.6	**0.0391**	0.029	73.3	ug/L	117	Standard
	Ni	60	388.3	8.5	**0.1732**	0.011	6.5	ug/L	68	Standard
	Cu	65	189.0	4.2	**0.0388**	0.005	14.1	ug/L	141	Standard
	Zn	66	2163.5	23.6	**2.4481**	0.701	28.6	ug/L	138	Standard
>	**Ge**	72	234945.5	3.3				ug/L	283230	Standard
	As	75	76.3	41.0	**0.2644**	0.035	13.3	ug/L	-198	Standard
	Se	82	28.5	4.9	**0.1049**	0.012	11.5	ug/L	21	Standard
	Se-1	77	113.7	8.8	**0.1107**	0.144	129.8	ug/L	131	Standard
>	**Ga**	71	505.0	18.1				mg/L	607	Standard
	Rb	85	655.0	4.0				ug/L	30	Standard
	Y	89	200381.8	2.4				ug/L	251555	Standard
>	**Rh**	103	295.0	2.9				ug/L	335	Standard
	Mo	98	727.9	8.7	**0.2494**	0.018	7.1	ug/L	13	Standard
	Ag	107	92.0	31.4	**0.0094**	0.006	58.5	ug/L	36	Standard
	Cd	111	31.6	14.5	**-0.0059**	0.002	26.5	mg/L	49	Standard
	Cd	114	122.8	23.5	**-0.0045**	0.003	77.0	ug/L	170	Standard
>	**In**	115	581775.0	1.9				ug/L	727802	Standard
	Sn	118	417.0	11.0	**-0.0021**	0.004	198.8	ug/L	471	Standard
	Sb	123	466.4	15.0	**0.0707**	0.009	13.1	ug/L	39	Standard
	Ba	135	144011.3	4.4	**41.2199**	1.040	2.5	ug/L	25	Standard
	Ce	140	1335.4	3.5				ug/L	25	Standard
>	**Tb**	159	915855.8	2.0				ug/L	1071747	Standard
	Ho	165	30.3	24.7				ug/L	13	Standard
	Tl	203	535.7	56.0	**0.0356**	0.020	55.9	ug/L	5	Standard
	Tl	205	1477.8	73.7	**0.0433**	0.031	72.0	ug/L	10	Standard
	Pb	206	622.0	52.2	**0.0231**	0.028	120.3	ug/L	382	Standard
	Pb	207	554.0	50.7	**0.0302**	0.029	95.2	ug/L	306	Standard
	Pb	208	2583.1	56.1	**0.0292**	0.032	108.6	ug/L	1443	Standard
	U	238	3528.1	9.8	**0.2652**	0.021	7.9	ug/L	5	Standard
>	**Bi**	209	489498.4	2.6				ug/L	561075	Standard

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	Na	23	95149.6	2.1	**6.6812**	0.173	2.6	mg/L	288	Standard
	Mg	24	511250.1	3.3	**0.9253**	0.006	0.6	mg/L	218	Standard
	K	39	193.3	6.0	**0.0973**	0.005	4.8	mg/L	125	Standard
	Ca	43	21.7	13.3	**22.5863**	3.275	14.5	mg/L	3	Standard
	Fe	54	302.9	20.0	**-0.0344**	0.014	42.1	mg/L	550	Standard
	Fe	57	2826.9	2.3	**0.0328**	0.002	5.7	mg/L	1772	Standard
>	**Sc-1**	45	274426.8	3.7				mg/L	330668	Standard
	Cl	35	12.3	52.8				ug/L	5	Standard
	Kr	83	34.7	12.6				ug/L	38	Standard
	Br	81	490.8	12.5				ug/L	344	Standard
	P	31	198.3	9.1				ug/L	312	Standard
	S	34	5610.2	3.5				ug/L	5594	Standard
	Sr	88	150.0	21.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		82.952	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	79.936
	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	87.243
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207059003
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Method 6020 - Summary Report

Sample ID: L1207059004
Sample Date/Time: Sunday, July 29, 2012 15:41:19
Number of Replicates: 3
Autosampler Position: 411
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	22465.0	4.4	**3498.1000**	136.247	3.9	ug/L	9465	Standard
	Be	9	8.3	34.6	**-0.0152**	0.002	13.6	ug/L	10	Standard
	Al	27	26219.4	8.2	**1.6293**	0.133	8.1	ug/L	7870	Standard
>	**Sc**	45	277763.7	2.2				ug/L	330668	Standard
	Ti	47	257.7	5.1	**0.2165**	0.013	5.8	ug/L	53	Standard
	V	51	12002.0	4.0	**1.1473**	0.039	3.4	ug/L	2687	Standard
	Cr	52	7846.4	3.1	**0.1002**	0.025	24.5	ug/L	8408	Standard
	Cr	53	600.0	8.7	**0.3377**	0.044	13.1	ug/L	288	Standard
	Mn	55	2889.6	4.3	**0.1734**	0.008	4.5	ug/L	1080	Standard
	Co	59	790.4	4.1	**0.0987**	0.004	4.3	ug/L	117	Standard
	Ni	60	392.0	10.2	**0.1687**	0.017	10.4	ug/L	68	Standard
	Cu	65	173.7	6.6	**0.0270**	0.006	23.6	ug/L	141	Standard
	Zn	66	1330.7	4.3	**1.3870**	0.046	3.3	ug/L	138	Standard
>	**Ge**	72	242660.6	1.3				ug/L	283230	Standard
	As	75	92.7	17.0	**0.2817**	0.020	7.0	ug/L	-198	Standard
	Se	82	33.8	11.4	**0.1564**	0.050	31.8	ug/L	21	Standard
	Se-1	77	119.0	8.1	**0.1376**	0.148	107.4	ug/L	131	Standard
>	**Ga**	71	498.3	11.3				mg/L	607	Standard
	Rb	85	528.3	6.7				ug/L	30	Standard
	Y	89	204761.5	2.3				ug/L	251555	Standard
>	**Rh**	103	293.3	12.8				ug/L	335	Standard
	Mo	98	739.2	6.8	**0.2463**	0.014	5.6	ug/L	13	Standard
	Ag	107	67.0	14.2	**0.0041**	0.002	49.7	ug/L	36	Standard
	Cd	111	31.9	18.1	**-0.0062**	0.002	33.5	mg/L	49	Standard
	Cd	114	98.2	11.7	**-0.0079**	0.001	16.1	ug/L	170	Standard
>	**In**	115	598054.8	1.4				ug/L	727802	Standard
	Sn	118	390.0	12.4	**-0.0062**	0.005	77.1	ug/L	471	Standard
	Sb	123	462.5	18.2	**0.0683**	0.011	16.8	ug/L	39	Standard
	Ba	135	157611.8	4.1	**43.8945**	1.476	3.4	ug/L	25	Standard
	Ce	140	174.3	2.4				ug/L	25	Standard
>	**Tb**	159	920698.2	1.1				ug/L	1071747	Standard
	Ho	165	12.7	16.4				ug/L	13	Standard
	Tl	203	405.3	9.9	**0.0264**	0.003	9.6	ug/L	5	Standard
	Tl	205	905.0	5.4	**0.0263**	0.001	4.8	ug/L	10	Standard
	Pb	206	414.7	3.3	**0.0043**	0.001	28.8	ug/L	382	Standard
	Pb	207	312.7	6.2	**0.0042**	0.002	45.1	ug/L	306	Standard
	Pb	208	1555.0	0.5	**0.0055**	0.000	7.6	ug/L	1443	Standard
	U	238	3714.5	3.5	**0.2746**	0.008	3.0	ug/L	5	Standard
>	**Bi**	209	498195.0	0.8				ug/L	561075	Standard

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⌈	**Na**	23	99235.6	1.6	**6.8831**	0.129	1.9	mg/L	288	Standard
|	**Mg**	24	548849.6	3.0	**0.9812**	0.012	1.3	mg/L	218	Standard
|	**K**	39	193.3	1.5	**0.0950**	0.007	7.7	mg/L	125	Standard
|	**Ca**	43	21.7	35.3	**22.1374**	9.085	41.0	mg/L	3	Standard
|	**Fe**	54	214.4	11.2	**-0.0603**	0.006	10.0	mg/L	550	Standard
|	**Fe**	57	2085.1	5.6	**0.0144**	0.002	14.1	mg/L	1772	Standard
⌊>	**Sc-1**	45	277763.7	2.2				mg/L	330668	Standard
	Cl	35	12.3	26.1				ug/L	5	Standard
	Kr	83	35.3	14.8				ug/L	38	Standard
	Br	81	562.5	7.9				ug/L	344	Standard
	P	31	192.5	12.5				ug/L	312	Standard
	S	34	5861.1	2.6				ug/L	5594	Standard
	Sr	88	161.7	21.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		85.676	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	82.173
	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	88.793
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207059005
Sample Date/Time: Sunday, July 29, 2012 15:44:28
Number of Replicates: 3
Autosampler Position: 412
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27556.8	5.5	**4076.5878**	302.602	7.4	ug/L	9465	Standard
	Be	9	31.7	48.2	**-0.0004**	0.011	2565.3	ug/L	10	Standard
	Al	27	305852.3	2.4	**22.7699**	1.131	5.0	ug/L	7870	Standard
>	**Sc**	45	307442.3	5.5				ug/L	330668	Standard
	Ti	47	864.0	6.0	**0.7627**	0.063	8.2	ug/L	53	Standard
	V	51	14869.7	1.1	**1.3567**	0.050	3.7	ug/L	2687	Standard
	Cr	52	8960.7	2.8	**0.1669**	0.019	11.5	ug/L	8408	Standard
	Cr	53	719.2	8.5	**0.3971**	0.067	16.9	ug/L	288	Standard
	Mn	55	4664.7	4.4	**0.3005**	0.015	5.0	ug/L	1080	Standard
	Co	59	329.0	2.7	**0.0300**	0.002	7.5	ug/L	117	Standard
	Ni	60	623.7	3.0	**0.2622**	0.008	3.1	ug/L	68	Standard
	Cu	65	240.7	8.4	**0.0538**	0.011	20.9	ug/L	141	Standard
	Zn	66	1655.4	1.7	**1.6198**	0.051	3.2	ug/L	138	Standard
>	**Ge**	72	262409.8	3.3				ug/L	283230	Standard
	As	75	145.4	14.8	**0.3302**	0.019	5.8	ug/L	-198	Standard
	Se	82	36.0	15.8	**0.1488**	0.051	34.2	ug/L	21	Standard
	Se-1	77	131.0	9.2	**0.1786**	0.243	136.0	ug/L	131	Standard
>	**Ga**	71	598.3	10.8				mg/L	607	Standard
	Rb	85	951.7	2.4				ug/L	30	Standard
	Y	89	229769.0	3.8				ug/L	251555	Standard
>	**Rh**	103	363.3	13.8				ug/L	335	Standard
	Mo	98	945.2	8.0	**0.2902**	0.021	7.1	ug/L	13	Standard
	Ag	107	68.0	22.8	**0.0032**	0.003	94.4	ug/L	36	Standard
	Cd	111	44.7	8.1	**-0.0026**	0.002	64.0	mg/L	49	Standard
	Cd	114	150.6	3.8	**-0.0029**	0.001	19.1	ug/L	170	Standard
>	**In**	115	651946.3	2.7				ug/L	727802	Standard
	Sn	118	461.0	11.7	**-0.0026**	0.006	241.0	ug/L	471	Standard
	Sb	123	354.0	11.1	**0.0486**	0.005	10.7	ug/L	39	Standard
	Ba	135	190047.2	2.2	**48.5829**	1.683	3.5	ug/L	25	Standard
	Ce	140	2148.5	2.9				ug/L	25	Standard
>	**Tb**	159	977824.5	3.5				ug/L	1071747	Standard
	Ho	165	52.7	8.8				ug/L	13	Standard
	Tl	203	486.7	5.2	**0.0301**	0.002	5.8	ug/L	5	Standard
	Tl	205	1133.7	5.0	**0.0312**	0.002	5.8	ug/L	10	Standard
	Pb	206	589.3	4.2	**0.0168**	0.001	6.4	ug/L	382	Standard
	Pb	207	486.0	4.3	**0.0197**	0.002	11.7	ug/L	306	Standard
	Pb	208	2231.7	3.2	**0.0180**	0.001	5.9	ug/L	1443	Standard
	U	238	4589.4	4.6	**0.3215**	0.020	6.1	ug/L	5	Standard
>	**Bi**	209	526217.5	2.3				ug/L	561075	Standard

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Na	23	106709.5	1.7	**6.7023**	0.488	7.3	mg/L	288	Standard
Mg	24	655184.7	2.0	**1.0604**	0.061	5.8	mg/L	218	Standard
K	39	250.0	26.2	**0.1303**	0.065	50.1	mg/L	125	Standard
Ca	43	15.0	33.3	**12.1580**	6.770	55.7	mg/L	3	Standard
Fe	54	374.4	22.2	**-0.0248**	0.022	88.8	mg/L	550	Standard
Fe	57	3817.1	0.5	**0.0468**	0.004	9.0	mg/L	1772	Standard
Sc-1	45	307442.3	5.5				mg/L	330668	Standard
Cl	35	12.7	9.1				ug/L	5	Standard
Kr	83	36.3	11.5				ug/L	38	Standard
Br	81	517.5	0.8				ug/L	344	Standard
P	31	240.8	5.2				ug/L	312	Standard
S	34	6157.1	2.6				ug/L	5594	Standard
Sr	88	178.3	14.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.649	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.577
	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	93.787
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207059005
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Method 6020 - Summary Report

Sample ID: L1207059006
Sample Date/Time: Sunday, July 29, 2012 15:47:38
Number of Replicates: 3
Autosampler Position: 413
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	27929.1	2.3	**4012.5334**	288.704	7.2	ug/L	9465	Standard
	Be	9	10.0	50.0	**-0.0149**	0.003	20.8	ug/L	10	Standard
	Al	27	40469.0	0.6	**2.4313**	0.097	4.0	ug/L	7870	Standard
>	**Sc**	45	315019.4	2.7				ug/L	330668	Standard
	Ti	47	355.7	6.0	**0.2807**	0.018	6.4	ug/L	53	Standard
	V	51	14422.4	1.7	**1.2709**	0.036	2.9	ug/L	2687	Standard
	Cr	52	8603.1	1.5	**0.0899**	0.027	30.5	ug/L	8408	Standard
	Cr	53	669.2	3.5	**0.3422**	0.019	5.4	ug/L	288	Standard
	Mn	55	1829.1	4.1	**0.0632**	0.005	8.0	ug/L	1080	Standard
	Co	59	299.0	12.2	**0.0251**	0.004	17.7	ug/L	117	Standard
	Ni	60	541.3	2.6	**0.2180**	0.006	2.7	ug/L	68	Standard
	Cu	65	202.3	2.5	**0.0320**	0.002	5.8	ug/L	141	Standard
	Zn	66	1745.4	3.8	**1.6734**	0.083	4.9	ug/L	138	Standard
>	**Ge**	72	268459.2	0.8				ug/L	283230	Standard
	As	75	100.5	54.9	**0.2793**	0.058	20.9	ug/L	-198	Standard
	Se	82	34.8	10.0	**0.1279**	0.035	27.0	ug/L	21	Standard
	Se-1	77	122.7	7.4	**0.0017**	0.126	7561.5	ug/L	131	Standard
>	**Ga**	71	551.7	1.4				mg/L	607	Standard
	Rb	85	681.7	1.1				ug/L	30	Standard
	Y	89	230811.0	3.3				ug/L	251555	Standard
>	**Rh**	103	371.7	14.8				ug/L	335	Standard
	Mo	98	924.6	2.0	**0.2815**	0.007	2.4	ug/L	13	Standard
	Ag	107	71.7	14.7	**0.0038**	0.002	51.2	ug/L	36	Standard
	Cd	111	37.4	27.0	**-0.0053**	0.004	66.8	mg/L	49	Standard
	Cd	114	107.0	12.8	**-0.0080**	0.002	19.4	ug/L	170	Standard
>	**In**	115	657240.6	0.8				ug/L	727802	Standard
	Sn	118	459.0	3.9	**-0.0032**	0.002	57.2	ug/L	471	Standard
	Sb	123	450.5	9.6	**0.0608**	0.006	10.0	ug/L	39	Standard
	Ba	135	187000.5	1.8	**47.4016**	1.205	2.5	ug/L	25	Standard
	Ce	140	160.3	5.3				ug/L	25	Standard
>	**Tb**	159	983204.9	1.6				ug/L	1071747	Standard
	Ho	165	14.3	21.3				ug/L	13	Standard
	Tl	203	400.0	5.0	**0.0243**	0.001	4.9	ug/L	5	Standard
	Tl	205	950.0	3.0	**0.0258**	0.001	3.7	ug/L	10	Standard
	Pb	206	413.0	1.3	**0.0018**	0.000	16.2	ug/L	382	Standard
	Pb	207	365.3	6.0	**0.0073**	0.002	29.6	ug/L	306	Standard
	Pb	208	1642.7	2.1	**0.0051**	0.001	15.0	ug/L	1443	Standard
	U	238	4504.3	1.5	**0.3116**	0.007	2.2	ug/L	5	Standard
>	**Bi**	209	532426.3	0.8				ug/L	561075	Standard

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	Na	23	107652.8	1.4	**6.5859**	0.271	4.1	mg/L	288	Standard
	Mg	24	664637.0	1.6	**1.0486**	0.045	4.3	mg/L	218	Standard
	K	39	258.3	4.5	**0.1314**	0.013	10.1	mg/L	125	Standard
	Ca	43	20.0	66.1	**17.3620**	15.623	90.0	mg/L	3	Standard
	Fe	54	272.2	14.5	**-0.0527**	0.012	22.3	mg/L	550	Standard
	Fe	57	2756.9	8.4	**0.0226**	0.004	16.1	mg/L	1772	Standard
>	**Sc-1**	45	315019.4	2.7				mg/L	330668	Standard
	Cl	35	16.7	18.3				ug/L	5	Standard
	Kr	83	37.8	7.5				ug/L	38	Standard
	Br	81	608.3	5.8				ug/L	344	Standard
	P	31	206.7	1.8				ug/L	312	Standard
	S	34	6431.4	3.9				ug/L	5594	Standard
	Sr	88	245.0	9.4				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		94.785	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.305
	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	94.894
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207059007
Sample Date/Time: Sunday, July 29, 2012 15:50:49
Number of Replicates: 3
Autosampler Position: 414
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	63119.6	3.1	**11342.7606**	157.506	1.4	ug/L	9465	Standard
	Be	9	18.3	56.8	**-0.0096**	0.007	69.7	ug/L	10	Standard
	Al	27	1747149.1	4.1	**129.8085**	3.496	2.7	ug/L	7870	Standard
>	**Sc**	45	313944.9	1.9				ug/L	330668	Standard
	Ti	47	4664.1	1.9	**4.1913**	0.069	1.6	ug/L	53	Standard
	V	51	8623.1	2.7	**0.6444**	0.020	3.1	ug/L	2687	Standard
	Cr	52	10242.1	2.7	**0.3088**	0.024	7.9	ug/L	8408	Standard
	Cr	53	783.4	12.3	**0.4319**	0.072	16.6	ug/L	288	Standard
	Mn	55	165822.0	3.0	**13.2422**	0.270	2.0	ug/L	1080	Standard
	Co	59	1105.0	4.0	**0.1278**	0.005	4.1	ug/L	117	Standard
	Ni	60	1448.1	3.1	**0.6301**	0.015	2.3	ug/L	68	Standard
	Cu	65	668.3	4.8	**0.2610**	0.013	4.8	ug/L	141	Standard
	Zn	66	4279.6	2.8	**4.3088**	0.086	2.0	ug/L	138	Standard
>	**Ge**	72	269243.3	0.9				ug/L	283230	Standard
	As	75	20.5	147.8	**0.1946**	0.032	16.5	ug/L	-198	Standard
	Se	82	175.7	2.5	**1.6266**	0.061	3.8	ug/L	21	Standard
	Se-1	77	221.7	10.3	**1.4938**	0.364	24.4	ug/L	131	Standard
>	**Ga**	71	760.0	10.4				mg/L	607	Standard
	Rb	85	2455.2	6.8				ug/L	30	Standard
	Y	89	226257.4	2.3				ug/L	251555	Standard
>	**Rh**	103	365.0	3.6				ug/L	335	Standard
	Mo	98	519.0	7.0	**0.1547**	0.012	7.4	ug/L	13	Standard
	Ag	107	64.3	7.3	**0.0024**	0.001	35.8	ug/L	36	Standard
	Cd	111	48.1	8.3	**-0.0017**	0.001	80.3	mg/L	49	Standard
	Cd	114	152.9	16.8	**-0.0028**	0.003	100.3	ug/L	170	Standard
>	**In**	115	657787.3	0.7				ug/L	727802	Standard
	Sn	118	675.3	2.0	**0.0176**	0.001	4.8	ug/L	471	Standard
	Sb	123	418.4	11.7	**0.0565**	0.006	11.1	ug/L	39	Standard
	Ba	135	37551.2	1.8	**9.4998**	0.116	1.2	ug/L	25	Standard
	Ce	140	10486.0	2.1				ug/L	25	Standard
>	**Tb**	159	988739.4	1.1				ug/L	1071747	Standard
	Ho	165	188.0	8.2				ug/L	13	Standard
	Tl	203	403.0	4.6	**0.0246**	0.001	5.4	ug/L	5	Standard
	Tl	205	958.7	6.5	**0.0262**	0.002	6.9	ug/L	10	Standard
	Pb	206	1279.7	4.1	**0.0735**	0.005	6.8	ug/L	382	Standard
	Pb	207	1053.0	3.5	**0.0754**	0.003	4.6	ug/L	306	Standard
	Pb	208	4963.3	3.4	**0.0752**	0.004	5.1	ug/L	1443	Standard
	U	238	16185.3	3.2	**1.1266**	0.042	3.7	ug/L	5	Standard
>	**Bi**	209	529521.9	0.6				ug/L	561075	Standard

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	Na	23	118353.8	1.3	**7.2657**	0.187	2.6	mg/L	288	Standard
	Mg	24	1342459.7	1.7	**2.1238**	0.056	2.7	mg/L	218	Standard
	K	39	235.0	25.8	**0.1107**	0.058	52.8	mg/L	125	Standard
	Ca	43	10.0	50.0	**5.8805**	5.463	92.9	mg/L	3	Standard
	Fe	54	1070.3	8.7	**0.1478**	0.019	13.1	mg/L	550	Standard
	Fe	57	11641.1	5.1	**0.2083**	0.008	4.0	mg/L	1772	Standard
>	**Sc-1**	45	313944.9	1.9				mg/L	330668	Standard
	Cl	35	14.7	10.4				ug/L	5	Standard
	Kr	83	36.1	15.7				ug/L	38	Standard
	Br	81	597.5	6.9				ug/L	344	Standard
	P	31	385.0	4.9				ug/L	312	Standard
	S	34	9851.5	1.2				ug/L	5594	Standard
	Sr	88	193.3	11.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		95.062	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.380
	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	94.376
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207059008
Sample Date/Time: Sunday, July 29, 2012 15:53:59
Number of Replicates: 3
Autosampler Position: 415
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	63096.1	2.0	**11806.1723**	300.223	2.5	ug/L	9465	Standard
	Be	9	11.7	99.0	**-0.0135**	0.008	57.4	ug/L	10	Standard
	Al	27	17635.3	3.3	**0.7823**	0.047	6.0	ug/L	7870	Standard
>	**Sc**	45	303200.8	1.6				ug/L	330668	Standard
	Ti	47	244.7	25.0	**0.1805**	0.056	31.0	ug/L	53	Standard
	V	51	5523.3	1.7	**0.3160**	0.012	3.7	ug/L	2687	Standard
	Cr	52	8650.1	2.8	**0.1007**	0.037	36.6	ug/L	8408	Standard
	Cr	53	398.3	6.4	**0.1251**	0.022	17.3	ug/L	288	Standard
	Mn	55	92389.9	1.5	**7.3916**	0.132	1.8	ug/L	1080	Standard
	Co	59	209.7	8.1	**0.0138**	0.002	16.3	ug/L	117	Standard
	Ni	60	574.7	5.4	**0.2342**	0.015	6.4	ug/L	68	Standard
	Cu	65	254.3	9.9	**0.0582**	0.012	21.4	ug/L	141	Standard
	Zn	66	1697.1	1.7	**1.6292**	0.035	2.2	ug/L	138	Standard
>	**Ge**	72	267455.3	0.3				ug/L	283230	Standard
	As	75	-56.8	31.3	**0.1123**	0.019	16.9	ug/L	-198	Standard
	Se	82	177.7	5.5	**1.6608**	0.099	6.0	ug/L	21	Standard
	Se-1	77	213.7	11.4	**1.3922**	0.360	25.9	ug/L	131	Standard
>	**Ga**	71	543.3	6.0				mg/L	607	Standard
	Rb	85	508.3	10.0				ug/L	30	Standard
	Y	89	227184.1	1.3				ug/L	251555	Standard
>	**Rh**	103	368.3	7.0				ug/L	335	Standard
	Mo	98	537.4	1.9	**0.1610**	0.003	2.0	ug/L	13	Standard
	Ag	107	43.0	14.1	**-0.0013**	0.001	85.6	ug/L	36	Standard
	Cd	111	35.0	10.0	**-0.0061**	0.001	23.0	mg/L	49	Standard
	Cd	114	98.6	9.3	**-0.0090**	0.001	12.6	ug/L	170	Standard
>	**In**	115	655751.3	1.5				ug/L	727802	Standard
	Sn	118	411.0	3.8	**-0.0078**	0.001	18.8	ug/L	471	Standard
	Sb	123	179.2	31.7	**0.0254**	0.008	30.8	ug/L	39	Standard
	Ba	135	30430.9	0.4	**7.7217**	0.114	1.5	ug/L	25	Standard
	Ce	140	113.0	14.2				ug/L	25	Standard
>	**Tb**	159	992278.6	1.3				ug/L	1071747	Standard
	Ho	165	14.0	24.7				ug/L	13	Standard
	Tl	203	336.3	14.5	**0.0204**	0.003	17.0	ug/L	5	Standard
	Tl	205	777.4	7.3	**0.0212**	0.002	7.9	ug/L	10	Standard
	Pb	206	399.0	4.8	**0.0008**	0.002	212.5	ug/L	382	Standard
	Pb	207	334.0	4.9	**0.0043**	0.001	27.6	ug/L	306	Standard
	Pb	208	1535.4	1.3	**0.0030**	0.000	12.1	ug/L	1443	Standard
	U	238	16529.7	2.0	**1.1485**	0.039	3.4	ug/L	5	Standard
>	**Bi**	209	530579.8	1.7				ug/L	561075	Standard

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Na	23	120159.6	0.5	**7.6387**	0.101	1.3	mg/L	288	Standard
Mg	24	1378019.7	0.4	**2.2571**	0.042	1.9	mg/L	218	Standard
K	39	288.3	19.5	**0.1692**	0.051	30.0	mg/L	125	Standard
Ca	43	16.7	62.4	**14.1384**	12.282	86.9	mg/L	3	Standard
Fe	54	298.9	17.7	**-0.0432**	0.015	33.6	mg/L	550	Standard
Fe	57	2866.9	4.2	**0.0273**	0.003	12.5	mg/L	1772	Standard
Sc-1	45	303200.8	1.6				mg/L	330668	Standard
Cl	35	11.3	31.0				ug/L	5	Standard
Kr	83	37.1	13.5				ug/L	38	Standard
Br	81	594.2	3.6				ug/L	344	Standard
P	31	347.5	5.4				ug/L	312	Standard
S	34	10140.9	2.8				ug/L	5594	Standard
Sr	88	163.3	6.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.430	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.100
	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	94.565
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207059008
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Method 6020 - Summary Report

Sample ID: L1207059012
Sample Date/Time: Sunday, July 29, 2012 15:57:09
Number of Replicates: 3
Autosampler Position: 416
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	34507.6	4.3	**5603.8140**	194.260	3.5	ug/L	9465	Standard
	Be	9	5.0	0.0	**-0.0179**	0.000	0.6	ug/L	10	Standard
	Al	27	542958.1	1.1	**41.1490**	0.994	2.4	ug/L	7870	Standard
>	**Sc**	45	305048.7	3.0				ug/L	330668	Standard
	Ti	47	1598.8	2.1	**1.4148**	0.046	3.2	ug/L	53	Standard
	V	51	7300.5	1.1	**0.5059**	0.004	0.7	ug/L	2687	Standard
	Cr	52	10302.8	1.8	**0.3230**	0.011	3.4	ug/L	8408	Standard
	Cr	53	877.5	3.5	**0.5110**	0.025	4.9	ug/L	288	Standard
	Mn	55	31418.9	0.4	**2.4518**	0.022	0.9	ug/L	1080	Standard
	Co	59	427.3	4.7	**0.0416**	0.002	5.1	ug/L	117	Standard
	Ni	60	778.4	1.0	**0.3267**	0.000	0.1	ug/L	68	Standard
	Cu	65	273.0	3.1	**0.0671**	0.004	5.4	ug/L	141	Standard
	Zn	66	1562.4	1.5	**1.4839**	0.029	2.0	ug/L	138	Standard
>	**Ge**	72	268115.3	1.1				ug/L	283230	Standard
	As	75	8.8	209.7	**0.1820**	0.020	10.7	ug/L	-198	Standard
	Se	82	54.7	2.8	**0.3419**	0.017	5.1	ug/L	21	Standard
	Se-1	77	143.3	9.5	**0.3183**	0.209	65.8	ug/L	131	Standard
>	**Ga**	71	583.3	5.7				mg/L	607	Standard
	Rb	85	980.0	3.1				ug/L	30	Standard
	Y	89	228125.9	3.5				ug/L	251555	Standard
>	**Rh**	103	340.0	21.4				ug/L	335	Standard
	Mo	98	1355.4	5.3	**0.4167**	0.018	4.2	ug/L	13	Standard
	Ag	107	57.7	33.6	**0.0013**	0.003	261.8	ug/L	36	Standard
	Cd	111	31.4	24.3	**-0.0074**	0.003	34.5	mg/L	49	Standard
	Cd	114	115.4	9.7	**-0.0071**	0.001	15.9	ug/L	170	Standard
>	**In**	115	655924.2	1.1				ug/L	727802	Standard
	Sn	118	443.7	5.2	**-0.0046**	0.002	37.2	ug/L	471	Standard
	Sb	123	207.0	10.2	**0.0289**	0.003	8.8	ug/L	39	Standard
	Ba	135	38951.3	1.5	**9.8827**	0.038	0.4	ug/L	25	Standard
	Ce	140	3305.7	1.7				ug/L	25	Standard
>	**Tb**	159	991929.6	1.3				ug/L	1071747	Standard
	Ho	165	55.7	17.7				ug/L	13	Standard
	Tl	203	416.3	2.0	**0.0252**	0.000	0.9	ug/L	5	Standard
	Tl	205	959.0	6.4	**0.0259**	0.001	4.8	ug/L	10	Standard
	Pb	206	647.0	3.2	**0.0208**	0.001	4.5	ug/L	382	Standard
	Pb	207	524.3	3.3	**0.0227**	0.002	8.5	ug/L	306	Standard
	Pb	208	2444.1	3.0	**0.0217**	0.001	2.4	ug/L	1443	Standard
	U	238	6578.8	0.5	**0.4533**	0.010	2.2	ug/L	5	Standard
>	**Bi**	209	534870.4	2.7				ug/L	561075	Standard

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	Na	23	109490.9	1.3	**6.9164**	0.119	1.7	mg/L	288	Standard
	Mg	24	960173.5	1.5	**1.5639**	0.050	3.2	mg/L	218	Standard
	K	39	260.0	21.4	**0.1412**	0.056	39.5	mg/L	125	Standard
	Ca	43	8.3	34.6	**4.3811**	3.561	81.3	mg/L	3	Standard
	Fe	54	485.6	10.9	**0.0049**	0.017	355.8	mg/L	550	Standard
	Fe	57	4839.1	6.5	**0.0692**	0.004	6.4	mg/L	1772	Standard
>	**Sc-1**	45	305048.7	3.0				mg/L	330668	Standard
	Cl	35	19.7	2.9				ug/L	5	Standard
	Kr	83	34.9	1.1				ug/L	38	Standard
	Br	81	625.0	6.5				ug/L	344	Standard
	P	31	271.7	6.7				ug/L	312	Standard
	S	34	7529.4	1.1				ug/L	5594	Standard
	Sr	88	181.7	5.7				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		94.664	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.124
	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	95.330
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 16:00:22
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: JYH 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	7	8877.6	3.8	**-68.6983**	72.818	106.0	ug/L	9465	Standard
	Be	9	81656.1	0.2	**47.9607**	0.941	2.0	ug/L	10	Standard
	Al	27	721711.1	1.5	**49.3615**	0.318	0.6	ug/L	7870	Standard
>	**Sc**	45	338662.1	1.8				ug/L	330668	Standard
	Ti	47	117157.2	0.3	**97.1213**	0.751	0.8	ug/L	53	Standard
	V	51	487004.3	1.0	**47.4192**	0.750	1.6	ug/L	2687	Standard
	Cr	52	392213.4	0.8	**47.5807**	0.642	1.3	ug/L	8408	Standard
	Cr	53	66843.8	1.7	**48.8648**	0.599	1.2	ug/L	288	Standard
	Mn	55	660515.0	0.5	**48.4115**	0.081	0.2	ug/L	1080	Standard
	Co	59	403621.0	1.0	**47.0046**	0.678	1.4	ug/L	117	Standard
	Ni	60	117066.2	0.4	**48.6644**	0.067	0.1	ug/L	68	Standard
	Cu	65	107862.2	0.5	**48.4227**	0.489	1.0	ug/L	141	Standard
	Zn	66	52339.2	0.6	**49.6866**	0.585	1.2	ug/L	138	Standard
>	**Ge**	72	294749.7	0.5				ug/L	283230	Standard
	As	75	51270.1	0.6	**49.6947**	0.072	0.1	ug/L	-198	Standard
	Se	82	5234.2	0.8	**50.6361**	0.200	0.4	ug/L	21	Standard
	Se-1	77	3823.8	0.7	**50.9054**	0.427	0.8	ug/L	131	Standard
>	**Ga**	71	676.7	13.4				mg/L	607	Standard
	Rb	85	715.0	8.1				ug/L	30	Standard
	Y	89	258639.9	2.8				ug/L	251555	Standard
>	**Rh**	103	370.0	15.2				ug/L	335	Standard
	Mo	98	354131.5	1.6	**100.7135**	0.395	0.4	ug/L	13	Standard
	Ag	107	322283.5	1.1	**52.0887**	0.217	0.4	ug/L	36	Standard
	Cd	111	157995.8	0.7	**49.7647**	1.007	2.0	mg/L	49	Standard
	Cd	114	484201.3	1.1	**50.1496**	0.628	1.3	ug/L	170	Standard
>	**In**	115	721390.5	1.5				ug/L	727802	Standard
	Sn	118	564053.4	1.1	**49.4473**	0.316	0.6	ug/L	471	Standard
	Sb	123	408721.6	0.5	**48.7857**	0.994	2.0	ug/L	39	Standard
	Ba	135	220348.4	0.6	**50.8893**	0.784	1.5	ug/L	25	Standard
	Ce	140	829.7	6.9				ug/L	25	Standard
>	**Tb**	159	1073567.2	0.9				ug/L	1071747	Standard
	Ho	165	19.7	20.5				ug/L	13	Standard
	Tl	203	807569.4	0.6	**47.8151**	0.366	0.8	ug/L	5	Standard
	Tl	205	1873467.5	0.7	**47.5620**	0.697	1.5	ug/L	10	Standard
	Pb	206	625209.8	0.5	**47.9615**	0.844	1.8	ug/L	382	Standard
	Pb	207	531624.4	1.0	**48.8438**	0.936	1.9	ug/L	306	Standard
	Pb	208	2462042.1	0.2	**48.1291**	0.697	1.4	ug/L	1443	Standard
	U	238	743792.8	0.9	**48.1666**	1.034	2.1	ug/L	5	Standard
>	**Bi**	209	569281.1	1.2				ug/L	561075	Standard

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	Na	23	103742.4	1.8	**5.8969**	0.160	2.7	mg/L	288	Standard
	Mg	24	3288873.1	0.5	**4.8224**	0.065	1.3	mg/L	218	Standard
	K	39	5772.8	0.9	**4.8822**	0.100	2.0	mg/L	125	Standard
	Ca	43	6.7	86.6	**1.5444**	5.979	387.1	mg/L	3	Standard
	Fe	54	22178.7	0.3	**5.0486**	0.083	1.6	mg/L	550	Standard
	Fe	57	289827.9	3.5	**5.5773**	0.098	1.8	mg/L	1772	Standard
>	**Sc-1**	45	338662.1	1.8				mg/L	330668	Standard
	Cl	35	5.0	20.0				ug/L	5	Standard
	Kr	83	39.3	12.5				ug/L	38	Standard
	Br	81	358.3	2.5				ug/L	344	Standard
	P	31	417.5	7.5				ug/L	312	Standard
	S	34	6313.0	0.3				ug/L	5594	Standard
	Sr	88	50.0	43.6				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	98.723		
>	Sc	45			
	Ti	47	97.121		
	V	51	94.838		
	Cr	52	95.161		
	Cr	53			
	Mn	55	96.823		
	Co	59	94.009		
	Ni	60	97.329		
	Cu	65	96.845		
	Zn	66	99.373		
>	Ge	72		104.067	
	As	75	99.389		
	Se	82	101.272		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	100.714		
	Ag	107	104.177		

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	Cd	111	99.529	
	Cd	114		
>	In	115		99.119
	Sn	118	98.895	
	Sb	123	97.571	
	Ba	135	101.779	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.630	
	Tl	205		
	Pb	206	95.923	
	Pb	207	97.688	
	Pb	208	96.258	
	U	238	96.333	
>	Bi	209		101.463
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 16:03:31
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: JYH 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	7	8997.7	3.3	**-23.1242**	53.029	229.3	ug/L	9465	Standard
	Be	9	20.0	75.0	**-0.0093**	0.009	96.1	ug/L	10	Standard
	Al	27	7943.8	4.0	**-0.0240**	0.022	92.5	ug/L	7870	Standard
>	**Sc**	45	334258.9	1.3				ug/L	330668	Standard
	Ti	47	60.0	13.6	**0.0074**	0.008	101.9	ug/L	53	Standard
	V	51	2520.9	1.6	**-0.0300**	0.007	23.3	ug/L	2687	Standard
	Cr	52	7835.0	1.4	**-0.0975**	0.014	14.3	ug/L	8408	Standard
	Cr	53	234.2	10.9	**-0.0228**	0.022	94.5	ug/L	288	Standard
	Mn	55	1150.4	8.6	**0.0013**	0.007	563.3	ug/L	1080	Standard
	Co	59	140.7	14.0	**0.0035**	0.002	67.0	ug/L	117	Standard
	Ni	60	74.7	23.8	**0.0023**	0.008	341.6	ug/L	68	Standard
	Cu	65	144.0	7.7	**-0.0022**	0.006	284.5	ug/L	141	Standard
	Zn	66	163.7	17.1	**0.0063**	0.028	446.4	ug/L	138	Standard
>	**Ge**	72	291038.2	1.8				ug/L	283230	Standard
	As	75	-205.2	16.6	**-0.0277**	0.030	107.9	ug/L	-198	Standard
	Se	82	26.5	8.4	**0.0184**	0.026	142.0	ug/L	21	Standard
	Se-1	77	132.7	9.7	**-0.0022**	0.180	8227.0	ug/L	131	Standard
>	**Ga**	71	576.7	8.9				mg/L	607	Standard
	Rb	85	20.0	25.0				ug/L	30	Standard
	Y	89	251668.7	2.4				ug/L	251555	Standard
>	**Rh**	103	333.3	15.1				ug/L	335	Standard
	Mo	98	216.4	25.1	**0.0552**	0.016	28.7	ug/L	13	Standard
	Ag	107	108.0	44.4	**0.0087**	0.008	90.7	ug/L	36	Standard
	Cd	111	74.8	30.8	**0.0056**	0.008	133.1	mg/L	49	Standard
	Cd	114	215.6	26.8	**0.0024**	0.006	252.8	ug/L	170	Standard
>	**In**	115	712342.7	2.5				ug/L	727802	Standard
	Sn	118	885.0	10.3	**0.0312**	0.008	26.4	ug/L	471	Standard
	Sb	123	2138.4	3.2	**0.2602**	0.007	2.5	ug/L	39	Standard
	Ba	135	49.0	32.1	**-0.0001**	0.004	4890.9	ug/L	25	Standard
	Ce	140	27.0	7.4				ug/L	25	Standard
>	**Tb**	159	1041626.2	2.3				ug/L	1071747	Standard
	Ho	165	11.3	27.0				ug/L	13	Standard
	Tl	203	96.0	59.3	**0.0046**	0.003	73.8	ug/L	5	Standard
	Tl	205	227.0	64.6	**0.0058**	0.004	65.2	ug/L	10	Standard
	Pb	206	461.7	4.9	**0.0034**	0.002	51.1	ug/L	382	Standard
	Pb	207	370.0	8.4	**0.0054**	0.003	57.4	ug/L	306	Standard
	Pb	208	1769.7	8.1	**0.0054**	0.003	55.1	ug/L	1443	Standard
	U	238	88.3	53.9	**0.0055**	0.003	57.1	ug/L	5	Standard
>	**Bi**	209	569107.8	1.7				ug/L	561075	Standard

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Na	23	346.7	16.0	**-0.0161**	0.003	20.6	mg/L	288	Standard
Mg	24	501.7	50.0	**0.0010**	0.000	34.9	mg/L	218	Standard
K	39	118.3	6.5	**-0.0052**	0.006	105.3	mg/L	125	Standard
Ca	43	3.3	173.2	**-1.8119**	6.145	339.1	mg/L	3	Standard
Fe	54	561.5	12.8	**0.0114**	0.016	141.1	mg/L	550	Standard
Fe	57	1948.5	1.9	**0.0035**	0.001	15.4	mg/L	1772	Standard
Sc-1	45	334258.9	1.3				mg/L	330668	Standard
Cl	35	5.7	36.7				ug/L	5	Standard
Kr	83	36.9	7.0				ug/L	38	Standard
Br	81	373.3	10.7				ug/L	344	Standard
P	31	392.5	16.0				ug/L	312	Standard
S	34	6166.3	1.8				ug/L	5594	Standard
Sr	88	28.3	83.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		102.757	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: QC Std 7
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	Cd	111	
	Cd	114	
>	In	115	97.876
	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	101.432
	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	

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 54 WG404188-02
Sample Date/Time: Sunday, July 29, 2012 16:06:43
Number of Replicates: 3
Autosampler Position: 417
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	8440.7	3.1	**-103.2758**	67.897	65.7	ug/L	9465	Standard
	Be	9	6.7	43.3	**-0.0172**	0.002	10.2	ug/L	10	Standard
	Al	27	7913.7	1.6	**-0.0165**	0.018	109.5	ug/L	7870	Standard
>	**Sc**	45	328660.3	1.7				ug/L	330668	Standard
	Ti	47	52.7	18.7	**0.0021**	0.009	403.3	ug/L	53	Standard
	V	51	2508.4	1.0	**-0.0258**	0.001	2.8	ug/L	2687	Standard
	Cr	52	7891.7	1.3	**-0.0686**	0.015	21.3	ug/L	8408	Standard
	Cr	53	225.8	5.5	**-0.0255**	0.010	39.5	ug/L	288	Standard
	Mn	55	1112.0	2.3	**0.0003**	0.002	777.8	ug/L	1080	Standard
	Co	59	112.3	20.4	**0.0004**	0.003	638.5	ug/L	117	Standard
	Ni	60	79.3	25.8	**0.0050**	0.009	182.3	ug/L	68	Standard
	Cu	65	151.7	7.2	**0.0027**	0.005	178.9	ug/L	141	Standard
	Zn	66	601.0	4.4	**0.4407**	0.026	5.8	ug/L	138	Standard
>	**Ge**	72	284740.1	0.8				ug/L	283230	Standard
	As	75	-214.7	9.9	**-0.0420**	0.022	52.2	ug/L	-198	Standard
	Se	82	19.4	24.3	**-0.0485**	0.046	94.8	ug/L	21	Standard
	Se-1	77	112.7	5.1	**-0.2471**	0.077	31.0	ug/L	131	Standard
>	**Ga**	71	591.7	6.3				mg/L	607	Standard
	Rb	85	18.3	31.5				ug/L	30	Standard
	Y	89	259764.8	1.5				ug/L	251555	Standard
>	**Rh**	103	315.0	7.3				ug/L	335	Standard
	Mo	98	90.1	8.7	**0.0187**	0.002	12.7	ug/L	13	Standard
	Ag	107	69.3	27.6	**0.0023**	0.003	133.5	ug/L	36	Standard
	Cd	111	61.1	16.4	**0.0011**	0.003	280.9	mg/L	49	Standard
	Cd	114	198.7	13.0	**0.0005**	0.003	518.9	ug/L	170	Standard
>	**In**	115	716223.0	0.6				ug/L	727802	Standard
	Sn	118	596.7	0.8	**0.0053**	0.001	12.9	ug/L	471	Standard
	Sb	123	533.0	15.0	**0.0659**	0.010	14.8	ug/L	39	Standard
	Ba	135	51.7	21.3	**0.0005**	0.003	498.1	ug/L	25	Standard
	Ce	140	26.7	30.5				ug/L	25	Standard
>	**Tb**	159	1047672.0	0.5				ug/L	1071747	Standard
	Ho	165	11.0	24.1				ug/L	13	Standard
	Tl	203	64.3	54.3	**0.0028**	0.002	75.5	ug/L	5	Standard
	Tl	205	148.0	55.6	**0.0038**	0.002	55.3	ug/L	10	Standard
	Pb	206	412.3	3.6	**-0.0005**	0.001	267.1	ug/L	382	Standard
	Pb	207	346.0	2.1	**0.0031**	0.001	28.2	ug/L	306	Standard
	Pb	208	1608.0	4.9	**0.0022**	0.002	67.7	ug/L	1443	Standard
	U	238	38.0	67.2	**0.0022**	0.002	74.5	ug/L	5	Standard
>	**Bi**	209	569532.0	1.0				ug/L	561075	Standard

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Na	23	388.3	22.6	**-0.0134**	0.005	35.7	mg/L	288	Standard
Mg	24	478.3	42.4	**0.0010**	0.000	29.2	mg/L	218	Standard
K	39	130.0	27.7	**0.0072**	0.033	460.0	mg/L	125	Standard
Ca	43	3.3	86.6	**-1.7705**	3.109	175.6	mg/L	3	Standard
Fe	54	559.6	8.7	**0.0134**	0.014	102.9	mg/L	550	Standard
Fe	57	1970.1	4.0	**0.0045**	0.002	38.6	mg/L	1772	Standard
> **Sc-1**	45	328660.3	1.7				mg/L	330668	Standard
Cl	35	4.7	44.6				ug/L	5	Standard
Kr	83	40.9	5.5				ug/L	38	Standard
Br	81	390.0	12.2				ug/L	344	Standard
P	31	369.2	8.5				ug/L	312	Standard
S	34	6051.2	1.2				ug/L	5594	Standard
Sr	88	71.7	20.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.533	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	98.409
	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	101.507
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 54 WG404188-02
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Method 6020 - Summary Report

Sample ID: LCSW 54 WG404188-03
Sample Date/Time: Sunday, July 29, 2012 16:09:52
Number of Replicates: 3
Autosampler Position: 418
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9644.7	1.5	**-64.1351**	25.412	39.6	ug/L	9465	Standard
	Be	9	43805.0	3.8	**23.7325**	0.805	3.4	ug/L	10	Standard
	Al	27	510401.1	0.2	**32.0227**	0.125	0.4	ug/L	7870	Standard
>	**Sc**	45	366863.4	0.5				ug/L	330668	Standard
	Ti	47	81.3	15.3	**0.0209**	0.010	45.8	ug/L	53	Standard
	V	51	267142.6	1.1	**24.5334**	0.259	1.1	ug/L	2687	Standard
	Cr	52	220443.5	0.9	**24.8567**	0.303	1.2	ug/L	8408	Standard
	Cr	53	37178.9	1.8	**25.6842**	0.468	1.8	ug/L	288	Standard
	Mn	55	367703.5	0.8	**25.5197**	0.203	0.8	ug/L	1080	Standard
	Co	59	223111.7	0.3	**24.6348**	0.080	0.3	ug/L	117	Standard
	Ni	60	64885.7	1.2	**25.5681**	0.410	1.6	ug/L	68	Standard
	Cu	65	61120.7	0.2	**25.9909**	0.101	0.4	ug/L	141	Standard
	Zn	66	30400.8	0.7	**27.3016**	0.207	0.8	ug/L	138	Standard
>	**Ge**	72	310790.2	0.6				ug/L	283230	Standard
	As	75	26272.2	0.3	**24.2397**	0.064	0.3	ug/L	-198	Standard
	Se	82	2637.3	0.7	**24.0706**	0.253	1.1	ug/L	21	Standard
	Se-1	77	1945.5	0.7	**23.6020**	0.191	0.8	ug/L	131	Standard
>	**Ga**	71	686.7	4.8				mg/L	607	Standard
	Rb	85	51.7	63.0				ug/L	30	Standard
	Y	89	275409.5	2.0				ug/L	251555	Standard
>	**Rh**	103	323.3	27.2				ug/L	335	Standard
	Mo	98	66.0	20.0	**0.0104**	0.003	32.9	ug/L	13	Standard
	Ag	107	152729.6	0.4	**23.1180**	0.185	0.8	ug/L	36	Standard
	Cd	111	84243.4	1.1	**24.8424**	0.302	1.2	mg/L	49	Standard
	Cd	114	254389.7	1.4	**24.6677**	0.199	0.8	ug/L	170	Standard
>	**In**	115	770108.3	0.6				ug/L	727802	Standard
	Sn	118	872.0	3.7	**0.0243**	0.003	11.7	ug/L	471	Standard
	Sb	123	214585.7	1.5	**23.9884**	0.246	1.0	ug/L	39	Standard
	Ba	135	115579.2	0.5	**24.9950**	0.033	0.1	ug/L	25	Standard
	Ce	140	488.7	7.5				ug/L	25	Standard
>	**Tb**	159	1107057.6	0.6				ug/L	1071747	Standard
	Ho	165	20.7	27.5				ug/L	13	Standard
	Tl	203	438398.7	0.4	**24.9465**	0.200	0.8	ug/L	5	Standard
	Tl	205	1013681.9	0.4	**24.7317**	0.146	0.6	ug/L	10	Standard
	Pb	206	342352.6	0.2	**25.2234**	0.172	0.7	ug/L	382	Standard
	Pb	207	291512.0	0.6	**25.7254**	0.269	1.0	ug/L	306	Standard
	Pb	208	1344684.1	0.2	**25.2479**	0.105	0.4	ug/L	1443	Standard
	U	238	390447.1	1.0	**24.2979**	0.308	1.3	ug/L	5	Standard
>	**Bi**	209	592309.6	0.5				ug/L	561075	Standard

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Na	23	626.7	10.7	**-0.0031**	0.003	109.1	mg/L	288	Standard
Mg	24	1326.7	4.5	**0.0021**	0.000	4.2	mg/L	218	Standard
K	39	150.0	20.8	**0.0109**	0.025	231.9	mg/L	125	Standard
Ca	43	3.3	86.6	**-2.1324**	2.795	131.1	mg/L	3	Standard
Fe	54	861.9	6.5	**0.0643**	0.011	17.7	mg/L	550	Standard
Fe	57	2248.5	4.5	**0.0054**	0.002	31.8	mg/L	1772	Standard
> **Sc-1**	45	366863.4	0.5				mg/L	330668	Standard
Cl	35	3.3	17.3				ug/L	5	Standard
Kr	83	41.0	1.6				ug/L	38	Standard
Br	81	443.3	6.7				ug/L	344	Standard
P	31	525.8	7.3				ug/L	312	Standard
S	34	6243.0	1.6				ug/L	5594	Standard
Sr	88	41.7	50.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		109.731	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	105.813
	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	105.567
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSW 54 WG404188-03
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Method 6020 - Summary Report

Sample ID: L1207065801
Sample Date/Time: Sunday, July 29, 2012 16:13:01
Number of Replicates: 3
Autosampler Position: 419
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	92567.0	2.8	**18695.4211**	327.211	1.8	ug/L	9465	Standard
	Be	9	36.7	92.8	**0.0033**	0.023	679.5	ug/L	10	Standard
	Al	27	84012.1	9.9	**6.0986**	0.769	12.6	ug/L	7870	Standard
>	**Sc**	45	295099.8	1.6				ug/L	330668	Standard
	Ti	47	339.3	3.9	**0.2730**	0.012	4.4	ug/L	53	Standard
	V	51	10526.8	3.4	**0.8781**	0.043	4.9	ug/L	2687	Standard
	Cr	52	12318.0	3.0	**0.6347**	0.058	9.1	ug/L	8408	Standard
	Cr	53	1111.7	4.4	**0.7196**	0.044	6.1	ug/L	288	Standard
	Mn	55	22537.8	2.6	**1.7746**	0.055	3.1	ug/L	1080	Standard
	Co	59	715.0	31.9	**0.0805**	0.030	37.6	ug/L	117	Standard
	Ni	60	439.3	10.4	**0.1761**	0.022	12.6	ug/L	68	Standard
	Cu	65	496.0	1.4	**0.1827**	0.004	2.3	ug/L	141	Standard
	Zn	66	1551.7	1.9	**1.5080**	0.028	1.9	ug/L	138	Standard
>	**Ge**	72	262397.0	0.4				ug/L	283230	Standard
	As	75	123.3	31.7	**0.3066**	0.043	14.0	ug/L	-198	Standard
	Se	82	33.1	5.8	**0.1180**	0.022	18.3	ug/L	21	Standard
	Se-1	77	133.7	7.3	**0.2152**	0.143	66.6	ug/L	131	Standard
>	**Ga**	71	605.0	1.7				mg/L	607	Standard
	Rb	85	44762.8	4.0				ug/L	30	Standard
	Y	89	222372.1	2.2				ug/L	251555	Standard
>	**Rh**	103	288.3	13.1				ug/L	335	Standard
	Mo	98	1277.0	7.4	**0.3975**	0.028	7.1	ug/L	13	Standard
	Ag	107	83.0	29.2	**0.0060**	0.004	71.8	ug/L	36	Standard
	Cd	111	155.6	1.4	**0.0364**	0.001	2.7	mg/L	49	Standard
	Cd	114	529.0	6.9	**0.0409**	0.004	10.4	ug/L	170	Standard
>	**In**	115	647317.8	0.5				ug/L	727802	Standard
	Sn	118	757.0	1.3	**0.0266**	0.001	2.4	ug/L	471	Standard
	Sb	123	1245.0	1.7	**0.1674**	0.002	1.3	ug/L	39	Standard
	Ba	135	28086.3	1.2	**7.2180**	0.092	1.3	ug/L	25	Standard
	Ce	140	1247.7	1.8				ug/L	25	Standard
>	**Tb**	159	984305.3	0.8				ug/L	1071747	Standard
	Ho	165	43.3	13.5				ug/L	13	Standard
	Tl	203	246.3	19.9	**0.0147**	0.003	20.5	ug/L	5	Standard
	Tl	205	540.7	17.5	**0.0149**	0.003	16.8	ug/L	10	Standard
	Pb	206	560.3	4.6	**0.0145**	0.002	15.3	ug/L	382	Standard
	Pb	207	471.3	5.8	**0.0182**	0.002	13.0	ug/L	306	Standard
	Pb	208	2222.4	5.6	**0.0178**	0.002	12.9	ug/L	1443	Standard
	U	238	1354.1	28.8	**0.0945**	0.026	28.0	ug/L	5	Standard
>	**Bi**	209	526000.9	0.8				ug/L	561075	Standard

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Na	23	116593.6	1.3	**7.6159**	0.180	2.4	mg/L	288	Standard
Mg	24	300957.8	2.8	**0.5066**	0.009	1.7	mg/L	218	Standard
K	39	2258.5	3.5	**2.1316**	0.070	3.3	mg/L	125	Standard
Ca	43	15.0	57.7	**12.6085**	10.261	81.4	mg/L	3	Standard
Fe	54	282.0	6.2	**-0.0457**	0.004	8.1	mg/L	550	Standard
Fe	57	2081.8	14.7	**0.0114**	0.006	55.2	mg/L	1772	Standard
Sc-1	45	295099.8	1.6				mg/L	330668	Standard
Cl	35	6.7	31.2				ug/L	5	Standard
Kr	83	36.0	15.3				ug/L	38	Standard
Br	81	454.2	12.4				ug/L	344	Standard
P	31	339.2	14.1				ug/L	312	Standard
S	34	7762.0	2.3				ug/L	5594	Standard
Sr	88	136.7	7.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.645	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	88.941
	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	93.749
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065802 WG404188-01
Sample Date/Time: Sunday, July 29, 2012 16:16:12
Number of Replicates: 3
Autosampler Position: 420
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	63615.0	1.8	**11638.6253**	243.141	2.1	ug/L	9465	Standard
	Be	9	21.7	35.3	**-0.0073**	0.005	68.0	ug/L	10	Standard
	Al	27	627507.5	4.8	**46.9341**	2.223	4.7	ug/L	7870	Standard
>	**Sc**	45	309478.7	0.3				ug/L	330668	Standard
	Ti	47	1751.4	1.1	**1.5654**	0.013	0.8	ug/L	53	Standard
	V	51	5158.7	1.5	**0.2793**	0.005	1.9	ug/L	2687	Standard
	Cr	52	8818.6	0.4	**0.1295**	0.005	3.5	ug/L	8408	Standard
	Cr	53	361.7	10.0	**0.0970**	0.031	31.8	ug/L	288	Standard
	Mn	55	176788.7	2.1	**14.2892**	0.284	2.0	ug/L	1080	Standard
	Co	59	3461.1	2.3	**0.4334**	0.011	2.5	ug/L	117	Standard
	Ni	60	914.4	3.0	**0.3919**	0.011	2.7	ug/L	68	Standard
	Cu	65	7280.4	1.5	**3.5565**	0.054	1.5	ug/L	141	Standard
	Zn	66	2179.8	1.5	**2.1469**	0.046	2.2	ug/L	138	Standard
>	**Ge**	72	266170.6	0.6				ug/L	283230	Standard
	As	75	-31.5	14.9	**0.1391**	0.005	3.5	ug/L	-198	Standard
	Se	82	23.0	9.4	**0.0043**	0.024	558.2	ug/L	21	Standard
	Se-1	77	114.7	5.9	**-0.1038**	0.112	108.0	ug/L	131	Standard
>	**Ga**	71	633.3	8.2				mg/L	607	Standard
	Rb	85	10997.3	3.2				ug/L	30	Standard
	Y	89	232189.0	1.1				ug/L	251555	Standard
>	**Rh**	103	340.0	5.3				ug/L	335	Standard
	Mo	98	330.5	4.3	**0.0965**	0.005	5.4	ug/L	13	Standard
	Ag	107	51.3	13.3	**0.0002**	0.001	651.4	ug/L	36	Standard
	Cd	111	83.9	7.2	**0.0109**	0.002	19.1	mg/L	49	Standard
	Cd	114	255.1	10.3	**0.0089**	0.003	30.7	ug/L	170	Standard
>	**In**	115	654188.2	0.9				ug/L	727802	Standard
	Sn	118	1275.1	3.1	**0.0759**	0.004	5.1	ug/L	471	Standard
	Sb	123	391.0	9.1	**0.0533**	0.005	9.5	ug/L	39	Standard
	Ba	135	68248.1	1.8	**17.3724**	0.382	2.2	ug/L	25	Standard
	Ce	140	21086.3	1.3				ug/L	25	Standard
>	**Tb**	159	985877.4	0.5				ug/L	1071747	Standard
	Ho	165	341.7	0.4				ug/L	13	Standard
	Tl	203	85.0	7.1	**0.0043**	0.000	8.3	ug/L	5	Standard
	Tl	205	195.0	3.6	**0.0053**	0.000	3.4	ug/L	10	Standard
	Pb	206	1603.1	3.8	**0.0989**	0.004	4.5	ug/L	382	Standard
	Pb	207	1337.1	3.2	**0.1022**	0.004	3.6	ug/L	306	Standard
	Pb	208	6298.8	2.0	**0.1020**	0.002	2.1	ug/L	1443	Standard
	U	238	482.3	5.7	**0.0330**	0.002	5.9	ug/L	5	Standard
>	**Bi**	209	534654.1	0.4				ug/L	561075	Standard

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Na	23	92645.7	1.0	**5.7605**	0.060	1.0	mg/L	288	Standard
Mg	24	319521.4	1.9	**0.5129**	0.009	1.8	mg/L	218	Standard
K	39	663.3	15.0	**0.5188**	0.095	18.4	mg/L	125	Standard
Ca	43	3.3	173.2	**-1.5346**	6.625	431.7	mg/L	3	Standard
Fe	54	595.8	0.8	**0.0308**	0.001	3.0	mg/L	550	Standard
Fe	57	6619.8	5.5	**0.1055**	0.007	6.9	mg/L	1772	Standard
Sc-1	45	309478.7	0.3				mg/L	330668	Standard
Cl	35	8.3	50.0				ug/L	5	Standard
Kr	83	37.4	9.5				ug/L	38	Standard
Br	81	397.5	8.6				ug/L	344	Standard
P	31	213.3	5.8				ug/L	312	Standard
S	34	7202.5	2.5				ug/L	5594	Standard
Sr	88	120.0	14.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.977	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065802 WG404188-01
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	Cd	111	
	Cd	114	
>	In	115	89.885
	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	95.291
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065803S WG404188-04
Sample Date/Time: Sunday, July 29, 2012 16:19:20
Number of Replicates: 3
Autosampler Position: 421
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	67213.8	0.6	**12248.4111**	278.540	2.3	ug/L	9465	Standard
	Be	9	10076.7	6.2	**6.3851**	0.330	5.2	ug/L	10	Standard
	Al	27	311395.4	2.5	**22.7427**	0.114	0.5	ug/L	7870	Standard
>	**Sc**	45	312864.9	2.3				ug/L	330668	Standard
	Ti	47	814.0	5.4	**0.6972**	0.039	5.5	ug/L	53	Standard
	V	51	58353.2	3.0	**5.9871**	0.188	3.1	ug/L	2687	Standard
	Cr	52	52292.5	2.7	**6.0326**	0.193	3.2	ug/L	8408	Standard
	Cr	53	7606.1	2.4	**5.9251**	0.138	2.3	ug/L	288	Standard
	Mn	55	254714.3	1.9	**20.4243**	0.397	1.9	ug/L	1080	Standard
	Co	59	50008.4	3.2	**6.3748**	0.194	3.0	ug/L	117	Standard
	Ni	60	13807.3	0.5	**6.2689**	0.045	0.7	ug/L	68	Standard
	Cu	65	15840.6	2.1	**7.7412**	0.159	2.1	ug/L	141	Standard
	Zn	66	8777.5	2.0	**9.0137**	0.187	2.1	ug/L	138	Standard
>	**Ge**	72	268778.7	0.2				ug/L	283230	Standard
	As	75	6237.0	2.5	**6.7791**	0.161	2.4	ug/L	-198	Standard
	Se	82	686.1	1.4	**7.0701**	0.086	1.2	ug/L	21	Standard
	Se-1	77	582.7	3.6	**6.9603**	0.309	4.4	ug/L	131	Standard
>	**Ga**	71	546.7	10.2				mg/L	607	Standard
	Rb	85	10341.9	7.3				ug/L	30	Standard
	Y	89	229822.6	3.0				ug/L	251555	Standard
>	**Rh**	103	326.7	3.2				ug/L	335	Standard
	Mo	98	228.5	25.7	**0.0635**	0.019	29.1	ug/L	13	Standard
	Ag	107	31903.9	1.2	**5.5962**	0.035	0.6	ug/L	36	Standard
	Cd	111	19467.0	2.1	**6.6470**	0.108	1.6	mg/L	49	Standard
	Cd	114	60105.5	1.1	**6.7481**	0.037	0.5	ug/L	170	Standard
>	**In**	115	663708.4	0.6				ug/L	727802	Standard
	Sn	118	828.0	7.5	**0.0316**	0.006	19.8	ug/L	471	Standard
	Sb	123	47972.3	2.3	**6.2236**	0.110	1.8	ug/L	39	Standard
	Ba	135	93587.9	2.4	**23.4816**	0.440	1.9	ug/L	25	Standard
	Ce	140	7617.6	1.8				ug/L	25	Standard
>	**Tb**	159	990052.7	0.8				ug/L	1071747	Standard
	Ho	165	141.0	10.2				ug/L	13	Standard
	Tl	203	96667.9	2.5	**6.1044**	0.150	2.5	ug/L	5	Standard
	Tl	205	223832.5	1.6	**6.0614**	0.106	1.7	ug/L	10	Standard
	Pb	206	75343.6	1.6	**6.1368**	0.091	1.5	ug/L	382	Standard
	Pb	207	64306.5	1.6	**6.2772**	0.124	2.0	ug/L	306	Standard
	Pb	208	297803.5	1.9	**6.1841**	0.120	1.9	ug/L	1443	Standard
	U	238	84812.8	2.4	**5.8578**	0.142	2.4	ug/L	5	Standard
>	**Bi**	209	533656.3	0.6				ug/L	561075	Standard

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	Na	23	96088.8	1.9	**5.9112**	0.027	0.5	mg/L	288	Standard
	Mg	24	333271.6	3.4	**0.5292**	0.018	3.4	mg/L	218	Standard
	K	39	690.0	13.4	**0.5368**	0.086	16.0	mg/L	125	Standard
	Ca	43	8.3	34.6	**4.0600**	3.214	79.2	mg/L	3	Standard
	Fe	54	417.4	5.0	**-0.0157**	0.007	45.9	mg/L	550	Standard
	Fe	57	3200.3	1.6	**0.0323**	0.002	6.5	mg/L	1772	Standard
>	**Sc-1**	45	312864.9	2.3				mg/L	330668	Standard
	Cl	35	6.0	16.7				ug/L	5	Standard
	Kr	83	39.6	5.9				ug/L	38	Standard
	Br	81	416.7	9.5				ug/L	344	Standard
	P	31	236.7	5.8				ug/L	312	Standard
	S	34	7180.0	1.7				ug/L	5594	Standard
	Sr	88	113.3	13.5				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		94.898	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	91.194
	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	95.113
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065804SD WG404188-05
Sample Date/Time: Sunday, July 29, 2012 16:22:30
Number of Replicates: 3
Autosampler Position: 422
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	66214.4	0.6	**12220.9822**	331.357	2.7	ug/L	9465	Standard
	Be	9	10528.7	1.9	**6.7639**	0.202	3.0	ug/L	10	Standard
	Al	27	322177.9	1.0	**23.8709**	0.312	1.3	ug/L	7870	Standard
>	**Sc**	45	308810.9	1.8				ug/L	330668	Standard
	Ti	47	883.4	1.9	**0.7543**	0.014	1.8	ug/L	53	Standard
	V	51	60321.5	1.3	**6.1506**	0.069	1.1	ug/L	2687	Standard
	Cr	52	53392.3	1.8	**6.1285**	0.132	2.1	ug/L	8408	Standard
	Cr	53	8055.5	1.6	**6.2391**	0.104	1.7	ug/L	288	Standard
	Mn	55	253558.2	2.0	**20.1797**	0.360	1.8	ug/L	1080	Standard
	Co	59	51314.4	1.6	**6.4933**	0.103	1.6	ug/L	117	Standard
	Ni	60	14403.5	2.9	**6.4924**	0.197	3.0	ug/L	68	Standard
	Cu	65	15764.9	0.4	**7.6466**	0.053	0.7	ug/L	141	Standard
	Zn	66	9229.5	2.5	**9.4146**	0.255	2.7	ug/L	138	Standard
>	**Ge**	72	270780.5	0.3				ug/L	283230	Standard
	As	75	6583.6	2.5	**7.0951**	0.193	2.7	ug/L	-198	Standard
	Se	82	720.7	2.7	**7.3830**	0.226	3.1	ug/L	21	Standard
	Se-1	77	611.0	4.8	**7.3201**	0.421	5.7	ug/L	131	Standard
>	**Ga**	71	613.3	14.0				mg/L	607	Standard
	Rb	85	10180.1	3.1				ug/L	30	Standard
	Y	89	229289.3	2.5				ug/L	251555	Standard
>	**Rh**	103	323.3	14.0				ug/L	335	Standard
	Mo	98	202.7	24.1	**0.0557**	0.014	25.8	ug/L	13	Standard
	Ag	107	33119.2	1.3	**5.8371**	0.124	2.1	ug/L	36	Standard
	Cd	111	20110.9	1.3	**6.9003**	0.164	2.4	mg/L	49	Standard
	Cd	114	61462.8	1.3	**6.9336**	0.163	2.3	ug/L	170	Standard
>	**In**	115	660712.1	1.1				ug/L	727802	Standard
	Sn	118	683.3	6.2	**0.0180**	0.003	18.3	ug/L	471	Standard
	Sb	123	50872.8	1.5	**6.6310**	0.148	2.2	ug/L	39	Standard
	Ba	135	93228.7	2.0	**23.5043**	0.719	3.1	ug/L	25	Standard
	Ce	140	6507.7	2.1				ug/L	25	Standard
>	**Tb**	159	986518.8	0.5				ug/L	1071747	Standard
	Ho	165	116.3	1.3				ug/L	13	Standard
	Tl	203	98488.5	2.0	**6.2195**	0.100	1.6	ug/L	5	Standard
	Tl	205	227289.7	1.5	**6.1550**	0.070	1.1	ug/L	10	Standard
	Pb	206	77959.4	1.9	**6.3510**	0.099	1.6	ug/L	382	Standard
	Pb	207	65894.7	1.5	**6.4327**	0.069	1.1	ug/L	306	Standard
	Pb	208	305073.0	1.5	**6.3359**	0.068	1.1	ug/L	1443	Standard
	U	238	87265.4	2.6	**6.0271**	0.134	2.2	ug/L	5	Standard
>	**Bi**	209	533629.2	0.4				ug/L	561075	Standard

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Na	23	96343.7	0.7	**6.0058**	0.079	1.3	mg/L	288	Standard
Mg	24	336330.1	2.5	**0.5409**	0.004	0.8	mg/L	218	Standard
K	39	690.0	7.8	**0.5459**	0.061	11.1	mg/L	125	Standard
Ca	43	10.0	86.6	**5.9955**	9.834	164.0	mg/L	3	Standard
Fe	54	445.9	11.2	**-0.0073**	0.011	150.7	mg/L	550	Standard
Fe	57	3713.8	0.9	**0.0441**	0.001	2.9	mg/L	1772	Standard
Sc-1	45	308810.9	1.8				mg/L	330668	Standard
Cl	35	7.0	42.9				ug/L	5	Standard
Kr	83	35.6	3.5				ug/L	38	Standard
Br	81	384.2	3.1				ug/L	344	Standard
P	31	211.7	14.0				ug/L	312	Standard
S	34	6915.7	0.6				ug/L	5594	Standard
Sr	88	121.7	17.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		95.605	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065804SD WG404188-05
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	Cd	111	
	Cd	114	
>	In	115	90.782
	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	95.108
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207065804SD WG404188-05
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065806
Sample Date/Time: Sunday, July 29, 2012 16:25:39
Number of Replicates: 3
Autosampler Position: 423
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	7520.2	2.6	**-92.3650**	33.051	35.8	ug/L	9465	Standard
	Be	9	10.0	100.0	**-0.0143**	0.007	47.7	ug/L	10	Standard
	Al	27	15956.7	3.2	**0.7047**	0.026	3.7	ug/L	7870	Standard
>	**Sc**	45	290816.3	1.2				ug/L	330668	Standard
	Ti	47	49.3	16.4	**0.0030**	0.008	251.5	ug/L	53	Standard
	V	51	2408.8	3.1	**-0.0143**	0.007	51.4	ug/L	2687	Standard
	Cr	52	7161.7	1.5	**-0.0807**	0.010	12.8	ug/L	8408	Standard
	Cr	53	195.0	19.2	**-0.0358**	0.031	85.6	ug/L	288	Standard
	Mn	55	1318.4	2.5	**0.0248**	0.003	11.5	ug/L	1080	Standard
	Co	59	130.3	6.2	**0.0040**	0.001	25.1	ug/L	117	Standard
	Ni	60	195.3	4.6	**0.0623**	0.005	7.4	ug/L	68	Standard
	Cu	65	189.0	10.9	**0.0279**	0.010	35.5	ug/L	141	Standard
	Zn	66	1338.1	1.3	**1.2843**	0.018	1.4	ug/L	138	Standard
>	**Ge**	72	261523.4	0.5				ug/L	283230	Standard
	As	75	-172.3	21.9	**-0.0147**	0.040	274.0	ug/L	-198	Standard
	Se	82	24.8	9.3	**0.0283**	0.024	84.7	ug/L	21	Standard
	Se-1	77	109.7	5.5	**-0.1504**	0.103	68.3	ug/L	131	Standard
>	**Ga**	71	541.7	8.0				mg/L	607	Standard
	Rb	85	66.7	38.5				ug/L	30	Standard
	Y	89	225908.5	1.2				ug/L	251555	Standard
>	**Rh**	103	315.0	7.3				ug/L	335	Standard
	Mo	98	18.1	44.9	**-0.0014**	0.003	195.1	ug/L	13	Standard
	Ag	107	78.3	12.8	**0.0053**	0.002	33.9	ug/L	36	Standard
	Cd	111	32.6	6.4	**-0.0067**	0.001	12.8	mg/L	49	Standard
	Cd	114	113.3	12.3	**-0.0070**	0.001	20.3	ug/L	170	Standard
>	**In**	115	641686.1	1.5				ug/L	727802	Standard
	Sn	118	759.4	7.0	**0.0275**	0.006	20.1	ug/L	471	Standard
	Sb	123	215.6	26.1	**0.0307**	0.007	23.2	ug/L	39	Standard
	Ba	135	121.3	49.0	**0.0198**	0.015	74.8	ug/L	25	Standard
	Ce	140	64.3	4.5				ug/L	25	Standard
>	**Tb**	159	962638.4	1.1				ug/L	1071747	Standard
	Ho	165	12.0	33.3				ug/L	13	Standard
	Tl	203	93.7	89.1	**0.0049**	0.005	108.1	ug/L	5	Standard
	Tl	205	217.3	82.0	**0.0060**	0.005	81.4	ug/L	10	Standard
	Pb	206	423.7	10.8	**0.0029**	0.004	131.8	ug/L	382	Standard
	Pb	207	325.0	19.4	**0.0034**	0.006	176.9	ug/L	306	Standard
	Pb	208	1563.7	12.7	**0.0037**	0.004	112.2	ug/L	1443	Standard
	U	238	44.0	47.5	**0.0028**	0.001	51.0	ug/L	5	Standard
>	**Bi**	209	529692.7	0.9				ug/L	561075	Standard

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Na	23	1865.1	5.1	**0.0879**	0.005	5.5	mg/L	288	Standard
Mg	24	380.0	16.0	**0.0009**	0.000	10.3	mg/L	218	Standard
K	39	113.3	16.7	**0.0052**	0.019	362.5	mg/L	125	Standard
Ca	43	5.0	100.0	**0.7064**	6.018	852.0	mg/L	3	Standard
Fe	54	239.5	16.8	**-0.0561**	0.011	19.6	mg/L	550	Standard
Fe	57	1710.1	6.9	**0.0038**	0.003	72.3	mg/L	1772	Standard
Sc-1	45	290816.3	1.2				mg/L	330668	Standard
Cl	35	4.0	50.0				ug/L	5	Standard
Kr	83	36.1	5.4				ug/L	38	Standard
Br	81	303.3	4.7				ug/L	344	Standard
P	31	156.7	9.8				ug/L	312	Standard
S	34	5212.6	1.3				ug/L	5594	Standard
Sr	88	40.0	43.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		92.336	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	88.168
	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	94.407
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065806PS WG404837-01
Sample Date/Time: Sunday, July 29, 2012 16:28:48
Number of Replicates: 3
Autosampler Position: 424
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9351.2	0.3	**-30.4269**	40.939	134.5	ug/L	9465	Standard
	Be	9	80066.3	4.4	**45.6398**	2.180	4.8	ug/L	10	Standard
	Al	27	696553.3	2.3	**46.2097**	1.437	3.1	ug/L	7870	Standard
>	**Sc**	45	348983.4	2.6				ug/L	330668	Standard
	Ti	47	62.3	21.2	**0.0077**	0.011	145.0	ug/L	53	Standard
	V	51	470482.6	2.1	**44.9384**	0.629	1.4	ug/L	2687	Standard
	Cr	52	384719.3	1.7	**45.7617**	0.781	1.7	ug/L	8408	Standard
	Cr	53	64236.8	2.8	**46.0704**	0.912	2.0	ug/L	288	Standard
	Mn	55	642088.3	2.5	**46.1823**	1.154	2.5	ug/L	1080	Standard
	Co	59	393645.6	2.4	**44.9865**	0.957	2.1	ug/L	117	Standard
	Ni	60	113727.3	1.4	**46.3952**	0.468	1.0	ug/L	68	Standard
	Cu	65	107321.8	1.9	**47.2788**	0.650	1.4	ug/L	141	Standard
	Zn	66	51650.9	2.3	**48.1124**	0.934	1.9	ug/L	138	Standard
>	**Ge**	72	300347.3	1.3				ug/L	283230	Standard
	As	75	47893.0	1.6	**45.5724**	0.647	1.4	ug/L	-198	Standard
	Se	82	4873.7	1.1	**46.2558**	0.899	1.9	ug/L	21	Standard
	Se-1	77	3570.8	1.8	**46.4985**	0.982	2.1	ug/L	131	Standard
>	**Ga**	71	678.3	5.0				mg/L	607	Standard
	Rb	85	58.3	26.2				ug/L	30	Standard
	Y	89	266863.7	2.3				ug/L	251555	Standard
>	**Rh**	103	351.7	12.1				ug/L	335	Standard
	Mo	98	150.2	12.3	**0.0346**	0.005	15.8	ug/L	13	Standard
	Ag	107	317686.0	3.1	**50.1377**	1.455	2.9	ug/L	36	Standard
	Cd	111	151053.7	1.5	**46.4515**	0.572	1.2	mg/L	49	Standard
	Cd	114	460057.2	1.8	**46.5259**	0.741	1.6	ug/L	170	Standard
>	**In**	115	738722.6	0.9				ug/L	727802	Standard
	Sn	118	1381.7	3.7	**0.0710**	0.005	7.3	ug/L	471	Standard
	Sb	123	390582.0	2.2	**45.5193**	1.070	2.4	ug/L	39	Standard
	Ba	135	206100.6	1.9	**46.4767**	0.966	2.1	ug/L	25	Standard
	Ce	140	90.0	9.9				ug/L	25	Standard
>	**Tb**	159	1075549.5	1.5				ug/L	1071747	Standard
	Ho	165	14.0	32.7				ug/L	13	Standard
	Tl	203	780035.2	1.1	**45.4298**	0.772	1.7	ug/L	5	Standard
	Tl	205	1804567.3	1.9	**45.0639**	1.167	2.6	ug/L	10	Standard
	Pb	206	610365.3	1.9	**46.0536**	1.161	2.5	ug/L	382	Standard
	Pb	207	517594.3	1.1	**46.7723**	0.805	1.7	ug/L	306	Standard
	Pb	208	2394969.2	1.5	**46.0498**	1.017	2.2	ug/L	1443	Standard
	U	238	714504.3	2.5	**45.5110**	1.442	3.2	ug/L	5	Standard
>	**Bi**	209	578753.8	0.7				ug/L	561075	Standard

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Na	23	2133.5	7.6	**0.0822**	0.008	9.9	mg/L	288	Standard
Mg	24	535.0	2.5	**0.0011**	0.000	3.4	mg/L	218	Standard
K	39	133.3	17.3	**0.0033**	0.022	663.1	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.6248**	3.005	82.9	mg/L	3	Standard
Fe	54	633.0	10.0	**0.0223**	0.018	80.4	mg/L	550	Standard
Fe	57	2100.1	7.3	**0.0047**	0.004	77.6	mg/L	1772	Standard
Sc-1	45	348983.4	2.6				mg/L	330668	Standard
Cl	35	4.7	61.9				ug/L	5	Standard
Kr	83	41.1	2.3				ug/L	38	Standard
Br	81	381.7	1.6				ug/L	344	Standard
P	31	349.2	8.5				ug/L	312	Standard
S	34	5634.4	3.4				ug/L	5594	Standard
Sr	88	28.3	36.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		106.044	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	101.500
	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	103.151
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065806SDL WG404837-02
Sample Date/Time: Sunday, July 29, 2012 16:31:57
Number of Replicates: 3
Autosampler Position: 425
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	8694.2	4.0	**-30.6819**	44.515	145.1	ug/L	9465	Standard
	Be	9	10.0	86.6	**-0.0150**	0.005	36.3	ug/L	10	Standard
	Al	27	13150.7	1.3	**0.3696**	0.024	6.6	ug/L	7870	Standard
>	**Sc**	45	324304.5	1.6				ug/L	330668	Standard
	Ti	47	45.0	30.1	**-0.0041**	0.012	288.7	ug/L	53	Standard
	V	51	2686.4	0.5	**-0.0056**	0.002	27.1	ug/L	2687	Standard
	Cr	52	8191.9	1.5	**-0.0215**	0.020	92.2	ug/L	8408	Standard
	Cr	53	232.5	1.1	**-0.0190**	0.001	6.5	ug/L	288	Standard
	Mn	55	2040.8	3.6	**0.0721**	0.006	8.7	ug/L	1080	Standard
	Co	59	142.0	13.4	**0.0042**	0.002	57.1	ug/L	117	Standard
	Ni	60	178.0	5.4	**0.0480**	0.004	8.4	ug/L	68	Standard
	Cu	65	172.7	6.6	**0.0132**	0.006	41.9	ug/L	141	Standard
	Zn	66	2304.8	1.1	**2.1384**	0.027	1.3	ug/L	138	Standard
>	**Ge**	72	282462.3	0.4				ug/L	283230	Standard
	As	75	-180.2	10.3	**-0.0089**	0.018	204.3	ug/L	-198	Standard
	Se	82	27.3	5.6	**0.0335**	0.015	46.1	ug/L	21	Standard
	Se-1	77	119.7	5.6	**-0.1329**	0.103	77.6	ug/L	131	Standard
>	**Ga**	71	623.3	5.3				mg/L	607	Standard
	Rb	85	25.0	20.0				ug/L	30	Standard
	Y	89	248952.2	1.6				ug/L	251555	Standard
>	**Rh**	103	293.3	11.3				ug/L	335	Standard
	Mo	98	35.3	4.0	**0.0033**	0.000	9.8	ug/L	13	Standard
	Ag	107	96.0	10.9	**0.0072**	0.002	27.3	ug/L	36	Standard
	Cd	111	61.6	17.2	**0.0019**	0.003	168.3	mg/L	49	Standard
	Cd	114	172.2	8.3	**-0.0016**	0.001	77.8	ug/L	170	Standard
>	**In**	115	693061.5	1.4				ug/L	727802	Standard
	Sn	118	699.3	5.8	**0.0165**	0.005	27.7	ug/L	471	Standard
	Sb	123	1937.5	3.6	**0.2424**	0.008	3.2	ug/L	39	Standard
	Ba	135	65.3	3.9	**0.0042**	0.001	16.1	ug/L	25	Standard
	Ce	140	48.7	9.7				ug/L	25	Standard
>	**Tb**	159	1031677.4	0.4				ug/L	1071747	Standard
	Ho	165	10.0	62.5				ug/L	13	Standard
	Tl	203	89.0	33.1	**0.0043**	0.002	39.4	ug/L	5	Standard
	Tl	205	221.7	28.2	**0.0058**	0.002	26.8	ug/L	10	Standard
	Pb	206	433.0	9.1	**0.0020**	0.003	157.6	ug/L	382	Standard
	Pb	207	377.3	6.9	**0.0069**	0.002	29.5	ug/L	306	Standard
	Pb	208	1715.7	8.1	**0.0052**	0.002	45.9	ug/L	1443	Standard
	U	238	102.3	45.6	**0.0065**	0.003	45.8	ug/L	5	Standard
>	**Bi**	209	554489.1	1.2				ug/L	561075	Standard

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Na	23	676.7	3.0	**0.0042**	0.001	29.1	mg/L	288	Standard
Mg	24	341.7	19.9	**0.0008**	0.000	12.1	mg/L	218	Standard
K	39	146.7	17.2	**0.0234**	0.021	91.8	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.5648**	3.109	87.2	mg/L	3	Standard
Fe	54	517.3	9.6	**0.0049**	0.014	282.2	mg/L	550	Standard
Fe	57	1908.5	6.0	**0.0038**	0.002	45.6	mg/L	1772	Standard
Sc-1	45	324304.5	1.6				mg/L	330668	Standard
Cl	35	2.7	21.7				ug/L	5	Standard
Kr	83	37.9	4.5				ug/L	38	Standard
Br	81	389.2	4.3				ug/L	344	Standard
P	31	276.7	13.6				ug/L	312	Standard
S	34	5586.9	3.2				ug/L	5594	Standard
Sr	88	43.3	40.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.729	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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Cd	111	
Cd	114	
> In	115	95.227
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	98.826
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 16:35:09
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: JYH 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	7	8795.9	1.0	**-61.3586**	4.499	7.3	ug/L	9465	Standard
	Be	9	81788.6	2.6	**48.6946**	1.251	2.6	ug/L	10	Standard
	Al	27	705156.5	1.5	**48.8913**	0.677	1.4	ug/L	7870	Standard
>	**Sc**	45	334032.2	1.0				ug/L	330668	Standard
	Ti	47	115686.7	1.0	**96.6629**	0.547	0.6	ug/L	53	Standard
	V	51	485587.9	0.9	**47.6566**	0.214	0.4	ug/L	2687	Standard
	Cr	52	389143.7	0.5	**47.5829**	0.224	0.5	ug/L	8408	Standard
	Cr	53	65386.7	1.9	**48.1780**	0.708	1.5	ug/L	288	Standard
	Mn	55	653738.1	0.8	**48.2962**	0.219	0.5	ug/L	1080	Standard
	Co	59	405612.3	0.7	**47.6109**	0.070	0.1	ug/L	117	Standard
	Ni	60	116055.8	0.9	**48.6289**	0.368	0.8	ug/L	68	Standard
	Cu	65	108688.5	1.7	**49.1795**	0.485	1.0	ug/L	141	Standard
	Zn	66	52014.5	0.8	**49.7699**	0.202	0.4	ug/L	138	Standard
>	**Ge**	72	292421.0	0.8				ug/L	283230	Standard
	As	75	50272.0	1.2	**49.1180**	0.569	1.2	ug/L	-198	Standard
	Se	82	5093.2	1.1	**49.6608**	0.541	1.1	ug/L	21	Standard
	Se-1	77	3738.8	1.6	**50.1443**	0.911	1.8	ug/L	131	Standard
>	**Ga**	71	618.3	14.7				mg/L	607	Standard
	Rb	85	761.7	8.2				ug/L	30	Standard
	Y	89	254527.8	2.8				ug/L	251555	Standard
>	**Rh**	103	341.7	13.1				ug/L	335	Standard
	Mo	98	350289.5	0.2	**101.7025**	0.154	0.2	ug/L	13	Standard
	Ag	107	315742.4	0.6	**52.0958**	0.304	0.6	ug/L	36	Standard
	Cd	111	153580.3	0.9	**49.3758**	0.563	1.1	mg/L	49	Standard
	Cd	114	475533.4	0.4	**50.2769**	0.239	0.5	ug/L	170	Standard
>	**In**	115	706628.5	0.3				ug/L	727802	Standard
	Sn	118	548627.3	0.5	**49.0977**	0.403	0.8	ug/L	471	Standard
	Sb	123	403811.0	0.5	**49.1963**	0.133	0.3	ug/L	39	Standard
	Ba	135	214676.9	0.6	**50.6077**	0.197	0.4	ug/L	25	Standard
	Ce	140	826.7	3.1				ug/L	25	Standard
>	**Tb**	159	1049957.4	0.6				ug/L	1071747	Standard
	Ho	165	17.7	3.3				ug/L	13	Standard
	Tl	203	792945.5	0.3	**48.4731**	0.536	1.1	ug/L	5	Standard
	Tl	205	1843960.3	1.0	**48.3269**	0.205	0.4	ug/L	10	Standard
	Pb	206	615714.1	1.2	**48.7597**	0.454	0.9	ug/L	382	Standard
	Pb	207	524986.7	0.8	**49.7930**	0.144	0.3	ug/L	306	Standard
	Pb	208	2420343.3	0.7	**48.8452**	0.332	0.7	ug/L	1443	Standard
	U	238	729084.3	0.9	**48.7415**	0.749	1.5	ug/L	5	Standard
>	**Bi**	209	551387.4	0.8				ug/L	561075	Standard

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Na	23	102403.3	1.4	**5.9002**	0.077	1.3	mg/L	288	Standard
Mg	24	3278444.3	1.6	**4.8738**	0.127	2.6	mg/L	218	Standard
K	39	5717.7	3.8	**4.9029**	0.212	4.3	mg/L	125	Standard
Ca	43	18.3	56.8	**14.1198**	11.198	79.3	mg/L	3	Standard
Fe	54	21567.6	3.9	**4.9766**	0.249	5.0	mg/L	550	Standard
Fe	57	293135.4	3.3	**5.7204**	0.136	2.4	mg/L	1772	Standard
Sc-1	45	334032.2	1.0				mg/L	330668	Standard
Cl	35	2.0	50.0				ug/L	5	Standard
Kr	83	38.3	13.1				ug/L	38	Standard
Br	81	412.5	10.3				ug/L	344	Standard
P	31	352.5	8.2				ug/L	312	Standard
S	34	6213.8	1.5				ug/L	5594	Standard
Sr	88	55.0	24.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.783		
Sc	45			
Ti	47	96.663		
V	51	95.313		
Cr	52	95.166		
Cr	53			
Mn	55	96.592		
Co	59	95.222		
Ni	60	97.258		
Cu	65	98.359		
Zn	66	99.540		
Ge	72		103.245	
As	75	98.236		
Se	82	99.322		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	101.703		
Ag	107	104.192		

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	Cd	111	98.752	
	Cd	114		
>	In	115		97.091
	Sn	118	98.195	
	Sb	123	98.393	
	Ba	135	101.215	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.946	
	Tl	205		
	Pb	206	97.519	
	Pb	207	99.586	
	Pb	208	97.690	
	U	238	97.483	
>	Bi	209		98.273
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 16:38:20
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: JYH 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	7	8414.0	2.6	**-90.7273**	61.485	67.8	ug/L	9465	Standard
	Be	9	15.0	57.7	**-0.0120**	0.005	44.6	ug/L	10	Standard
	Al	27	7820.4	3.6	**-0.0173**	0.018	102.5	ug/L	7870	Standard
>	**Sc**	45	325167.5	1.1				ug/L	330668	Standard
	Ti	47	63.0	13.8	**0.0111**	0.007	67.0	ug/L	53	Standard
	V	51	2523.7	1.8	**-0.0236**	0.006	27.3	ug/L	2687	Standard
	Cr	52	7774.7	0.8	**-0.0809**	0.011	13.9	ug/L	8408	Standard
	Cr	53	233.3	3.8	**-0.0193**	0.008	40.0	ug/L	288	Standard
	Mn	55	1130.0	1.8	**0.0019**	0.002	83.5	ug/L	1080	Standard
	Co	59	142.7	19.9	**0.0042**	0.004	84.8	ug/L	117	Standard
	Ni	60	78.7	13.2	**0.0047**	0.005	97.6	ug/L	68	Standard
	Cu	65	154.7	12.0	**0.0044**	0.009	204.8	ug/L	141	Standard
	Zn	66	156.7	11.5	**0.0032**	0.019	585.0	ug/L	138	Standard
>	**Ge**	72	283993.2	0.7				ug/L	283230	Standard
	As	75	-176.8	15.9	**-0.0046**	0.028	617.0	ug/L	-198	Standard
	Se	82	30.2	23.8	**0.0624**	0.074	119.0	ug/L	21	Standard
	Se-1	77	116.7	17.0	**-0.1860**	0.280	150.3	ug/L	131	Standard
>	**Ga**	71	568.3	8.4				mg/L	607	Standard
	Rb	85	15.0	57.7				ug/L	30	Standard
	Y	89	245015.5	1.5				ug/L	251555	Standard
>	**Rh**	103	326.7	26.0				ug/L	335	Standard
	Mo	98	206.9	12.6	**0.0535**	0.008	14.7	ug/L	13	Standard
	Ag	107	122.7	20.8	**0.0115**	0.004	38.1	ug/L	36	Standard
	Cd	111	67.8	40.6	**0.0038**	0.009	238.9	mg/L	49	Standard
	Cd	114	226.8	25.3	**0.0040**	0.006	155.2	ug/L	170	Standard
>	**In**	115	699683.0	0.6				ug/L	727802	Standard
	Sn	118	852.4	7.2	**0.0297**	0.006	20.2	ug/L	471	Standard
	Sb	123	2333.9	4.2	**0.2890**	0.013	4.4	ug/L	39	Standard
	Ba	135	59.7	53.5	**0.0027**	0.008	281.9	ug/L	25	Standard
	Ce	140	25.7	23.8				ug/L	25	Standard
>	**Tb**	159	1029389.8	0.4				ug/L	1071747	Standard
	Ho	165	12.0	16.7				ug/L	13	Standard
	Tl	203	117.3	53.1	**0.0061**	0.004	62.2	ug/L	5	Standard
	Tl	205	249.3	56.9	**0.0065**	0.004	56.7	ug/L	10	Standard
	Pb	206	421.3	8.0	**0.0012**	0.003	215.0	ug/L	382	Standard
	Pb	207	382.7	13.3	**0.0076**	0.005	63.2	ug/L	306	Standard
	Pb	208	1728.7	9.6	**0.0056**	0.003	58.2	ug/L	1443	Standard
	U	238	103.3	39.5	**0.0067**	0.003	40.5	ug/L	5	Standard
>	**Bi**	209	552654.4	0.5				ug/L	561075	Standard

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	Na	23	331.7	16.7	**-0.0164**	0.004	21.5	mg/L	288	Standard
	Mg	24	515.0	17.0	**0.0011**	0.000	12.6	mg/L	218	Standard
	K	39	116.7	15.1	**-0.0039**	0.015	389.4	mg/L	125	Standard
	Ca	43	1.7	173.2	**-3.5608**	3.116	87.5	mg/L	3	Standard
	Fe	54	567.8	7.7	**0.0168**	0.012	70.4	mg/L	550	Standard
	Fe	57	1943.5	5.2	**0.0044**	0.002	48.1	mg/L	1772	Standard
>	**Sc-1**	45	325167.5	1.1				mg/L	330668	Standard
	Cl	35	6.0	16.7				ug/L	5	Standard
	Kr	83	41.4	4.4				ug/L	38	Standard
	Br	81	355.8	10.3				ug/L	344	Standard
	P	31	367.5	8.2				ug/L	312	Standard
	S	34	5872.8	2.6				ug/L	5594	Standard
	Sr	88	41.7	30.2				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		100.270	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	96.136
	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	98.499
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065807
Sample Date/Time: Sunday, July 29, 2012 16:41:31
Number of Replicates: 3
Autosampler Position: 426
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	96902.3	1.7	**20099.3614**	392.247	2.0	ug/L	9465	Standard
	Be	9	10.0	50.0	**-0.0143**	0.004	25.0	ug/L	10	Standard
	Al	27	108963.8	0.9	**8.2530**	0.249	3.0	ug/L	7870	Standard
>	**Sc**	45	289160.5	1.9				ug/L	330668	Standard
	Ti	47	400.0	7.7	**0.3287**	0.030	9.0	ug/L	53	Standard
	V	51	10871.8	2.1	**0.9129**	0.020	2.2	ug/L	2687	Standard
	Cr	52	12971.2	2.1	**0.7210**	0.031	4.3	ug/L	8408	Standard
	Cr	53	1246.7	12.8	**0.8282**	0.131	15.8	ug/L	288	Standard
	Mn	55	24004.3	0.5	**1.8905**	0.018	1.0	ug/L	1080	Standard
	Co	59	649.0	7.8	**0.0716**	0.007	9.4	ug/L	117	Standard
	Ni	60	437.3	2.2	**0.1746**	0.004	2.1	ug/L	68	Standard
	Cu	65	420.3	5.6	**0.1439**	0.011	7.7	ug/L	141	Standard
	Zn	66	2115.1	4.5	**2.1047**	0.092	4.4	ug/L	138	Standard
>	**Ge**	72	263060.3	0.4				ug/L	283230	Standard
	As	75	155.9	18.8	**0.3414**	0.031	9.1	ug/L	-198	Standard
	Se	82	29.3	6.2	**0.0764**	0.019	24.5	ug/L	21	Standard
	Se-1	77	114.0	7.5	**-0.0933**	0.139	149.4	ug/L	131	Standard
>	**Ga**	71	581.7	12.2				mg/L	607	Standard
	Rb	85	51106.1	2.0				ug/L	30	Standard
	Y	89	218955.8	0.8				ug/L	251555	Standard
>	**Rh**	103	343.3	4.4				ug/L	335	Standard
	Mo	98	1427.1	2.6	**0.4517**	0.012	2.7	ug/L	13	Standard
	Ag	107	52.3	21.1	**0.0006**	0.002	339.2	ug/L	36	Standard
	Cd	111	246.2	3.3	**0.0694**	0.002	3.4	mg/L	49	Standard
	Cd	114	764.9	6.5	**0.0694**	0.005	7.6	ug/L	170	Standard
>	**In**	115	638122.7	0.6				ug/L	727802	Standard
	Sn	118	848.4	6.8	**0.0367**	0.005	14.8	ug/L	471	Standard
	Sb	123	719.9	7.0	**0.0989**	0.007	6.9	ug/L	39	Standard
	Ba	135	30373.8	1.5	**7.9193**	0.110	1.4	ug/L	25	Standard
	Ce	140	1303.7	6.1				ug/L	25	Standard
>	**Tb**	159	963108.4	0.5				ug/L	1071747	Standard
	Ho	165	44.3	12.4				ug/L	13	Standard
	Tl	203	252.7	5.2	**0.0154**	0.001	4.9	ug/L	5	Standard
	Tl	205	583.3	9.6	**0.0163**	0.001	9.1	ug/L	10	Standard
	Pb	206	569.7	0.7	**0.0159**	0.001	3.7	ug/L	382	Standard
	Pb	207	469.3	4.6	**0.0187**	0.002	10.0	ug/L	306	Standard
	Pb	208	2183.4	1.2	**0.0177**	0.001	4.2	ug/L	1443	Standard
	U	238	1153.7	6.6	**0.0818**	0.006	6.8	ug/L	5	Standard
>	**Bi**	209	518396.7	0.7				ug/L	561075	Standard

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⌈	**Na**	23	120588.0	1.0	**8.0406**	0.146	1.8	mg/L	288	Standard
|	**Mg**	24	323038.2	2.0	**0.5549**	0.006	1.2	mg/L	218	Standard
|	**K**	39	2660.2	2.3	**2.5849**	0.076	2.9	mg/L	125	Standard
|	**Ca**	43	6.7	43.3	**2.7832**	3.427	123.1	mg/L	3	Standard
|	**Fe**	54	349.1	4.6	**-0.0258**	0.005	20.7	mg/L	550	Standard
|	**Fe**	57	2370.2	8.4	**0.0189**	0.004	19.2	mg/L	1772	Standard
⌊>	**Sc-1**	45	289160.5	1.9				mg/L	330668	Standard
	Cl	35	9.3	30.9				ug/L	5	Standard
	Kr	83	36.1	5.2				ug/L	38	Standard
	Br	81	441.7	4.2				ug/L	344	Standard
	P	31	342.5	12.3				ug/L	312	Standard
	S	34	7850.4	2.7				ug/L	5594	Standard
	Sr	88	158.3	32.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		92.879	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	87.678
	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	92.393
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065808
Sample Date/Time: Sunday, July 29, 2012 16:44:42
Number of Replicates: 3
Autosampler Position: 427
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	26352.9	3.3	**3838.6119**	162.160	4.2	ug/L	9465	Standard
	Be	9	15.0	88.2	**-0.0115**	0.009	75.1	ug/L	10	Standard
	Al	27	357681.3	5.1	**26.7951**	1.277	4.8	ug/L	7870	Standard
>	**Sc**	45	306143.7	0.7				ug/L	330668	Standard
	Ti	47	941.4	6.2	**0.8221**	0.060	7.3	ug/L	53	Standard
	V	51	4011.1	0.3	**0.1551**	0.005	3.2	ug/L	2687	Standard
	Cr	52	9106.4	1.2	**0.1696**	0.018	10.8	ug/L	8408	Standard
	Cr	53	475.8	7.4	**0.1900**	0.032	16.7	ug/L	288	Standard
	Mn	55	36685.7	2.6	**2.9006**	0.111	3.8	ug/L	1080	Standard
	Co	59	1271.4	4.8	**0.1510**	0.010	6.7	ug/L	117	Standard
	Ni	60	490.0	7.3	**0.1967**	0.019	9.7	ug/L	68	Standard
	Cu	65	375.7	2.9	**0.1193**	0.008	6.7	ug/L	141	Standard
	Zn	66	1661.8	4.6	**1.6022**	0.105	6.5	ug/L	138	Standard
>	**Ge**	72	266058.3	1.4				ug/L	283230	Standard
	As	75	-108.5	22.4	**0.0565**	0.027	48.3	ug/L	-198	Standard
	Se	82	34.7	9.6	**0.1308**	0.040	30.9	ug/L	21	Standard
	Se-1	77	121.0	7.9	**-0.0075**	0.124	1654.6	ug/L	131	Standard
>	**Ga**	71	578.3	3.0				mg/L	607	Standard
	Rb	85	888.4	8.5				ug/L	30	Standard
	Y	89	227182.4	1.3				ug/L	251555	Standard
>	**Rh**	103	330.0	3.0				ug/L	335	Standard
	Mo	98	729.3	36.2	**0.2238**	0.083	37.1	ug/L	13	Standard
	Ag	107	199.7	130.7	**0.0269**	0.047	174.0	ug/L	36	Standard
	Cd	111	115.2	117.4	**0.0221**	0.047	214.1	mg/L	49	Standard
	Cd	114	374.9	108.9	**0.0230**	0.047	204.2	ug/L	170	Standard
>	**In**	115	647614.6	1.0				ug/L	727802	Standard
	Sn	118	575.0	35.7	**0.0088**	0.020	228.0	ug/L	471	Standard
	Sb	123	422.9	68.1	**0.0580**	0.038	65.8	ug/L	39	Standard
	Ba	135	33750.9	3.1	**8.6728**	0.299	3.4	ug/L	25	Standard
	Ce	140	12939.5	2.1				ug/L	25	Standard
>	**Tb**	159	968949.2	0.8				ug/L	1071747	Standard
	Ho	165	100.7	9.2				ug/L	13	Standard
	Tl	203	236.7	88.8	**0.0140**	0.013	95.6	ug/L	5	Standard
	Tl	205	519.7	85.4	**0.0142**	0.012	85.4	ug/L	10	Standard
	Pb	206	1200.4	14.7	**0.0671**	0.015	22.1	ug/L	382	Standard
	Pb	207	995.0	8.7	**0.0698**	0.009	12.4	ug/L	306	Standard
	Pb	208	4655.6	9.5	**0.0688**	0.010	13.8	ug/L	1443	Standard
	U	238	214.3	29.1	**0.0147**	0.004	29.7	ug/L	5	Standard
>	**Bi**	209	528943.4	0.3				ug/L	561075	Standard

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Na	23	106093.5	1.6	**6.6749**	0.150	2.2	mg/L	288	Standard
Mg	24	153138.9	3.3	**0.2486**	0.008	3.1	mg/L	218	Standard
K	39	221.7	5.7	**0.1032**	0.013	12.3	mg/L	125	Standard
Ca	43	6.7	43.3	**2.3404**	3.281	140.2	mg/L	3	Standard
Fe	54	495.3	1.5	**0.0066**	0.003	39.6	mg/L	550	Standard
Fe	57	4495.7	7.1	**0.0615**	0.006	10.5	mg/L	1772	Standard
Sc-1	45	306143.7	0.7				mg/L	330668	Standard
Cl	35	4.7	32.7				ug/L	5	Standard
Kr	83	35.3	10.9				ug/L	38	Standard
Br	81	445.0	3.4				ug/L	344	Standard
P	31	277.5	8.6				ug/L	312	Standard
S	34	6997.4	1.5				ug/L	5594	Standard
Sr	88	68.3	23.5				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.937	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065808
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	Cd	111	
	Cd	114	
>	In	115	88.982
	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	94.273
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207065809
Sample Date/Time: Sunday, July 29, 2012 16:47:51
Number of Replicates: 3
Autosampler Position: 428
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	73042.4	3.0	**14544.6656**	777.308	5.3	ug/L	9465	Standard
	Be	9	20.0	50.0	**-0.0077**	0.007	85.4	ug/L	10	Standard
	Al	27	55803.2	9.9	**3.9000**	0.523	13.4	ug/L	7870	Standard
>	**Sc**	45	292254.0	1.8				ug/L	330668	Standard
	Ti	47	166.0	1.0	**0.1094**	0.002	1.9	ug/L	53	Standard
	V	51	3828.8	5.4	**0.1351**	0.018	13.1	ug/L	2687	Standard
	Cr	52	14274.1	1.2	**0.8797**	0.003	0.3	ug/L	8408	Standard
	Cr	53	1978.5	2.7	**1.4118**	0.052	3.7	ug/L	288	Standard
	Mn	55	2415.2	4.6	**0.1121**	0.007	5.8	ug/L	1080	Standard
	Co	59	173.3	7.4	**0.0093**	0.002	16.4	ug/L	117	Standard
	Ni	60	254.7	10.1	**0.0881**	0.011	12.7	ug/L	68	Standard
	Cu	65	227.7	3.7	**0.0456**	0.005	11.1	ug/L	141	Standard
	Zn	66	1704.1	4.9	**1.6452**	0.064	3.9	ug/L	138	Standard
>	**Ge**	72	266077.6	1.3				ug/L	283230	Standard
	As	75	-49.2	45.0	**0.1202**	0.024	19.6	ug/L	-198	Standard
	Se	82	36.4	6.8	**0.1490**	0.029	19.7	ug/L	21	Standard
	Se-1	77	127.0	3.4	**0.0849**	0.057	66.6	ug/L	131	Standard
>	**Ga**	71	561.7	8.6				mg/L	607	Standard
	Rb	85	26404.7	1.9				ug/L	30	Standard
	Y	89	226866.4	2.3				ug/L	251555	Standard
>	**Rh**	103	330.0	9.1				ug/L	335	Standard
	Mo	98	4140.3	1.1	**1.3221**	0.015	1.2	ug/L	13	Standard
	Ag	107	87.7	54.3	**0.0071**	0.009	123.3	ug/L	36	Standard
	Cd	111	36.7	58.4	**-0.0052**	0.008	147.5	mg/L	49	Standard
	Cd	114	157.6	34.5	**-0.0018**	0.006	359.9	ug/L	170	Standard
>	**In**	115	639084.3	1.0				ug/L	727802	Standard
	Sn	118	513.0	5.6	**0.0034**	0.003	83.5	ug/L	471	Standard
	Sb	123	249.6	16.7	**0.0354**	0.005	15.4	ug/L	39	Standard
	Ba	135	19040.6	1.8	**4.9524**	0.039	0.8	ug/L	25	Standard
	Ce	140	618.7	4.7				ug/L	25	Standard
>	**Tb**	159	965401.6	0.3				ug/L	1071747	Standard
	Ho	165	15.3	7.5				ug/L	13	Standard
	Tl	203	446.3	6.8	**0.0279**	0.002	6.8	ug/L	5	Standard
	Tl	205	1052.4	12.6	**0.0293**	0.004	12.3	ug/L	10	Standard
	Pb	206	478.0	5.9	**0.0081**	0.002	27.6	ug/L	382	Standard
	Pb	207	412.7	8.3	**0.0129**	0.003	25.6	ug/L	306	Standard
	Pb	208	1841.4	7.0	**0.0102**	0.003	25.7	ug/L	1443	Standard
	U	238	95.3	34.7	**0.0065**	0.002	35.5	ug/L	5	Standard
>	**Bi**	209	519926.3	0.4				ug/L	561075	Standard

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⌈	**Na**	23	129879.3	1.0	**8.5705**	0.139	1.6	mg/L	288	Standard
|	**Mg**	24	12321.7	1.7	**0.0212**	0.001	3.5	mg/L	218	Standard
|	**K**	39	1238.4	7.2	**1.1312**	0.079	7.0	mg/L	125	Standard
|	**Ca**	43	3.3	86.6	**-1.3536**	3.470	256.3	mg/L	3	Standard
|	**Fe**	54	239.3	5.2	**-0.0564**	0.004	7.8	mg/L	550	Standard
|	**Fe**	57	1801.8	4.4	**0.0057**	0.002	36.9	mg/L	1772	Standard
⌊>	**Sc-1**	45	292254.0	1.8				mg/L	330668	Standard
	Cl	35	18.0	24.2				ug/L	5	Standard
	Kr	83	33.8	9.0				ug/L	38	Standard
	Br	81	719.2	4.5				ug/L	344	Standard
	P	31	150.8	10.5				ug/L	312	Standard
	S	34	5552.7	4.9				ug/L	5594	Standard
	Sr	88	136.7	9.2				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		93.944	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	87.810
	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	92.666
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065810
Sample Date/Time: Sunday, July 29, 2012 16:51:01
Number of Replicates: 3
Autosampler Position: 429
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	63489.5	2.6	**12146.0243**	97.480	0.8	ug/L	9465	Standard
	Be	9	13.3	57.3	**-0.0123**	0.005	40.2	ug/L	10	Standard
	Al	27	94354.6	1.3	**6.8526**	0.254	3.7	ug/L	7870	Standard
>	**Sc**	45	297614.0	2.5				ug/L	330668	Standard
	Ti	47	342.7	5.8	**0.2740**	0.020	7.3	ug/L	53	Standard
	V	51	2938.7	6.4	**0.0410**	0.021	52.1	ug/L	2687	Standard
	Cr	52	8450.7	2.5	**0.0877**	0.035	39.8	ug/L	8408	Standard
	Cr	53	1300.1	5.1	**0.8674**	0.052	6.0	ug/L	288	Standard
	Mn	55	68699.7	0.9	**5.5431**	0.080	1.4	ug/L	1080	Standard
	Co	59	582.7	5.7	**0.0626**	0.005	7.6	ug/L	117	Standard
	Ni	60	569.0	3.0	**0.2348**	0.009	4.0	ug/L	68	Standard
	Cu	65	223.7	9.3	**0.0444**	0.011	24.9	ug/L	141	Standard
	Zn	66	2119.5	2.3	**2.0996**	0.044	2.1	ug/L	138	Standard
>	**Ge**	72	264206.4	0.5				ug/L	283230	Standard
	As	75	-1.1	4660.2	**0.1716**	0.057	33.4	ug/L	-198	Standard
	Se	82	54.5	17.7	**0.3482**	0.108	31.0	ug/L	21	Standard
	Se-1	77	145.3	5.2	**0.3814**	0.128	33.5	ug/L	131	Standard
>	**Ga**	71	581.7	12.2				mg/L	607	Standard
	Rb	85	1658.4	2.9				ug/L	30	Standard
	Y	89	226625.6	0.5				ug/L	251555	Standard
>	**Rh**	103	395.0	10.0				ug/L	335	Standard
	Mo	98	144.5	15.3	**0.0390**	0.007	17.0	ug/L	13	Standard
	Ag	107	60.0	27.5	**0.0019**	0.003	151.4	ug/L	36	Standard
	Cd	111	48.7	32.2	**-0.0011**	0.005	504.3	mg/L	49	Standard
	Cd	114	160.4	60.3	**-0.0016**	0.011	698.1	ug/L	170	Standard
>	**In**	115	642223.7	1.0				ug/L	727802	Standard
	Sn	118	742.0	17.3	**0.0256**	0.012	47.0	ug/L	471	Standard
	Sb	123	251.0	93.7	**0.0353**	0.031	88.3	ug/L	39	Standard
	Ba	135	25806.3	2.4	**6.6831**	0.091	1.4	ug/L	25	Standard
	Ce	140	1730.1	1.0				ug/L	25	Standard
>	**Tb**	159	973322.1	0.7				ug/L	1071747	Standard
	Ho	165	39.3	14.0				ug/L	13	Standard
	Tl	203	584.0	47.7	**0.0369**	0.018	47.9	ug/L	5	Standard
	Tl	205	1309.1	48.1	**0.0366**	0.017	46.9	ug/L	10	Standard
	Pb	206	682.7	27.4	**0.0256**	0.015	59.2	ug/L	382	Standard
	Pb	207	552.3	25.4	**0.0272**	0.014	49.7	ug/L	306	Standard
	Pb	208	2532.4	26.0	**0.0253**	0.014	53.5	ug/L	1443	Standard
	U	238	503.3	24.5	**0.0356**	0.008	23.5	ug/L	5	Standard
>	**Bi**	209	516251.3	1.3				ug/L	561075	Standard

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Na	23	136123.8	0.7	**8.8230**	0.159	1.8	mg/L	288	Standard
Mg	24	938503.3	3.1	**1.5657**	0.011	0.7	mg/L	218	Standard
K	39	368.3	13.2	**0.2533**	0.045	17.9	mg/L	125	Standard
Ca	43	13.3	43.3	**10.5935**	7.213	68.1	mg/L	3	Standard
Fe	54	924.1	6.9	**0.1238**	0.011	9.0	mg/L	550	Standard
Fe	57	10215.1	3.4	**0.1903**	0.002	1.2	mg/L	1772	Standard
> **Sc-1**	45	297614.0	2.5				mg/L	330668	Standard
Cl	35	43.7	13.2				ug/L	5	Standard
Kr	83	37.3	2.4				ug/L	38	Standard
Br	81	1214.2	1.8				ug/L	344	Standard
P	31	183.3	6.3				ug/L	312	Standard
S	34	13042.3	1.3				ug/L	5594	Standard
Sr	88	363.3	25.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.283	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	88.242
	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	92.011
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207065811
Sample Date/Time: Sunday, July 29, 2012 16:54:11
Number of Replicates: 3
Autosampler Position: 430
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	7593.6	6.1	**-30.5960**	122.466	400.3	ug/L	9465	Standard
	Be	9	6.7	86.6	**-0.0166**	0.004	24.2	ug/L	10	Standard
	Al	27	17398.3	3.3	**0.8573**	0.024	2.8	ug/L	7870	Standard
>	**Sc**	45	283440.5	1.8				ug/L	330668	Standard
	Ti	47	40.0	28.4	**-0.0054**	0.011	199.4	ug/L	53	Standard
	V	51	2563.4	4.6	**0.0049**	0.013	260.3	ug/L	2687	Standard
	Cr	52	8103.8	2.4	**0.0596**	0.027	45.3	ug/L	8408	Standard
	Cr	53	280.0	14.0	**0.0362**	0.032	88.8	ug/L	288	Standard
	Mn	55	1061.4	5.3	**0.0042**	0.005	114.7	ug/L	1080	Standard
	Co	59	137.3	6.2	**0.0051**	0.001	23.2	ug/L	117	Standard
	Ni	60	341.3	0.7	**0.1320**	0.001	0.8	ug/L	68	Standard
	Cu	65	165.3	18.1	**0.0166**	0.015	93.2	ug/L	141	Standard
	Zn	66	1565.4	1.9	**1.5408**	0.028	1.8	ug/L	138	Standard
>	**Ge**	72	259570.2	0.3				ug/L	283230	Standard
	As	75	-170.7	21.8	**-0.0146**	0.041	280.8	ug/L	-198	Standard
	Se	82	21.7	19.7	**-0.0039**	0.047	1191.4	ug/L	21	Standard
	Se-1	77	117.0	11.3	**-0.0227**	0.212	933.2	ug/L	131	Standard
>	**Ga**	71	486.7	9.0				mg/L	607	Standard
	Rb	85	40.0	43.3				ug/L	30	Standard
	Y	89	222067.5	1.7				ug/L	251555	Standard
>	**Rh**	103	291.7	10.3				ug/L	335	Standard
	Mo	98	23.7	11.1	**0.0006**	0.001	167.0	ug/L	13	Standard
	Ag	107	42.3	25.3	**-0.0011**	0.002	161.0	ug/L	36	Standard
	Cd	111	33.9	19.3	**-0.0060**	0.002	34.1	mg/L	49	Standard
	Cd	114	93.6	6.6	**-0.0090**	0.001	8.4	ug/L	170	Standard
>	**In**	115	624946.8	2.8				ug/L	727802	Standard
	Sn	118	363.3	6.5	**-0.0106**	0.002	20.8	ug/L	471	Standard
	Sb	123	155.2	7.5	**0.0232**	0.002	9.5	ug/L	39	Standard
	Ba	135	48.3	24.7	**0.0014**	0.003	230.3	ug/L	25	Standard
	Ce	140	54.7	11.8				ug/L	25	Standard
>	**Tb**	159	943378.1	1.9				ug/L	1071747	Standard
	Ho	165	11.7	9.9				ug/L	13	Standard
	Tl	203	84.3	48.5	**0.0043**	0.003	58.8	ug/L	5	Standard
	Tl	205	195.3	38.4	**0.0054**	0.002	37.0	ug/L	10	Standard
	Pb	206	341.7	3.4	**-0.0038**	0.001	16.1	ug/L	382	Standard
	Pb	207	294.0	3.7	**0.0006**	0.001	235.4	ug/L	306	Standard
	Pb	208	1412.4	3.7	**0.0006**	0.001	136.8	ug/L	1443	Standard
	U	238	11.0	18.2	**0.0005**	0.000	27.6	ug/L	5	Standard
>	**Bi**	209	526618.4	1.3				ug/L	561075	Standard

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Na	23	458.3	10.9	**-0.0049**	0.003	65.1	mg/L	288	Standard
Mg	24	766.7	7.9	**0.0016**	0.000	7.7	mg/L	218	Standard
K	39	126.7	16.4	**0.0219**	0.020	91.2	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.3106**	3.549	107.2	mg/L	3	Standard
Fe	54	247.9	5.5	**-0.0521**	0.004	8.6	mg/L	550	Standard
Fe	57	1613.4	1.7	**0.0026**	0.001	20.9	mg/L	1772	Standard
Sc-1	45	283440.5	1.8				mg/L	330668	Standard
Cl	35	5.3	28.6				ug/L	5	Standard
Kr	83	37.8	13.7				ug/L	38	Standard
Br	81	286.7	3.9				ug/L	344	Standard
P	31	152.5	23.1				ug/L	312	Standard
S	34	5657.7	5.0				ug/L	5594	Standard
Sr	88	51.7	43.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		91.647	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207065811
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	Cd	111	
	Cd	114	
>	In	115	85.868
	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	93.859
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 16:57:24
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: JYH 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	7	8942.6	0.6	**-24.8991**	26.541	106.6	ug/L	9465	Standard
	Be	9	81967.8	1.9	**49.0242**	1.506	3.1	ug/L	10	Standard
	Al	27	705838.9	1.5	**49.1520**	0.185	0.4	ug/L	7870	Standard
>	**Sc**	45	332605.1	1.7				ug/L	330668	Standard
	Ti	47	116800.5	0.2	**96.4161**	0.960	1.0	ug/L	53	Standard
	V	51	479302.3	0.7	**46.4646**	0.473	1.0	ug/L	2687	Standard
	Cr	52	390096.4	0.5	**47.1140**	0.698	1.5	ug/L	8408	Standard
	Cr	53	65512.2	0.2	**47.6871**	0.474	1.0	ug/L	288	Standard
	Mn	55	650858.4	0.9	**47.4998**	0.332	0.7	ug/L	1080	Standard
	Co	59	405674.5	0.4	**47.0450**	0.706	1.5	ug/L	117	Standard
	Ni	60	115505.3	0.4	**47.8128**	0.437	0.9	ug/L	68	Standard
	Cu	65	108626.0	0.5	**48.5617**	0.808	1.7	ug/L	141	Standard
	Zn	66	51992.4	0.3	**49.1478**	0.687	1.4	ug/L	138	Standard
>	**Ge**	72	296016.6	1.2				ug/L	283230	Standard
	As	75	50440.6	0.9	**48.6929**	0.991	2.0	ug/L	-198	Standard
	Se	82	5140.4	1.5	**49.5157**	0.947	1.9	ug/L	21	Standard
	Se-1	77	3729.1	2.8	**49.3935**	2.035	4.1	ug/L	131	Standard
>	**Ga**	71	585.0	6.7				mg/L	607	Standard
	Rb	85	688.3	0.8				ug/L	30	Standard
	Y	89	255225.3	1.5				ug/L	251555	Standard
>	**Rh**	103	423.3	4.9				ug/L	335	Standard
	Mo	98	352179.4	0.8	**101.7511**	1.350	1.3	ug/L	13	Standard
	Ag	107	314647.1	1.1	**51.6633**	0.984	1.9	ug/L	36	Standard
	Cd	111	152350.7	0.6	**48.7395**	0.563	1.2	mg/L	49	Standard
	Cd	114	472682.2	0.5	**49.7312**	0.645	1.3	ug/L	170	Standard
>	**In**	115	710145.4	0.9				ug/L	727802	Standard
	Sn	118	552492.1	0.7	**49.1990**	0.233	0.5	ug/L	471	Standard
	Sb	123	399152.1	0.8	**48.3916**	0.689	1.4	ug/L	39	Standard
	Ba	135	215597.5	1.1	**50.5756**	0.692	1.4	ug/L	25	Standard
	Ce	140	837.4	1.7				ug/L	25	Standard
>	**Tb**	159	1050444.8	0.2				ug/L	1071747	Standard
	Ho	165	11.3	5.1				ug/L	13	Standard
	Tl	203	790979.8	1.1	**47.4680**	0.978	2.1	ug/L	5	Standard
	Tl	205	1827052.0	0.3	**47.0078**	0.566	1.2	ug/L	10	Standard
	Pb	206	616917.7	1.1	**47.9615**	0.851	1.8	ug/L	382	Standard
	Pb	207	525351.7	1.1	**48.9153**	0.789	1.6	ug/L	306	Standard
	Pb	208	2422992.2	1.2	**48.0020**	0.762	1.6	ug/L	1443	Standard
	U	238	731933.1	0.3	**48.0324**	0.492	1.0	ug/L	5	Standard
>	**Bi**	209	561705.0	0.9				ug/L	561075	Standard

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Na	23	101324.4	1.1	**5.8646**	0.170	2.9	mg/L	288	Standard
Mg	24	3214350.2	2.8	**4.8004**	0.209	4.4	mg/L	218	Standard
K	39	5904.5	5.0	**5.0862**	0.185	3.6	mg/L	125	Standard
Ca	43	10.0	50.0	**5.2335**	5.166	98.7	mg/L	3	Standard
Fe	54	22519.9	2.7	**5.2253**	0.230	4.4	mg/L	550	Standard
Fe	57	284277.5	1.6	**5.5733**	0.188	3.4	mg/L	1772	Standard
Sc-1	45	332605.1	1.7				mg/L	330668	Standard
Cl	35	5.7	56.7				ug/L	5	Standard
Kr	83	38.3	11.3				ug/L	38	Standard
Br	81	385.0	6.7				ug/L	344	Standard
P	31	395.8	3.8				ug/L	312	Standard
S	34	5928.7	2.5				ug/L	5594	Standard
Sr	88	60.0	16.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	98.304		
Sc	45			
Ti	47	96.416		
V	51	92.929		
Cr	52	94.228		
Cr	53			
Mn	55	95.000		
Co	59	94.090		
Ni	60	95.626		
Cu	65	97.123		
Zn	66	98.296		
Ge	72		104.515	
As	75	97.386		
Se	82	99.031		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	101.751		
Ag	107	103.327		

Sample ID: QC Std 6
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	Cd	111	97.479	
	Cd	114		
>	In	115		97.574
	Sn	118	98.398	
	Sb	123	96.783	
	Ba	135	101.151	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	94.936	
	Tl	205		
	Pb	206	95.923	
	Pb	207	97.831	
	Pb	208	96.004	
	U	238	96.065	
>	Bi	209		100.112
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 16:59:55
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 17:00:35
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: JYH 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	7	8407.3	1.3	**-125.2467**	45.838	36.6	ug/L	9465	Standard
	Be	9	40.0	57.3	**0.0028**	0.014	490.1	ug/L	10	Standard
	Al	27	8010.5	3.2	**-0.0150**	0.016	104.0	ug/L	7870	Standard
>	**Sc**	45	331716.3	2.2				ug/L	330668	Standard
	Ti	47	69.0	28.0	**0.0161**	0.017	103.5	ug/L	53	Standard
	V	51	2569.6	2.1	**-0.0200**	0.007	33.7	ug/L	2687	Standard
	Cr	52	7822.7	0.9	**-0.0789**	0.011	13.9	ug/L	8408	Standard
	Cr	53	217.5	9.1	**-0.0321**	0.015	45.2	ug/L	288	Standard
	Mn	55	1144.4	1.4	**0.0026**	0.001	40.3	ug/L	1080	Standard
	Co	59	149.7	8.0	**0.0049**	0.001	29.2	ug/L	117	Standard
	Ni	60	85.7	18.5	**0.0076**	0.007	89.8	ug/L	68	Standard
	Cu	65	162.0	9.7	**0.0074**	0.007	98.1	ug/L	141	Standard
	Zn	66	142.0	13.4	**-0.0119**	0.020	164.5	ug/L	138	Standard
>	**Ge**	72	285154.7	0.7				ug/L	283230	Standard
	As	75	-161.6	17.1	**0.0115**	0.026	229.1	ug/L	-198	Standard
	Se	82	24.6	15.9	**0.0039**	0.041	1059.7	ug/L	21	Standard
	Se-1	77	115.3	10.3	**-0.2109**	0.175	83.1	ug/L	131	Standard
>	**Ga**	71	576.7	2.8				mg/L	607	Standard
	Rb	85	23.3	12.4				ug/L	30	Standard
	Y	89	248018.7	1.3				ug/L	251555	Standard
>	**Rh**	103	325.0	4.6				ug/L	335	Standard
	Mo	98	226.4	11.1	**0.0588**	0.007	11.9	ug/L	13	Standard
	Ag	107	106.7	20.2	**0.0087**	0.003	40.0	ug/L	36	Standard
	Cd	111	76.5	15.9	**0.0064**	0.004	63.8	mg/L	49	Standard
	Cd	114	215.9	17.1	**0.0027**	0.004	141.4	ug/L	170	Standard
>	**In**	115	704138.4	0.9				ug/L	727802	Standard
	Sn	118	862.0	3.5	**0.0301**	0.002	7.6	ug/L	471	Standard
	Sb	123	2273.8	2.5	**0.2797**	0.005	1.6	ug/L	39	Standard
	Ba	135	49.0	42.8	**0.0001**	0.005	7070.3	ug/L	25	Standard
	Ce	140	29.7	14.0				ug/L	25	Standard
>	**Tb**	159	1026177.6	0.3				ug/L	1071747	Standard
	Ho	165	8.3	25.0				ug/L	13	Standard
	Tl	203	109.0	34.7	**0.0055**	0.002	41.3	ug/L	5	Standard
	Tl	205	258.7	38.7	**0.0067**	0.003	38.5	ug/L	10	Standard
	Pb	206	460.7	6.5	**0.0039**	0.002	62.3	ug/L	382	Standard
	Pb	207	380.0	8.6	**0.0069**	0.003	43.5	ug/L	306	Standard
	Pb	208	1742.0	6.6	**0.0054**	0.002	42.4	ug/L	1443	Standard
	U	238	125.7	37.9	**0.0080**	0.003	39.1	ug/L	5	Standard
>	**Bi**	209	559928.8	0.2				ug/L	561075	Standard

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Na	23	390.0	7.8	**-0.0135**	0.001	10.9	mg/L	288	Standard
Mg	24	645.0	48.1	**0.0013**	0.000	36.2	mg/L	218	Standard
K	39	110.0	12.0	**-0.0117**	0.012	99.1	mg/L	125	Standard
Ca	43	1.7	173.2	**-3.5904**	3.064	85.3	mg/L	3	Standard
Fe	54	581.1	4.1	**0.0172**	0.006	36.1	mg/L	550	Standard
Fe	57	2068.5	6.7	**0.0061**	0.002	33.1	mg/L	1772	Standard
Sc-1	45	331716.3	2.2				mg/L	330668	Standard
Cl	35	4.0	43.3				ug/L	5	Standard
Kr	83	39.4	2.0				ug/L	38	Standard
Br	81	375.8	5.5				ug/L	344	Standard
P	31	374.2	11.8				ug/L	312	Standard
S	34	5863.6	1.6				ug/L	5594	Standard
Sr	88	48.3	31.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		100.680	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	96.749
	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	99.796
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207064301
Sample Date/Time: Sunday, July 29, 2012 17:03:48
Number of Replicates: 3
Autosampler Position: 431
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	12690.3	4.5	**1037.8464**	164.883	15.9	ug/L	9465	Standard
	Be	9	10.0	50.0	**-0.0144**	0.004	24.6	ug/L	10	Standard
	Al	27	41421.6	2.3	**2.7191**	0.005	0.2	ug/L	7870	Standard
>	**Sc**	45	294140.2	2.1				ug/L	330668	Standard
	Ti	47	217.0	4.4	**0.1644**	0.009	5.4	ug/L	53	Standard
	V	51	5365.4	2.2	**0.3256**	0.013	3.8	ug/L	2687	Standard
	Cr	52	8740.2	0.6	**0.1679**	0.007	4.1	ug/L	8408	Standard
	Cr	53	265.0	8.4	**0.0272**	0.020	72.0	ug/L	288	Standard
	Mn	55	149546.0	2.4	**12.5730**	0.297	2.4	ug/L	1080	Standard
	Co	59	594.7	3.2	**0.0667**	0.002	3.4	ug/L	117	Standard
	Ni	60	93358.1	1.2	**44.7351**	0.461	1.0	ug/L	68	Standard
	Cu	65	423.3	8.8	**0.1515**	0.019	12.4	ug/L	141	Standard
	Zn	66	52789.1	1.1	**57.7941**	0.816	1.4	ug/L	138	Standard
>	**Ge**	72	255686.7	0.4				ug/L	283230	Standard
	As	75	-368.8	15.7	**-0.2380**	0.065	27.4	ug/L	-198	Standard
	Se	82	2193.8	2.3	**24.3407**	0.611	2.5	ug/L	21	Standard
	Se-1	77	1618.1	6.0	**23.8779**	1.465	6.1	ug/L	131	Standard
>	**Ga**	71	448.3	15.1				mg/L	607	Standard
	Rb	85	3685.4	5.0				ug/L	30	Standard
	Y	89	218550.5	2.4				ug/L	251555	Standard
>	**Rh**	103	320.0	4.1				ug/L	335	Standard
	Mo	98	15236.9	2.0	**4.8174**	0.007	0.1	ug/L	13	Standard
	Ag	107	47.0	14.7	**-0.0005**	0.001	271.6	ug/L	36	Standard
	Cd	111	285.8	1.3	**0.0820**	0.002	2.1	mg/L	49	Standard
	Cd	114	950.3	1.9	**0.0894**	0.001	1.2	ug/L	170	Standard
>	**In**	115	647992.5	2.1				ug/L	727802	Standard
	Sn	118	498.3	2.5	**0.0013**	0.001	115.6	ug/L	471	Standard
	Sb	123	830.9	10.9	**0.1120**	0.010	8.8	ug/L	39	Standard
	Ba	135	5123.5	1.5	**1.3063**	0.034	2.6	ug/L	25	Standard
	Ce	140	318.7	3.8				ug/L	25	Standard
>	**Tb**	159	983313.7	0.4				ug/L	1071747	Standard
	Ho	165	16.7	3.5				ug/L	13	Standard
	Tl	203	138.3	9.6	**0.0080**	0.001	9.3	ug/L	5	Standard
	Tl	205	313.7	2.7	**0.0089**	0.000	4.1	ug/L	10	Standard
	Pb	206	416.3	4.0	**0.0034**	0.002	44.1	ug/L	382	Standard
	Pb	207	334.3	6.1	**0.0055**	0.001	27.3	ug/L	306	Standard
	Pb	208	1552.0	5.8	**0.0045**	0.001	33.0	ug/L	1443	Standard
	U	238	50341.8	1.1	**3.6210**	0.029	0.8	ug/L	5	Standard
>	**Bi**	209	512463.5	1.9				ug/L	561075	Standard

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⌈	**Na**	23	47611.4	2.9	**3.0985**	0.084	2.7	mg/L	288	Standard
|	**Mg**	24	6542939.9	1.1	**11.0467**	0.232	2.1	mg/L	218	Standard
|	**K**	39	411.7	13.4	**0.3004**	0.049	16.2	mg/L	125	Standard
|	**Ca**	43	115.0	8.7	**133.1355**	11.672	8.8	mg/L	3	Standard
|	**Fe**	54	320.5	6.0	**-0.0351**	0.005	14.6	mg/L	550	Standard
|	**Fe**	57	9773.2	4.7	**0.1832**	0.010	5.7	mg/L	1772	Standard
⌊>	**Sc-1**	45	294140.2	2.1				mg/L	330668	Standard
	Cl	35	2.0	86.6				ug/L	5	Standard
	Kr	83	36.3	6.9				ug/L	38	Standard
	Br	81	364.2	9.9				ug/L	344	Standard
	P	31	322.5	14.9				ug/L	312	Standard
	S	34	71073.8	1.5				ug/L	5594	Standard
	Sr	88	238.3	9.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		90.275	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.034
	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	91.336
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064302
Sample Date/Time: Sunday, July 29, 2012 17:06:57
Number of Replicates: 3
Autosampler Position: 432
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13444.3	4.1	**1100.3493**	53.083	4.8	ug/L	9465	Standard
	Be	9	10.0		**-0.0147**	0.000	1.1	ug/L	10	Standard
	Al	27	50574.4	4.1	**3.3094**	0.089	2.7	ug/L	7870	Standard
>	**Sc**	45	304585.5	2.4				ug/L	330668	Standard
	Ti	47	190.0	9.0	**0.1372**	0.018	12.9	ug/L	53	Standard
	V	51	5860.8	1.9	**0.3763**	0.017	4.5	ug/L	2687	Standard
	Cr	52	8976.7	2.5	**0.1915**	0.037	19.3	ug/L	8408	Standard
	Cr	53	335.0	5.9	**0.0840**	0.015	17.3	ug/L	288	Standard
	Mn	55	161324.2	2.2	**13.4618**	0.398	3.0	ug/L	1080	Standard
	Co	59	1099.4	3.6	**0.1333**	0.005	3.9	ug/L	117	Standard
	Ni	60	104020.4	3.0	**49.4553**	1.851	3.7	ug/L	68	Standard
	Cu	65	637.3	3.3	**0.2599**	0.013	5.0	ug/L	141	Standard
	Zn	66	27668.9	2.2	**29.9792**	0.901	3.0	ug/L	138	Standard
>	**Ge**	72	257764.2	0.8				ug/L	283230	Standard
	As	75	-362.1	47.3	**-0.2278**	0.192	84.2	ug/L	-198	Standard
	Se	82	2767.0	3.2	**30.5175**	1.148	3.8	ug/L	21	Standard
	Se-1	77	2021.1	2.6	**30.0380**	1.051	3.5	ug/L	131	Standard
>	**Ga**	71	520.0	8.3				mg/L	607	Standard
	Rb	85	4172.2	1.5				ug/L	30	Standard
	Y	89	220122.8	1.8				ug/L	251555	Standard
>	**Rh**	103	355.0	23.1				ug/L	335	Standard
	Mo	98	16831.0	2.7	**5.1806**	0.096	1.8	ug/L	13	Standard
	Ag	107	45.7	9.9	**-0.0010**	0.001	69.8	ug/L	36	Standard
	Cd	111	27.9	21.5	**-0.0087**	0.002	25.1	mg/L	49	Standard
	Cd	114	168.2	1.1	**-0.0013**	0.000	13.7	ug/L	170	Standard
>	**In**	115	665620.4	1.5				ug/L	727802	Standard
	Sn	118	552.0	4.9	**0.0051**	0.002	48.9	ug/L	471	Standard
	Sb	123	785.1	6.4	**0.1033**	0.005	4.8	ug/L	39	Standard
	Ba	135	5548.7	1.8	**1.3775**	0.024	1.8	ug/L	25	Standard
	Ce	140	316.0	1.8				ug/L	25	Standard
>	**Tb**	159	997205.7	0.7				ug/L	1071747	Standard
	Ho	165	26.7	17.7				ug/L	13	Standard
	Tl	203	131.0	7.0	**0.0074**	0.001	8.8	ug/L	5	Standard
	Tl	205	311.3	2.9	**0.0086**	0.000	3.6	ug/L	10	Standard
	Pb	206	503.7	1.3	**0.0101**	0.000	3.3	ug/L	382	Standard
	Pb	207	418.0	5.6	**0.0133**	0.002	18.0	ug/L	306	Standard
	Pb	208	1943.4	1.2	**0.0122**	0.001	5.4	ug/L	1443	Standard
	U	238	56666.1	2.6	**4.0005**	0.082	2.0	ug/L	5	Standard
>	**Bi**	209	522032.1	0.8				ug/L	561075	Standard

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Na	23	51005.7	1.0	**3.2072**	0.048	1.5	mg/L	288	Standard
Mg	24	7260112.7	2.4	**11.8341**	0.045	0.4	mg/L	218	Standard
K	39	478.3	2.6	**0.3511**	0.018	5.0	mg/L	125	Standard
Ca	43	95.0	19.0	**105.2225**	21.380	20.3	mg/L	3	Standard
Fe	54	329.6	16.8	**-0.0355**	0.016	46.3	mg/L	550	Standard
Fe	57	9478.0	3.4	**0.1693**	0.003	1.7	mg/L	1772	Standard
> **Sc-1**	45	304585.5	2.4				mg/L	330668	Standard
Cl	35	5.3	10.8				ug/L	5	Standard
Kr	83	39.3	11.2				ug/L	38	Standard
Br	81	404.2	5.3				ug/L	344	Standard
P	31	282.5	9.3				ug/L	312	Standard
S	34	76731.4	2.5				ug/L	5594	Standard
Sr	88	268.3	7.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		91.009	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	91.456
	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	93.041
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064303
Sample Date/Time: Sunday, July 29, 2012 17:10:06
Number of Replicates: 3
Autosampler Position: 433
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	15269.4	6.6	**1258.5463**	134.371	10.7	ug/L	9465	Standard
	Be	9	10.0	50.0	**-0.0151**	0.003	21.1	ug/L	10	Standard
	Al	27	33951.3	2.1	**1.8463**	0.023	1.3	ug/L	7870	Standard
>	**Sc**	45	327814.6	2.4				ug/L	330668	Standard
	Ti	47	442.3	6.6	**0.3513**	0.020	5.7	ug/L	53	Standard
	V	51	3231.5	2.3	**0.0602**	0.002	3.6	ug/L	2687	Standard
	Cr	52	8908.0	2.8	**0.1065**	0.028	26.7	ug/L	8408	Standard
	Cr	53	276.7	9.7	**0.0211**	0.018	87.4	ug/L	288	Standard
	Mn	55	161048.6	3.9	**12.6323**	0.431	3.4	ug/L	1080	Standard
	Co	59	571.7	11.7	**0.0584**	0.007	12.4	ug/L	117	Standard
	Ni	60	5727.4	5.2	**2.5319**	0.093	3.7	ug/L	68	Standard
	Cu	65	542.3	7.5	**0.1942**	0.016	8.4	ug/L	141	Standard
	Zn	66	4719.1	3.9	**4.6809**	0.171	3.7	ug/L	138	Standard
>	**Ge**	72	274061.2	1.7				ug/L	283230	Standard
	As	75	-160.8	46.8	**0.0065**	0.077	1186.1	ug/L	-198	Standard
	Se	82	244.0	3.8	**2.3085**	0.128	5.6	ug/L	21	Standard
	Se-1	77	275.0	3.7	**2.2239**	0.091	4.1	ug/L	131	Standard
>	**Ga**	71	541.7	14.9				mg/L	607	Standard
	Rb	85	3973.9	2.3				ug/L	30	Standard
	Y	89	234853.3	2.0				ug/L	251555	Standard
>	**Rh**	103	388.3	23.2				ug/L	335	Standard
	Mo	98	1994.7	6.0	**0.5532**	0.021	3.7	ug/L	13	Standard
	Ag	107	57.7	20.3	**0.0002**	0.002	744.5	ug/L	36	Standard
	Cd	111	57.9	8.1	**-0.0003**	0.001	417.1	mg/L	49	Standard
	Cd	114	230.1	3.5	**0.0034**	0.001	23.0	ug/L	170	Standard
>	**In**	115	729949.9	2.4				ug/L	727802	Standard
	Sn	118	479.7	11.8	**-0.0059**	0.004	74.4	ug/L	471	Standard
	Sb	123	538.5	10.6	**0.0652**	0.005	8.2	ug/L	39	Standard
	Ba	135	23877.8	3.2	**5.4382**	0.041	0.8	ug/L	25	Standard
	Ce	140	197.7	11.4				ug/L	25	Standard
>	**Tb**	159	1049759.1	1.6				ug/L	1071747	Standard
	Ho	165	18.7	3.1				ug/L	13	Standard
	Tl	203	215.0	61.9	**0.0119**	0.008	67.0	ug/L	5	Standard
	Tl	205	510.7	69.8	**0.0132**	0.009	69.4	ug/L	10	Standard
	Pb	206	445.3	26.0	**0.0028**	0.009	321.8	ug/L	382	Standard
	Pb	207	367.3	21.6	**0.0058**	0.007	127.5	ug/L	306	Standard
	Pb	208	1740.7	23.6	**0.0055**	0.008	146.4	ug/L	1443	Standard
	U	238	10160.1	5.4	**0.6711**	0.026	3.9	ug/L	5	Standard
>	**Bi**	209	557600.4	1.5				ug/L	561075	Standard

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Na	23	58004.2	1.7	**3.3908**	0.065	1.9	mg/L	288	Standard
Mg	24	7585681.6	4.4	**11.4850**	0.225	2.0	mg/L	218	Standard
K	39	578.3	8.7	**0.4074**	0.038	9.3	mg/L	125	Standard
Ca	43	86.7	12.0	**88.2668**	10.731	12.2	mg/L	3	Standard
Fe	54	305.8	17.2	**-0.0475**	0.012	26.0	mg/L	550	Standard
Fe	57	9904.9	3.9	**0.1633**	0.003	1.8	mg/L	1772	Standard
Sc-1	45	327814.6	2.4				mg/L	330668	Standard
Cl	35	6.0					ug/L	5	Standard
Kr	83	43.2	14.6				ug/L	38	Standard
Br	81	398.3	13.8				ug/L	344	Standard
P	31	1712.6	4.1				ug/L	312	Standard
S	34	78532.3	2.6				ug/L	5594	Standard
Sr	88	325.0	18.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		96.763	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	100.295
	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	99.381
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064304
Sample Date/Time: Sunday, July 29, 2012 17:13:15
Number of Replicates: 3
Autosampler Position: 434
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	16333.8	3.9	**1349.8086**	128.593	9.5	ug/L	9465	Standard
	Be	9	26.7	109.9	**-0.0057**	0.017	299.4	ug/L	10	Standard
	Al	27	28548.5	2.6	**1.3829**	0.050	3.6	ug/L	7870	Standard
>	**Sc**	45	340681.1	0.9				ug/L	330668	Standard
	Ti	47	455.7	7.2	**0.3570**	0.021	5.8	ug/L	53	Standard
	V	51	3077.8	3.9	**0.0393**	0.013	32.5	ug/L	2687	Standard
	Cr	52	8818.2	1.6	**0.0774**	0.033	42.1	ug/L	8408	Standard
	Cr	53	269.2	13.3	**0.0119**	0.024	200.5	ug/L	288	Standard
	Mn	55	179123.1	1.7	**13.8557**	0.509	3.7	ug/L	1080	Standard
	Co	59	2547.5	2.7	**0.3015**	0.014	4.7	ug/L	117	Standard
	Ni	60	4146.9	3.9	**1.7977**	0.033	1.9	ug/L	68	Standard
	Cu	65	472.3	7.6	**0.1571**	0.015	9.5	ug/L	141	Standard
	Zn	66	1712.4	7.4	**1.5748**	0.099	6.3	ug/L	138	Standard
>	**Ge**	72	278212.8	2.1				ug/L	283230	Standard
	As	75	-126.0	35.2	**0.0442**	0.044	99.6	ug/L	-198	Standard
	Se	82	86.1	10.2	**0.6455**	0.110	17.0	ug/L	21	Standard
	Se-1	77	161.3	4.0	**0.5018**	0.060	12.0	ug/L	131	Standard
>	**Ga**	71	600.0	2.5				mg/L	607	Standard
	Rb	85	4203.9	3.0				ug/L	30	Standard
	Y	89	242070.1	0.7				ug/L	251555	Standard
>	**Rh**	103	365.0	10.3				ug/L	335	Standard
	Mo	98	1481.6	7.1	**0.4003**	0.026	6.5	ug/L	13	Standard
	Ag	107	50.0	55.6	**-0.0012**	0.004	364.4	ug/L	36	Standard
	Cd	111	38.1	44.5	**-0.0067**	0.005	75.6	mg/L	49	Standard
	Cd	114	122.7	28.2	**-0.0079**	0.003	42.3	ug/L	170	Standard
>	**In**	115	745800.0	1.0				ug/L	727802	Standard
	Sn	118	594.7	5.3	**0.0030**	0.002	72.3	ug/L	471	Standard
	Sb	123	255.2	3.5	**0.0312**	0.001	3.2	ug/L	39	Standard
	Ba	135	26176.9	1.7	**5.8376**	0.154	2.6	ug/L	25	Standard
	Ce	140	104.7	8.9				ug/L	25	Standard
>	**Tb**	159	1084790.7	0.6				ug/L	1071747	Standard
	Ho	165	13.7	33.8				ug/L	13	Standard
	Tl	203	139.3	9.0	**0.0072**	0.001	10.8	ug/L	5	Standard
	Tl	205	304.7	15.2	**0.0078**	0.001	15.6	ug/L	10	Standard
	Pb	206	394.7	3.2	**-0.0017**	0.001	63.9	ug/L	382	Standard
	Pb	207	334.3	7.1	**0.0022**	0.002	107.5	ug/L	306	Standard
	Pb	208	1569.0	6.6	**0.0016**	0.002	138.8	ug/L	1443	Standard
	U	238	11190.8	1.2	**0.7260**	0.006	0.8	ug/L	5	Standard
>	**Bi**	209	567947.2	0.4				ug/L	561075	Standard

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Na	23	59498.3	1.7	**3.3461**	0.086	2.6	mg/L	288	Standard
Mg	24	8095450.4	3.0	**11.7997**	0.438	3.7	mg/L	218	Standard
K	39	560.0	7.3	**0.3723**	0.034	9.2	mg/L	125	Standard
Ca	43	106.7	39.9	**105.7925**	45.259	42.8	mg/L	3	Standard
Fe	54	329.5	10.5	**-0.0448**	0.008	18.1	mg/L	550	Standard
Fe	57	10528.7	5.2	**0.1680**	0.012	7.0	mg/L	1772	Standard
Sc-1	45	340681.1	0.9				mg/L	330668	Standard
Cl	35	7.7	94.4				ug/L	5	Standard
Kr	83	43.7	3.3				ug/L	38	Standard
Br	81	406.7	7.1				ug/L	344	Standard
P	31	1577.6	5.5				ug/L	312	Standard
S	34	84574.6	1.7				ug/L	5594	Standard
Sr	88	285.0	12.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		98.229	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	102.473
	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	101.225
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064305
Sample Date/Time: Sunday, July 29, 2012 17:16:24
Number of Replicates: 3
Autosampler Position: 435
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	15736.5	2.3	**1299.1497**	70.168	5.4	ug/L	9465	Standard
	Be	9	13.3	57.3	**-0.0132**	0.005	34.0	ug/L	10	Standard
	Al	27	43890.2	1.3	**2.5054**	0.175	7.0	ug/L	7870	Standard
>	**Sc**	45	333806.6	4.4				ug/L	330668	Standard
	Ti	47	617.3	3.0	**0.4983**	0.006	1.2	ug/L	53	Standard
	V	51	3009.8	0.9	**0.0318**	0.014	43.2	ug/L	2687	Standard
	Cr	52	8910.0	1.5	**0.0876**	0.047	54.0	ug/L	8408	Standard
	Cr	53	247.5	15.9	**-0.0044**	0.035	795.8	ug/L	288	Standard
	Mn	55	152758.2	1.0	**11.7820**	0.404	3.4	ug/L	1080	Standard
	Co	59	915.4	4.5	**0.0996**	0.000	0.4	ug/L	117	Standard
	Ni	60	4210.3	1.6	**1.8232**	0.051	2.8	ug/L	68	Standard
	Cu	65	590.3	4.3	**0.2133**	0.023	10.7	ug/L	141	Standard
	Zn	66	3474.4	1.5	**3.3480**	0.104	3.1	ug/L	138	Standard
>	**Ge**	72	278847.4	4.1				ug/L	283230	Standard
	As	75	-66.7	25.4	**0.1043**	0.019	18.3	ug/L	-198	Standard
	Se	82	80.6	7.8	**0.5853**	0.060	10.2	ug/L	21	Standard
	Se-1	77	152.3	1.0	**0.3676**	0.071	19.4	ug/L	131	Standard
>	**Ga**	71	621.7	9.3				mg/L	607	Standard
	Rb	85	3895.5	0.6				ug/L	30	Standard
	Y	89	248574.9	2.4				ug/L	251555	Standard
>	**Rh**	103	370.0	8.2				ug/L	335	Standard
	Mo	98	752.6	1.9	**0.1983**	0.004	1.8	ug/L	13	Standard
	Ag	107	44.0	10.4	**-0.0021**	0.001	33.2	ug/L	36	Standard
	Cd	111	56.9	26.2	**-0.0010**	0.005	533.2	mg/L	49	Standard
	Cd	114	182.2	10.0	**-0.0021**	0.001	53.7	ug/L	170	Standard
>	**In**	115	751806.3	3.7				ug/L	727802	Standard
	Sn	118	489.7	9.6	**-0.0062**	0.003	54.9	ug/L	471	Standard
	Sb	123	301.9	11.5	**0.0363**	0.003	9.6	ug/L	39	Standard
	Ba	135	47989.9	1.2	**10.6307**	0.264	2.5	ug/L	25	Standard
	Ce	140	496.7	1.8				ug/L	25	Standard
>	**Tb**	159	1081781.2	3.5				ug/L	1071747	Standard
	Ho	165	16.7	9.2				ug/L	13	Standard
	Tl	203	158.0	2.9	**0.0083**	0.001	7.6	ug/L	5	Standard
	Tl	205	368.3	4.8	**0.0094**	0.000	3.2	ug/L	10	Standard
	Pb	206	447.7	5.7	**0.0023**	0.003	108.5	ug/L	382	Standard
	Pb	207	354.0	2.9	**0.0039**	0.002	42.5	ug/L	306	Standard
	Pb	208	1661.0	2.3	**0.0033**	0.001	42.5	ug/L	1443	Standard
	U	238	3601.1	1.7	**0.2331**	0.006	2.5	ug/L	5	Standard
>	**Bi**	209	569164.0	3.9				ug/L	561075	Standard

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Na	23	59051.5	1.9	**3.3922**	0.107	3.2	mg/L	288	Standard
Mg	24	7856687.3	3.7	**11.6922**	0.385	3.3	mg/L	218	Standard
K	39	590.0	5.2	**0.4088**	0.021	5.0	mg/L	125	Standard
Ca	43	98.3	24.0	**99.8756**	30.374	30.4	mg/L	3	Standard
Fe	54	382.7	3.6	**-0.0305**	0.006	20.2	mg/L	550	Standard
Fe	57	11421.0	4.2	**0.1896**	0.001	0.6	mg/L	1772	Standard
> **Sc-1**	45	333806.6	4.4				mg/L	330668	Standard
Cl	35	6.3	32.9				ug/L	5	Standard
Kr	83	35.7	3.4				ug/L	38	Standard
Br	81	451.7	9.4				ug/L	344	Standard
P	31	1936.0	2.9				ug/L	312	Standard
S	34	82589.5	2.0				ug/L	5594	Standard
Sr	88	256.7	14.9				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		98.453	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	103.298
	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	101.442
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064301
Sample Date/Time: Sunday, July 29, 2012 17:19:34
Number of Replicates: 3
Autosampler Position: 436
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9519.7	2.7	**191.5453**	32.980	17.2	ug/L	9465	Standard
	Be	9	11.7	99.0	**-0.0138**	0.007	52.5	ug/L	10	Standard
	Al	27	11239.2	1.3	**0.2550**	0.013	5.0	ug/L	7870	Standard
>	**Sc**	45	315118.5	1.2				ug/L	330668	Standard
	Ti	47	48.3	4.8	**0.0003**	0.002	593.8	ug/L	53	Standard
	V	51	3043.8	1.5	**0.0423**	0.007	16.7	ug/L	2687	Standard
	Cr	52	8503.4	0.5	**0.0591**	0.021	35.3	ug/L	8408	Standard
	Cr	53	173.3	10.8	**-0.0594**	0.017	28.0	ug/L	288	Standard
	Mn	55	14277.7	3.1	**1.0499**	0.047	4.5	ug/L	1080	Standard
	Co	59	173.3	14.9	**0.0087**	0.003	37.2	ug/L	117	Standard
	Ni	60	8772.2	2.4	**3.9181**	0.127	3.2	ug/L	68	Standard
	Cu	65	134.0	4.7	**-0.0027**	0.002	87.6	ug/L	141	Standard
	Zn	66	6273.3	1.9	**6.3102**	0.176	2.8	ug/L	138	Standard
>	**Ge**	72	272516.2	1.3				ug/L	283230	Standard
	As	75	-171.3	16.0	**-0.0064**	0.029	463.5	ug/L	-198	Standard
	Se	82	244.2	1.9	**2.3240**	0.014	0.6	ug/L	21	Standard
	Se-1	77	265.3	2.1	**2.1047**	0.132	6.3	ug/L	131	Standard
>	**Ga**	71	548.3	6.1				mg/L	607	Standard
	Rb	85	373.3	12.2				ug/L	30	Standard
	Y	89	231806.6	1.1				ug/L	251555	Standard
>	**Rh**	103	326.7	9.2				ug/L	335	Standard
	Mo	98	1295.7	1.7	**0.3585**	0.007	1.9	ug/L	13	Standard
	Ag	107	39.0	14.3	**-0.0027**	0.001	32.6	ug/L	36	Standard
	Cd	111	41.6	11.5	**-0.0053**	0.002	31.4	mg/L	49	Standard
	Cd	114	150.8	5.8	**-0.0047**	0.001	18.9	ug/L	170	Standard
>	**In**	115	727109.8	1.3				ug/L	727802	Standard
	Sn	118	368.3	3.3	**-0.0154**	0.001	6.7	ug/L	471	Standard
	Sb	123	117.9	12.5	**0.0158**	0.002	12.1	ug/L	39	Standard
	Ba	135	487.0	5.4	**0.1002**	0.007	7.4	ug/L	25	Standard
	Ce	140	54.0	17.7				ug/L	25	Standard
>	**Tb**	159	1050608.1	1.7				ug/L	1071747	Standard
	Ho	165	11.7	9.9				ug/L	13	Standard
	Tl	203	29.0	34.5	**0.0006**	0.001	89.7	ug/L	5	Standard
	Tl	205	73.7	16.6	**0.0019**	0.000	16.4	ug/L	10	Standard
	Pb	206	355.0	4.1	**-0.0052**	0.001	28.5	ug/L	382	Standard
	Pb	207	326.7	4.9	**0.0010**	0.001	131.2	ug/L	306	Standard
	Pb	208	1451.7	0.9	**-0.0012**	0.001	52.0	ug/L	1443	Standard
	U	238	4470.0	1.9	**0.2853**	0.007	2.6	ug/L	5	Standard
>	**Bi**	209	577165.4	1.4				ug/L	561075	Standard

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Na	23	6383.0	5.8	**0.3560**	0.022	6.2	mg/L	288	Standard
Mg	24	487464.3	2.0	**0.7685**	0.023	3.1	mg/L	218	Standard
K	39	166.7	33.2	**0.0458**	0.051	110.7	mg/L	125	Standard
Ca	43	11.7	49.5	**7.7080**	6.387	82.9	mg/L	3	Standard
Fe	54	237.2	18.4	**-0.0618**	0.010	16.7	mg/L	550	Standard
Fe	57	3097.0	4.7	**0.0297**	0.003	8.7	mg/L	1772	Standard
Sc-1	45	315118.5	1.2				mg/L	330668	Standard
Cl	35	2.3	49.5				ug/L	5	Standard
Kr	83	37.7	7.7				ug/L	38	Standard
Br	81	304.2	10.5				ug/L	344	Standard
P	31	133.3	5.7				ug/L	312	Standard
S	34	12707.0	3.1				ug/L	5594	Standard
Sr	88	61.7	38.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		96.217	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	99.905
	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	102.868
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207064302
Sample Date/Time: Sunday, July 29, 2012 17:22:43
Number of Replicates: 3
Autosampler Position: 437
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9427.9	2.4	**165.3091**	59.619	36.1	ug/L	9465	Standard
	Be	9	6.7	43.3	**-0.0170**	0.002	10.9	ug/L	10	Standard
	Al	27	9044.4	2.8	**0.0889**	0.012	13.3	ug/L	7870	Standard
>	**Sc**	45	316375.9	1.1				ug/L	330668	Standard
	Ti	47	53.0	1.9	**0.0057**	0.000	3.2	ug/L	53	Standard
	V	51	3030.5	0.9	**0.0491**	0.006	11.5	ug/L	2687	Standard
	Cr	52	8310.6	0.4	**0.0616**	0.021	34.3	ug/L	8408	Standard
	Cr	53	170.8	16.1	**-0.0580**	0.023	39.4	ug/L	288	Standard
	Mn	55	15838.6	2.0	**1.2058**	0.039	3.3	ug/L	1080	Standard
	Co	59	216.7	6.7	**0.0149**	0.002	10.4	ug/L	117	Standard
	Ni	60	10128.1	1.4	**4.6435**	0.088	1.9	ug/L	68	Standard
	Cu	65	135.7	7.4	**-0.0001**	0.006	4815.3	ug/L	141	Standard
	Zn	66	4197.2	4.3	**4.2805**	0.170	4.0	ug/L	138	Standard
>	**Ge**	72	265766.6	1.5				ug/L	283230	Standard
	As	75	-192.7	13.0	**-0.0337**	0.027	79.8	ug/L	-198	Standard
	Se	82	306.6	6.0	**3.0606**	0.154	5.0	ug/L	21	Standard
	Se-1	77	312.0	9.0	**2.9174**	0.407	14.0	ug/L	131	Standard
>	**Ga**	71	558.3	8.1				mg/L	607	Standard
	Rb	85	416.7	23.0				ug/L	30	Standard
	Y	89	234851.4	1.5				ug/L	251555	Standard
>	**Rh**	103	321.7	14.9				ug/L	335	Standard
	Mo	98	1526.2	1.6	**0.4329**	0.005	1.1	ug/L	13	Standard
	Ag	107	40.3	12.2	**-0.0023**	0.001	37.8	ug/L	36	Standard
	Cd	111	17.3	26.4	**-0.0127**	0.001	10.9	mg/L	49	Standard
	Cd	114	80.3	15.5	**-0.0118**	0.001	11.9	ug/L	170	Standard
>	**In**	115	711663.8	1.5				ug/L	727802	Standard
	Sn	118	362.3	5.8	**-0.0152**	0.002	14.6	ug/L	471	Standard
	Sb	123	108.3	12.5	**0.0149**	0.002	11.8	ug/L	39	Standard
	Ba	135	535.0	3.4	**0.1138**	0.006	5.4	ug/L	25	Standard
	Ce	140	53.7	15.6				ug/L	25	Standard
>	**Tb**	159	1026988.1	1.2				ug/L	1071747	Standard
	Ho	165	12.3	4.7				ug/L	13	Standard
	Tl	203	23.7	35.2	**0.0003**	0.000	143.6	ug/L	5	Standard
	Tl	205	64.3	7.3	**0.0017**	0.000	7.0	ug/L	10	Standard
	Pb	206	374.7	1.3	**-0.0034**	0.000	7.4	ug/L	382	Standard
	Pb	207	321.0	3.3	**0.0008**	0.001	139.5	ug/L	306	Standard
	Pb	208	1450.4	3.1	**-0.0009**	0.001	99.5	ug/L	1443	Standard
	U	238	5325.3	2.6	**0.3434**	0.008	2.3	ug/L	5	Standard
>	**Bi**	209	571117.5	0.5				ug/L	561075	Standard

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⌈	**Na**	23	7013.3	8.5	**0.3928**	0.032	8.2	mg/L	288	Standard
|	**Mg**	24	563009.6	1.6	**0.8838**	0.007	0.8	mg/L	218	Standard
|	**K**	39	145.0	17.2	**0.0252**	0.022	86.3	mg/L	125	Standard
|	**Ca**	43	10.0	86.6	**5.8906**	9.835	167.0	mg/L	3	Standard
|	**Fe**	54	222.8	22.0	**-0.0655**	0.013	19.5	mg/L	550	Standard
|	**Fe**	57	3190.3	5.9	**0.0314**	0.004	13.8	mg/L	1772	Standard
⌊>	**Sc-1**	45	316375.9	1.1				mg/L	330668	Standard
	Cl	35	4.0	25.0				ug/L	5	Standard
	Kr	83	36.1	4.6				ug/L	38	Standard
	Br	81	310.8	7.0				ug/L	344	Standard
	P	31	135.8	7.7				ug/L	312	Standard
	S	34	13588.6	0.8				ug/L	5594	Standard
	Sr	88	75.0	30.6				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		93.834	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	97.783
	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	101.790
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064303
Sample Date/Time: Sunday, July 29, 2012 17:25:54
Number of Replicates: 3
Autosampler Position: 438
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9519.7	4.0	**201.9088**	52.277	25.9	ug/L	9465	Standard
	Be	9	11.7	49.5	**-0.0138**	0.004	27.3	ug/L	10	Standard
	Al	27	7805.3	2.2	**0.0029**	0.023	781.1	ug/L	7870	Standard
>	**Sc**	45	313443.0	1.8				ug/L	330668	Standard
	Ti	47	97.0	4.5	**0.0453**	0.005	10.3	ug/L	53	Standard
	V	51	2733.7	0.9	**0.0140**	0.003	22.0	ug/L	2687	Standard
	Cr	52	8197.2	1.1	**0.0351**	0.004	10.6	ug/L	8408	Standard
	Cr	53	181.7	11.1	**-0.0505**	0.017	34.4	ug/L	288	Standard
	Mn	55	16025.8	3.9	**1.2083**	0.048	4.0	ug/L	1080	Standard
	Co	59	155.0	6.5	**0.0067**	0.001	17.5	ug/L	117	Standard
	Ni	60	756.0	5.7	**0.3162**	0.020	6.3	ug/L	68	Standard
	Cu	65	126.7	14.2	**-0.0053**	0.008	157.9	ug/L	141	Standard
	Zn	66	1632.8	2.1	**1.5561**	0.021	1.3	ug/L	138	Standard
>	**Ge**	72	268301.1	0.9				ug/L	283230	Standard
	As	75	-152.0	14.8	**0.0113**	0.025	219.8	ug/L	-198	Standard
	Se	82	48.3	19.5	**0.2731**	0.101	36.9	ug/L	21	Standard
	Se-1	77	124.3	7.3	**0.0294**	0.153	522.2	ug/L	131	Standard
>	**Ga**	71	578.3	13.2				mg/L	607	Standard
	Rb	85	386.7	9.9				ug/L	30	Standard
	Y	89	234071.1	1.4				ug/L	251555	Standard
>	**Rh**	103	345.0	5.2				ug/L	335	Standard
	Mo	98	217.5	4.5	**0.0576**	0.003	5.4	ug/L	13	Standard
	Ag	107	39.3	13.0	**-0.0023**	0.001	36.6	ug/L	36	Standard
	Cd	111	24.8	12.4	**-0.0101**	0.001	9.8	mg/L	49	Standard
	Cd	114	66.7	11.6	**-0.0130**	0.001	6.4	ug/L	170	Standard
>	**In**	115	689407.5	0.4				ug/L	727802	Standard
	Sn	118	383.0	10.5	**-0.0123**	0.004	31.0	ug/L	471	Standard
	Sb	123	86.5	15.2	**0.0126**	0.002	13.2	ug/L	39	Standard
	Ba	135	2375.5	5.2	**0.5627**	0.031	5.6	ug/L	25	Standard
	Ce	140	47.7	6.1				ug/L	25	Standard
>	**Tb**	159	1013463.9	0.7				ug/L	1071747	Standard
	Ho	165	10.7	44.3				ug/L	13	Standard
	Tl	203	23.0	19.0	**0.0003**	0.000	80.0	ug/L	5	Standard
	Tl	205	64.7	22.2	**0.0017**	0.000	21.3	ug/L	10	Standard
	Pb	206	377.3	2.7	**-0.0028**	0.001	35.2	ug/L	382	Standard
	Pb	207	293.3	2.3	**-0.0014**	0.001	52.4	ug/L	306	Standard
	Pb	208	1445.4	0.9	**-0.0006**	0.000	23.5	ug/L	1443	Standard
	U	238	975.7	5.3	**0.0637**	0.003	4.7	ug/L	5	Standard
>	**Bi**	209	562850.4	0.7				ug/L	561075	Standard

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Na	23	8352.3	7.8	**0.4797**	0.039	8.1	mg/L	288	Standard
Mg	24	593348.3	4.0	**0.9405**	0.047	4.9	mg/L	218	Standard
K	39	170.0	7.8	**0.0500**	0.014	27.7	mg/L	125	Standard
Ca	43	5.0	100.0	**0.3538**	5.719	1616.6	mg/L	3	Standard
Fe	54	217.8	16.0	**-0.0664**	0.008	11.6	mg/L	550	Standard
Fe	57	2953.6	4.7	**0.0271**	0.004	13.2	mg/L	1772	Standard
Sc-1	45	313443.0	1.8				mg/L	330668	Standard
Cl	35	4.7	53.9				ug/L	5	Standard
Kr	83	33.3	9.2				ug/L	38	Standard
Br	81	300.0	5.2				ug/L	344	Standard
P	31	270.8	9.1				ug/L	312	Standard
S	34	14179.1	4.0				ug/L	5594	Standard
Sr	88	65.0	15.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		94.729	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207064303
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	Cd	111	
	Cd	114	
>	In	115	94.725
	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	100.316
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064304
Sample Date/Time: Sunday, July 29, 2012 17:29:04
Number of Replicates: 3
Autosampler Position: 439
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9321.2	3.7	**177.7356**	53.866	30.3	ug/L	9465	Standard
	Be	9	8.3	91.7	**-0.0158**	0.005	31.5	ug/L	10	Standard
	Al	27	6219.6	1.7	**-0.1118**	0.007	6.3	ug/L	7870	Standard
>	**Sc**	45	310734.8	2.0				ug/L	330668	Standard
	Ti	47	74.7	11.2	**0.0246**	0.007	29.6	ug/L	53	Standard
	V	51	2785.8	1.8	**0.0180**	0.005	27.3	ug/L	2687	Standard
	Cr	52	8218.2	0.1	**0.0322**	0.004	11.7	ug/L	8408	Standard
	Cr	53	172.5	16.7	**-0.0588**	0.023	38.5	ug/L	288	Standard
	Mn	55	15128.2	1.8	**1.1296**	0.026	2.3	ug/L	1080	Standard
	Co	59	307.7	3.6	**0.0261**	0.001	5.3	ug/L	117	Standard
	Ni	60	521.0	4.2	**0.2076**	0.011	5.1	ug/L	68	Standard
	Cu	65	109.0	18.6	**-0.0143**	0.010	71.0	ug/L	141	Standard
	Zn	66	1352.1	2.1	**1.2553**	0.036	2.8	ug/L	138	Standard
>	**Ge**	72	269712.1	0.4				ug/L	283230	Standard
	As	75	-161.0	14.6	**0.0028**	0.024	853.3	ug/L	-198	Standard
	Se	82	29.7	14.8	**0.0727**	0.048	66.0	ug/L	21	Standard
	Se-1	77	131.3	15.0	**0.1250**	0.305	243.9	ug/L	131	Standard
>	**Ga**	71	531.7	6.6				mg/L	607	Standard
	Rb	85	428.3	20.4				ug/L	30	Standard
	Y	89	231435.8	0.1				ug/L	251555	Standard
>	**Rh**	103	303.3	9.4				ug/L	335	Standard
	Mo	98	143.2	5.7	**0.0353**	0.003	8.3	ug/L	13	Standard
	Ag	107	42.3	5.9	**-0.0018**	0.001	27.5	ug/L	36	Standard
	Cd	111	16.7	24.0	**-0.0128**	0.001	10.3	mg/L	49	Standard
	Cd	114	69.6	11.3	**-0.0127**	0.001	6.4	ug/L	170	Standard
>	**In**	115	693042.9	1.3				ug/L	727802	Standard
	Sn	118	364.3	3.8	**-0.0142**	0.001	5.9	ug/L	471	Standard
	Sb	123	63.4	22.8	**0.0097**	0.002	19.4	ug/L	39	Standard
	Ba	135	2187.8	6.7	**0.5148**	0.042	8.1	ug/L	25	Standard
	Ce	140	30.0	5.8				ug/L	25	Standard
>	**Tb**	159	1002844.6	0.5				ug/L	1071747	Standard
	Ho	165	10.0	45.8				ug/L	13	Standard
	Tl	203	26.3	28.5	**0.0005**	0.000	88.0	ug/L	5	Standard
	Tl	205	73.7	48.6	**0.0019**	0.001	48.9	ug/L	10	Standard
	Pb	206	360.0	1.4	**-0.0039**	0.001	17.3	ug/L	382	Standard
	Pb	207	304.0	4.0	**-0.0002**	0.001	335.6	ug/L	306	Standard
	Pb	208	1373.0	1.2	**-0.0018**	0.000	13.3	ug/L	1443	Standard
	U	238	876.4	2.4	**0.0576**	0.001	1.1	ug/L	5	Standard
>	**Bi**	209	558579.8	2.1				ug/L	561075	Standard

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Na	23	7692.0	4.1	**0.4430**	0.011	2.5	mg/L	288	Standard
Mg	24	551645.2	4.1	**0.8815**	0.025	2.9	mg/L	218	Standard
K	39	156.7	13.3	**0.0387**	0.019	48.4	mg/L	125	Standard
Ca	43	15.0	33.3	**11.8186**	6.049	51.2	mg/L	3	Standard
Fe	54	201.1	6.5	**-0.0701**	0.003	4.7	mg/L	550	Standard
Fe	57	2993.6	9.4	**0.0284**	0.005	17.2	mg/L	1772	Standard
Sc-1	45	310734.8	2.0				mg/L	330668	Standard
Cl	35	5.0	20.0				ug/L	5	Standard
Kr	83	37.3	2.4				ug/L	38	Standard
Br	81	268.3	17.2				ug/L	344	Standard
P	31	234.2	14.2				ug/L	312	Standard
S	34	13626.1	2.4				ug/L	5594	Standard
Sr	88	63.3	35.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		95.227	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207064304
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	Cd	111	
	Cd	114	
>	In	115	95.224
	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	99.555
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064305
Sample Date/Time: Sunday, July 29, 2012 17:32:13
Number of Replicates: 3
Autosampler Position: 440
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9289.5	1.2	**226.8859**	54.588	24.1	ug/L	9465	Standard
	Be	9	8.3	34.6	**-0.0157**	0.002	12.6	ug/L	10	Standard
	Al	27	7948.8	3.0	**0.0354**	0.011	31.4	ug/L	7870	Standard
>	**Sc**	45	302216.7	2.0				ug/L	330668	Standard
	Ti	47	84.3	7.6	**0.0348**	0.006	16.3	ug/L	53	Standard
	V	51	2736.8	2.1	**0.0185**	0.003	14.8	ug/L	2687	Standard
	Cr	52	8264.9	0.8	**0.0606**	0.007	11.9	ug/L	8408	Standard
	Cr	53	150.0	10.0	**-0.0743**	0.014	18.3	ug/L	288	Standard
	Mn	55	13102.0	1.6	**0.9879**	0.025	2.5	ug/L	1080	Standard
	Co	59	190.0	6.2	**0.0116**	0.002	15.7	ug/L	117	Standard
	Ni	60	536.0	2.9	**0.2192**	0.004	2.0	ug/L	68	Standard
	Cu	65	105.0	6.6	**-0.0152**	0.004	25.4	ug/L	141	Standard
	Zn	66	1388.1	5.7	**1.3210**	0.078	5.9	ug/L	138	Standard
>	**Ge**	72	264498.6	1.2				ug/L	283230	Standard
	As	75	-169.8	12.9	**-0.0100**	0.023	233.3	ug/L	-198	Standard
	Se	82	26.9	9.8	**0.0487**	0.028	58.3	ug/L	21	Standard
	Se-1	77	110.7	16.5	**-0.1561**	0.265	169.7	ug/L	131	Standard
>	**Ga**	71	525.0	15.7				mg/L	607	Standard
	Rb	85	310.0	11.6				ug/L	30	Standard
	Y	89	227842.6	2.4				ug/L	251555	Standard
>	**Rh**	103	355.0	16.0				ug/L	335	Standard
	Mo	98	80.9	8.4	**0.0169**	0.002	12.3	ug/L	13	Standard
	Ag	107	38.7	5.4	**-0.0024**	0.000	13.8	ug/L	36	Standard
	Cd	111	24.5	2.4	**-0.0102**	0.000	1.6	mg/L	49	Standard
	Cd	114	70.0	18.9	**-0.0126**	0.001	11.1	ug/L	170	Standard
>	**In**	115	690068.7	0.4				ug/L	727802	Standard
	Sn	118	349.7	12.0	**-0.0153**	0.004	25.8	ug/L	471	Standard
	Sb	123	59.2	22.0	**0.0092**	0.002	17.6	ug/L	39	Standard
	Ba	135	3983.5	2.6	**0.9504**	0.029	3.0	ug/L	25	Standard
	Ce	140	64.0	13.4				ug/L	25	Standard
>	**Tb**	159	995127.0	0.9				ug/L	1071747	Standard
	Ho	165	10.3	14.8				ug/L	13	Standard
	Tl	203	20.7	26.6	**0.0002**	0.000	165.2	ug/L	5	Standard
	Tl	205	61.7	11.5	**0.0016**	0.000	11.9	ug/L	10	Standard
	Pb	206	340.0	4.5	**-0.0053**	0.001	18.9	ug/L	382	Standard
	Pb	207	314.3	6.6	**0.0010**	0.002	177.3	ug/L	306	Standard
	Pb	208	1369.7	5.6	**-0.0017**	0.001	75.1	ug/L	1443	Standard
	U	238	291.0	2.6	**0.0191**	0.000	2.3	ug/L	5	Standard
>	**Bi**	209	555182.3	0.8				ug/L	561075	Standard

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Na	23	7323.4	5.1	**0.4330**	0.020	4.7	mg/L	288	Standard
Mg	24	558481.1	2.7	**0.9182**	0.039	4.2	mg/L	218	Standard
K	39	181.7	13.9	**0.0674**	0.026	39.0	mg/L	125	Standard
Ca	43	10.0	50.0	**6.2870**	5.633	89.6	mg/L	3	Standard
Fe	54	189.5	26.5	**-0.0716**	0.013	18.7	mg/L	550	Standard
Fe	57	3005.3	6.8	**0.0305**	0.005	16.6	mg/L	1772	Standard
Sc-1	45	302216.7	2.0				mg/L	330668	Standard
Cl	35	3.3	17.3				ug/L	5	Standard
Kr	83	38.4	4.4				ug/L	38	Standard
Br	81	272.5	4.2				ug/L	344	Standard
P	31	283.3	10.7				ug/L	312	Standard
S	34	13678.7	1.5				ug/L	5594	Standard
Sr	88	75.0	43.7				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.387	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	94.815
	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	98.950
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 17:35:25
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: JYH 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	7	9603.0	3.8	**-43.9802**	48.254	109.7	ug/L	9465	Standard
	Be	9	90739.3	2.0	**49.9954**	1.119	2.2	ug/L	10	Standard
	Al	27	726054.7	0.8	**46.5570**	0.289	0.6	ug/L	7870	Standard
>	**Sc**	45	360973.2	1.3				ug/L	330668	Standard
	Ti	47	124288.8	1.6	**99.3874**	2.062	2.1	ug/L	53	Standard
	V	51	504884.0	1.2	**47.4175**	0.763	1.6	ug/L	2687	Standard
	Cr	52	406283.8	1.0	**47.5411**	0.825	1.7	ug/L	8408	Standard
	Cr	53	70117.7	1.8	**49.4471**	0.994	2.0	ug/L	288	Standard
	Mn	55	687853.5	0.6	**48.6306**	0.520	1.1	ug/L	1080	Standard
	Co	59	426613.0	0.5	**47.9212**	0.472	1.0	ug/L	117	Standard
	Ni	60	121106.4	1.1	**48.5647**	0.976	2.0	ug/L	68	Standard
	Cu	65	113970.7	0.8	**49.3543**	0.736	1.5	ug/L	141	Standard
	Zn	66	54014.5	1.6	**49.4574**	0.768	1.6	ug/L	138	Standard
>	**Ge**	72	305587.1	1.0				ug/L	283230	Standard
	As	75	52572.0	0.5	**49.1548**	0.539	1.1	ug/L	-198	Standard
	Se	82	5363.7	0.4	**50.0508**	0.667	1.3	ug/L	21	Standard
	Se-1	77	3886.8	1.1	**49.8762**	0.807	1.6	ug/L	131	Standard
>	**Ga**	71	721.7	11.6				mg/L	607	Standard
	Rb	85	808.4	6.3				ug/L	30	Standard
	Y	89	276547.7	3.3				ug/L	251555	Standard
>	**Rh**	103	371.7	13.1				ug/L	335	Standard
	Mo	98	368954.9	2.3	**96.3369**	2.210	2.3	ug/L	13	Standard
	Ag	107	337386.0	0.4	**50.0623**	0.188	0.4	ug/L	36	Standard
	Cd	111	172103.8	0.9	**49.7597**	0.421	0.8	mg/L	49	Standard
	Cd	114	519867.6	0.5	**49.4302**	0.209	0.4	ug/L	170	Standard
>	**In**	115	785729.3	0.0				ug/L	727802	Standard
	Sn	118	610231.5	0.3	**49.1123**	0.187	0.4	ug/L	471	Standard
	Sb	123	439673.5	0.4	**48.1731**	0.168	0.3	ug/L	39	Standard
	Ba	135	231977.1	1.0	**49.1805**	0.502	1.0	ug/L	25	Standard
	Ce	140	891.0	1.2				ug/L	25	Standard
>	**Tb**	159	1117738.2	0.9				ug/L	1071747	Standard
	Ho	165	17.3	17.6				ug/L	13	Standard
	Tl	203	852848.4	1.0	**47.9824**	0.482	1.0	ug/L	5	Standard
	Tl	205	1975789.7	0.6	**47.6600**	0.089	0.2	ug/L	10	Standard
	Pb	206	663981.0	0.5	**48.3969**	0.365	0.8	ug/L	382	Standard
	Pb	207	564536.6	0.8	**49.2820**	0.423	0.9	ug/L	306	Standard
	Pb	208	2608000.9	0.6	**48.4417**	0.280	0.6	ug/L	1443	Standard
	U	238	794961.0	0.5	**48.9121**	0.323	0.7	ug/L	5	Standard
>	**Bi**	209	599081.1	0.8				ug/L	561075	Standard

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Na	23	108740.5	0.4	**5.7975**	0.073	1.3	mg/L	288	Standard
Mg	24	3422130.9	1.6	**4.7069**	0.047	1.0	mg/L	218	Standard
K	39	6067.9	4.5	**4.8131**	0.243	5.1	mg/L	125	Standard
Ca	43	6.7	86.6	**1.2308**	5.708	463.7	mg/L	3	Standard
Fe	54	22478.3	3.8	**4.7958**	0.248	5.2	mg/L	550	Standard
Fe	57	320162.6	4.1	**5.7813**	0.161	2.8	mg/L	1772	Standard
Sc-1	45	360973.2	1.3				mg/L	330668	Standard
Cl	35	3.0	115.5				ug/L	5	Standard
Kr	83	40.0	12.3				ug/L	38	Standard
Br	81	417.5	4.9				ug/L	344	Standard
P	31	412.5	9.5				ug/L	312	Standard
S	34	6531.4	3.8				ug/L	5594	Standard
Sr	88	58.3	34.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	93.114		
Sc	45			
Ti	47	99.387		
V	51	94.835		
Cr	52	95.082		
Cr	53			
Mn	55	97.261		
Co	59	95.842		
Ni	60	97.129		
Cu	65	98.709		
Zn	66	98.915		
Ge	72		107.894	
As	75	98.310		
Se	82	100.102		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.337		
Ag	107	100.125		

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	Cd	111	99.519	
	Cd	114		
>	In	115		107.959
	Sn	118	98.225	
	Sb	123	96.346	
	Ba	135	98.361	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.965	
	Tl	205		
	Pb	206	96.794	
	Pb	207	98.564	
	Pb	208	96.883	
	U	238	97.824	
>	Bi	209		106.774
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 17:37:55
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 17:38:35
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: JYH 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	7	9396.2	2.8	**-36.0587**	19.323	53.6	ug/L	9465	Standard
	Be	9	23.3	68.9	**-0.0081**	0.009	110.2	ug/L	10	Standard
	Al	27	8364.0	3.3	**-0.0236**	0.011	45.5	ug/L	7870	Standard
>	**Sc**	45	351624.3	2.0				ug/L	330668	Standard
	Ti	47	72.3	15.3	**0.0154**	0.010	63.9	ug/L	53	Standard
	V	51	2560.1	2.1	**-0.0359**	0.006	17.2	ug/L	2687	Standard
	Cr	52	8046.5	0.2	**-0.1098**	0.018	16.2	ug/L	8408	Standard
	Cr	53	254.2	14.4	**-0.0151**	0.029	193.1	ug/L	288	Standard
	Mn	55	1231.7	4.1	**0.0038**	0.004	95.9	ug/L	1080	Standard
	Co	59	152.0	15.7	**0.0041**	0.003	66.0	ug/L	117	Standard
	Ni	60	85.7	28.5	**0.0055**	0.010	184.6	ug/L	68	Standard
	Cu	65	176.0	10.5	**0.0092**	0.008	89.7	ug/L	141	Standard
	Zn	66	181.0	8.1	**0.0162**	0.014	87.2	ug/L	138	Standard
>	**Ge**	72	302704.5	1.8				ug/L	283230	Standard
	As	75	-196.2	9.6	**-0.0118**	0.017	146.7	ug/L	-198	Standard
	Se	82	24.8	23.8	**-0.0075**	0.060	803.1	ug/L	21	Standard
	Se-1	77	117.3	5.1	**-0.2802**	0.062	22.2	ug/L	131	Standard
>	**Ga**	71	591.7	7.6				mg/L	607	Standard
	Rb	85	18.3	78.7				ug/L	30	Standard
	Y	89	267755.3	3.4				ug/L	251555	Standard
>	**Rh**	103	345.0	7.7				ug/L	335	Standard
	Mo	98	219.6	11.2	**0.0503**	0.007	13.3	ug/L	13	Standard
	Ag	107	138.0	50.8	**0.0115**	0.010	88.8	ug/L	36	Standard
	Cd	111	89.1	47.9	**0.0075**	0.012	161.3	mg/L	49	Standard
	Cd	114	272.3	36.5	**0.0057**	0.009	162.3	ug/L	170	Standard
>	**In**	115	784753.5	1.1				ug/L	727802	Standard
	Sn	118	972.4	16.0	**0.0309**	0.012	38.4	ug/L	471	Standard
	Sb	123	2380.7	8.6	**0.2629**	0.021	8.0	ug/L	39	Standard
	Ba	135	79.7	50.6	**0.0054**	0.008	155.8	ug/L	25	Standard
	Ce	140	20.7	14.8				ug/L	25	Standard
>	**Tb**	159	1105974.0	1.1				ug/L	1071747	Standard
	Ho	165	15.3	33.5				ug/L	13	Standard
	Tl	203	151.0	81.5	**0.0074**	0.007	93.2	ug/L	5	Standard
	Tl	205	350.7	69.6	**0.0084**	0.006	69.5	ug/L	10	Standard
	Pb	206	519.0	17.6	**0.0055**	0.007	120.4	ug/L	382	Standard
	Pb	207	395.3	13.3	**0.0057**	0.005	81.3	ug/L	306	Standard
	Pb	208	1968.4	14.4	**0.0072**	0.005	73.9	ug/L	1443	Standard
	U	238	127.3	48.6	**0.0076**	0.004	50.2	ug/L	5	Standard
>	**Bi**	209	602823.9	0.2				ug/L	561075	Standard

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Na	23	358.3	16.1	**-0.0165**	0.003	18.6	mg/L	288	Standard
Mg	24	863.4	34.8	**0.0015**	0.000	27.9	mg/L	218	Standard
K	39	150.0	36.1	**0.0167**	0.047	283.2	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	642.8	15.2	**0.0235**	0.024	104.2	mg/L	550	Standard
Fe	57	2218.5	7.6	**0.0066**	0.004	54.5	mg/L	1772	Standard
> **Sc-1**	45	351624.3	2.0				mg/L	330668	Standard
Cl	35	5.7	44.4				ug/L	5	Standard
Kr	83	38.4	4.8				ug/L	38	Standard
Br	81	413.3	1.3				ug/L	344	Standard
P	31	321.7	3.1				ug/L	312	Standard
S	34	6207.1	2.8				ug/L	5594	Standard
Sr	88	40.0	33.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		106.876	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	107.825
	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	107.441
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Sunday, July 29, 2012 17:41:05
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Method 6020 - Summary Report

Sample ID: L1207064306
Sample Date/Time: Sunday, July 29, 2012 17:41:47
Number of Replicates: 3
Autosampler Position: 441
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	15170.9	1.6	**1378.7753**	145.155	10.5	ug/L	9465	Standard
	Be	9	16.7	34.6	**-0.0106**	0.004	36.7	ug/L	10	Standard
	Al	27	34066.6	1.8	**1.9644**	0.068	3.5	ug/L	7870	Standard
>	**Sc**	45	313862.6	4.1				ug/L	330668	Standard
	Ti	47	481.0	3.1	**0.4024**	0.017	4.1	ug/L	53	Standard
	V	51	2854.8	4.4	**0.0319**	0.002	5.9	ug/L	2687	Standard
	Cr	52	8376.0	3.3	**0.0778**	0.017	21.9	ug/L	8408	Standard
	Cr	53	292.5	11.6	**0.0424**	0.026	61.5	ug/L	288	Standard
	Mn	55	159646.8	1.7	**13.0036**	0.277	2.1	ug/L	1080	Standard
	Co	59	1698.1	2.0	**0.2078**	0.008	3.7	ug/L	117	Standard
	Ni	60	3226.0	3.4	**1.4686**	0.030	2.0	ug/L	68	Standard
	Cu	65	447.3	8.9	**0.1563**	0.012	7.5	ug/L	141	Standard
	Zn	66	1640.8	4.4	**1.5916**	0.021	1.3	ug/L	138	Standard
>	**Ge**	72	264118.3	3.8				ug/L	283230	Standard
	As	75	-103.0	57.6	**0.0632**	0.059	93.6	ug/L	-198	Standard
	Se	82	119.8	5.5	**1.0594**	0.118	11.1	ug/L	21	Standard
	Se-1	77	170.0	7.1	**0.7594**	0.086	11.4	ug/L	131	Standard
>	**Ga**	71	595.0	6.6				mg/L	607	Standard
	Rb	85	3693.8	1.6				ug/L	30	Standard
	Y	89	226422.0	3.1				ug/L	251555	Standard
>	**Rh**	103	338.3	8.4				ug/L	335	Standard
	Mo	98	658.7	3.2	**0.1903**	0.003	1.5	ug/L	13	Standard
	Ag	107	57.7	10.5	**0.0009**	0.001	109.9	ug/L	36	Standard
	Cd	111	29.8	25.2	**-0.0084**	0.003	30.3	mg/L	49	Standard
	Cd	114	109.8	13.4	**-0.0082**	0.002	19.4	ug/L	170	Standard
>	**In**	115	684258.9	1.9				ug/L	727802	Standard
	Sn	118	615.7	3.9	**0.0095**	0.002	21.0	ug/L	471	Standard
	Sb	123	552.3	12.8	**0.0714**	0.010	14.2	ug/L	39	Standard
	Ba	135	49930.1	1.7	**12.1469**	0.050	0.4	ug/L	25	Standard
	Ce	140	198.7	5.5				ug/L	25	Standard
>	**Tb**	159	1025555.3	1.4				ug/L	1071747	Standard
	Ho	165	18.7	16.4				ug/L	13	Standard
	Tl	203	190.7	18.2	**0.0109**	0.002	20.6	ug/L	5	Standard
	Tl	205	411.7	6.4	**0.0111**	0.001	7.2	ug/L	10	Standard
	Pb	206	395.0	5.9	**0.0001**	0.002	2675.9	ug/L	382	Standard
	Pb	207	349.7	3.1	**0.0055**	0.001	15.3	ug/L	306	Standard
	Pb	208	1542.4	3.8	**0.0028**	0.001	33.3	ug/L	1443	Standard
	U	238	3730.8	0.9	**0.2561**	0.002	0.9	ug/L	5	Standard
>	**Bi**	209	536587.2	1.5				ug/L	561075	Standard

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Na	23	60296.4	1.1	**3.6890**	0.196	5.3	mg/L	288	Standard
Mg	24	8344280.2	2.4	**13.2099**	0.482	3.7	mg/L	218	Standard
K	39	616.7	6.0	**0.4660**	0.012	2.5	mg/L	125	Standard
Ca	43	108.3	27.8	**116.2385**	30.008	25.8	mg/L	3	Standard
Fe	54	392.0	12.6	**-0.0227**	0.010	44.8	mg/L	550	Standard
Fe	57	10020.0	4.3	**0.1746**	0.004	2.2	mg/L	1772	Standard
Sc-1	45	313862.6	4.1				mg/L	330668	Standard
Cl	35	7.7	39.8				ug/L	5	Standard
Kr	83	42.0	0.8				ug/L	38	Standard
Br	81	429.2	7.4				ug/L	344	Standard
P	31	1465.9	1.7				ug/L	312	Standard
S	34	86730.0	0.8				ug/L	5594	Standard
Sr	88	268.3	8.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		93.252	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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Cd	111	
Cd	114	
> In	115	94.017
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	95.636
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207064307
Sample Date/Time: Sunday, July 29, 2012 17:44:57
Number of Replicates: 3
Autosampler Position: 442
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13592.8	2.5	**1204.4854**	103.079	8.6	ug/L	9465	Standard
	Be	9	20.0	25.0	**-0.0078**	0.003	42.2	ug/L	10	Standard
	Al	27	54817.4	2.4	**3.7396**	0.116	3.1	ug/L	7870	Standard
>	**Sc**	45	297349.6	1.0				ug/L	330668	Standard
	Ti	47	536.0	3.2	**0.4858**	0.019	3.8	ug/L	53	Standard
	V	51	9062.8	1.0	**0.7758**	0.017	2.2	ug/L	2687	Standard
	Cr	52	8021.5	0.3	**0.1019**	0.016	15.8	ug/L	8408	Standard
	Cr	53	242.5	10.8	**0.0148**	0.026	173.3	ug/L	288	Standard
	Mn	55	152018.2	1.2	**13.1946**	0.282	2.1	ug/L	1080	Standard
	Co	59	2027.8	2.5	**0.2679**	0.010	3.7	ug/L	117	Standard
	Ni	60	4558.7	2.7	**2.2267**	0.072	3.3	ug/L	68	Standard
	Cu	65	580.3	3.7	**0.2427**	0.016	6.6	ug/L	141	Standard
	Zn	66	2863.6	0.6	**3.0921**	0.044	1.4	ug/L	138	Standard
>	**Ge**	72	247794.2	1.6				ug/L	283230	Standard
	As	75	51.2	49.0	**0.2318**	0.030	12.8	ug/L	-198	Standard
	Se	82	64.6	8.8	**0.5043**	0.061	12.2	ug/L	21	Standard
	Se-1	77	137.3	6.5	**0.3982**	0.151	38.0	ug/L	131	Standard
>	**Ga**	71	681.7	9.5				mg/L	607	Standard
	Rb	85	4083.9	4.3				ug/L	30	Standard
	Y	89	215688.8	3.3				ug/L	251555	Standard
>	**Rh**	103	335.0	11.7				ug/L	335	Standard
	Mo	98	4052.1	3.4	**1.2579**	0.049	3.9	ug/L	13	Standard
	Ag	107	39.3	12.5	**-0.0020**	0.001	41.7	ug/L	36	Standard
	Cd	111	63.9	9.3	**0.0038**	0.002	49.9	mg/L	49	Standard
	Cd	114	231.7	14.1	**0.0061**	0.004	59.6	ug/L	170	Standard
>	**In**	115	657312.7	0.7				ug/L	727802	Standard
	Sn	118	472.0	9.4	**-0.0020**	0.004	224.6	ug/L	471	Standard
	Sb	123	756.6	3.7	**0.1009**	0.004	4.0	ug/L	39	Standard
	Ba	135	36206.9	1.9	**9.1669**	0.205	2.2	ug/L	25	Standard
	Ce	140	325.3	6.6				ug/L	25	Standard
>	**Tb**	159	990490.4	1.7				ug/L	1071747	Standard
	Ho	165	19.0	13.9				ug/L	13	Standard
	Tl	203	196.3	17.8	**0.0117**	0.002	19.9	ug/L	5	Standard
	Tl	205	437.0	7.6	**0.0122**	0.001	8.6	ug/L	10	Standard
	Pb	206	381.0	2.3	**0.0000**	0.001	5448.0	ug/L	382	Standard
	Pb	207	321.3	2.0	**0.0038**	0.001	29.2	ug/L	306	Standard
	Pb	208	1500.4	2.9	**0.0030**	0.001	31.4	ug/L	1443	Standard
	U	238	6180.3	2.8	**0.4392**	0.015	3.3	ug/L	5	Standard
>	**Bi**	209	518564.5	2.2				ug/L	561075	Standard

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	Na	23	51000.7	2.0	**3.2850**	0.060	1.8	mg/L	288	Standard
	Mg	24	6854792.0	2.0	**11.4472**	0.321	2.8	mg/L	218	Standard
	K	39	561.7	1.4	**0.4442**	0.009	2.1	mg/L	125	Standard
	Ca	43	85.0	52.3	**96.2670**	54.238	56.3	mg/L	3	Standard
	Fe	54	326.6	10.8	**-0.0345**	0.009	24.7	mg/L	550	Standard
	Fe	57	8439.0	2.3	**0.1514**	0.006	4.0	mg/L	1772	Standard
>	**Sc-1**	45	297349.6	1.0				mg/L	330668	Standard
	Cl	35	5.0	34.6				ug/L	5	Standard
	Kr	83	34.7	6.0				ug/L	38	Standard
	Br	81	408.3	2.5				ug/L	344	Standard
	P	31	1773.4	3.3				ug/L	312	Standard
	S	34	73400.7	1.8				ug/L	5594	Standard
	Sr	88	243.3	13.2				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	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		87.489	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	90.315
	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	92.423
	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	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064308
Sample Date/Time: Sunday, July 29, 2012 17:48:06
Number of Replicates: 3
Autosampler Position: 443
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13294.2	4.3	**1263.8651**	113.941	9.0	ug/L	9465	Standard
	Be	9	31.7	81.0	**0.0011**	0.018	1663.4	ug/L	10	Standard
	Al	27	24322.9	4.6	**1.4194**	0.111	7.8	ug/L	7870	Standard
>	**Sc**	45	285082.7	2.0				ug/L	330668	Standard
	Ti	47	460.0	8.0	**0.4336**	0.042	9.7	ug/L	53	Standard
	V	51	9163.7	2.7	**0.8411**	0.041	4.9	ug/L	2687	Standard
	Cr	52	7493.2	1.2	**0.0791**	0.012	15.1	ug/L	8408	Standard
	Cr	53	272.5	19.2	**0.0524**	0.046	87.1	ug/L	288	Standard
	Mn	55	163045.4	2.9	**14.8712**	0.593	4.0	ug/L	1080	Standard
	Co	59	3255.4	4.0	**0.4607**	0.024	5.2	ug/L	117	Standard
	Ni	60	3951.2	2.8	**2.0233**	0.044	2.2	ug/L	68	Standard
	Cu	65	437.3	6.7	**0.1777**	0.015	8.3	ug/L	141	Standard
	Zn	66	1680.4	2.1	**1.8471**	0.056	3.0	ug/L	138	Standard
>	**Ge**	72	235991.8	1.0				ug/L	283230	Standard
	As	75	77.8	8.2	**0.2667**	0.008	3.1	ug/L	-198	Standard
	Se	82	42.8	1.6	**0.2766**	0.011	3.9	ug/L	21	Standard
	Se-1	77	113.3	15.1	**0.0967**	0.290	300.3	ug/L	131	Standard
>	**Ga**	71	580.0	3.1				mg/L	607	Standard
	Rb	85	4293.9	8.0				ug/L	30	Standard
	Y	89	203347.5	2.1				ug/L	251555	Standard
>	**Rh**	103	263.3	11.1				ug/L	335	Standard
	Mo	98	4451.0	3.1	**1.4277**	0.048	3.4	ug/L	13	Standard
	Ag	107	45.7	25.7	**-0.0006**	0.002	362.3	ug/L	36	Standard
	Cd	111	35.3	62.6	**-0.0057**	0.008	139.6	mg/L	49	Standard
	Cd	114	116.5	16.4	**-0.0065**	0.002	34.6	ug/L	170	Standard
>	**In**	115	636502.6	0.4				ug/L	727802	Standard
	Sn	118	389.7	2.1	**-0.0087**	0.001	10.6	ug/L	471	Standard
	Sb	123	623.6	9.1	**0.0861**	0.008	9.2	ug/L	39	Standard
	Ba	135	39100.1	3.3	**10.2243**	0.362	3.5	ug/L	25	Standard
	Ce	140	149.3	14.1				ug/L	25	Standard
>	**Tb**	159	958552.0	1.3				ug/L	1071747	Standard
	Ho	165	14.3	49.0				ug/L	13	Standard
	Tl	203	182.3	11.8	**0.0112**	0.001	13.3	ug/L	5	Standard
	Tl	205	375.0	18.6	**0.0109**	0.002	18.9	ug/L	10	Standard
	Pb	206	367.0	6.8	**-0.0000**	0.002	9484.2	ug/L	382	Standard
	Pb	207	294.3	2.3	**0.0022**	0.001	37.4	ug/L	306	Standard
	Pb	208	1419.0	4.9	**0.0024**	0.002	68.4	ug/L	1443	Standard
	U	238	6945.3	3.0	**0.5117**	0.016	3.2	ug/L	5	Standard
>	**Bi**	209	500080.1	0.4				ug/L	561075	Standard

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Na	23	57000.5	4.0	**3.8385**	0.234	6.1	mg/L	288	Standard
Mg	24	7296135.8	1.0	**12.7093**	0.259	2.0	mg/L	218	Standard
K	39	636.7	14.5	**0.5439**	0.083	15.2	mg/L	125	Standard
Ca	43	90.0	48.4	**106.9812**	55.481	51.9	mg/L	3	Standard
Fe	54	304.2	23.1	**-0.0369**	0.019	51.4	mg/L	550	Standard
Fe	57	8260.6	3.9	**0.1552**	0.005	3.3	mg/L	1772	Standard
> **Sc-1**	45	285082.7	2.0				mg/L	330668	Standard
Cl	35	7.3	41.7				ug/L	5	Standard
Kr	83	40.9	8.7				ug/L	38	Standard
Br	81	344.2	16.4				ug/L	344	Standard
P	31	1640.1	6.9				ug/L	312	Standard
S	34	78582.5	2.8				ug/L	5594	Standard
Sr	88	251.7	21.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		83.322	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	87.455
	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	89.129
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064309
Sample Date/Time: Sunday, July 29, 2012 17:51:15
Number of Replicates: 3
Autosampler Position: 444
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13457.6	2.9	**1312.2189**	91.691	7.0	ug/L	9465	Standard
	Be	9	10.0	86.6	**-0.0142**	0.006	43.6	ug/L	10	Standard
	Al	27	37917.4	1.7	**2.5473**	0.072	2.8	ug/L	7870	Standard
>	**Sc**	45	284107.8	1.8				ug/L	330668	Standard
	Ti	47	539.3	7.9	**0.5104**	0.049	9.6	ug/L	53	Standard
	V	51	3244.2	1.3	**0.1128**	0.004	3.4	ug/L	2687	Standard
	Cr	52	7762.3	0.9	**0.1088**	0.009	8.2	ug/L	8408	Standard
	Cr	53	243.3	14.2	**0.0235**	0.028	117.9	ug/L	288	Standard
	Mn	55	152731.8	1.9	**13.7836**	0.317	2.3	ug/L	1080	Standard
	Co	59	656.0	7.5	**0.0813**	0.006	6.9	ug/L	117	Standard
	Ni	60	3847.5	2.7	**1.9502**	0.070	3.6	ug/L	68	Standard
	Cu	65	519.0	5.8	**0.2208**	0.019	8.4	ug/L	141	Standard
	Zn	66	2890.6	1.5	**3.2524**	0.082	2.5	ug/L	138	Standard
>	**Ge**	72	238370.4	1.6				ug/L	283230	Standard
	As	75	-41.5	110.1	**0.1236**	0.054	43.5	ug/L	-198	Standard
	Se	82	174.6	8.8	**1.8581**	0.215	11.6	ug/L	21	Standard
	Se-1	77	202.7	8.2	**1.5998**	0.240	15.0	ug/L	131	Standard
>	**Ga**	71	518.3	7.3				mg/L	607	Standard
	Rb	85	4018.9	2.8				ug/L	30	Standard
	Y	89	209740.9	3.1				ug/L	251555	Standard
>	**Rh**	103	318.3	13.7				ug/L	335	Standard
	Mo	98	1443.0	2.3	**0.4460**	0.012	2.7	ug/L	13	Standard
	Ag	107	38.3	18.9	**-0.0021**	0.001	64.9	ug/L	36	Standard
	Cd	111	57.5	26.4	**0.0018**	0.005	308.3	mg/L	49	Standard
	Cd	114	172.0	21.2	**-0.0005**	0.004	839.9	ug/L	170	Standard
>	**In**	115	653442.0	1.3				ug/L	727802	Standard
	Sn	118	472.3	5.1	**-0.0017**	0.003	162.5	ug/L	471	Standard
	Sb	123	291.3	11.1	**0.0402**	0.004	11.2	ug/L	39	Standard
	Ba	135	37308.2	2.0	**9.5029**	0.239	2.5	ug/L	25	Standard
	Ce	140	484.0	2.5				ug/L	25	Standard
>	**Tb**	159	973215.6	0.7				ug/L	1071747	Standard
	Ho	165	20.7	15.6				ug/L	13	Standard
	Tl	203	203.3	7.6	**0.0124**	0.001	7.7	ug/L	5	Standard
	Tl	205	431.3	11.2	**0.0123**	0.001	11.2	ug/L	10	Standard
	Pb	206	377.0	5.6	**0.0003**	0.002	597.2	ug/L	382	Standard
	Pb	207	308.3	2.3	**0.0031**	0.001	32.4	ug/L	306	Standard
	Pb	208	1467.4	3.9	**0.0029**	0.001	45.1	ug/L	1443	Standard
	U	238	6381.0	2.0	**0.4619**	0.010	2.2	ug/L	5	Standard
>	**Bi**	209	508999.9	1.2				ug/L	561075	Standard

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Na	23	56030.1	0.9	**3.7834**	0.075	2.0	mg/L	288	Standard
Mg	24	7333245.1	3.6	**12.8164**	0.472	3.7	mg/L	218	Standard
K	39	588.3	8.7	**0.4972**	0.049	9.8	mg/L	125	Standard
Ca	43	96.7	20.9	**114.9284**	23.351	20.3	mg/L	3	Standard
Fe	54	294.2	8.4	**-0.0393**	0.008	19.6	mg/L	550	Standard
Fe	57	7893.7	7.4	**0.1475**	0.014	9.6	mg/L	1772	Standard
Sc-1	45	284107.8	1.8				mg/L	330668	Standard
Cl	35	9.0	19.2				ug/L	5	Standard
Kr	83	36.0	13.8				ug/L	38	Standard
Br	81	343.3	10.4				ug/L	344	Standard
P	31	2164.3	1.9				ug/L	312	Standard
S	34	78693.1	2.1				ug/L	5594	Standard
Sr	88	263.3	17.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		84.162	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.783
	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	90.719
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064310
Sample Date/Time: Sunday, July 29, 2012 17:54:23
Number of Replicates: 3
Autosampler Position: 445
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	13924.7	1.0	**1372.8068**	44.131	3.2	ug/L	9465	Standard
	Be	9	26.7	10.8	**-0.0028**	0.002	67.4	ug/L	10	Standard
	Al	27	31252.2	2.9	**1.9597**	0.086	4.4	ug/L	7870	Standard
>	**Sc**	45	288300.4	0.5				ug/L	330668	Standard
	Ti	47	425.7	3.0	**0.3912**	0.018	4.6	ug/L	53	Standard
	V	51	3078.8	3.2	**0.0907**	0.009	9.4	ug/L	2687	Standard
	Cr	52	7487.8	1.0	**0.0605**	0.006	9.6	ug/L	8408	Standard
	Cr	53	232.5	5.7	**0.0128**	0.013	103.1	ug/L	288	Standard
	Mn	55	167053.9	2.3	**15.0050**	0.520	3.5	ug/L	1080	Standard
	Co	59	1453.4	2.8	**0.1952**	0.008	4.0	ug/L	117	Standard
	Ni	60	2854.6	2.6	**1.4315**	0.053	3.7	ug/L	68	Standard
	Cu	65	465.0	7.1	**0.1892**	0.017	8.8	ug/L	141	Standard
	Zn	66	1716.8	3.7	**1.8592**	0.088	4.7	ug/L	138	Standard
>	**Ge**	72	239650.9	1.2				ug/L	283230	Standard
	As	75	-8.5	133.0	**0.1626**	0.013	8.3	ug/L	-198	Standard
	Se	82	117.1	3.7	**1.1573**	0.057	4.9	ug/L	21	Standard
	Se-1	77	169.0	4.1	**1.0128**	0.144	14.3	ug/L	131	Standard
>	**Ga**	71	486.7	1.6				mg/L	607	Standard
	Rb	85	3720.5	2.9				ug/L	30	Standard
	Y	89	206469.3	2.0				ug/L	251555	Standard
>	**Rh**	103	323.3	8.5				ug/L	335	Standard
	Mo	98	924.0	1.0	**0.2823**	0.004	1.4	ug/L	13	Standard
	Ag	107	41.3	18.2	**-0.0016**	0.001	82.2	ug/L	36	Standard
	Cd	111	33.1	4.5	**-0.0068**	0.001	7.5	mg/L	49	Standard
	Cd	114	80.9	12.2	**-0.0110**	0.001	9.8	ug/L	170	Standard
>	**In**	115	654988.2	0.9				ug/L	727802	Standard
	Sn	118	462.7	6.1	**-0.0027**	0.003	108.5	ug/L	471	Standard
	Sb	123	244.6	10.1	**0.0340**	0.003	10.3	ug/L	39	Standard
	Ba	135	38917.6	1.4	**9.8898**	0.222	2.2	ug/L	25	Standard
	Ce	140	253.3	1.6				ug/L	25	Standard
>	**Tb**	159	978523.1	0.5				ug/L	1071747	Standard
	Ho	165	17.7	17.3				ug/L	13	Standard
	Tl	203	131.7	2.2	**0.0076**	0.000	2.6	ug/L	5	Standard
	Tl	205	295.7	5.5	**0.0084**	0.000	5.4	ug/L	10	Standard
	Pb	206	359.0	1.0	**-0.0015**	0.000	22.3	ug/L	382	Standard
	Pb	207	297.3	5.7	**0.0017**	0.002	103.6	ug/L	306	Standard
	Pb	208	1372.0	4.5	**0.0006**	0.001	227.1	ug/L	1443	Standard
	U	238	6956.3	0.2	**0.5003**	0.002	0.4	ug/L	5	Standard
>	**Bi**	209	512226.2	0.2				ug/L	561075	Standard

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Na	23	58646.7	2.3	**3.9027**	0.081	2.1	mg/L	288	Standard
Mg	24	7791231.7	1.4	**13.4174**	0.207	1.5	mg/L	218	Standard
K	39	603.3	15.1	**0.5035**	0.090	17.9	mg/L	125	Standard
Ca	43	95.0	19.0	**111.2894**	21.524	19.3	mg/L	3	Standard
Fe	54	278.5	20.1	**-0.0449**	0.015	33.4	mg/L	550	Standard
Fe	57	8185.5	0.9	**0.1515**	0.003	1.7	mg/L	1772	Standard
Sc-1	45	288300.4	0.5				mg/L	330668	Standard
Cl	35	6.7	48.2				ug/L	5	Standard
Kr	83	36.7	9.0				ug/L	38	Standard
Br	81	337.5	3.9				ug/L	344	Standard
P	31	1673.4	7.5				ug/L	312	Standard
S	34	81571.5	2.0				ug/L	5594	Standard
Sr	88	255.0	7.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		84.614	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	89.995
	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	91.294
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064306
Sample Date/Time: Sunday, July 29, 2012 17:57:32
Number of Replicates: 3
Autosampler Position: 446
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	8949.3	7.8	**201.0469**	26.861	13.4	ug/L	9465	Standard
	Be	9	18.3	15.7	**-0.0088**	0.002	26.2	ug/L	10	Standard
	Al	27	7063.3	10.9	**-0.0204**	0.024	118.8	ug/L	7870	Standard
>	**Sc**	45	294746.8	7.0				ug/L	330668	Standard
	Ti	47	81.3	8.2	**0.0367**	0.008	22.5	ug/L	53	Standard
	V	51	2589.2	7.1	**0.0191**	0.001	2.7	ug/L	2687	Standard
	Cr	52	7832.4	8.4	**0.0638**	0.017	26.7	ug/L	8408	Standard
	Cr	53	167.5	10.8	**-0.0522**	0.007	13.2	ug/L	288	Standard
	Mn	55	11021.7	6.8	**0.8709**	0.025	2.9	ug/L	1080	Standard
	Co	59	225.7	9.9	**0.0179**	0.001	7.0	ug/L	117	Standard
	Ni	60	355.0	5.6	**0.1452**	0.005	3.8	ug/L	68	Standard
	Cu	65	118.7	11.3	**-0.0047**	0.008	173.6	ug/L	141	Standard
	Zn	66	1222.4	13.9	**1.2175**	0.097	8.0	ug/L	138	Standard
>	**Ge**	72	249816.3	7.2				ug/L	283230	Standard
	As	75	-156.3	7.3	**-0.0065**	0.024	368.2	ug/L	-198	Standard
	Se	82	27.6	22.4	**0.0716**	0.050	70.0	ug/L	21	Standard
	Se-1	77	113.0	17.4	**-0.0242**	0.200	827.3	ug/L	131	Standard
>	**Ga**	71	528.3	4.4				mg/L	607	Standard
	Rb	85	296.7	8.0				ug/L	30	Standard
	Y	89	214535.2	7.4				ug/L	251555	Standard
>	**Rh**	103	273.3	6.9				ug/L	335	Standard
	Mo	98	56.3	27.9	**0.0097**	0.004	42.5	ug/L	13	Standard
	Ag	107	44.0	34.1	**-0.0015**	0.002	163.5	ug/L	36	Standard
	Cd	111	33.2	70.1	**-0.0072**	0.008	104.9	mg/L	49	Standard
	Cd	114	120.4	89.7	**-0.0070**	0.012	165.6	ug/L	170	Standard
>	**In**	115	678593.7	5.0				ug/L	727802	Standard
	Sn	118	432.3	26.6	**-0.0072**	0.010	135.2	ug/L	471	Standard
	Sb	123	144.3	89.2	**0.0199**	0.016	80.6	ug/L	39	Standard
	Ba	135	3316.7	8.0	**0.8022**	0.033	4.1	ug/L	25	Standard
	Ce	140	47.0	4.3				ug/L	25	Standard
>	**Tb**	159	977763.5	2.4				ug/L	1071747	Standard
	Ho	165	11.7	4.9				ug/L	13	Standard
	Tl	203	98.0	111.4	**0.0050**	0.007	133.5	ug/L	5	Standard
	Tl	205	206.7	112.5	**0.0055**	0.006	111.3	ug/L	10	Standard
	Pb	206	389.3	21.9	**-0.0007**	0.006	901.5	ug/L	382	Standard
	Pb	207	331.3	22.1	**0.0033**	0.007	195.6	ug/L	306	Standard
	Pb	208	1532.0	18.4	**0.0023**	0.005	236.7	ug/L	1443	Standard
	U	238	265.3	18.3	**0.0179**	0.003	18.5	ug/L	5	Standard
>	**Bi**	209	540994.2	5.2				ug/L	561075	Standard

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Na	23	6439.7	9.4	**0.3867**	0.020	5.3	mg/L	288	Standard
Mg	24	435025.7	6.6	**0.7332**	0.004	0.6	mg/L	218	Standard
K	39	175.0	4.9	**0.0655**	0.014	20.8	mg/L	125	Standard
Ca	43	13.3	43.3	**11.0297**	8.317	75.4	mg/L	3	Standard
Fe	54	176.2	16.7	**-0.0737**	0.010	13.3	mg/L	550	Standard
Fe	57	2758.6	11.4	**0.0265**	0.005	17.5	mg/L	1772	Standard
Sc-1	45	294746.8	7.0				mg/L	330668	Standard
Cl	35	4.0	43.3				ug/L	5	Standard
Kr	83	36.3	11.7				ug/L	38	Standard
Br	81	307.5	9.9				ug/L	344	Standard
P	31	175.8	4.6				ug/L	312	Standard
S	34	11823.0	6.8				ug/L	5594	Standard
Sr	88	45.0	33.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		88.203	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	93.239
	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	96.421
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064307
Sample Date/Time: Sunday, July 29, 2012 18:00:40
Number of Replicates: 3
Autosampler Position: 447
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9991.6	2.1	**270.0269**	33.905	12.6	ug/L	9465	Standard
	Be	9	16.7	62.4	**-0.0108**	0.007	60.6	ug/L	10	Standard
	Al	27	13953.1	1.0	**0.4470**	0.011	2.5	ug/L	7870	Standard
>	**Sc**	45	318127.3	1.7				ug/L	330668	Standard
	Ti	47	105.3	13.7	**0.0519**	0.014	26.4	ug/L	53	Standard
	V	51	3396.8	1.1	**0.0813**	0.005	5.7	ug/L	2687	Standard
	Cr	52	8284.6	1.0	**0.0348**	0.018	52.6	ug/L	8408	Standard
	Cr	53	151.7	3.4	**-0.0762**	0.003	4.3	ug/L	288	Standard
	Mn	55	15704.1	1.3	**1.1686**	0.023	2.0	ug/L	1080	Standard
	Co	59	313.3	4.3	**0.0265**	0.002	6.6	ug/L	117	Standard
	Ni	60	610.3	7.2	**0.2466**	0.019	7.8	ug/L	68	Standard
	Cu	65	148.3	8.0	**0.0046**	0.006	119.5	ug/L	141	Standard
	Zn	66	1446.1	2.3	**1.3442**	0.024	1.8	ug/L	138	Standard
>	**Ge**	72	271280.1	0.7				ug/L	283230	Standard
	As	75	-177.6	7.7	**-0.0136**	0.014	99.6	ug/L	-198	Standard
	Se	82	24.6	13.1	**0.0166**	0.035	211.2	ug/L	21	Standard
	Se-1	77	119.0	11.7	**-0.0712**	0.219	308.2	ug/L	131	Standard
>	**Ga**	71	576.7	5.6				mg/L	607	Standard
	Rb	85	411.7	12.2				ug/L	30	Standard
	Y	89	233713.8	1.0				ug/L	251555	Standard
>	**Rh**	103	296.7	17.3				ug/L	335	Standard
	Mo	98	401.8	2.9	**0.1081**	0.005	4.3	ug/L	13	Standard
	Ag	107	42.0	2.4	**-0.0021**	0.000	4.5	ug/L	36	Standard
	Cd	111	23.4	17.7	**-0.0108**	0.001	13.0	mg/L	49	Standard
	Cd	114	80.4	13.0	**-0.0118**	0.001	9.4	ug/L	170	Standard
>	**In**	115	715302.8	1.1				ug/L	727802	Standard
	Sn	118	369.3	5.4	**-0.0147**	0.002	11.7	ug/L	471	Standard
	Sb	123	103.6	17.5	**0.0143**	0.002	15.2	ug/L	39	Standard
	Ba	135	3576.4	1.0	**0.8216**	0.014	1.6	ug/L	25	Standard
	Ce	140	73.0	7.6				ug/L	25	Standard
>	**Tb**	159	1018055.2	1.0				ug/L	1071747	Standard
	Ho	165	12.7	24.1				ug/L	13	Standard
	Tl	203	33.3	14.8	**0.0009**	0.000	35.6	ug/L	5	Standard
	Tl	205	69.0	19.6	**0.0018**	0.000	17.6	ug/L	10	Standard
	Pb	206	364.7	4.0	**-0.0040**	0.001	16.3	ug/L	382	Standard
	Pb	207	289.0	1.4	**-0.0020**	0.000	8.3	ug/L	306	Standard
	Pb	208	1392.4	3.2	**-0.0019**	0.001	34.0	ug/L	1443	Standard
	U	238	589.0	4.0	**0.0380**	0.001	2.2	ug/L	5	Standard
>	**Bi**	209	567270.4	1.9				ug/L	561075	Standard

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Na	23	8100.5	2.8	**0.4568**	0.007	1.6	mg/L	288	Standard
Mg	24	555636.7	0.7	**0.8676**	0.014	1.6	mg/L	218	Standard
K	39	170.0	13.5	**0.0477**	0.022	45.6	mg/L	125	Standard
Ca	43	13.3	21.7	**9.5046**	3.319	34.9	mg/L	3	Standard
Fe	54	225.8	21.5	**-0.0652**	0.011	17.6	mg/L	550	Standard
Fe	57	3078.6	4.9	**0.0287**	0.002	7.6	mg/L	1772	Standard
Sc-1	45	318127.3	1.7				mg/L	330668	Standard
Cl	35	4.3	58.1				ug/L	5	Standard
Kr	83	40.9	11.7				ug/L	38	Standard
Br	81	299.2	5.6				ug/L	344	Standard
P	31	260.0	9.5				ug/L	312	Standard
S	34	13501.0	2.6				ug/L	5594	Standard
Sr	88	61.7	12.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		95.781	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207064307
Report Date/Time: Sunday, July 29, 2012 18:03:10
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	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

98.283

101.104

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064308
Sample Date/Time: Sunday, July 29, 2012 18:03:48
Number of Replicates: 3
Autosampler Position: 448
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9719.8	2.0	**185.2685**	32.876	17.7	ug/L	9465	Standard
	Be	9	8.3	124.9	**-0.0160**	0.007	41.2	ug/L	10	Standard
	Al	27	6756.5	1.8	**-0.0903**	0.013	14.5	ug/L	7870	Standard
>	**Sc**	45	322840.9	2.1				ug/L	330668	Standard
	Ti	47	89.0	9.2	**0.0356**	0.008	21.3	ug/L	53	Standard
	V	51	3337.8	2.5	**0.0682**	0.008	11.9	ug/L	2687	Standard
	Cr	52	8299.9	1.0	**0.0152**	0.015	100.4	ug/L	8408	Standard
	Cr	53	171.7	17.4	**-0.0630**	0.022	35.2	ug/L	288	Standard
	Mn	55	15044.1	2.5	**1.0925**	0.014	1.3	ug/L	1080	Standard
	Co	59	388.3	4.7	**0.0351**	0.002	5.5	ug/L	117	Standard
	Ni	60	570.0	3.6	**0.2233**	0.007	3.0	ug/L	68	Standard
	Cu	65	119.3	10.8	**-0.0107**	0.006	52.0	ug/L	141	Standard
	Zn	66	1517.1	1.1	**1.3877**	0.033	2.4	ug/L	138	Standard
>	**Ge**	72	276626.0	1.3				ug/L	283230	Standard
	As	75	-177.8	14.0	**-0.0101**	0.024	237.8	ug/L	-198	Standard
	Se	82	24.6	11.2	**0.0116**	0.030	255.0	ug/L	21	Standard
	Se-1	77	120.7	8.6	**-0.0807**	0.174	216.0	ug/L	131	Standard
>	**Ga**	71	640.0	9.0				mg/L	607	Standard
	Rb	85	396.7	15.2				ug/L	30	Standard
	Y	89	238809.2	1.4				ug/L	251555	Standard
>	**Rh**	103	355.0	17.1				ug/L	335	Standard
	Mo	98	383.3	6.0	**0.1023**	0.008	7.6	ug/L	13	Standard
	Ag	107	48.7	4.7	**-0.0011**	0.000	26.4	ug/L	36	Standard
	Cd	111	20.4	15.2	**-0.0118**	0.001	7.8	mg/L	49	Standard
	Cd	114	70.5	8.1	**-0.0129**	0.001	3.9	ug/L	170	Standard
>	**In**	115	718872.4	1.2				ug/L	727802	Standard
	Sn	118	354.7	9.6	**-0.0162**	0.003	16.8	ug/L	471	Standard
	Sb	123	99.4	23.1	**0.0137**	0.003	19.3	ug/L	39	Standard
	Ba	135	3359.0	2.2	**0.7670**	0.010	1.3	ug/L	25	Standard
	Ce	140	33.7	12.4				ug/L	25	Standard
>	**Tb**	159	1022103.0	0.9				ug/L	1071747	Standard
	Ho	165	13.3	17.3				ug/L	13	Standard
	Tl	203	28.7	47.5	**0.0006**	0.001	127.1	ug/L	5	Standard
	Tl	205	67.7	10.5	**0.0017**	0.000	8.7	ug/L	10	Standard
	Pb	206	367.7	8.6	**-0.0044**	0.003	62.6	ug/L	382	Standard
	Pb	207	310.3	3.2	**-0.0007**	0.000	75.0	ug/L	306	Standard
	Pb	208	1441.4	2.2	**-0.0015**	0.001	72.0	ug/L	1443	Standard
	U	238	586.0	4.1	**0.0370**	0.002	5.0	ug/L	5	Standard
>	**Bi**	209	580322.4	1.8				ug/L	561075	Standard

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Na	23	7493.5	7.1	**0.4129**	0.023	5.6	mg/L	288	Standard
Mg	24	524725.2	1.9	**0.8073**	0.015	1.9	mg/L	218	Standard
K	39	185.0	11.8	**0.0592**	0.023	39.4	mg/L	125	Standard
Ca	43	16.7	62.4	**12.7902**	11.219	87.7	mg/L	3	Standard
Fe	54	192.6	30.4	**-0.0739**	0.015	20.8	mg/L	550	Standard
Fe	57	3097.0	6.1	**0.0281**	0.003	11.7	mg/L	1772	Standard
Sc-1	45	322840.9	2.1				mg/L	330668	Standard
Cl	35	9.0	29.4				ug/L	5	Standard
Kr	83	37.0	8.0				ug/L	38	Standard
Br	81	319.2	12.7				ug/L	344	Standard
P	31	251.7	7.5				ug/L	312	Standard
S	34	13358.4	2.6				ug/L	5594	Standard
Sr	88	70.0	21.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		97.668	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	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

98.773

103.430

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207064309
Sample Date/Time: Sunday, July 29, 2012 18:06:59
Number of Replicates: 3
Autosampler Position: 449
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9496.3	0.7	**139.9651**	40.945	29.3	ug/L	9465	Standard
	Be	9	11.7	65.5	**-0.0141**	0.005	32.3	ug/L	10	Standard
	Al	27	8182.2	3.5	**0.0130**	0.021	159.1	ug/L	7870	Standard
>	**Sc**	45	322901.9	1.8				ug/L	330668	Standard
	Ti	47	96.3	4.3	**0.0404**	0.005	11.2	ug/L	53	Standard
	V	51	2859.5	0.8	**0.0123**	0.003	24.9	ug/L	2687	Standard
	Cr	52	8320.6	0.2	**-0.0041**	0.010	236.2	ug/L	8408	Standard
	Cr	53	136.7	12.5	**-0.0923**	0.014	14.9	ug/L	288	Standard
	Mn	55	15272.7	0.9	**1.0866**	0.003	0.3	ug/L	1080	Standard
	Co	59	169.7	14.4	**0.0075**	0.003	41.0	ug/L	117	Standard
	Ni	60	602.3	4.6	**0.2324**	0.014	6.0	ug/L	68	Standard
	Cu	65	119.0	11.8	**-0.0120**	0.006	50.7	ug/L	141	Standard
	Zn	66	1420.7	1.5	**1.2609**	0.017	1.4	ug/L	138	Standard
>	**Ge**	72	282283.8	1.1				ug/L	283230	Standard
	As	75	-194.5	17.3	**-0.0235**	0.034	145.1	ug/L	-198	Standard
	Se	82	36.2	17.4	**0.1251**	0.068	54.4	ug/L	21	Standard
	Se-1	77	132.0	4.2	**0.0463**	0.100	216.8	ug/L	131	Standard
>	**Ga**	71	595.0	2.2				mg/L	607	Standard
	Rb	85	365.0	10.3				ug/L	30	Standard
	Y	89	245408.9	2.5				ug/L	251555	Standard
>	**Rh**	103	333.3	15.6				ug/L	335	Standard
	Mo	98	154.1	8.3	**0.0363**	0.004	10.3	ug/L	13	Standard
	Ag	107	44.7	13.7	**-0.0018**	0.001	55.8	ug/L	36	Standard
	Cd	111	21.3	22.1	**-0.0116**	0.002	12.9	mg/L	49	Standard
	Cd	114	65.4	9.0	**-0.0135**	0.001	4.7	ug/L	170	Standard
>	**In**	115	727841.4	0.5				ug/L	727802	Standard
	Sn	118	368.7	5.9	**-0.0154**	0.002	11.3	ug/L	471	Standard
	Sb	123	60.0	17.5	**0.0089**	0.001	13.8	ug/L	39	Standard
	Ba	135	3501.7	2.9	**0.7901**	0.022	2.8	ug/L	25	Standard
	Ce	140	66.7	11.7				ug/L	25	Standard
>	**Tb**	159	1034696.9	0.4				ug/L	1071747	Standard
	Ho	165	12.3	44.7				ug/L	13	Standard
	Tl	203	29.7	20.6	**0.0007**	0.000	53.2	ug/L	5	Standard
	Tl	205	69.7	20.1	**0.0018**	0.000	18.9	ug/L	10	Standard
	Pb	206	371.0	2.7	**-0.0043**	0.001	21.3	ug/L	382	Standard
	Pb	207	324.3	5.6	**0.0005**	0.002	455.2	ug/L	306	Standard
	Pb	208	1474.4	1.3	**-0.0011**	0.001	52.4	ug/L	1443	Standard
	U	238	585.3	3.2	**0.0368**	0.002	4.8	ug/L	5	Standard
>	**Bi**	209	583695.2	1.5				ug/L	561075	Standard

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⌈	**Na**	23	8108.8	5.5	**0.4500**	0.023	5.2	mg/L	288	Standard
|	**Mg**	24	576435.6	1.6	**0.8867**	0.015	1.7	mg/L	218	Standard
|	**K**	39	145.0	15.8	**0.0224**	0.018	82.4	mg/L	125	Standard
|	**Ca**	43	8.3	34.6	**3.8213**	3.297	86.3	mg/L	3	Standard
|	**Fe**	54	236.3	15.9	**-0.0633**	0.010	15.9	mg/L	550	Standard
|	**Fe**	57	3167.0	8.4	**0.0295**	0.004	14.5	mg/L	1772	Standard
⌊>	**Sc-1**	45	322901.9	1.8				mg/L	330668	Standard
	Cl	35	4.3	93.3				ug/L	5	Standard
	Kr	83	33.9	16.3				ug/L	38	Standard
	Br	81	325.0	4.0				ug/L	344	Standard
	P	31	314.2	9.5				ug/L	312	Standard
	S	34	13960.6	2.7				ug/L	5594	Standard
	Sr	88	63.3	35.6				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		99.666	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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Cd	111	
Cd	114	
> In	115	100.005
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	104.032
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207064309
Report Date/Time: Sunday, July 29, 2012 18:09:29
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064310
Sample Date/Time: Sunday, July 29, 2012 18:10:08
Number of Replicates: 3
Autosampler Position: 450
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9804.8	2.4	**194.6151**	54.286	27.9	ug/L	9465	Standard
	Be	9	18.3	56.8	**-0.0100**	0.006	61.3	ug/L	10	Standard
	Al	27	7076.7	5.8	**-0.0695**	0.021	30.6	ug/L	7870	Standard
>	**Sc**	45	324139.5	1.8				ug/L	330668	Standard
	Ti	47	91.7	9.4	**0.0363**	0.006	17.6	ug/L	53	Standard
	V	51	2915.5	5.2	**0.0181**	0.011	59.0	ug/L	2687	Standard
	Cr	52	8467.7	3.3	**0.0153**	0.018	117.3	ug/L	8408	Standard
	Cr	53	160.8	12.6	**-0.0739**	0.014	18.3	ug/L	288	Standard
	Mn	55	13393.6	3.8	**0.9429**	0.021	2.2	ug/L	1080	Standard
	Co	59	305.3	26.1	**0.0239**	0.009	37.9	ug/L	117	Standard
	Ni	60	455.3	6.2	**0.1685**	0.009	5.2	ug/L	68	Standard
	Cu	65	130.0	31.0	**-0.0069**	0.018	262.2	ug/L	141	Standard
	Zn	66	1343.7	1.3	**1.1856**	0.043	3.6	ug/L	138	Standard
>	**Ge**	72	282122.0	2.0				ug/L	283230	Standard
	As	75	-171.4	6.0	**-0.0002**	0.009	4101.3	ug/L	-198	Standard
	Se	82	33.9	10.1	**0.1019**	0.042	41.1	ug/L	21	Standard
	Se-1	77	127.3	9.0	**-0.0219**	0.138	627.3	ug/L	131	Standard
>	**Ga**	71	581.7	14.0				mg/L	607	Standard
	Rb	85	326.7	3.9				ug/L	30	Standard
	Y	89	247630.9	1.6				ug/L	251555	Standard
>	**Rh**	103	350.0	18.2				ug/L	335	Standard
	Mo	98	148.5	65.0	**0.0341**	0.026	77.6	ug/L	13	Standard
	Ag	107	113.0	80.4	**0.0089**	0.014	160.3	ug/L	36	Standard
	Cd	111	62.6	76.4	**0.0010**	0.015	1454.6	mg/L	49	Standard
	Cd	114	204.3	69.7	**0.0004**	0.014	3169.6	ug/L	170	Standard
>	**In**	115	735260.6	1.5				ug/L	727802	Standard
	Sn	118	512.3	25.9	**-0.0034**	0.011	317.7	ug/L	471	Standard
	Sb	123	183.8	61.1	**0.0232**	0.013	55.7	ug/L	39	Standard
	Ba	135	2973.3	2.6	**0.6623**	0.014	2.1	ug/L	25	Standard
	Ce	140	40.7	9.3				ug/L	25	Standard
>	**Tb**	159	1039677.9	0.9				ug/L	1071747	Standard
	Ho	165	12.0	8.3				ug/L	13	Standard
	Tl	203	232.7	80.4	**0.0121**	0.011	87.2	ug/L	5	Standard
	Tl	205	538.3	82.7	**0.0131**	0.011	82.4	ug/L	10	Standard
	Pb	206	564.3	21.1	**0.0096**	0.008	85.4	ug/L	382	Standard
	Pb	207	436.0	30.5	**0.0099**	0.011	113.6	ug/L	306	Standard
	Pb	208	2103.1	26.2	**0.0104**	0.010	95.0	ug/L	1443	Standard
	U	238	625.0	22.8	**0.0387**	0.008	21.5	ug/L	5	Standard
>	**Bi**	209	590285.2	1.7				ug/L	561075	Standard

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Na	23	6858.2	4.2	**0.3736**	0.020	5.3	mg/L	288	Standard
Mg	24	485519.2	2.4	**0.7439**	0.013	1.7	mg/L	218	Standard
K	39	198.3	17.2	**0.0700**	0.028	40.4	mg/L	125	Standard
Ca	43	8.3	124.9	**3.8130**	11.429	299.7	mg/L	3	Standard
Fe	54	176.1	21.2	**-0.0783**	0.009	11.5	mg/L	550	Standard
Fe	57	2998.6	4.1	**0.0259**	0.002	7.7	mg/L	1772	Standard
> **Sc-1**	45	324139.5	1.8				mg/L	330668	Standard
Cl	35	4.0	66.1				ug/L	5	Standard
Kr	83	34.8	6.2				ug/L	38	Standard
Br	81	306.7	5.3				ug/L	344	Standard
P	31	249.2	3.5				ug/L	312	Standard
S	34	12853.0	2.4				ug/L	5594	Standard
Sr	88	43.3	35.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.609	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	101.025
	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	105.206
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 18:13:19
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: JYH 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	7	10361.9	1.4	**16.4095**	56.612	345.0	ug/L	9465	Standard
	Be	9	94185.2	1.8	**49.7387**	0.749	1.5	ug/L	10	Standard
	Al	27	775545.8	2.2	**47.6983**	1.839	3.9	ug/L	7870	Standard
>	**Sc**	45	376605.6	1.7				ug/L	330668	Standard
	Ti	47	133108.8	0.7	**100.2350**	0.719	0.7	ug/L	53	Standard
	V	51	533447.5	0.8	**47.1787**	0.289	0.6	ug/L	2687	Standard
	Cr	52	428392.8	0.2	**47.1994**	0.450	1.0	ug/L	8408	Standard
	Cr	53	74902.2	0.6	**49.7477**	0.728	1.5	ug/L	288	Standard
	Mn	55	735347.5	0.1	**48.9618**	0.565	1.2	ug/L	1080	Standard
	Co	59	449170.0	0.4	**47.5176**	0.638	1.3	ug/L	117	Standard
	Ni	60	128493.4	2.5	**48.5144**	0.734	1.5	ug/L	68	Standard
	Cu	65	120501.0	1.6	**49.1364**	0.274	0.6	ug/L	141	Standard
	Zn	66	57430.6	0.2	**49.5256**	0.652	1.3	ug/L	138	Standard
>	**Ge**	72	324487.4	1.1				ug/L	283230	Standard
	As	75	55571.5	0.4	**48.9337**	0.506	1.0	ug/L	-198	Standard
	Se	82	5672.6	0.1	**49.8481**	0.510	1.0	ug/L	21	Standard
	Se-1	77	4207.3	2.7	**50.8871**	1.883	3.7	ug/L	131	Standard
>	**Ga**	71	700.0	3.8				mg/L	607	Standard
	Rb	85	778.4	5.6				ug/L	30	Standard
	Y	89	287588.7	0.6				ug/L	251555	Standard
>	**Rh**	103	465.0	16.1				ug/L	335	Standard
	Mo	98	396596.5	0.9	**98.2249**	1.048	1.1	ug/L	13	Standard
	Ag	107	359143.6	0.3	**50.5478**	0.180	0.4	ug/L	36	Standard
	Cd	111	179878.6	1.0	**49.3310**	0.589	1.2	mg/L	49	Standard
	Cd	114	548914.5	0.2	**49.5055**	0.076	0.2	ug/L	170	Standard
>	**In**	115	828371.6	0.2				ug/L	727802	Standard
	Sn	118	643214.5	0.7	**49.1019**	0.324	0.7	ug/L	471	Standard
	Sb	123	462212.1	0.9	**48.0362**	0.521	1.1	ug/L	39	Standard
	Ba	135	244577.2	0.5	**49.1826**	0.220	0.4	ug/L	25	Standard
	Ce	140	914.7	2.5				ug/L	25	Standard
>	**Tb**	159	1167453.8	0.1				ug/L	1071747	Standard
	Ho	165	18.0	0.0				ug/L	13	Standard
	Tl	203	888711.7	0.6	**47.7663**	0.290	0.6	ug/L	5	Standard
	Tl	205	2186873.7	0.6	**50.3963**	0.442	0.9	ug/L	10	Standard
	Pb	206	699884.0	1.1	**48.7335**	0.406	0.8	ug/L	382	Standard
	Pb	207	592266.6	0.8	**49.3926**	0.348	0.7	ug/L	306	Standard
	Pb	208	2744088.4	0.5	**48.6922**	0.111	0.2	ug/L	1443	Standard
	U	238	835868.9	0.7	**49.1305**	0.220	0.4	ug/L	5	Standard
>	**Bi**	209	627087.2	0.3				ug/L	561075	Standard

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Na	23	109480.8	0.8	**5.5938**	0.089	1.6	mg/L	288	Standard
Mg	24	3504127.8	0.8	**4.6203**	0.062	1.4	mg/L	218	Standard
K	39	6187.9	1.3	**4.7017**	0.067	1.4	mg/L	125	Standard
Ca	43	13.3	43.3	**7.2408**	5.679	78.4	mg/L	3	Standard
Fe	54	24070.3	1.9	**4.9242**	0.120	2.4	mg/L	550	Standard
Fe	57	350410.9	3.7	**6.0679**	0.194	3.2	mg/L	1772	Standard
Sc-1	45	376605.6	1.7				mg/L	330668	Standard
Cl	35	4.0	66.1				ug/L	5	Standard
Kr	83	41.3	14.0				ug/L	38	Standard
Br	81	447.5	5.3				ug/L	344	Standard
P	31	460.8	7.2				ug/L	312	Standard
S	34	6719.0	7.0				ug/L	5594	Standard
Sr	88	31.7	50.8				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	95.397		
Sc	45			
Ti	47	100.235		
V	51	94.357		
Cr	52	94.399		
Cr	53			
Mn	55	97.924		
Co	59	95.035		
Ni	60	97.029		
Cu	65	98.273		
Zn	66	99.051		
Ge	72		114.567	
As	75	97.867		
Se	82	99.696		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	98.225		
Ag	107	101.096		

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	Cd	111	98.662	
	Cd	114		
>	In	115		113.818
	Sn	118	98.204	
	Sb	123	96.072	
	Ba	135	98.365	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	95.533	
	Tl	205		
	Pb	206	97.467	
	Pb	207	98.785	
	Pb	208	97.384	
	U	238	98.261	
>	Bi	209		111.765
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 18:16:29
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: JYH 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	7	9816.5	2.3	**-55.1928**	21.960	39.8	ug/L	9465	Standard
	Be	9	15.0	88.2	**-0.0131**	0.007	55.6	ug/L	10	Standard
	Al	27	8744.2	1.4	**-0.0292**	0.006	20.2	ug/L	7870	Standard
>	**Sc**	45	371457.6	1.9				ug/L	330668	Standard
	Ti	47	69.7	14.5	**0.0106**	0.008	73.1	ug/L	53	Standard
	V	51	2688.6	1.9	**-0.0356**	0.004	12.0	ug/L	2687	Standard
	Cr	52	8302.3	0.6	**-0.1254**	0.000	0.3	ug/L	8408	Standard
	Cr	53	230.0	8.5	**-0.0403**	0.014	35.2	ug/L	288	Standard
	Mn	55	1232.1	4.6	**-0.0002**	0.004	1844.6	ug/L	1080	Standard
	Co	59	139.7	12.2	**0.0020**	0.002	95.9	ug/L	117	Standard
	Ni	60	70.7	18.2	**-0.0019**	0.005	265.6	ug/L	68	Standard
	Cu	65	175.3	9.3	**0.0054**	0.007	132.1	ug/L	141	Standard
	Zn	66	179.0	7.3	**0.0067**	0.012	186.8	ug/L	138	Standard
>	**Ge**	72	317361.0	0.6				ug/L	283230	Standard
	As	75	-191.1	9.8	**0.0013**	0.017	1356.3	ug/L	-198	Standard
	Se	82	28.4	22.0	**0.0134**	0.055	414.3	ug/L	21	Standard
	Se-1	77	127.0	10.8	**-0.2284**	0.180	79.0	ug/L	131	Standard
>	**Ga**	71	693.3	13.8				mg/L	607	Standard
	Rb	85	18.3	68.6				ug/L	30	Standard
	Y	89	275454.7	0.7				ug/L	251555	Standard
>	**Rh**	103	410.0	15.3				ug/L	335	Standard
	Mo	98	244.6	17.0	**0.0548**	0.011	19.9	ug/L	13	Standard
	Ag	107	114.0	14.7	**0.0074**	0.003	33.7	ug/L	36	Standard
	Cd	111	75.4	17.7	**0.0029**	0.004	134.4	mg/L	49	Standard
	Cd	114	249.7	6.8	**0.0028**	0.002	61.0	ug/L	170	Standard
>	**In**	115	810887.7	0.7				ug/L	727802	Standard
	Sn	118	942.4	1.5	**0.0261**	0.001	2.3	ug/L	471	Standard
	Sb	123	2583.6	6.4	**0.2762**	0.019	6.9	ug/L	39	Standard
	Ba	135	56.7	15.0	**0.0001**	0.002	1261.8	ug/L	25	Standard
	Ce	140	28.3	12.4				ug/L	25	Standard
>	**Tb**	159	1133718.0	0.3				ug/L	1071747	Standard
	Ho	165	16.0	57.3				ug/L	13	Standard
	Tl	203	94.3	45.1	**0.0041**	0.002	57.0	ug/L	5	Standard
	Tl	205	235.7	38.3	**0.0055**	0.002	38.4	ug/L	10	Standard
	Pb	206	504.3	7.8	**0.0033**	0.003	87.0	ug/L	382	Standard
	Pb	207	409.0	5.0	**0.0058**	0.002	31.9	ug/L	306	Standard
	Pb	208	1941.4	5.5	**0.0055**	0.002	36.9	ug/L	1443	Standard
	U	238	112.7	23.5	**0.0065**	0.002	24.7	ug/L	5	Standard
>	**Bi**	209	622134.9	0.3				ug/L	561075	Standard

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Na	23	366.7	0.8	**-0.0171**	0.000	1.5	mg/L	288	Standard
Mg	24	623.3	20.2	**0.0011**	0.000	14.4	mg/L	218	Standard
K	39	130.0	3.8	**-0.0063**	0.006	93.5	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	594.3	7.8	**0.0052**	0.011	209.6	mg/L	550	Standard
Fe	57	2505.2	3.2	**0.0095**	0.001	10.0	mg/L	1772	Standard
> **Sc-1**	45	371457.6	1.9				mg/L	330668	Standard
Cl	35	3.7	103.3				ug/L	5	Standard
Kr	83	37.4	11.3				ug/L	38	Standard
Br	81	452.5	4.4				ug/L	344	Standard
P	31	376.7	5.4				ug/L	312	Standard
S	34	6301.3	1.4				ug/L	5594	Standard
Sr	88	50.0	10.0				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		112.051	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	111.416
	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	110.883
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1207064311
Sample Date/Time: Sunday, July 29, 2012 18:19:41
Number of Replicates: 3
Autosampler Position: 451
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	15975.1	1.3	**1227.8967**	59.667	4.9	ug/L	9465	Standard
	Be	9	26.7	28.6	**-0.0059**	0.004	70.3	ug/L	10	Standard
	Al	27	47074.7	3.0	**2.6009**	0.091	3.5	ug/L	7870	Standard
>	**Sc**	45	346712.4	1.2				ug/L	330668	Standard
	Ti	47	647.7	3.1	**0.5159**	0.012	2.4	ug/L	53	Standard
	V	51	4715.3	1.6	**0.2006**	0.012	5.9	ug/L	2687	Standard
	Cr	52	8909.0	1.0	**0.0684**	0.015	21.9	ug/L	8408	Standard
	Cr	53	313.3	14.8	**0.0419**	0.031	74.3	ug/L	288	Standard
	Mn	55	170163.3	1.0	**12.9211**	0.214	1.7	ug/L	1080	Standard
	Co	59	1240.7	1.0	**0.1374**	0.004	3.2	ug/L	117	Standard
	Ni	60	6079.2	1.3	**2.6027**	0.019	0.7	ug/L	68	Standard
	Cu	65	652.3	2.4	**0.2375**	0.010	4.4	ug/L	141	Standard
	Zn	66	4426.6	1.9	**4.2363**	0.121	2.9	ug/L	138	Standard
>	**Ge**	72	283203.9	2.0				ug/L	283230	Standard
	As	75	-45.4	100.5	**0.1265**	0.047	37.2	ug/L	-198	Standard
	Se	82	224.1	5.5	**2.0237**	0.099	4.9	ug/L	21	Standard
	Se-1	77	257.7	6.9	**1.8453**	0.271	14.7	ug/L	131	Standard
>	**Ga**	71	710.0	2.1				mg/L	607	Standard
	Rb	85	4559.0	1.3				ug/L	30	Standard
	Y	89	248047.3	0.6				ug/L	251555	Standard
>	**Rh**	103	396.7	7.7				ug/L	335	Standard
	Mo	98	2196.6	2.5	**0.6033**	0.007	1.2	ug/L	13	Standard
	Ag	107	55.0	11.1	**-0.0003**	0.001	289.8	ug/L	36	Standard
	Cd	111	74.1	5.4	**0.0045**	0.001	31.1	mg/L	49	Standard
	Cd	114	254.2	13.1	**0.0056**	0.004	66.0	ug/L	170	Standard
>	**In**	115	738226.6	1.7				ug/L	727802	Standard
	Sn	118	614.3	10.0	**0.0052**	0.005	89.9	ug/L	471	Standard
	Sb	123	653.1	10.9	**0.0780**	0.008	10.8	ug/L	39	Standard
	Ba	135	40062.6	1.6	**9.0323**	0.204	2.3	ug/L	25	Standard
	Ce	140	524.3	3.4				ug/L	25	Standard
>	**Tb**	159	1071473.7	0.4				ug/L	1071747	Standard
	Ho	165	19.0	36.8				ug/L	13	Standard
	Tl	203	184.7	22.5	**0.0100**	0.003	25.8	ug/L	5	Standard
	Tl	205	445.3	20.0	**0.0115**	0.002	20.6	ug/L	10	Standard
	Pb	206	444.3	2.4	**0.0024**	0.001	52.7	ug/L	382	Standard
	Pb	207	382.7	7.1	**0.0069**	0.003	41.5	ug/L	306	Standard
	Pb	208	1761.7	3.3	**0.0056**	0.002	28.1	ug/L	1443	Standard
	U	238	7170.7	1.0	**0.4687**	0.010	2.2	ug/L	5	Standard
>	**Bi**	209	563705.0	1.2				ug/L	561075	Standard

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Na	23	59896.6	2.8	**3.3100**	0.133	4.0	mg/L	288	Standard
Mg	24	8252419.3	1.1	**11.8176**	0.109	0.9	mg/L	218	Standard
K	39	570.0	4.0	**0.3725**	0.021	5.7	mg/L	125	Standard
Ca	43	106.7	9.8	**103.6331**	10.872	10.5	mg/L	3	Standard
Fe	54	349.5	8.0	**-0.0415**	0.007	16.5	mg/L	550	Standard
Fe	57	11721.2	1.1	**0.1870**	0.005	2.7	mg/L	1772	Standard
> **Sc-1**	45	346712.4	1.2				mg/L	330668	Standard
Cl	35	8.3	38.6				ug/L	5	Standard
Kr	83	37.8	11.0				ug/L	38	Standard
Br	81	450.8	9.8				ug/L	344	Standard
P	31	2005.1	3.9				ug/L	312	Standard
S	34	85481.3	0.5				ug/L	5594	Standard
Sr	88	313.3	19.3				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.991	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	101.432
	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	100.469
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207064312
Sample Date/Time: Sunday, July 29, 2012 18:22:51
Number of Replicates: 3
Autosampler Position: 452
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	16257.1	2.1	**1345.0409**	38.303	2.8	ug/L	9465	Standard
	Be	9	21.7	58.1	**-0.0085**	0.007	87.7	ug/L	10	Standard
	Al	27	44136.0	6.3	**2.4652**	0.192	7.8	ug/L	7870	Standard
>	**Sc**	45	339542.6	0.8				ug/L	330668	Standard
	Ti	47	501.3	5.3	**0.3895**	0.018	4.6	ug/L	53	Standard
	V	51	4543.9	1.4	**0.1832**	0.012	6.3	ug/L	2687	Standard
	Cr	52	8865.6	1.5	**0.0629**	0.025	39.3	ug/L	8408	Standard
	Cr	53	282.5	10.1	**0.0187**	0.022	114.9	ug/L	288	Standard
	Mn	55	176568.6	2.5	**13.4131**	0.483	3.6	ug/L	1080	Standard
	Co	59	3314.4	1.6	**0.3888**	0.009	2.3	ug/L	117	Standard
	Ni	60	4155.9	1.9	**1.7703**	0.044	2.5	ug/L	68	Standard
	Cu	65	507.0	4.0	**0.1694**	0.008	5.0	ug/L	141	Standard
	Zn	66	1954.8	0.6	**1.7859**	0.031	1.7	ug/L	138	Standard
>	**Ge**	72	283177.4	1.3				ug/L	283230	Standard
	As	75	-76.5	25.1	**0.0960**	0.018	19.1	ug/L	-198	Standard
	Se	82	143.6	9.9	**1.2104**	0.152	12.6	ug/L	21	Standard
	Se-1	77	184.7	6.0	**0.7962**	0.159	20.0	ug/L	131	Standard
>	**Ga**	71	606.7	4.2				mg/L	607	Standard
	Rb	85	4137.2	5.4				ug/L	30	Standard
	Y	89	246318.1	1.7				ug/L	251555	Standard
>	**Rh**	103	381.7	13.1				ug/L	335	Standard
	Mo	98	1854.9	0.5	**0.5047**	0.006	1.2	ug/L	13	Standard
	Ag	107	47.3	34.3	**-0.0016**	0.002	155.9	ug/L	36	Standard
	Cd	111	41.2	7.8	**-0.0057**	0.001	13.8	mg/L	49	Standard
	Cd	114	126.9	27.9	**-0.0075**	0.003	45.0	ug/L	170	Standard
>	**In**	115	743692.2	1.6				ug/L	727802	Standard
	Sn	118	524.0	5.7	**-0.0028**	0.003	113.6	ug/L	471	Standard
	Sb	123	507.4	9.1	**0.0606**	0.006	10.4	ug/L	39	Standard
	Ba	135	39884.8	1.3	**8.9269**	0.248	2.8	ug/L	25	Standard
	Ce	140	181.3	7.2				ug/L	25	Standard
>	**Tb**	159	1072827.4	1.0				ug/L	1071747	Standard
	Ho	165	9.3	22.3				ug/L	13	Standard
	Tl	203	157.7	23.5	**0.0083**	0.002	25.7	ug/L	5	Standard
	Tl	205	374.7	1.9	**0.0096**	0.000	1.5	ug/L	10	Standard
	Pb	206	401.0	5.4	**-0.0011**	0.002	153.6	ug/L	382	Standard
	Pb	207	332.7	6.0	**0.0021**	0.002	80.8	ug/L	306	Standard
	Pb	208	1590.0	6.3	**0.0021**	0.002	88.4	ug/L	1443	Standard
	U	238	7154.0	1.1	**0.4655**	0.008	1.8	ug/L	5	Standard
>	**Bi**	209	566201.2	0.7				ug/L	561075	Standard

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Na	23	61666.9	1.5	**3.4806**	0.044	1.3	mg/L	288	Standard
Mg	24	8290716.4	2.9	**12.1232**	0.365	3.0	mg/L	218	Standard
K	39	601.7	11.8	**0.4097**	0.058	14.1	mg/L	125	Standard
Ca	43	90.0	20.0	**88.5148**	18.759	21.2	mg/L	3	Standard
Fe	54	389.5	9.8	**-0.0306**	0.009	30.5	mg/L	550	Standard
Fe	57	10538.7	5.5	**0.1687**	0.010	5.8	mg/L	1772	Standard
Sc-1	45	339542.6	0.8				mg/L	330668	Standard
Cl	35	7.0	28.6				ug/L	5	Standard
Kr	83	42.0	5.2				ug/L	38	Standard
Br	81	454.2	7.5				ug/L	344	Standard
P	31	1555.1	4.0				ug/L	312	Standard
S	34	85438.5	0.1				ug/L	5594	Standard
Sr	88	286.7	10.1				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		99.982	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	102.183
	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	100.914
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064311
Sample Date/Time: Sunday, July 29, 2012 18:26:01
Number of Replicates: 3
Autosampler Position: 453
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9332.9	4.2	**172.8969**	75.457	43.6	ug/L	9465	Standard
	Be	9	11.7	89.2	**-0.0139**	0.007	46.9	ug/L	10	Standard
	Al	27	10563.7	6.6	**0.2140**	0.076	35.4	ug/L	7870	Standard
>	**Sc**	45	311982.6	2.9				ug/L	330668	Standard
	Ti	47	93.7	7.5	**0.0427**	0.007	15.4	ug/L	53	Standard
	V	51	2921.3	2.3	**0.0356**	0.006	17.6	ug/L	2687	Standard
	Cr	52	8356.3	1.3	**0.0621**	0.010	15.5	ug/L	8408	Standard
	Cr	53	177.5	9.9	**-0.0533**	0.014	26.0	ug/L	288	Standard
	Mn	55	14435.9	2.8	**1.0855**	0.028	2.5	ug/L	1080	Standard
	Co	59	229.7	19.4	**0.0164**	0.006	35.0	ug/L	117	Standard
	Ni	60	668.3	4.5	**0.2776**	0.014	5.0	ug/L	68	Standard
	Cu	65	143.7	3.3	**0.0035**	0.002	65.8	ug/L	141	Standard
	Zn	66	1585.7	5.6	**1.5147**	0.091	6.0	ug/L	138	Standard
>	**Ge**	72	267050.2	0.5				ug/L	283230	Standard
	As	75	-140.0	22.6	**0.0234**	0.034	145.5	ug/L	-198	Standard
	Se	82	43.6	12.2	**0.2248**	0.055	24.4	ug/L	21	Standard
	Se-1	77	118.3	7.2	**-0.0543**	0.123	226.4	ug/L	131	Standard
>	**Ga**	71	488.3	8.7				mg/L	607	Standard
	Rb	85	383.3	27.4				ug/L	30	Standard
	Y	89	233634.2	0.6				ug/L	251555	Standard
>	**Rh**	103	331.7	8.6				ug/L	335	Standard
	Mo	98	202.8	3.5	**0.0517**	0.001	1.9	ug/L	13	Standard
	Ag	107	41.7	20.4	**-0.0021**	0.001	63.4	ug/L	36	Standard
	Cd	111	43.5	49.8	**-0.0044**	0.007	152.3	mg/L	49	Standard
	Cd	114	167.1	68.8	**-0.0027**	0.012	435.8	ug/L	170	Standard
>	**In**	115	707001.6	1.8				ug/L	727802	Standard
	Sn	118	568.0	40.7	**0.0032**	0.020	614.4	ug/L	471	Standard
	Sb	123	233.2	75.6	**0.0299**	0.021	69.3	ug/L	39	Standard
	Ba	135	3314.4	5.3	**0.7693**	0.030	3.9	ug/L	25	Standard
	Ce	140	70.0	8.6				ug/L	25	Standard
>	**Tb**	159	1017856.6	0.7				ug/L	1071747	Standard
	Ho	165	14.0	53.9				ug/L	13	Standard
	Tl	203	167.3	130.3	**0.0089**	0.013	144.8	ug/L	5	Standard
	Tl	205	336.3	121.3	**0.0086**	0.010	119.9	ug/L	10	Standard
	Pb	206	466.0	29.3	**0.0041**	0.010	247.4	ug/L	382	Standard
	Pb	207	355.0	22.2	**0.0044**	0.007	157.1	ug/L	306	Standard
	Pb	208	1701.7	27.2	**0.0045**	0.009	194.9	ug/L	1443	Standard
	U	238	604.3	15.8	**0.0394**	0.006	14.5	ug/L	5	Standard
>	**Bi**	209	561299.2	1.6				ug/L	561075	Standard

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⌈	**Na**	23	7343.5	6.2	**0.4193**	0.016	3.8	mg/L	288	Standard
|	**Mg**	24	534151.9	3.6	**0.8502**	0.007	0.8	mg/L	218	Standard
|	**K**	39	165.0	6.1	**0.0462**	0.014	29.6	mg/L	125	Standard
|	**Ca**	43	6.7	43.3	**2.1784**	3.129	143.6	mg/L	3	Standard
|	**Fe**	54	188.0	13.9	**-0.0735**	0.007	10.1	mg/L	550	Standard
|	**Fe**	57	3270.4	7.2	**0.0341**	0.007	19.5	mg/L	1772	Standard
⌊>	**Sc-1**	45	311982.6	2.9				mg/L	330668	Standard
	Cl	35	7.7	32.8				ug/L	5	Standard
	Kr	83	34.9	2.9				ug/L	38	Standard
	Br	81	305.0	11.4				ug/L	344	Standard
	P	31	257.5	10.1				ug/L	312	Standard
	S	34	12957.2	3.1				ug/L	5594	Standard
	Sr	88	58.3	9.9				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈	Li	7			
|	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		94.287	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	97.142
	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	100.040
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: L1207064312
Sample Date/Time: Sunday, July 29, 2012 18:29:10
Number of Replicates: 3
Autosampler Position: 454
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: JYH 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	7	9479.6	2.1	**191.7253**	73.338	38.3	ug/L	9465	Standard
	Be	9	13.3	21.7	**-0.0128**	0.002	12.9	ug/L	10	Standard
	Al	27	7932.1	1.1	**0.0113**	0.009	80.5	ug/L	7870	Standard
>	**Sc**	45	313972.9	2.6				ug/L	330668	Standard
	Ti	47	76.3	4.0	**0.0252**	0.003	10.7	ug/L	53	Standard
	V	51	2906.7	1.6	**0.0270**	0.006	24.1	ug/L	2687	Standard
	Cr	52	8281.9	2.0	**0.0264**	0.028	106.0	ug/L	8408	Standard
	Cr	53	183.3	9.9	**-0.0520**	0.014	27.0	ug/L	288	Standard
	Mn	55	14335.4	1.4	**1.0512**	0.020	1.9	ug/L	1080	Standard
	Co	59	368.3	5.9	**0.0332**	0.003	7.8	ug/L	117	Standard
	Ni	60	555.7	4.3	**0.2201**	0.012	5.5	ug/L	68	Standard
	Cu	65	103.7	8.2	**-0.0176**	0.004	23.5	ug/L	141	Standard
	Zn	66	1604.4	4.3	**1.4966**	0.080	5.4	ug/L	138	Standard
>	**Ge**	72	273231.3	0.5				ug/L	283230	Standard
	As	75	-148.3	10.0	**0.0181**	0.016	87.7	ug/L	-198	Standard
	Se	82	32.0	9.4	**0.0929**	0.031	32.9	ug/L	21	Standard
	Se-1	77	115.0	4.5	**-0.1441**	0.086	59.9	ug/L	131	Standard
>	**Ga**	71	518.3	16.3				mg/L	607	Standard
	Rb	85	350.0	8.9				ug/L	30	Standard
	Y	89	233749.7	1.8				ug/L	251555	Standard
>	**Rh**	103	356.7	14.2				ug/L	335	Standard
	Mo	98	145.7	6.0	**0.0355**	0.002	7.0	ug/L	13	Standard
	Ag	107	40.3	21.4	**-0.0022**	0.001	63.9	ug/L	36	Standard
	Cd	111	21.0	14.5	**-0.0115**	0.001	8.6	mg/L	49	Standard
	Cd	114	62.2	5.2	**-0.0136**	0.000	2.8	ug/L	170	Standard
>	**In**	115	700487.4	0.9				ug/L	727802	Standard
	Sn	118	352.0	6.6	**-0.0156**	0.002	11.6	ug/L	471	Standard
	Sb	123	103.0	3.1	**0.0144**	0.000	3.4	ug/L	39	Standard
	Ba	135	3066.6	2.1	**0.7179**	0.013	1.8	ug/L	25	Standard
	Ce	140	39.0	14.3				ug/L	25	Standard
>	**Tb**	159	1010694.5	0.6				ug/L	1071747	Standard
	Ho	165	10.0	10.0				ug/L	13	Standard
	Tl	203	23.7	8.8	**0.0004**	0.000	31.1	ug/L	5	Standard
	Tl	205	71.7	14.3	**0.0018**	0.000	12.5	ug/L	10	Standard
	Pb	206	350.0	6.4	**-0.0052**	0.001	26.9	ug/L	382	Standard
	Pb	207	314.3	9.1	**0.0003**	0.002	794.8	ug/L	306	Standard
	Pb	208	1403.4	3.7	**-0.0017**	0.001	44.9	ug/L	1443	Standard
	U	238	560.3	8.8	**0.0361**	0.003	8.8	ug/L	5	Standard
>	**Bi**	209	568063.0	1.7				ug/L	561075	Standard

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Na	23	7266.7	6.7	**0.4121**	0.030	7.3	mg/L	288	Standard
Mg	24	525574.6	1.4	**0.8318**	0.028	3.3	mg/L	218	Standard
K	39	151.7	14.9	**0.0329**	0.024	73.3	mg/L	125	Standard
Ca	43	15.0	88.2	**11.7989**	15.221	129.0	mg/L	3	Standard
Fe	54	241.3	8.4	**-0.0605**	0.004	5.9	mg/L	550	Standard
Fe	57	3072.0	6.9	**0.0294**	0.003	10.9	mg/L	1772	Standard
Sc-1	45	313972.9	2.6				mg/L	330668	Standard
Cl	35	4.0	86.6				ug/L	5	Standard
Kr	83	37.3	0.9				ug/L	38	Standard
Br	81	321.7	2.5				ug/L	344	Standard
P	31	245.8	8.2				ug/L	312	Standard
S	34	13031.4	2.2				ug/L	5594	Standard
Sr	88	78.3	18.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		96.470	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

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	Cd	111	
	Cd	114	
>	In	115	96.247
	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	101.245
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 29, 2012 18:32:21
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: JYH 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	7	9958.3	5.8	**-6.1189**	93.285	1524.5	ug/L	9465	Standard
	Be	9	93643.9	4.7	**50.8420**	2.531	5.0	ug/L	10	Standard
	Al	27	760398.1	2.8	**48.0583**	1.156	2.4	ug/L	7870	Standard
>	**Sc**	45	366344.6	1.0				ug/L	330668	Standard
	Ti	47	127042.5	1.4	**100.8912**	2.303	2.3	ug/L	53	Standard
	V	51	515659.9	0.5	**48.1048**	1.127	2.3	ug/L	2687	Standard
	Cr	52	416996.4	0.3	**48.4832**	1.135	2.3	ug/L	8408	Standard
	Cr	53	71779.6	0.5	**50.2812**	1.279	2.5	ug/L	288	Standard
	Mn	55	709941.3	1.2	**49.8573**	1.469	2.9	ug/L	1080	Standard
	Co	59	434709.3	1.0	**48.4952**	0.867	1.8	ug/L	117	Standard
	Ni	60	125194.4	0.6	**49.8625**	1.267	2.5	ug/L	68	Standard
	Cu	65	115979.6	1.2	**49.8764**	0.782	1.6	ug/L	141	Standard
	Zn	66	55355.6	1.5	**50.3397**	0.970	1.9	ug/L	138	Standard
>	**Ge**	72	307763.4	2.3				ug/L	283230	Standard
	As	75	53855.8	1.0	**50.0101**	1.217	2.4	ug/L	-198	Standard
	Se	82	5523.4	0.4	**51.1936**	1.050	2.1	ug/L	21	Standard
	Se-1	77	4016.2	1.5	**51.2452**	1.959	3.8	ug/L	131	Standard
>	**Ga**	71	661.7	4.2				mg/L	607	Standard
	Rb	85	786.7	9.6				ug/L	30	Standard
	Y	89	274309.8	1.9				ug/L	251555	Standard
>	**Rh**	103	391.7	9.9				ug/L	335	Standard
	Mo	98	382165.9	1.2	**98.7975**	1.796	1.8	ug/L	13	Standard
	Ag	107	346760.3	0.8	**50.9563**	1.627	3.2	ug/L	36	Standard
	Cd	111	176052.3	0.3	**50.4054**	1.329	2.6	mg/L	49	Standard
	Cd	114	532893.6	0.9	**50.1662**	0.774	1.5	ug/L	170	Standard
>	**In**	115	793808.5	2.5				ug/L	727802	Standard
	Sn	118	624855.2	0.8	**49.7930**	0.940	1.9	ug/L	471	Standard
	Sb	123	448458.0	0.7	**48.6597**	1.479	3.0	ug/L	39	Standard
	Ba	135	235172.1	0.7	**49.3762**	1.556	3.2	ug/L	25	Standard
	Ce	140	896.4	3.8				ug/L	25	Standard
>	**Tb**	159	1123968.4	1.0				ug/L	1071747	Standard
	Ho	165	22.7	28.4				ug/L	13	Standard
	Tl	203	865309.4	0.4	**48.2524**	0.436	0.9	ug/L	5	Standard
	Tl	205	2046796.5	4.3	**48.9221**	1.553	3.2	ug/L	10	Standard
	Pb	206	672726.8	0.8	**48.6039**	0.955	2.0	ug/L	382	Standard
	Pb	207	572307.0	0.3	**49.5186**	0.506	1.0	ug/L	306	Standard
	Pb	208	2649534.4	0.2	**48.7793**	0.627	1.3	ug/L	1443	Standard
	U	238	815400.0	0.1	**49.7265**	0.606	1.2	ug/L	5	Standard
>	**Bi**	209	604461.6	1.2				ug/L	561075	Standard

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Na	23	109719.2	0.5	**5.7634**	0.043	0.7	mg/L	288	Standard
Mg	24	3464947.1	1.3	**4.6961**	0.059	1.2	mg/L	218	Standard
K	39	5931.2	0.9	**4.6311**	0.076	1.6	mg/L	125	Standard
Ca	43	11.7	49.5	**5.8840**	5.502	93.5	mg/L	3	Standard
Fe	54	22845.9	1.3	**4.8016**	0.110	2.3	mg/L	550	Standard
Fe	57	329760.5	1.7	**5.8698**	0.130	2.2	mg/L	1772	Standard
Sc-1	45	366344.6	1.0				mg/L	330668	Standard
Cl	35	4.3	13.3				ug/L	5	Standard
Kr	83	36.0	7.9				ug/L	38	Standard
Br	81	394.2	13.7				ug/L	344	Standard
P	31	380.8	9.1				ug/L	312	Standard
S	34	6514.7	5.0				ug/L	5594	Standard
Sr	88	63.3	4.6				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	96.117		
Sc	45			
Ti	47	100.891		
V	51	96.210		
Cr	52	96.966		
Cr	53			
Mn	55	99.715		
Co	59	96.990		
Ni	60	99.725		
Cu	65	99.753		
Zn	66	100.679		
Ge	72		108.662	
As	75	100.020		
Se	82	102.387		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	98.797		
Ag	107	101.913		

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 18:34:53
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	Cd	111	100.811	
	Cd	114		
>	In	115		109.069
	Sn	118	99.586	
	Sb	123	97.319	
	Ba	135	98.752	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.505	
	Tl	205		
	Pb	206	97.208	
	Pb	207	99.037	
	Pb	208	97.559	
	U	238	99.453	
>	Bi	209		107.733
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
Report Date/Time: Sunday, July 29, 2012 18:34:53
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Sunday, July 29, 2012 18:35:32
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: JYH 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	7	9476.3	1.8	**-36.9289**	25.128	68.0	ug/L	9465	Standard
	Be	9	21.7	87.4	**-0.0092**	0.011	115.0	ug/L	10	Standard
	Al	27	8865.9	3.1	**0.0045**	0.010	222.0	ug/L	7870	Standard
>	**Sc**	45	354837.4	1.4				ug/L	330668	Standard
	Ti	47	81.3	43.6	**0.0218**	0.027	124.1	ug/L	53	Standard
	V	51	2828.8	10.8	**-0.0125**	0.025	197.0	ug/L	2687	Standard
	Cr	52	8353.0	2.4	**-0.0802**	0.007	8.3	ug/L	8408	Standard
	Cr	53	239.2	17.4	**-0.0273**	0.030	109.9	ug/L	288	Standard
	Mn	55	1428.4	29.9	**0.0168**	0.028	168.4	ug/L	1080	Standard
	Co	59	287.7	79.0	**0.0190**	0.025	130.5	ug/L	117	Standard
	Ni	60	100.7	33.6	**0.0111**	0.013	116.1	ug/L	68	Standard
	Cu	65	189.3	16.4	**0.0143**	0.012	83.6	ug/L	141	Standard
	Zn	66	184.3	9.1	**0.0180**	0.015	83.3	ug/L	138	Standard
>	**Ge**	72	304861.4	1.8				ug/L	283230	Standard
	As	75	-202.4	10.6	**-0.0164**	0.022	131.7	ug/L	-198	Standard
	Se	82	29.1	12.1	**0.0304**	0.033	109.8	ug/L	21	Standard
	Se-1	77	127.3	5.2	**-0.1563**	0.114	73.2	ug/L	131	Standard
>	**Ga**	71	648.3	4.2				mg/L	607	Standard
	Rb	85	20.0	66.1				ug/L	30	Standard
	Y	89	273978.4	0.9				ug/L	251555	Standard
>	**Rh**	103	346.7	11.7				ug/L	335	Standard
	Mo	98	264.3	30.1	**0.0617**	0.020	32.8	ug/L	13	Standard
	Ag	107	126.7	28.1	**0.0098**	0.005	52.6	ug/L	36	Standard
	Cd	111	92.7	33.4	**0.0085**	0.009	102.4	mg/L	49	Standard
	Cd	114	318.5	36.8	**0.0100**	0.011	108.7	ug/L	170	Standard
>	**In**	115	786656.6	0.9				ug/L	727802	Standard
	Sn	118	1050.0	14.3	**0.0370**	0.011	30.7	ug/L	471	Standard
	Sb	123	2527.9	10.9	**0.2783**	0.028	10.0	ug/L	39	Standard
	Ba	135	93.0	60.3	**0.0081**	0.012	143.7	ug/L	25	Standard
	Ce	140	22.3	13.7				ug/L	25	Standard
>	**Tb**	159	1098360.1	0.5				ug/L	1071747	Standard
	Ho	165	10.7	19.5				ug/L	13	Standard
	Tl	203	240.3	86.5	**0.0122**	0.011	92.9	ug/L	5	Standard
	Tl	205	548.3	89.1	**0.0130**	0.011	88.0	ug/L	10	Standard
	Pb	206	642.7	39.4	**0.0141**	0.018	125.1	ug/L	382	Standard
	Pb	207	585.3	48.6	**0.0218**	0.024	110.0	ug/L	306	Standard
	Pb	208	2651.4	49.2	**0.0194**	0.023	120.3	ug/L	1443	Standard
	U	238	318.0	103.0	**0.0190**	0.020	103.3	ug/L	5	Standard
>	**Bi**	209	605710.1	1.1				ug/L	561075	Standard

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Na	23	481.7	33.5	**-0.0099**	0.009	89.5	mg/L	288	Standard
Mg	24	2266.9	92.0	**0.0035**	0.003	84.4	mg/L	218	Standard
K	39	123.3	6.2	**-0.0070**	0.008	109.1	mg/L	125	Standard
Ca	43	0.0		**-5.3596**	0.000	0.0	mg/L	3	Standard
Fe	54	636.3	7.5	**0.0205**	0.012	59.1	mg/L	550	Standard
Fe	57	2333.5	3.7	**0.0084**	0.002	25.0	mg/L	1772	Standard
> **Sc-1**	45	354837.4	1.4				mg/L	330668	Standard
Cl	35	4.0	25.0				ug/L	5	Standard
Kr	83	38.0	10.6				ug/L	38	Standard
Br	81	380.8	8.5				ug/L	344	Standard
P	31	353.3	1.8				ug/L	312	Standard
S	34	6019.5	2.3				ug/L	5594	Standard
Sr	88	45.0	29.4				ug/L	55	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
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		107.638	
As	75			
Se	82			
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107			

Sample ID: QC Std 7
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	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

108.087

107.955

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Sunday, July 29, 2012 18:38:03
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Approved: July 30, 2012

Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Sunday, July 29, 2012 18:38:44
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: JYH 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	7	9412.9	5.1	**-28.0256**	114.833	409.7	ug/L	9465	Standard
	Be	9	16.7	62.4	**-0.0117**	0.006	51.0	ug/L	10	Standard
	Al	27	6044.5	8.2	**-0.1766**	0.043	24.4	ug/L	7870	Standard
>	**Sc**	45	350937.5	2.4				ug/L	330668	Standard
	Ti	47	54.3	14.3	**0.0013**	0.006	507.0	ug/L	53	Standard
	V	51	6495.5	0.9	**0.3460**	0.007	2.0	ug/L	2687	Standard
	Cr	52	14309.1	0.9	**0.6652**	0.003	0.5	ug/L	8408	Standard
	Cr	53	1309.2	2.1	**0.7487**	0.011	1.4	ug/L	288	Standard
	Mn	55	7743.6	0.5	**0.4754**	0.007	1.5	ug/L	1080	Standard
	Co	59	3418.7	2.7	**0.3788**	0.009	2.4	ug/L	117	Standard
	Ni	60	3989.9	1.4	**1.6042**	0.017	1.0	ug/L	68	Standard
	Cu	65	1880.5	5.3	**0.7644**	0.048	6.3	ug/L	141	Standard
	Zn	66	7498.2	1.6	**6.8759**	0.127	1.8	ug/L	138	Standard
>	**Ge**	72	299463.3	1.0				ug/L	283230	Standard
	As	75	219.1	5.7	**0.3811**	0.013	3.5	ug/L	-198	Standard
	Se	82	72.4	3.5	**0.4501**	0.026	5.8	ug/L	21	Standard
	Se-1	77	149.0	6.6	**0.1672**	0.128	76.4	ug/L	131	Standard
>	**Ga**	71	623.3	0.9				mg/L	607	Standard
	Rb	85	21.7	26.6				ug/L	30	Standard
	Y	89	269608.0	1.6				ug/L	251555	Standard
>	**Rh**	103	380.0	27.6				ug/L	335	Standard
	Mo	98	67.9	15.3	**0.0111**	0.003	26.6	ug/L	13	Standard
	Ag	107	2608.6	2.2	**0.3904**	0.008	2.2	ug/L	36	Standard
	Cd	111	894.2	3.7	**0.2486**	0.012	4.9	mg/L	49	Standard
	Cd	114	2663.1	1.8	**0.2411**	0.004	1.5	ug/L	170	Standard
>	**In**	115	761698.8	0.9				ug/L	727802	Standard
	Sn	118	627.0	9.1	**0.0047**	0.005	110.2	ug/L	471	Standard
	Sb	123	3871.8	3.4	**0.4395**	0.018	4.1	ug/L	39	Standard
	Ba	135	3267.0	0.7	**0.7032**	0.010	1.4	ug/L	25	Standard
	Ce	140	22.3	15.7				ug/L	25	Standard
>	**Tb**	159	1085528.2	0.4				ug/L	1071747	Standard
	Ho	165	10.7	37.9				ug/L	13	Standard
	Tl	203	1396.7	2.0	**0.0792**	0.001	1.4	ug/L	5	Standard
	Tl	205	3186.3	1.6	**0.0785**	0.002	2.4	ug/L	10	Standard
	Pb	206	3052.0	2.3	**0.1953**	0.005	2.6	ug/L	382	Standard
	Pb	207	2507.9	2.0	**0.1951**	0.006	3.1	ug/L	306	Standard
	Pb	208	11762.1	1.4	**0.1941**	0.005	2.5	ug/L	1443	Standard
	U	238	6151.6	1.8	**0.3864**	0.010	2.6	ug/L	5	Standard
>	**Bi**	209	586561.7	0.8				ug/L	561075	Standard

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	Na	23	295.0	14.8	**-0.0200**	0.002	10.6	mg/L	288	Standard
	Mg	24	200.0	15.2	**0.0006**	0.000	7.9	mg/L	218	Standard
	K	39	125.0	18.3	**-0.0047**	0.018	388.4	mg/L	125	Standard
	Ca	43	6.7	86.6	**1.2843**	5.754	448.1	mg/L	3	Standard
	Fe	54	579.7	8.8	**0.0094**	0.014	148.5	mg/L	550	Standard
	Fe	57	2196.8	3.5	**0.0063**	0.002	26.6	mg/L	1772	Standard
>	**Sc-1**	45	350937.5	2.4				mg/L	330668	Standard
	Cl	35	1.3	43.3				ug/L	5	Standard
	Kr	83	36.7	7.4				ug/L	38	Standard
	Br	81	392.5	9.9				ug/L	344	Standard
	P	31	389.2	8.1				ug/L	312	Standard
	S	34	6098.7	3.1				ug/L	5594	Standard
	Sr	88	43.3	24.0				ug/L	55	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27			
>	Sc	45			
	Ti	47			
	V	51	86.512		
	Cr	52	83.156		
	Cr	53			
	Mn	55	95.076		
	Co	59	94.709		
	Ni	60	100.264		
	Cu	65	95.550		
	Zn	66	110.015		
>	Ge	72		105.732	
	As	75	95.280		
	Se	82	112.531		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107	97.597		

Sample ID: QC Std 8
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	Cd	111	103.579	
	Cd	114		
>	In	115		104.657
	Sn	118		
	Sb	123	109.867	
	Ba	135	93.759	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.002	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	97.041	
	U	238	96.597	
>	Bi	209		104.542
	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		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 8
Report Date/Time: Sunday, July 29, 2012 18:41:14
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2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Login Number: L12070640
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470

Analysis: SW-846 7470

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG404404 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50598
Approved By: Maren Beery
Maren Beery

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL21-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:46
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	HY.072512.104659
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL22-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:48
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	HY.072512.104838
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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL25-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/24/2012 11:13
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/25/2012 10:02
Workgroup #:	WG404404	**Analyst:**	PDM	**Run Date:**	07/25/2012 10:50
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	HY.072512.105025
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

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

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

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

TCLP Non-Volatile

PG 1 of 2

Analyst(s): RWC
Date: 7-23-12
Filter Lot #: 4767545
Microbac SOP: TCLP 01 Rev #: 09

Analyst / Date		Analyst / Date	
RWC 7-23-12		RWC 7-24-12	
Time ~~On~~	Temp On °C	Time Off	Temp Off °C
1430	23	700	23

Agitator Speed 30 ± 2 rpm ☑

Jug #	Sample #	Tests	Method	Fluid #	Matrix *	% Solid	~~Pretest pH~~ Initial	~~Pretest pH~~ Final	Int. Wt. (g)	Fluid Vol. (mL)	Final extract pH
D	07-199-14	ME	1311	F1-873	S	100	N/A	N/A	18.00	360	5
	15								90.03	1800	5
	16								3.51	70	5
	17								8.72	174	5
	18								7.62	152	5
	19								36.59	732	5
	20								4.00	80	5
	21								9.86	197	5
	22								17.82	356	5
	23								9.72	194	5
	24								94.32	1886	5
	25								2.98	60	5
	26								12.08	242	5
	27	RS							46.42	928	5
	30	MS									5
	31	SD									5
G-6	07-609-14	SV			S/S		9	4.83	100.08	2000	7
D	07-617-01				S		9	2	25.04	500	5
	02						9	2	25.00		5
	07-618-01			F2-293			13	12	25.01		11
	07-623-01			F1-873			9	2	100.02	2000	5
	02						9	2	100.04		5
	07-626-01						10	2	100.01		5
		Continued on PG 49									
		PG 1 of 2			RWC 7-23-12						

*Matrix Code: (S = solid, ~~sand, soil or sludge~~) (P = paint) (O = organic) (W = water or aqueous waste)
~~D = Disposable~~ plastic jug
TCLP Pretest weight will be 5.0 g (± 0.1) unless otherwise noted.
Temperature shall be maintained at 23° ± 2 for 18 ± 2 hours unless otherwise noted.

Comments:

Peer Review By:

TCLP Non-Volatile

PG 2 of 2

Analyst(s): RWC
Date: 7-23-12
Filter Lot #: 4767545
Microbac SOP: TCLP 01 Rev #: 09

Analyst / Date		Analyst / Date	
RWC 7-23-12		RWC 7-24-12	
Time On	Temp On °C	Time Off	Temp Off °C
1430	23	0700	23

Agitator Speed 30 ± 2 rpm ☑

Jug #	Sample #	Tests	Method	Fluid #	Matrix *	% Solid	Pretest pH Initial	Pretest pH Final	Int. Wt. (g)	Fluid Vol. (mL)	Final extract pH
D	07-63201	ME	1311	17-873	S	100	9	2	100.01	2000	5
D	02				S		9	2	100.04		5
7-21	07-66621	SV			S/S		9	2	100.02		5
N/A	FBLK(1)				N/A	N/A	N/A	N/A	N/A		N/A
	FBLK(2)			12-293							

RWC 7-23-12

*Matrix Code: (S = solid, sand, soil or sludge) (P = paint) (O = organic) (W = water or aqueous waste)
D = Disposable plastic jug
TCLP Pretest weight will be 5.0 g (± 0.1) unless otherwise noted.
Temperature shall be maintained at 23° ± 2 for 18 ± 2 hours unless otherwise noted.

Comments:

Peer Review By:

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG404289
Analyst: BRG
Spike Analyst: BRG
Method: 7470A
Run Date: 07/24/2012 11:13
Hotblock Start Temp: 95.3 @ 11:05
Hotblock End Temp: 95 @ 13:05

SOP: ME404 Revison 13
Spike Solution: STD52965
Spike Witness: REK
HNO3 Lot #: COA16256
KMnO4 1:1 Lot #: RGT17508
H2SO4 Lot #: COA16153
K2S2O8 1:1 Lot #: RGT16987
Digestion Tubes Lot #: COA16255
Mercury Water ICV Lot #: STD52967
HG H2O STDS 10PPM Lot #: STD52973

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG404289-02	BLANK	1	40 mL	40 mL		
2	WG404216-02	FBLK1	17	4 mL	40 mL		
3	WG404216-03	FBLK2	17	4 mL	40 mL		
4	WG404289-03	LCS	1	40 mL	40 mL	4 mL	
5	L12070609-14	SAMP	17	4 mL	40 mL		07/30/12
6	L12070618-01	SAMP	17	4 mL	40 mL		07/26/12
7	L12070632-01	SAMP	17	4 mL	40 mL		07/31/12
8	L12070632-02	SAMP	17	4 mL	40 mL		07/31/12
9	L12070639-01	SAMP	1	40 mL	40 mL		07/31/12
10	L12070639-02	SAMP	1	40 mL	40 mL		07/31/12
11	L12070639-03	SAMP	1	40 mL	40 mL		07/31/12
12	L12070640-01	SAMP	1	40 mL	40 mL		07/31/12
13	L12070640-02	SAMP	1	40 mL	40 mL		07/31/12
14	L12070640-03	SAMP	1	40 mL	40 mL		07/31/12
15	L12070666-08	SAMP	1	40 mL	40 mL		07/31/12
16	L12070666-18	SAMP	1	40 mL	40 mL		07/31/12
17	L12070666-21	SAMP	17	4 mL	40 mL		07/31/12
18	L12070673-01	SAMP	1	40 mL	40 mL		08/03/12
19	WG404289-01	REF	1	40 mL	40 mL		
20	L12070673-03	SAMP	1	40 mL	40 mL		08/03/12
21	WG404289-04	MS	1	36 mL	40 mL	4 mL	
22	WG404289-05	MSD	1	36 mL	40 mL	4 mL	

Analyst: Brenda Gregory

Reviewer:

HB_DIG - Modified 09/30/2009
PDF ID: 2513259
Report generated: 07/24/2012 13:04

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA Dataset: 072512B.PRN
Analyst1: PDM Analyst2: N/A
Method: 7470 SOP: ME404 Rev: 13
Maintenance Log ID: 42600

Calibration Std: STD52973 ICV Std: STD52967 Post Spike: STD52973
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV:

Workgroups: 404404

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.072512.095158	WG404479-01	Calibration Point		1		07/25/12 09:51
2	HY.072512.095409	WG404479-02	Calibration Point		1		07/25/12 09:54
3	HY.072512.095610	WG404479-03	Calibration Point		1		07/25/12 09:56
4	HY.072512.095810	WG404479-04	Calibration Point		1		07/25/12 09:58
5	HY.072512.100012	WG404479-05	Calibration Point		1		07/25/12 10:00
6	HY.072512.100220	WG404479-06	Calibration Point		1		07/25/12 10:02
7	HY.072512.100411	WG404479-07	Initial Calibration Verification		1		07/25/12 10:04
8	HY.072512.100609	WG404479-08	Initial Calib Blank		1		07/25/12 10:06
9	HY.072512.100757	WG404479-09	CCV		1		07/25/12 10:07
10	HY.072512.101009	WG404479-10	CCB		1		07/25/12 10:10
11	HY.072512.101414	WG404289-02	Method/Prep Blank	40/40	1		07/25/12 10:14
12	HY.072512.101600	WG404289-03	Laboratory Control S	40/40	1		07/25/12 10:16
13	HY.072512.101746	WG404216-02	TCLP Fluid Blank 1		1		07/25/12 10:17
14	HY.072512.102218	WG404216-02	TCLP Fluid Blank 1		1		07/25/12 10:22
15	HY.072512.102358	WG404216-03	TCLP Fluid Blank 2		1		07/25/12 10:23
16	HY.072512.102535	L12070609-14	116-WCSOIL-1	4/40	1		07/25/12 10:25
17	HY.072512.102711	WG404404-01	Post Digestion Spike		1	L12070609-14	07/25/12 10:27
18	HY.072512.102859	L12070618-01	NOVELIS ORANGE	4/40	1		07/25/12 10:28
19	HY.072512.103037	L12070632-01	1 PA 0712	4/40	1		07/25/12 10:30
20	HY.072512.103228	WG404479-11	CCV		1		07/25/12 10:32
21	HY.072512.103415	WG404479-12	CCB		1		07/25/12 10:34
22	HY.072512.103603	L12070632-02	1 SCPA 0712	4/40	1		07/25/12 10:36
23	HY.072512.103823	L12070639-01	MPL24-0712-1	40/40	1		07/25/12 10:38
24	HY.072512.104014	WG404404-02	Post Digestion Spike		1	L12070639-01	07/25/12 10:40
25	HY.072512.104320	L12070639-02	SMW1-0712-1	40/40	1		07/25/12 10:43
26	HY.072512.104511	L12070639-03	SMW4-0712-1	40/40	1		07/25/12 10:45
27	HY.072512.104659	L12070640-01	MPL21-0712-1	40/40	1		07/25/12 10:46
28	HY.072512.104838	L12070640-02	MPL22-0712-1	40/40	1		07/25/12 10:48
29	HY.072512.105025	L12070640-03	MPL25-0712-1	40/40	1		07/25/12 10:50
30	HY.072512.105205	WG404479-13	CCV		1		07/25/12 10:52
31	HY.072512.105343	WG404479-14	CCB		1		07/25/12 10:53
32	HY.072512.105532	L12070666-08	116-BH06-1-RB	40/40	1		07/25/12 10:55
33	HY.072512.105709	L12070666-18	125-BH04-1-RB	40/40	1		07/25/12 10:57
34	HY.072512.105859	L12070666-21	77WCSOIL-1	4/40	1		07/25/12 10:58

Page: 1 Approved: July 26, 2012

Marcia Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA
Dataset: 072512B.PRN
Analyst1: PDM
Analyst2: N/A
Method: 7470
SOP: ME404
Rev: 13
Maintenance Log ID: 42600

Calibration Std: STD52973
ICV Std: STD52967
Post Spike: STD52973
ICSA: N/A
ICSAB: N/A
Int. Std:
CCV:
LLCCV:

Workgroups: 404404

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	HY.072512.110038	L12070673-01	MPL19-0712-1	40/40	1		07/25/12 11:00
36	HY.072512.110225	WG404289-01	Reference Sample	40/40	1	L12070673-03	07/25/12 11:02
37	HY.072512.110413	WG404289-04	Matrix Spike	36/40	1	L12070673-03	07/25/12 11:04
38	HY.072512.110550	WG404289-05	Matrix Spike Duplica	36/40	1	L12070673-03	07/25/12 11:05
39	HY.072512.110756	WG404479-15	CCV		1		07/25/12 11:07
40	HY.072512.111003	WG404479-16	CCB		1		07/25/12 11:10

Page: 2 Approved: July 26, 2012

Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 25-JUL-2012
Analyst: PDM
Analyst: LMK
Method: 7470
Instrument: HYDRA
Curve Workgroup: WG404479
Runlog ID: 48042
Analytical Workgroups: WG404404

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	609,618,639,640,666,673
Client Forms	X
Level X	
Level 3	
Level 4	609,639,640,666,673
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: 26-JUL-2012 Pierce Morris

Secondary Reviewer: 26-JUL-2012 Maren Berry

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-26-2012 17:08:14

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A

AAB#: WG404404

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/24/2012	5	28		07/25/12	6	28	
MPL22-0712-1	02	07/19/12					07/24/2012	4.9	28		07/25/12	5.9	28	
MPL25-0712-1	03	07/19/12					07/24/2012	4.8	28		07/25/12	5.8	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2516603
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: HY.072512.101414
Prep Date: 07/24/12 11:13
Analyzed Date: 07/25/12 10:14
Analyst: PDM

Work Group: WG404404
Blank Sample ID: WG404289-02
Instrument ID: HYDRA
Method: 7470A

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404289-03	HY.072512.101600	07/25/12 10:16	01
MPL21-0712-1	L12070640-01	HY.072512.104659	07/25/12 10:46	01
MPL22-0712-1	L12070640-02	HY.072512.104838	07/25/12 10:48	01
MPL25-0712-1	L12070640-03	HY.072512.105025	07/25/12 10:50	01

Report Name: BLANK_SUMMARY
PDF File ID: 2516604
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/24/12 11:13 Sample ID: WG404289-02
Instrument ID: HYDRA Run Date: 07/25/12 10:14 Prep Method: 7470A
File ID: HY.072512.101414 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG404404 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-25-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

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

Report Name:BLANK
PDF ID: 2516605
25-JUL-2012 14:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/25/2012 Sample ID: WG404289-03
Instrument ID: HYDRA Run Time: 10:16 Prep Method: 7470A
File ID: HY.072512.101600 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG404404 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52965 Cal ID: HYDRA-25-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00415	104	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2516606
Report generated: 07/25/2012 14:18

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070640 **Worknum:** WG404404
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG404404-02 **File ID:** HY.072512.104014 **Dil:** 1 **Units:** ug/L
Sample ID: L12070639-01 **File ID:** HY.072512.103823 **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	100.0	85 - 115	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2516602
Report generated: 07/25/2012 14:18

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070640
Analytical Method: 7470A
ICAL Worknum: WG404479

Workgroup (AAB#): WG404404
Instrument ID: HYDRA
Initial Calibration Date: 07/25/2012 10:02

Analyte	WG404479-01		WG404479-02		WG404479-03		WG404479-04		WG404479-05		WG404479-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	540	0.200	18314	1.00	75661	2.00	142059	5.00	363904	10.0	705111

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: 2516607
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070640
Analytical Method: 7470A
ICAL Worknum: WG404479

Workgroup (AAB#): WG404404
Instrument ID: HYDRA
Initial Calibration Date: 07/25/2012 10:02

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: 2516607
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070640
Instrument ID: HYDRA
File ID: HY.072512.100609
Workgroup (AAB#): WG404404
Matrix: WATER

Run Date: 07/25/2012
Run Time: 10:06
Analyst: PDM
Cal ID: HYDRA - 25-JUL-12

Sample ID: WG404479-08
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: 2516609
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-10
Instrument ID: HYDRA
Run Time: 10:10
Method: 7470A
File ID: HY.072512.101009
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2516613
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640 Run Date: 07/25/2012 Sample ID: WG404479-12

Instrument ID: HYDRA Run Time: 10:34 Method: 7470A

File ID: HY.072512.103415 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG404404 Cal ID: HYDRA - 25-JUL-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2516613
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-14
Instrument ID: HYDRA
Run Time: 10:53
Method: 7470A
File ID: HY.072512.105343
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2516613
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640 Run Date: 07/25/2012 Sample ID: WG404479-16

Instrument ID: HYDRA Run Time: 11:10 Method: 7470A

File ID: HY.072512.111003 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG404404 Cal ID: HYDRA - 25-JUL-12

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 2516613
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12070640 Run Date: 07/25/2012 Sample ID: WG404479-07
Instrument ID: HYDRA Run Time: 10:04 Method: 7470A
File ID: HY.072512.100411 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG404404 Cal ID: HYDRA - 25-JUL-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.05	103	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2516608
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-09
Instrument ID: HYDRA
Run Time: 10:07
Method: 7470A
File ID: HY.072512.100757
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00196	mg/L	98.0	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2516612
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-11
Instrument ID: HYDRA
Run Time: 10:32
Method: 7470A
File ID: HY.072512.103228
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00196	mg/L	98.0	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2516612
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-13
Instrument ID: HYDRA
Run Time: 10:52
Method: 7470A
File ID: HY.072512.105205
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00194	mg/L	97.0	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2516612
Report generated 07/25/2012 14:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/25/2012
Sample ID: WG404479-15
Instrument ID: HYDRA
Run Time: 11:07
Method: 7470A
File ID: HY.072512.110756
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG404404
Cal ID: HYDRA - 25-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00193	mg/L	96.5	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2516612
Report generated 07/25/2012 14:18

2.1.3.3 Raw Data

Protocol: standard

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       09:51:58 25 Jul 12   HG

Hg    .000    ppb      540
                                                                              =
*** Standard: 2 Rep: 1              Seq:  2       09:54:09 25 Jul 12   HG

Hg    .200    ppb      18314
                                                                              =
*** Standard: 3 Rep: 1              Seq:  3       09:56:10 25 Jul 12   HG

Hg    1.00    ppb      75661
                                                                              =
*** Standard: 4 Rep: 1              Seq:  4       09:58:10 25 Jul 12   HG

Hg    2.00    ppb      142059
                                                                              =
*** Standard: 5 Rep: 1              Seq:  5       10:00:12 25 Jul 12   HG

Hg    5.00    ppb      363904
                                                                              =
*** Standard: 6 Rep: 1              Seq:  6       10:02:20 25 Jul 12   HG

Hg    10.0    ppb      705111
                                                                              =
*** Check Standard: 2  Ck2ICV       Seq:  7       10:04:11 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     2.05    2.00   ppb        .000
                                                                              =
*** Check Standard: 3  Ck3ICB       Seq:  8       10:06:09 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -6.73    -.013    .200   ppb        .000
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  9       10:07:57 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          98.2     1.96    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  10      10:10:09 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -21.1    -.042    .200   ppb        .000
                                                                              =
*** Sample ID: WG40428902            Seq:  11     10:14:14 25 Jul 12   HG
                           PBW 8A
Hg   -.001    ppb       .000     -.001
                                                                              =
==============================================================================
*** Sample ID: WG40428903            Seq:  12     10:16:00 25 Jul 12   HG
                           LCSW 8A
Hg    4.15    ppb       .000      4.15
                                                                              =
==============================================================================
```

Approved: 07/26/2012 09:24

Pierce Morris

Protocol: standard

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG40421602            Seq:  13     10:17:46 25 Jul 12   HG
                           TCLP 8A
Hg   -.103    ppb       .000     -.103
                                                                              =
*** Sample ID: WG40421602            Seq:  14     10:22:18 25 Jul 12   HG
                           TCLP 8A
Hg   -.050    ppb       .000     -.050
                                                                              =
================================================================================
*** Sample ID: WG40421603            Seq:  15     10:23:58 25 Jul 12   HG
                           TCLP2 8A
Hg   -.098    ppb       .000     -.098
                                                                              =
================================================================================
*** Sample ID: 1207060914            Seq:  16     10:25:35 25 Jul 12   HG

Hg    .006    ppb       .000      .006
                                                                              =
================================================================================
*** Sample ID: WG40440401            Seq:  17     10:27:11 25 Jul 12   HG
                           1207060914PS.9
Hg    .952    ppb       .000      .952
                                                                              =
================================================================================
*** Sample ID: 1207061801            Seq:  18     10:28:59 25 Jul 12   HG

Hg    .068    ppb       .000      .068
                                                                              =
================================================================================
*** Sample ID: 1207063201            Seq:  19     10:30:37 25 Jul 12   HG

Hg    .026    ppb       .000      .026
                                                                              =
*** Check Standard: 4  Ck4CCV        Seq:  20     10:32:28 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          98.0     1.96    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB        Seq:  21     10:34:15 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -1.72    -.003    .200   ppb        .000
                                                                              =
*** Sample ID: 1207063202            Seq:  22     10:36:03 25 Jul 12   HG

Hg   -.104    ppb       .000     -.104
                                                                              =
================================================================================
```

Approved: 07/26/2012 09:24

Pierce Morris

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: 1207063901           Seq:  23     10:38:23 25 Jul 12   HG

Hg   -.056    ppb       .000     -.056
                                                                              =
================================================================================
*** Sample ID: WG40440402           Seq:  24     10:40:14 25 Jul 12   HG
                          1207063901PS.9
Hg    1.00    ppb       .000      1.00
                                                                              =
================================================================================
*** Sample ID: 1207063902           Seq:  25     10:43:20 25 Jul 12   HG

Hg    .052    ppb       .000      .052
                                                                              =
================================================================================
*** Sample ID: 1207063903           Seq:  26     10:45:11 25 Jul 12   HG

Hg   -.008    ppb       .000     -.008
                                                                              =
================================================================================
*** Sample ID: 1207064001           Seq:  27     10:46:59 25 Jul 12   HG

Hg   -.012    ppb       .000     -.012
                                                                              =
================================================================================
*** Sample ID: 1207064002           Seq:  28     10:48:38 25 Jul 12   HG

Hg   -.002    ppb       .000     -.002
                                                                              =
================================================================================
*** Sample ID: 1207064003           Seq:  29     10:50:25 25 Jul 12   HG

Hg   -.018    ppb       .000     -.018
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  30     10:52:05 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          96.8     1.94    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  31     10:53:43 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -43.4    -.087    .200   ppb        .000
                                                                              =
*** Sample ID: 1207066608           Seq:  32     10:55:32 25 Jul 12   HG

Hg   -.054    ppb       .000     -.054
                                                                              =
================================================================================
```

Approved: 07/26/2012 09:24

Pierce Morris

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: 1207066618            Seq:  33     10:57:09 25 Jul 12   HG

Hg   -.029    ppb       .000     -.029
                                                                                =
================================================================================
*** Sample ID: 1207066621            Seq:  34     10:58:59 25 Jul 12   HG

Hg    .011    ppb       .000      .011
                                                                                =
================================================================================
*** Sample ID: 1207067301            Seq:  35     11:00:38 25 Jul 12   HG

Hg   -.025    ppb       .000     -.025
                                                                                =
================================================================================
*** Sample ID: 1207067303            Seq:  36     11:02:25 25 Jul 12   HG
                           WG40428901
Hg   -.034    ppb       .000     -.034
                                                                                =
================================================================================
*** Sample ID: WG40428904            Seq:  37     11:04:13 25 Jul 12   HG
                           1207069303S
Hg    4.23    ppb       .000      4.23
                                                                                =
================================================================================
*** Sample ID: WG40428905            Seq:  38     11:05:50 25 Jul 12   HG
                           1207069303SD
Hg    4.14    ppb       .000      4.14
                                                                                =
*** Check Standard: 4  Ck4CCV        Seq:  39     11:07:56 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          96.3     1.93    2.00   ppb        .000
                                                                                =
*** Check Standard: 5  Ck5CCB        Seq:  40     11:10:03 25 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -18.3    -.037    .200   ppb        .000
                                                                                =
```

Approved: 07/26/2012 09:24

Pierce Morris

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L12070640
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 client did not specify an MS/MSD for 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: 50652
Approved By: Mike Cochran

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #: L12070640-01
Client ID: MPL21-0712-1
Matrix: Water
Workgroup #: WG404674
Collect Date: 07/19/2012 11:06
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 300.0
Analytical Method: 300.0
Analyst: JBK
Dilution: 1
Units: mg/L

Instrument: IC1
Prep Date: 07/26/2012 14:12
Cal Date: 04/26/2012 14:46
Run Date: 07/26/2012 15:21
File ID: I10726121521.07

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	12.6		0.200	0.100
Fluoride	16984-48-8	0.316		0.200	0.100
Sulfate	14808-79-8	49.8		1.00	0.500

Sample #: L12070640-02
Client ID: MPL22-0712-1
Matrix: Water
Workgroup #: WG404674
Collect Date: 07/19/2012 12:45
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 300.0
Analytical Method: 300.0
Analyst: JBK
Dilution: 1
Units: mg/L

Instrument: IC1
Prep Date: 07/26/2012 14:12
Cal Date: 04/26/2012 14:46
Run Date: 07/26/2012 15:39
File ID: I10726121539.08

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.5		0.200	0.100
Fluoride	16984-48-8	0.377		0.200	0.100
Sulfate	14808-79-8	30.7		1.00	0.500

Sample #: L12070640-03
Client ID: MPL25-0712-1
Matrix: Water
Workgroup #: WG404674
Collect Date: 07/19/2012 15:40
Sample Tag: 01

PrePrep Method: N/A
Prep Method: 300.0
Analytical Method: 300.0
Analyst: JBK
Dilution: 1
Units: mg/L

Instrument: IC1
Prep Date: 07/26/2012 14:12
Cal Date: 04/26/2012 14:46
Run Date: 07/26/2012 15:56
File ID: I10726121556.09

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.211		0.200	0.100
Sulfate	14808-79-8	57.8		1.00	0.500

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL25-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/26/2012 14:12
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG404674	**Analyst:**	JBK	**Run Date:**	07/26/2012 17:23
Collect Date:	07/19/2012 15:40	**Dilution:**	5	**File ID:**	I10726121723.14
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	48.5		1.00	0.500

2.2.1.2 QC Summary Data

Example Calculations - Ion Chromatography

A. Methods 9056/300.0 (Quadratic with Offset)

1. Retrieve Curve Data from the ICAL Curve

c2 = the value of curve constant
c1= the curve slope
c0 = the curve offset

2. Obtain the area, y , from the instrument raw data

3. Calculate the concentration of the analyte, f(y), where:

$$f(y) = \frac{1}{2 * c_2} * \left(- c_1 \pm \sqrt{c_1^2 - 4 * c_2 * (c_0 - y)}\right)$$

Example Calculation:

Value of constant, c2, (curve):	0.0003
Value of curve constant, c1, (slope):	0.0869
Value of curve constant, c0, (offset):	-0.0103
Area of target analyte, y, (uS*min):	2.993
Calculated concentration, f(y), (mg/L):	31.1998864
or:	-40.1161215 *
Dilution factor (D):	1.00
Concentration of analyte in sample (mg/L):	31.200

* There are two possible solutions, but only one is valid.

B. Method 314.0 - Perchlorate (Linear)

Retrieve Curve Data from Linear Plot

c1 = the curve slope

Obtain the area, y , from the quantitation report

Calculate the concentration of the analyte, f(y), where:

f (y) = y / c1

Example Calculation:

Value of c1, slope:	0.0034
Area of target analyte, y:	0.083
Calculated concentration:	24.4117647
Dilution Factor:	1
Concentration in sample:	24.4117647

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 042612 ICAL IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 300/9056 SOP: IC01 Rev: 12

Maintenance Log ID: Syringe Filter Lot#:

Column 1 ID: AG14A Column 2 ID: AS14A
Workgroups: WG396330
Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: NA

Comments: ICAL. New suppressor installed on 04/25/2012.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I10426121244.01	DI WATER	1	1		04/26/12 12:44
2	I10426121301.02	DI WATER	1	1		04/26/12 13:01
3	I10426121319.03	WG396330-01 STD \#6	1	1		04/26/12 13:19
4	I10426121336.04	WG396330-02 STD \#5	1	1		04/26/12 13:36
5	I10426121353.05	WG396330-03 STD \#4	1	1		04/26/12 13:53
6	I10426121411.06	WG396330-04 STD \#3	1	1		04/26/12 14:11
7	I10426121428.07	WG396330-05 STD \#2	1	1		04/26/12 14:28
8	I10426121446.08	WG396330-06 STD \#1	1	1		04/26/12 14:46
9	I10426121503.09	WG396330-07 ALT STD	1	1		04/26/12 15:03
10	I10426121520.10	LCR TEST LEVEL \#6	1	1		04/26/12 15:20
11	I10426121538.11	LCR TEST LEVEL \#2	1	1		04/26/12 15:38
12	I10426121555.12	LCR TEST LEVEL \#0	1	1		04/26/12 15:55
13	I10426121613.13	END	1	1		04/26/12 16:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 Approved: 01-MAY-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 072612 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 13

Maintenance Log ID: 42634 Syringe Filter Lot#: 00144403

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG404674
Internal STD: NA Surrogate STD: NA Calibration STD 26-APR-2012
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: STD48131

Comments: L12070754 (ALL) were analyzed at dilutions only due to historical data indicating concentrations of the target analyte at or greater than the ICAL.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I10726121337.01	ELUENT	1	1		07/26/12 13:37
2	I10726121354.02	DI WATER	1	1		07/26/12 13:54
3	I10726121412.03	WG404675-01 ANION CCV	1	1		07/26/12 14:12
4	I10726121429.04	WG404675-02 ANION CCB	1	1		07/26/12 14:29
5	I10726121446.05	WG404674-01 ANION BLANK	1	1		07/26/12 14:46
6	I10726121504.06	WG404674-02 ANION LCS	1	1		07/26/12 15:04
7	I10726121521.07	L12070640-01 (F,CL,SO4)	1	1		07/26/12 15:21
8	I10726121539.08	L12070640-02 (F,CL,SO4)	1	1		07/26/12 15:39
9	I10726121556.09	L12070640-03 (F,CL,SO4)	1	1		07/26/12 15:56
10	I10726121614.10	L12070673-01 (F,CL,SO4)	1	1		07/26/12 16:14
11	I10726121631.11	L12070673-03 (F,CL,SO4)	1	1		07/26/12 16:31
12	I10726121648.12	L12070673-03 1/5 RR CL	1	5		07/26/12 16:48
13	I10726121705.13	L12070716-01 (F,CL,SO4)	1	1		07/26/12 17:05
14	I10726121723.14	L12070640-03 1/5 RR CL	1	5		07/26/12 17:23
15	I10726121740.15	WG404675-03 ANION CCV	1	1		07/26/12 17:40
16	I10726121758.16	WG404675-04 ANION CCB	1	1		07/26/12 17:58
17	I10726121815.17	L12070716-01 1/5 RR CL,SO4	1	5		07/26/12 18:15
18	I10726121833.18	L12070754-01 1/2 (SO4)	2	2		07/26/12 18:33
19	I10726121850.19	L12070754-02 1/2 (SO4)	2	2		07/26/12 18:50
20	I10726121907.20	L12070792-06 (F,CL,NO3,SO4)	1	1		07/26/12 19:07
21	I10726121925.21	L12070792-07 (F,CL,NO3,SO4)	1	1		07/26/12 19:25
22	I10726121942.22	L12070792-07 1/10 RR CL	1	10		07/26/12 19:42
23	I10726122000.23	L12070792-08 (F,CL,NO3,SO4)	1	1		07/26/12 20:00
24	I10726122017.24	L12070792-08 1/10 RR CL	1	10		07/26/12 20:17
25	I10726122034.25	L12070792-09 (F,CL,NO3,SO4)	1	1		07/26/12 20:34
26	I10726122052.26	L12070792-09 1/5 RR CL	1	5		07/26/12 20:52
27	I10726122109.27	WG404675-05 ANION CCV	1	1		07/26/12 21:09
28	I10726122126.28	WG404675-06 ANION CCB	1	1		07/26/12 21:26
29	I10726122144.29	L12070792-10 (F,CL,NO3,SO4)	1	1		07/26/12 21:44
30	I10726122201.30	L12070792-10 1/10 RR CL	1	10		07/26/12 22:01
31	I10726122219.31	L12070792-11 (F,CL,NO3,SO4)	1	1		07/26/12 22:19
32	I10726122236.32	L12070792-11 1/5 RR CL	1	5		07/26/12 22:36
33	I10726122254.33	L12070792-12 (F,CL,NO3,SO4)	1	1		07/26/12 22:54

Page: 1 Approved: 27-JUL-12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 072612 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 13

Maintenance Log ID: 42634 Syringe Filter Lot#: 00144403

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG404674
Internal STD: NA Surrogate STD: NA 26-APR-2012
CCV STD: STD48131 LCS STD: STD48131 STD48131

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I10726122311.34	L12070792-12 1/10 RR CL	1	10		07/26/12 23:11
35	I10726122329.35	L12070792-13 (F,CL,NO3,SO4)	1	1		07/26/12 23:29
36	I10726122346.36	L12070792-14 (F,CL,NO3,SO4)	1	1		07/26/12 23:46
37	I10727120003.37	L12070792-14 1/5 RR CL	1	5		07/27/12 00:03
38	I10727120021.38	L12070792-15 (F,CL,NO3,SO4)	1	1		07/27/12 00:21
39	I10727120038.39	WG404675-07 ANION CCV	1	1		07/27/12 00:38
40	I10727120056.40	WG404675-08 ANION CCB	1	1		07/27/12 00:56
41	I10727120113.41	L12070792-16 (F,CL,NO3,SO4)	1	1		07/27/12 01:13
42	I10727120130.42	L12070792-16 1/10 RR CL	1	10		07/27/12 01:30
43	I10727120148.43	L12070792-17 (F,CL,NO3,SO4)	1	1		07/27/12 01:48
44	I10727120205.44	L12070792-17 1/10 RR CL	1	10		07/27/12 02:05
45	I10727120223.45	DI WATER	1	1		07/27/12 02:23
46	I10727120240.46	WG404674-04 DUP 640-01	1	1		07/27/12 02:40
47	I10727120257.47	WG404674-05 MS 640-01	1	1		07/27/12 02:57
48	I10727120315.48	WG404674-06 SD 640-01	1	1		07/27/12 03:15
49	I10727120332.49	WG404675-09 ANION CCV	1	1		07/27/12 03:32
50	I10727120350.50	WG404675-10 ANION CCB	1	1		07/27/12 03:50
51	I10727120442.51	END	1	1		07/27/12 04:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 2 Approved: 27-JUL-12

Microbac Laboratories Inc.

Data Checklist

Date: 26-APR-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 46418
Analytical Workgroups: WG396330 (ICAL)

ANALYTICAL	
System Performance Check	X
Initial Calibration	X
Average RF	X
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	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	ECL

Primary Reviewer:
27-APR-2012

Secondary Reviewer:
01-MAY-2012

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-01-2012 11:43:43

Microbac Laboratories Inc.

Data Checklist

Date: 26-JUL-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 48080
Analytical Workgroups: 07-640, 07-673, 07-716, 07-754, 07-792

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	NA
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
27-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-27-2012 14:19:26

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG404674

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/26/2012	7.1	2	*	07/26/12	7.2	2	*
MPL22-0712-1	02	07/19/12					07/26/2012	7.1	2	*	07/26/12	7.1	2	*
MPL25-0712-1	03	07/19/12					07/26/2012	6.9	2	*	07/26/12	7	2	*
MPL25-0712-1	03	07/19/12					07/26/2012	6.9	2	*	07/26/12	7.1	2	*

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2520352
Report generated 07/30/2012 11:54

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: I10726121446.05
Prep Date: 07/26/12 14:12
Analyzed Date: 07/26/12 14:46
Analyst: JBK

Work Group: WG404674
Blank Sample ID: WG404674-01
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	WG404674-02	I10726121504.06	07/26/12 15:04	01
MPL21-0712-1	L12070640-01	I10726121521.07	07/26/12 15:21	01
MPL22-0712-1	L12070640-02	I10726121539.08	07/26/12 15:39	01
MPL25-0712-1	L12070640-03	I10726121556.09	07/26/12 15:56	01
MPL25-0712-1	L12070640-03	I10726121723.14	07/26/12 17:23	DL01
DUP	WG404674-04	I10727120240.46	07/27/12 02:40	01

Report Name: BLANK_SUMMARY
PDF File ID: 2520353
Report generated 07/30/2012 11:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/26/12 14:12 Sample ID: WG404674-01
Instrument ID: IC1 Run Date: 07/26/12 14:46 Prep Method: 300.0
File ID: I10726121446.05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG404674 Matrix: Water Units: mg/L
Contract #: Cal ID: IC1-26-APR-12

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: 2520354
30-JUL-2012 11:54

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/26/2012 Sample ID: WG404674-02
Instrument ID: IC1 Run Time: 15:04 Prep Method: 300.0
File ID: I10726121504.06 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG404674 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48131 Cal ID: IC1-26-APR-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	8.00	8.49	106	90 - 110	
Fluoride	8.00	8.16	102	90 - 110	
Sulfate	40.0	43.0	107	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2520355
Report generated: 07/30/2012 11:54

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070640
Analytical Method: 300.0
ICAL Workgroup: WG396330

Instrument ID: IC1
Initial Calibration Date: 26-APR-12 14:46
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
Chloride		5.670	20.9	0.99500	
Fluoride		4.225	6.89	0.99800	
Sulfate		8.072	9.49	0.99600	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

INT_CAL - Modified 03/06/2008
PDF File ID: 2520356
Report generated 07/30/2012 11:55

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12070640

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 26-APR-12 14:46

Column ID: F

Analyte	WG396330-01			WG396330-02			WG396330-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	24.0	4.55700000	5.267	12.0	1.87000000	6.417	8.00	1.32900000	6.020
Fluoride	24.0	6.30800000	3.805	12.0	2.79900000	4.287	8.00	2.01500000	3.970
Sulfate	120	17.6960000	6.781	60.0	7.19300000	8.341	40.0	5.09800000	7.846

INT_CAL - Modified 03/06/2008
PDF File ID: 2520356
Report generated 07/30/2012 11:55

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12070640

Analytical Method: 300.0

Instrument ID: IC1

Initial Calibration Date: 26-APR-12 14:46

Column ID: F

Analyte	WG396330-04			WG396330-05			WG396330-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	4.00	0.628000000	6.369	1.00	0.166000000	6.024	0.200	0.0510000000	3.922
Fluoride	4.00	0.926000000	4.320	1.00	0.226000000	4.425	0.200	0.0440000000	4.545
Sulfate	20.0	2.36300000	8.464	5.00	0.577000000	8.666	1.00	0.120000000	8.333

INT_CAL - Modified 03/06/2008
PDF File ID: 2520356
Report generated 07/30/2012 11:55

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12070640 Run Date: 04/26/2012 Sample ID: WG396330-07
Instrument ID: IC1 Run Time: 15:03 Method: 300.0
File ID: I10426121503.09 Analyst: JBK QC Key: DOD4
ICal Workgroup: WG396330 Cal ID: IC1 - 26-APR-12

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		8.00	8.26	mg/L	5.89	3.30	10	
Fluoride		8.00	8.29	mg/L	3.98	3.60	10	
Sulfate		40.0	40.0	mg/L	7.92	0.100	10	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 2520357
Report generated 07/30/2012 11:55

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/26/2012
Sample ID: WG404675-01
Instrument ID: IC1
Run Time: 14:12
Method: 300.0
File ID: I10726121412.03
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.51	mg/L	5.72	6.39	10	
Fluoride		8.00	8.15	mg/L	4.05	1.91	10	
Sulfate		40.0	43.1	mg/L	7.34	7.82	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2520358
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/26/2012
Sample ID: WG404675-03
Instrument ID: IC1
Run Time: 17:40
Method: 300.0
File ID: I10726121740.15
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.45	mg/L	5.76	5.56	10	
Fluoride		8.00	8.06	mg/L	4.09	0.725	10	
Sulfate		40.0	42.7	mg/L	7.40	6.87	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2520358
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404675-07
Instrument ID: IC1
Run Time: 00:38
Method: 300.0
File ID: I10727120038.39
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.53	mg/L	5.71	6.61	10	
Fluoride		8.00	8.14	mg/L	4.05	1.74	10	
Sulfate		40.0	43.2	mg/L	7.33	7.94	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2520358
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404675-09
Instrument ID: IC1
Run Time: 03:32
Method: 300.0
File ID: I10727120332.49
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.54	mg/L	5.70	6.79	10	
Fluoride		8.00	8.11	mg/L	4.07	1.35	10	
Sulfate		40.0	43.2	mg/L	7.32	8.01	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2520358
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/26/2012
Sample ID: WG404675-02
Instrument ID: IC1
Run Time: 14:29
Method: 300.0
File ID: I10726121429.04
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2520359
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/26/2012
Sample ID: WG404675-04
Instrument ID: IC1
Run Time: 17:58
Method: 300.0
File ID: I10726121758.16
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2520359
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404675-08
Instrument ID: IC1
Run Time: 00:56
Method: 300.0
File ID: I10727120056.40
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

CCB - Modified 03/05/2008
PDF File ID: 2520359
Report generated 07/30/2012 12:54

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070640
Run Date: 07/27/2012
Sample ID: WG404675-10
Instrument ID: IC1
Run Time: 03:50
Method: 300.0
File ID: I10727120350.50
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG404674
Cal ID: IC1 - 26-APR-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U
Fluoride	0.100	0.200	0.100	U
Sulfate	0.500	1.00	0.500	U

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

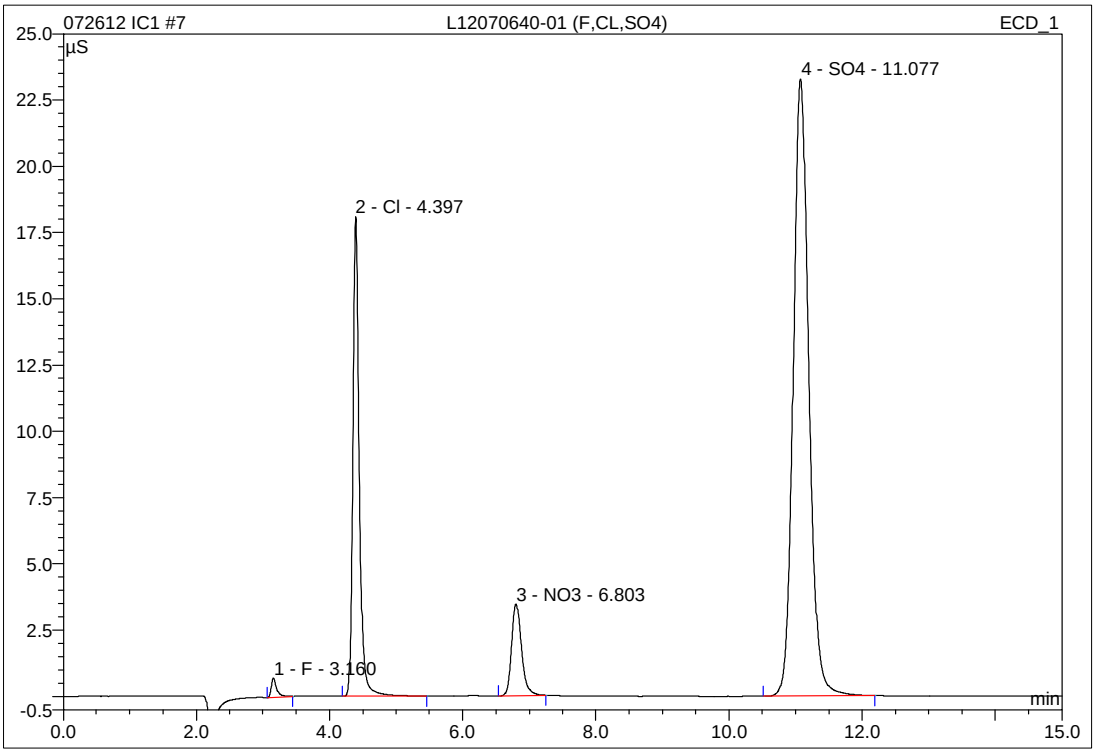
CCB - Modified 03/05/2008
PDF File ID: 2520359
Report generated 07/30/2012 12:54

2.2.1.3 Sample Data

7 L12070640-01 (F,CL,SO4)

1,1 JBK WG404674-03 REF

Sample Name:	**L12070640-01 (F,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:	**7/26/2012 15:21**	*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	3.16	F	0.733	0.071	0.79	0.316	BMB
2	4.40	Cl	18.091	2.055	22.76	12.554	BMB
3	6.80	NO3	3.454	0.601	6.65	1.481	BMB
4	11.08	SO4	23.285	6.304	69.80	49.849	BMB
Total:			45.563	9.031	100.00	64.200	

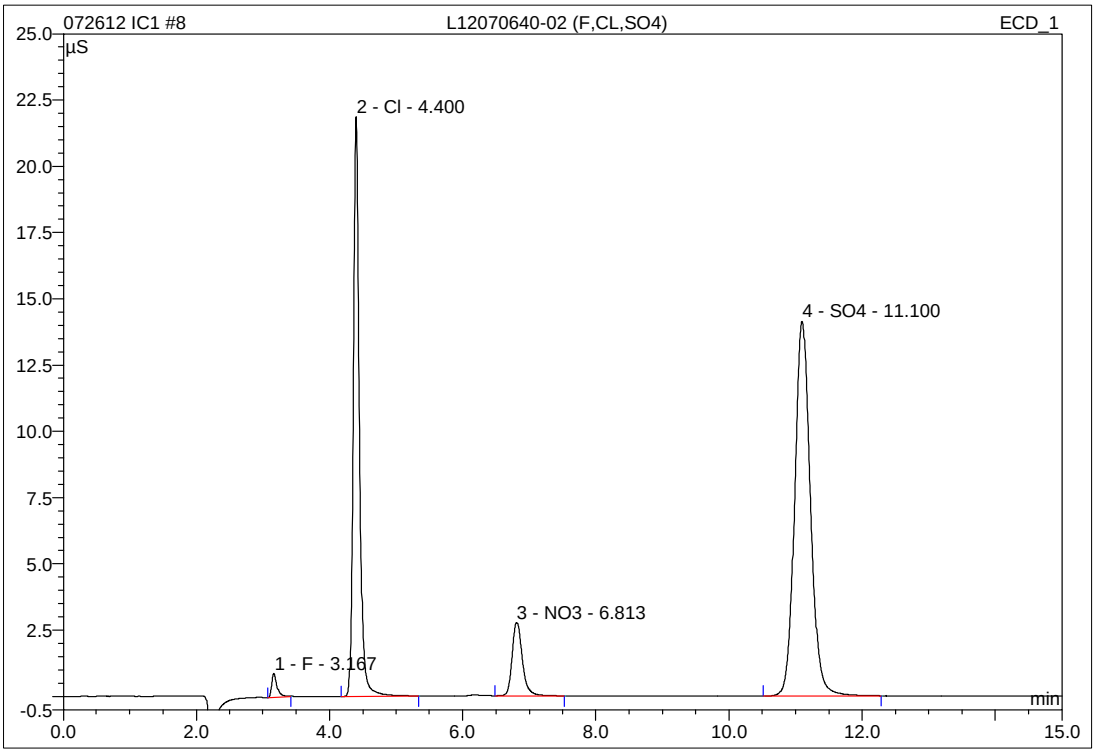
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 L12070640-02 (F,CL,SO4)

1,1 JBK

Sample Name:	**L12070640-02 (F,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:	**7/26/2012 15:39**	*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	3.17	F	0.910	0.086	1.26	0.377	BMB
2	4.40	Cl	21.864	2.364	34.66	14.459	BMB
3	6.81	NO3	2.770	0.491	7.19	1.212	BMB
4	11.10	SO4	14.139	3.881	56.89	30.719	BMB
Total:			39.683	6.823	100.00	46.767	

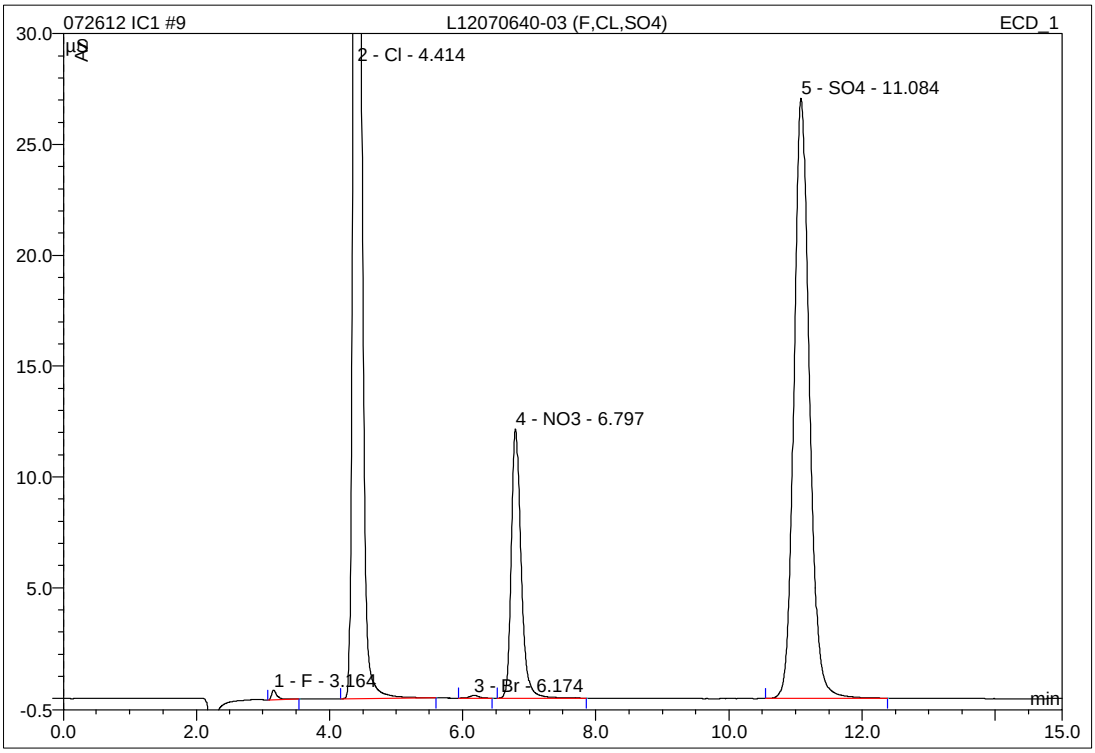
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 L12070640-03 (F,CL,SO4)

1,1 JBK (CL>ICAL RR 1/5)

Sample Name:	**L12070640-03 (F,CL,SO4)**	*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:	**7/26/2012 15:56**	*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	3.16	F	0.449	0.046	0.23	0.211	BMB
2	4.41	Cl	87.274	10.215	51.95	62.825	BMB
3	6.17	Br	0.131	0.021	0.11	0.306	BMB
4	6.80	NO3	12.143	2.075	10.55	5.088	BMB
5	11.08	SO4	27.076	7.307	37.16	57.767	BMB
Total:			127.073	19.663	100.00	126.197	

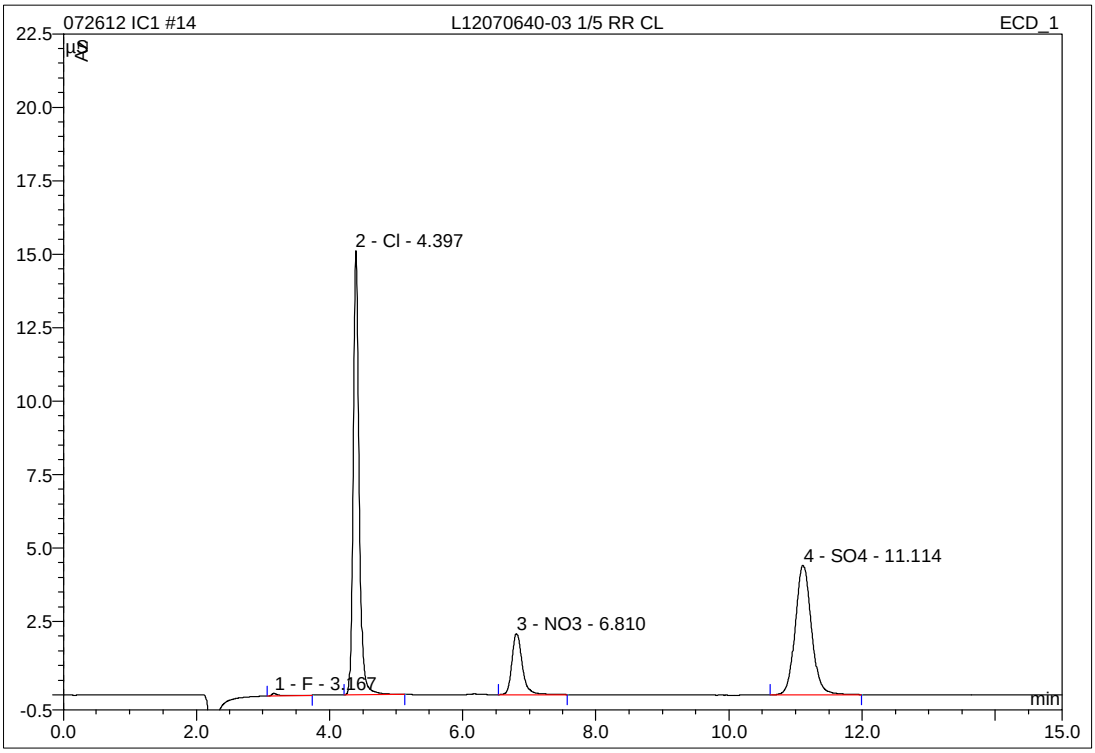
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

14 L12070640-03 1/5 RR CL

1,5 JBK

Sample Name:	**L12070640-03 1/5 RR CL**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2012 17:23**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



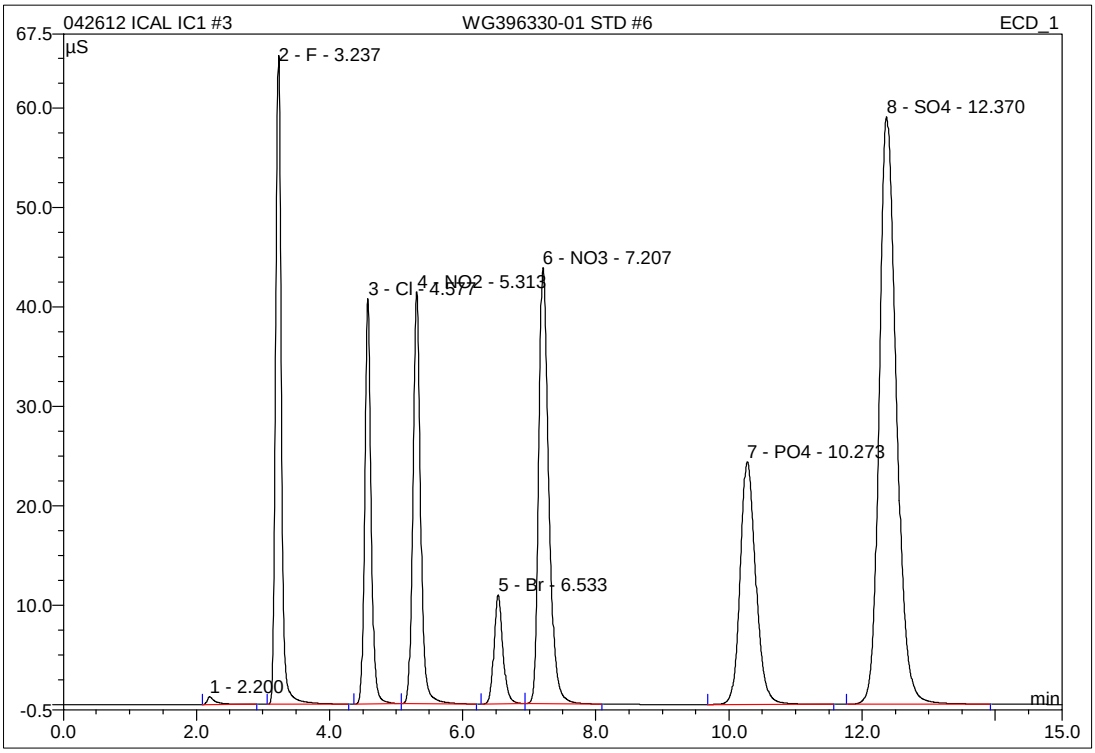
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.17	F	0.093	0.013	0.40	0.075	BMB
2	4.40	Cl	15.107	1.593	49.45	9.707	BMB
3	6.81	NO3	2.076	0.373	11.59	0.924	BMB
4	11.11	SO4	4.407	1.242	38.56	9.882	BMB
Total:			21.683	3.222	100.00	20.588	

2.2.1.4 Standards Data

3 WG396330-01 STD #6

1,1 JBK STD48131

Sample Name:	**WG396330-01 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:	**4/26/2012 13:19**	*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
1	2.20	n.a.	0.788	0.118	0.23	n.a.	BMB
2	3.24	F	65.274	6.308	12.54	25.959	BMB
3	4.58	Cl	40.765	4.557	9.06	27.966	BMb
4	5.31	NO2	41.461	5.569	11.08	15.874	bMB
5	6.53	Br	10.956	1.705	3.39	26.239	BMb
6	7.21	NO3	43.863	7.687	15.29	18.817	bMB
7	10.27	PO4	24.418	6.645	13.21	45.017	BMB
8	12.37	SO4	59.093	17.696	35.19	139.805	BMB
Total:			286.619	50.284	100.00	299.677	

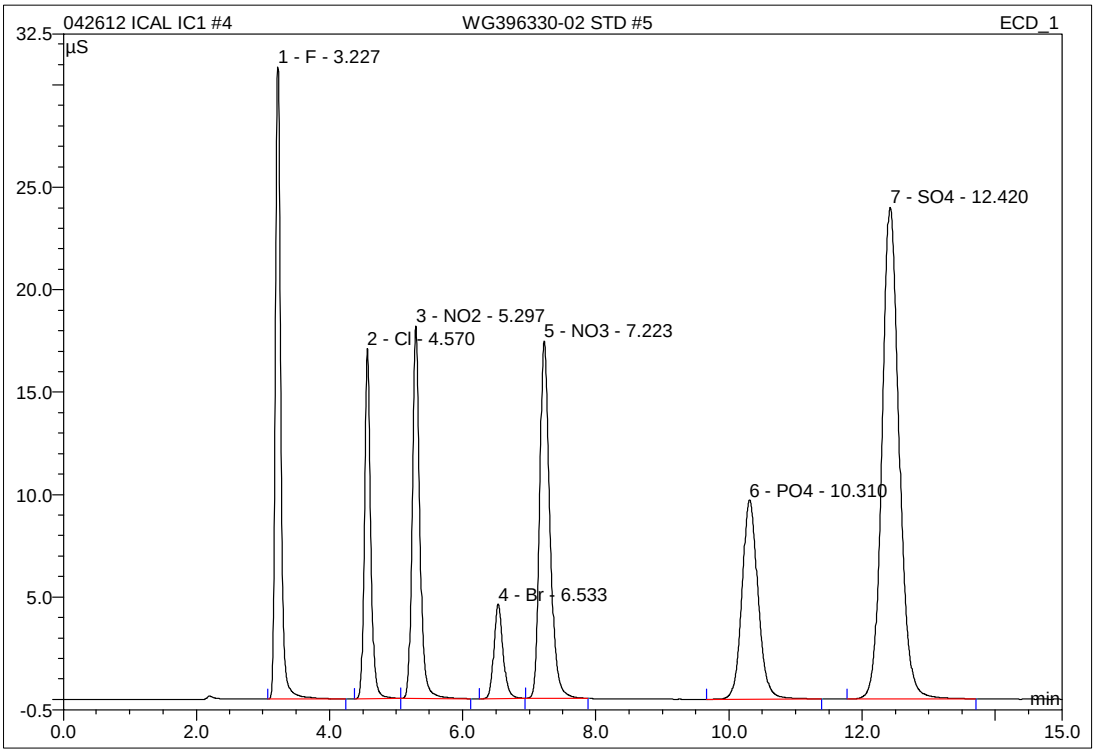
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG396330-02 STD #5

1,1 JBK STD48131

Sample Name:	**WG396330-02 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:	**4/26/2012 13:36**	*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	3.23	F	30.855	2.799	13.44	11.533	BMB
2	4.57	Cl	17.101	1.870	8.98	11.416	BMb
3	5.30	NO2	18.195	2.411	11.57	6.874	bMB
4	6.53	Br	4.618	0.736	3.53	11.322	BMB
5	7.22	NO3	17.440	3.110	14.93	7.620	BMB
6	10.31	PO4	9.737	2.713	13.02	18.406	BMB
7	12.42	SO4	24.012	7.193	34.53	56.874	BMB
Total:			121.957	20.834	100.00	124.044	

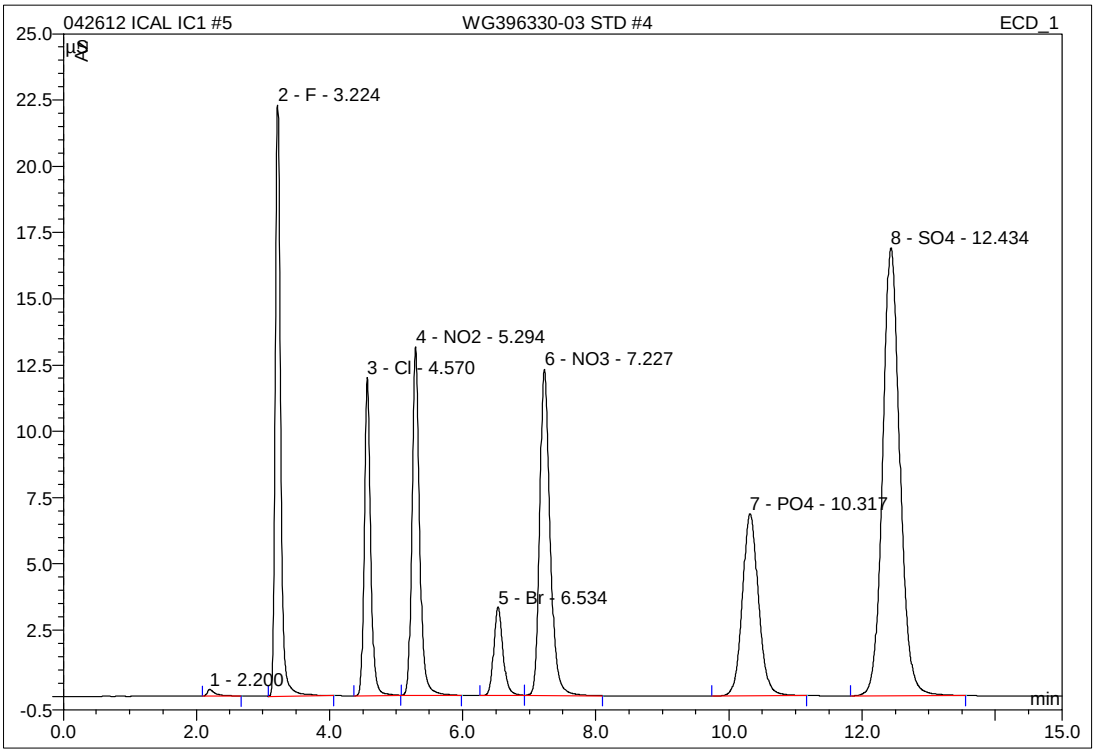
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 WG396330-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG396330-03 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:	**4/26/2012 13:53**	*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	2.20	n.a.	0.256	0.036	0.24	n.a.	BMB
2	3.22	F	22.303	2.015	13.51	8.308	BMB
3	4.57	Cl	12.004	1.329	8.91	8.080	BMB
4	5.29	NO2	13.136	1.744	11.70	4.974	BMB
5	6.53	Br	3.342	0.537	3.60	8.250	BMb
6	7.23	NO3	12.296	2.223	14.91	5.449	bMB
7	10.32	PO4	6.874	1.930	12.94	13.102	BMB
8	12.43	SO4	16.900	5.098	34.19	40.328	BMB
Total:			87.112	14.912	100.00	88.492	

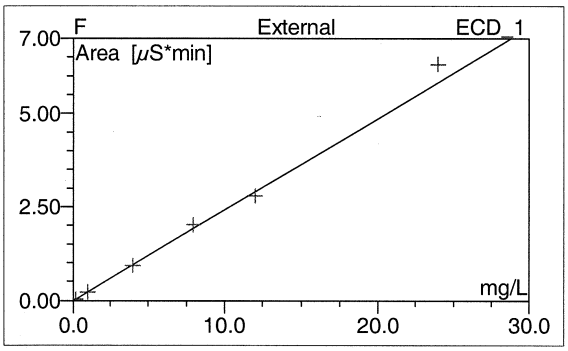
IC/Integration

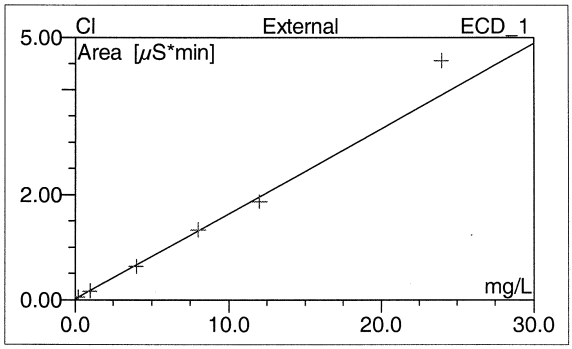
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

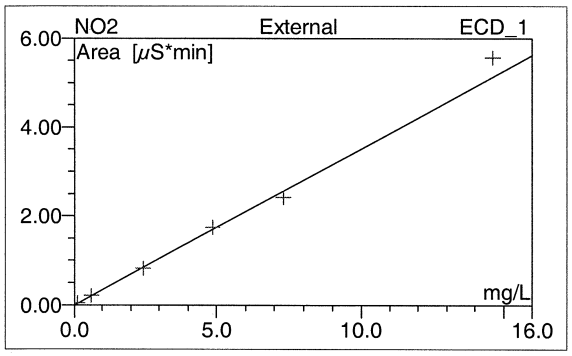
5 WG396330-03 STD #4

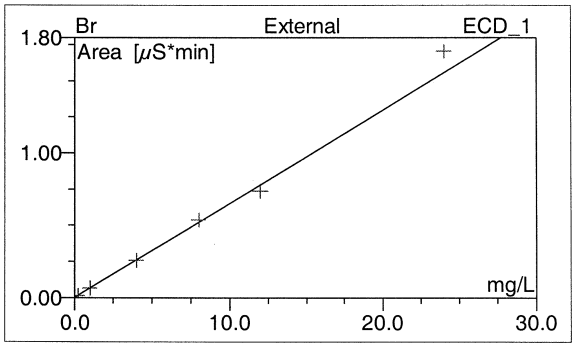
1,1 JBK STD48131

Sample Name:	**WG396330-03 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:	**4/26/2012 13:53**	*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	2.20	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.22	F	XXLOff	6	99.8400	-0.0056	0.2432	0.0000
3	4.57	Cl	XXLOff	6	99.5340	0.0176	0.1623	0.0000
4	5.29	NO2	XXLOff	6	99.8518	-0.0014	0.3509	0.0000
5	6.53	Br	XXLOff	6	99.8657	0.0010	0.0649	0.0000
6	7.23	NO3	XXLOff	6	99.6016	-0.0045	0.4088	0.0000
7	10.32	PO4	XXLOff	6	99.6355	-0.0059	0.1477	0.0000
8	12.43	SO4	XXLOff	6	99.5464	-0.0090	0.1266	0.0000
Average:					99.6964	-0.0011	0.2149	0.0000

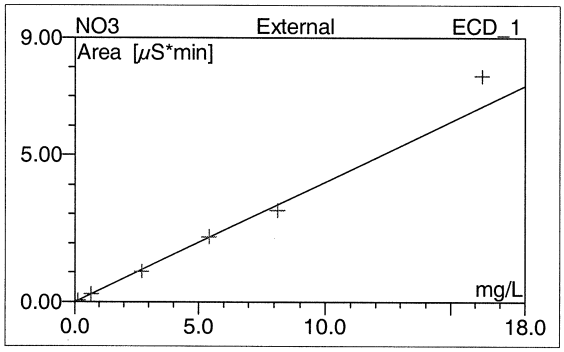
IC/Calibration(Batch)

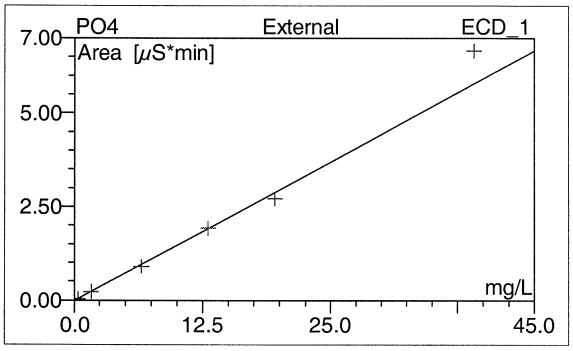
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

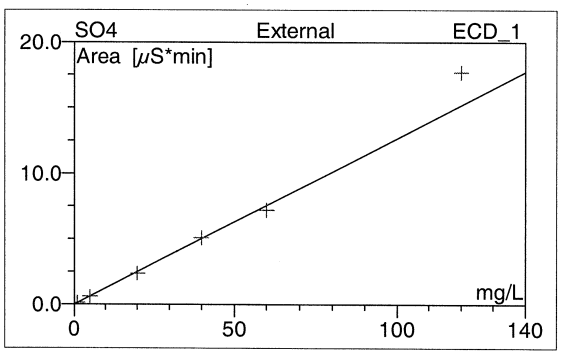
5 WG396330-03 STD #4

1,1 JBK STD48131

Sample Name:	**WG396330-03 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:	**4/26/2012 13:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**





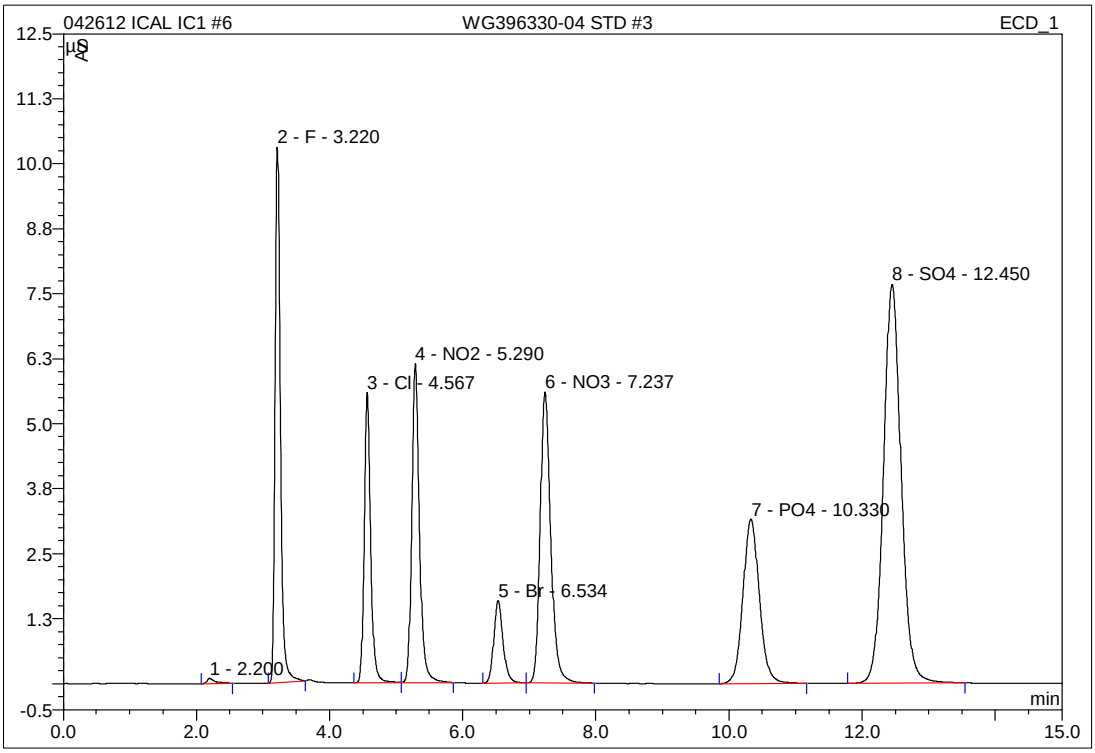


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.20	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.22	F	XXLOff	6	99.8400	-0.0056	0.2432	0.0000
3	4.57	Cl	XXLOff	6	99.5340	0.0176	0.1623	0.0000
4	5.29	NO2	XXLOff	6	99.8518	-0.0014	0.3509	0.0000
5	6.53	Br	XXLOff	6	99.8657	0.0010	0.0649	0.0000
6	7.23	NO3	XXLOff	6	99.6016	-0.0045	0.4088	0.0000
7	10.32	PO4	XXLOff	6	99.6355	-0.0059	0.1477	0.0000
8	12.43	SO4	XXLOff	6	99.5464	-0.0090	0.1266	0.0000
Average:					99.6964	-0.0011	0.2149	0.0000

6 WG396330-04 STD #3

1,1 JBK STD48131

Sample Name:	**WG396330-04 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:	**4/26/2012 14:11**	*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	2.20	n.a.	0.102	0.014	0.21	n.a.	BMB
2	3.22	F	10.301	0.926	13.33	3.829	BMB
3	4.57	Cl	5.587	0.628	9.03	3.758	BMB
4	5.29	NO2	6.130	0.823	11.84	2.348	BMB
5	6.53	Br	1.592	0.259	3.72	3.967	BMB
6	7.24	NO3	5.594	1.032	14.86	2.536	BMB
7	10.33	PO4	3.160	0.902	12.99	6.148	BMB
8	12.45	SO4	7.676	2.363	34.02	18.732	BMB
Total:			40.143	6.946	100.00	41.319	

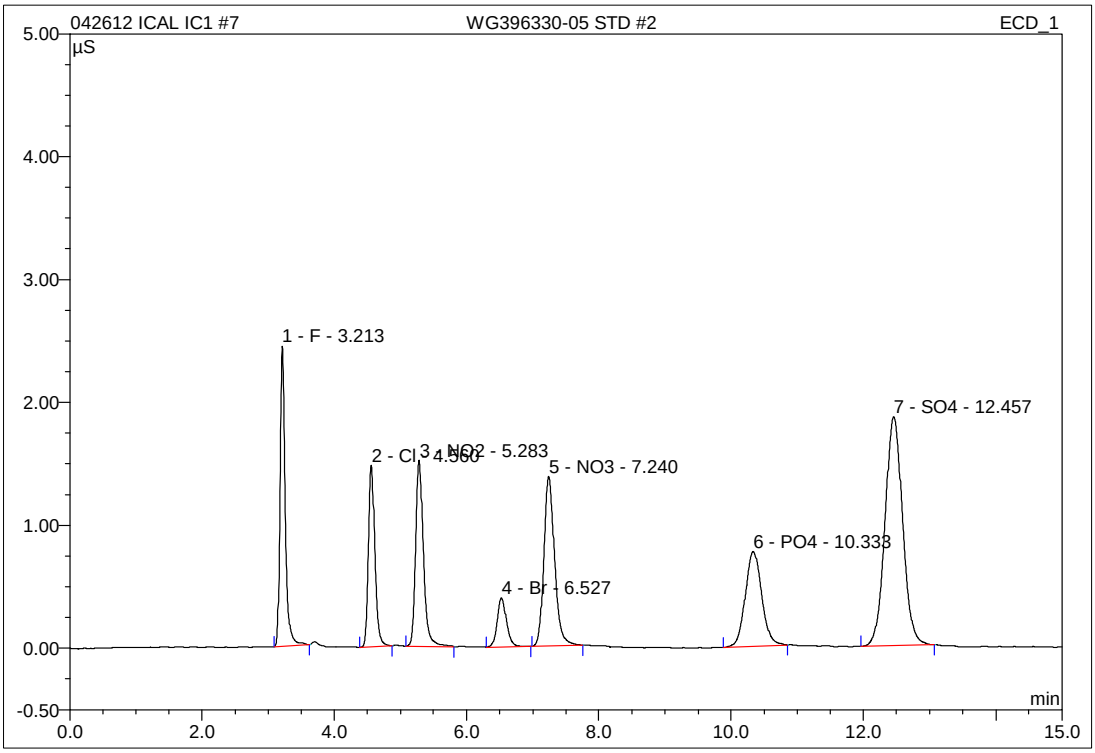
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 WG396330-05 STD #2

1,1 JBK STD48131

Sample Name:	**WG396330-05 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:	**4/26/2012 14:28**	*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
1	3.21	F	2.439	0.226	13.07	0.950	BMB
2	4.56	Cl	1.476	0.166	9.62	0.914	BMB
3	5.28	NO2	1.514	0.209	12.09	0.598	BMB
4	6.53	Br	0.400	0.066	3.83	1.004	BMB
5	7.24	NO3	1.379	0.260	15.04	0.646	BMB
6	10.33	PO4	0.771	0.223	12.92	1.549	BMB
7	12.46	SO4	1.864	0.577	33.42	4.624	BMB
Total:			9.842	1.725	100.00	10.286	

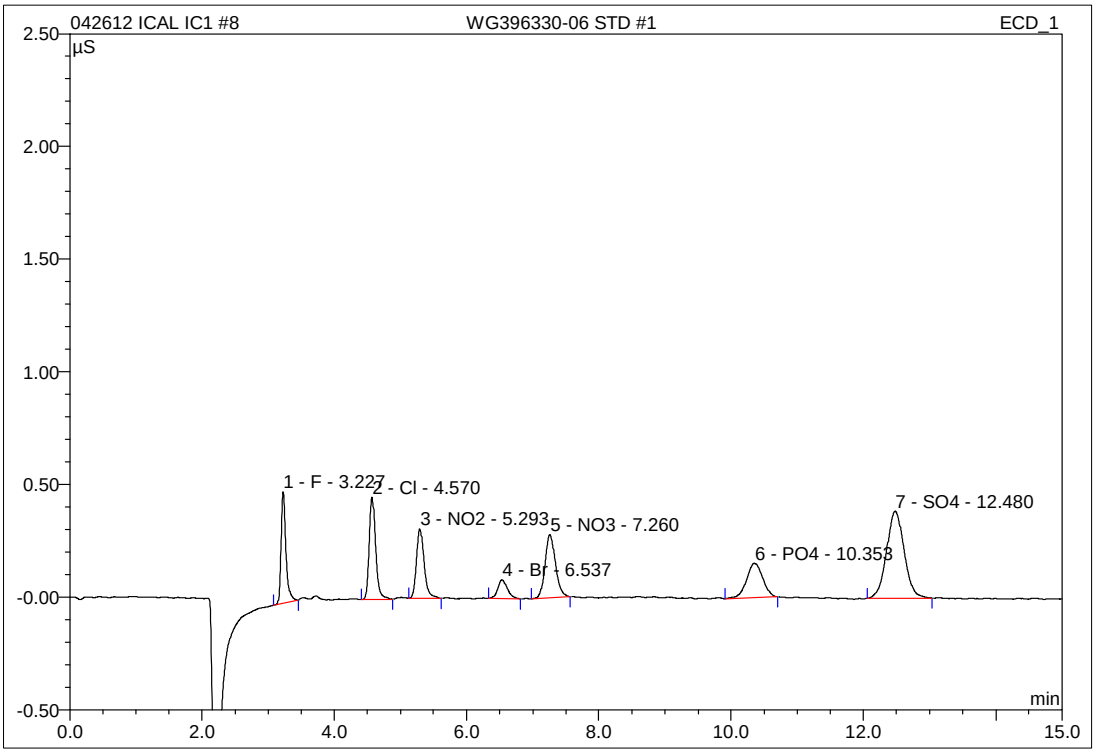
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 WG396330-06 STD #1

1,1 JBK STD48131

Sample Name:	**WG396330-06 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:	**4/26/2012 14:46**	*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	3.23	F	0.493	0.044	11.97	0.202	BMB
2	4.57	Cl	0.454	0.051	13.91	0.204	BMB
3	5.29	NO2	0.308	0.042	11.41	0.122	BMB
4	6.54	Br	0.084	0.014	3.86	0.202	BMB
5	7.26	NO3	0.280	0.052	14.16	0.137	BMB
6	10.35	PO4	0.152	0.043	11.78	0.330	BMB
7	12.48	SO4	0.387	0.120	32.92	1.018	BMB
Total:			2.158	0.364	100.00	2.215	

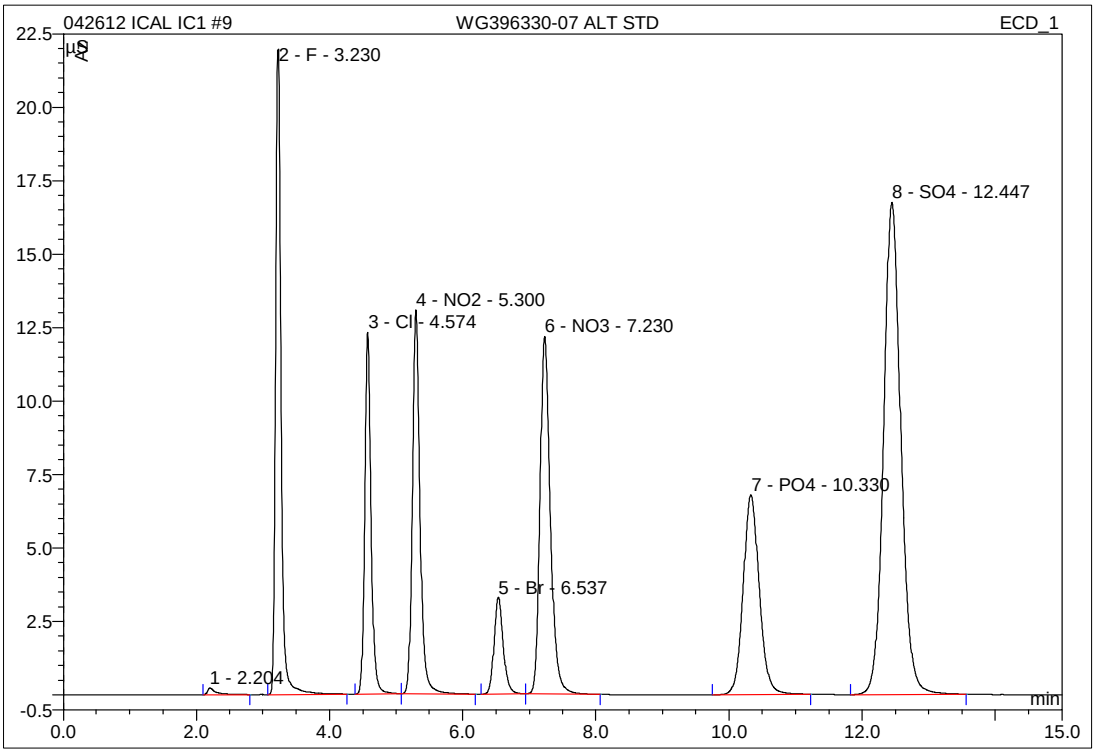
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 WG396330-07 ALT STD

1,1 JBK STD48132

Sample Name:	**WG396330-07 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:	**4/26/2012 15:03**	*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	2.20	n.a.	0.233	0.036	0.24	n.a.	BMB
2	3.23	F	21.970	2.010	13.56	8.287	BMB
3	4.57	Cl	12.319	1.358	9.16	8.260	BMB
4	5.30	NO2	13.060	1.739	11.73	4.960	BMB
5	6.54	Br	3.303	0.530	3.57	8.144	BMB
6	7.23	NO3	12.180	2.196	14.81	5.382	BMB
7	10.33	PO4	6.790	1.905	12.85	12.934	BMB
8	12.45	SO4	16.745	5.052	34.08	39.968	BMB
Total:			86.599	14.826	100.00	87.935	

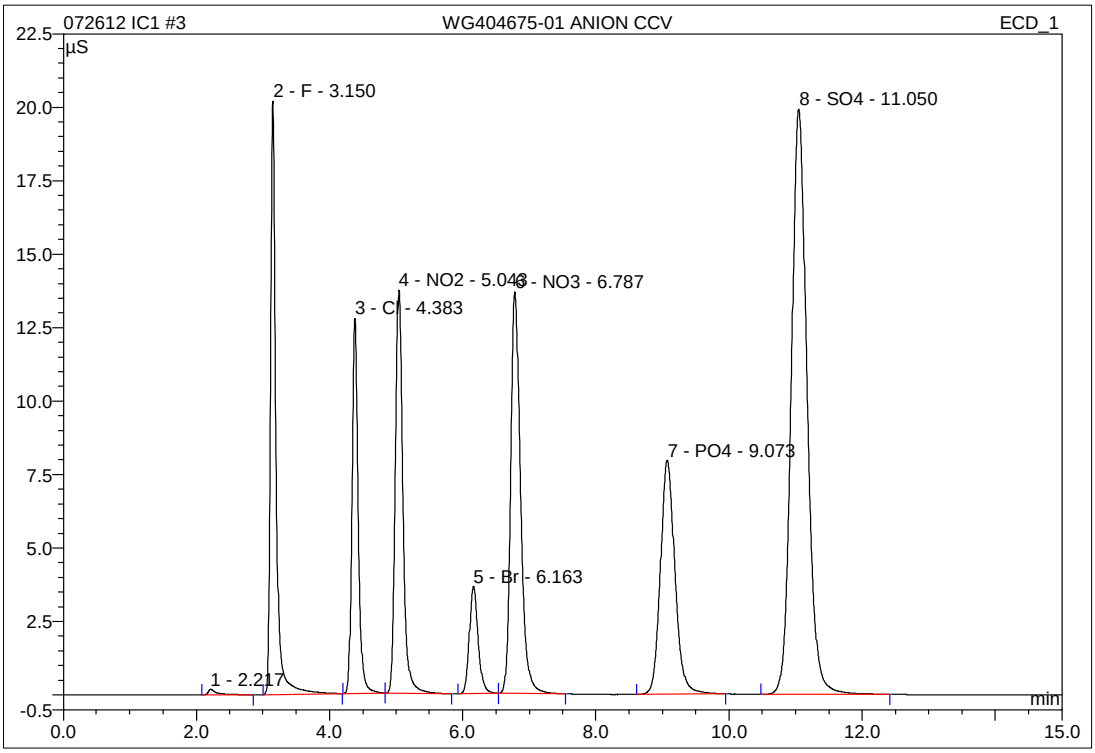
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG404675-01 ANION CCV

1,1 JBK STD48131 _____ psi @ _____

Sample Name:	**WG404675-01 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:	**7/26/2012 14:12**	*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	2.22	n.a.	0.191	0.031	0.20	n.a.	BMB
2	3.15	F	20.195	1.977	12.68	8.153	BMB
3	4.38	Cl	12.768	1.399	8.97	8.511	BMB
4	5.04	NO2	13.707	1.800	11.55	5.133	BMB
5	6.16	Br	3.659	0.562	3.60	8.639	BMB
6	6.79	NO3	13.668	2.345	15.04	5.747	BMB
7	9.07	PO4	7.972	2.022	12.97	13.725	BMB
8	11.05	SO4	19.918	5.452	34.98	43.126	BMB
Total:			92.079	15.587	100.00	93.033	

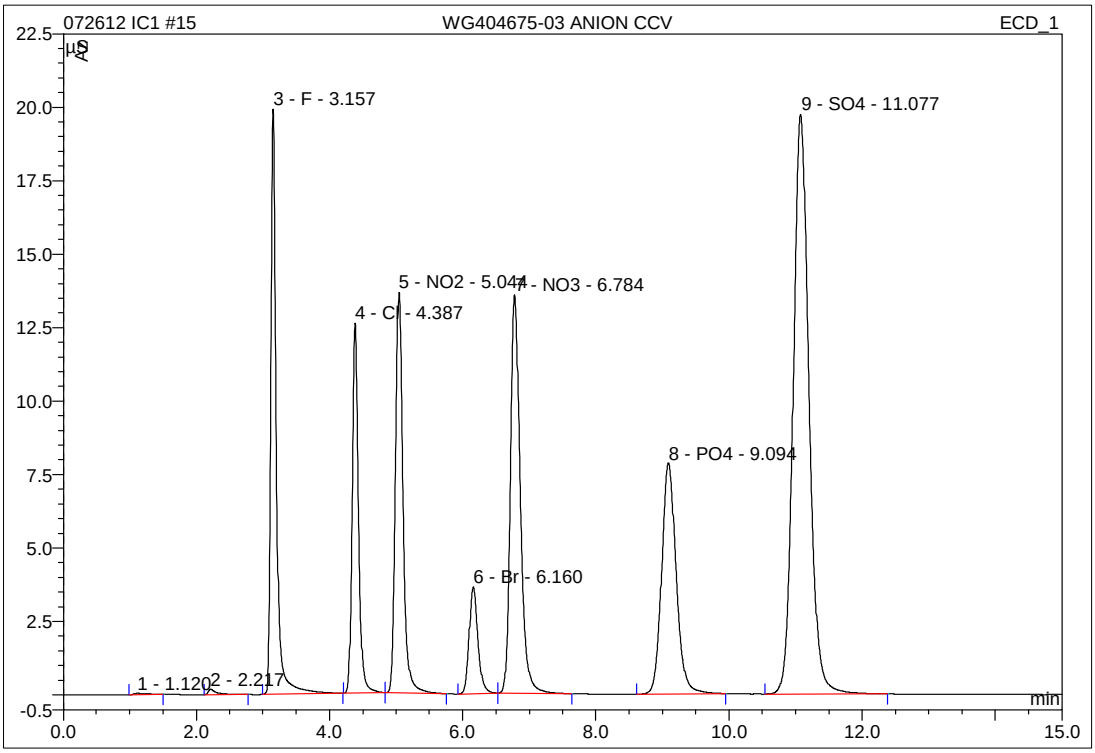
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG404675-03 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG404675-03 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:	**7/26/2012 17:40**	*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	1.12	n.a.	0.043	0.010	0.07	n.a.	BMB
2	2.22	n.a.	0.183	0.027	0.18	n.a.	BMB
3	3.16	F	19.911	1.954	12.64	8.058	BMB
4	4.39	Cl	12.598	1.388	8.98	8.445	BMB
5	5.04	NO2	13.620	1.785	11.55	5.092	BMB
6	6.16	Br	3.632	0.557	3.60	8.569	BMb
7	6.78	NO3	13.564	2.335	15.10	5.723	bMB
8	9.09	PO4	7.865	1.999	12.93	13.567	BMB
9	11.08	SO4	19.726	5.405	34.96	42.749	BMB
Total:			91.142	15.460	100.00	92.203	

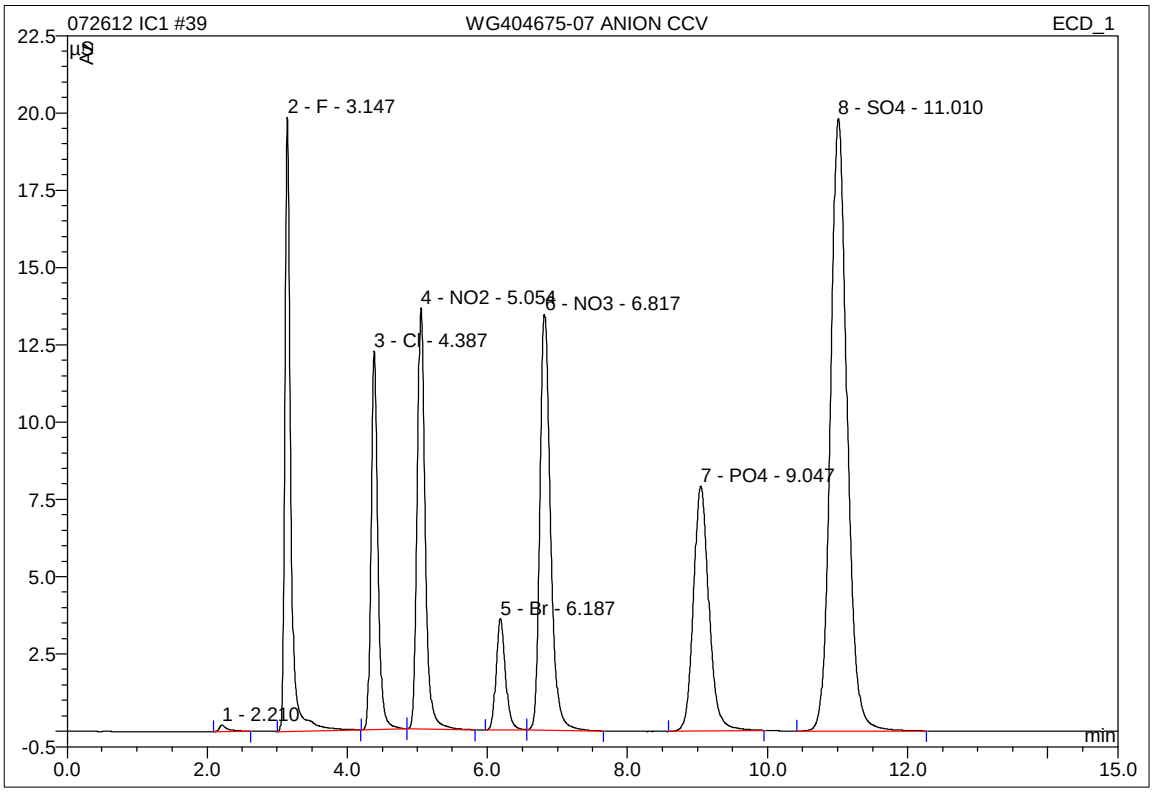
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

39 WG404675-07 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG404675-07 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:	**7/27/2012 0:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

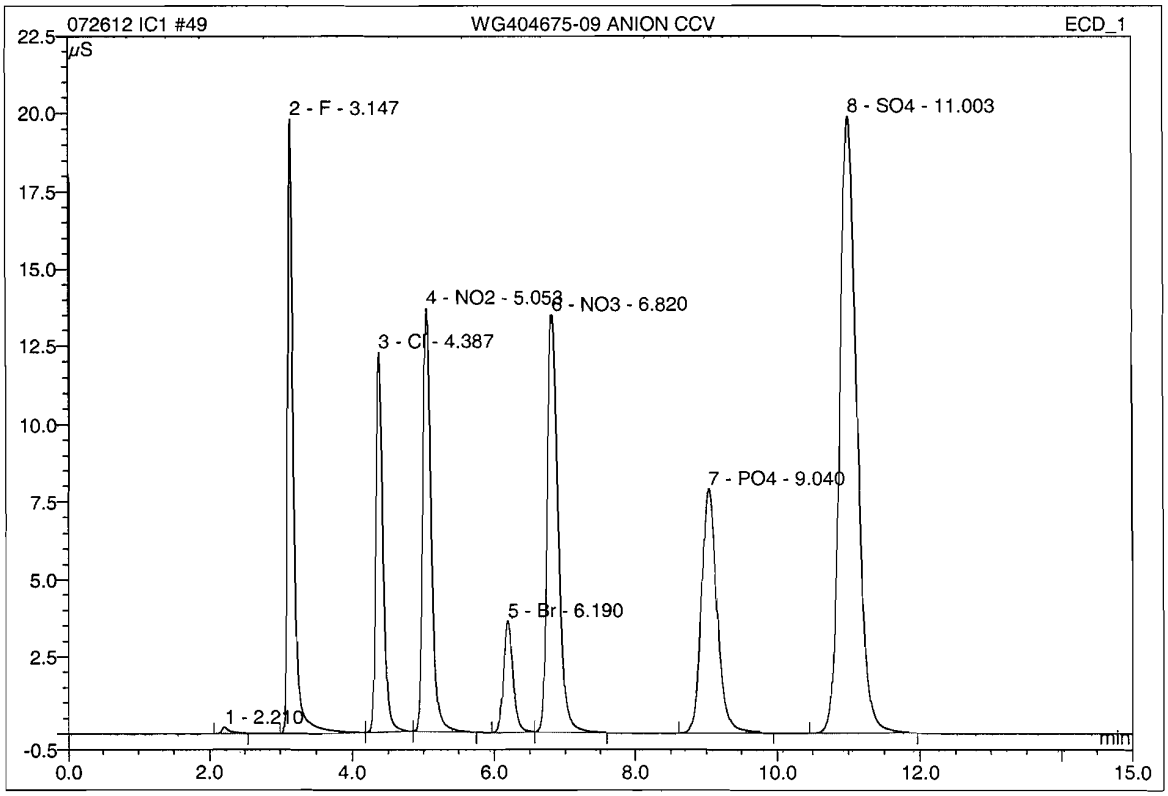


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.21	n.a.	0.209	0.029	0.18	n.a.	BMB
2	3.15	F	19.856	1.974	12.64	8.139	BMB
3	4.39	Cl	12.245	1.402	8.98	8.529	BMB
4	5.05	NO2	13.623	1.803	11.55	5.144	BMB
5	6.19	Br	3.609	0.560	3.59	8.607	BMB
6	6.82	NO3	13.448	2.350	15.05	5.759	BMB
7	9.05	PO4	7.929	2.039	13.06	13.842	BMB
8	11.01	SO4	19.817	5.459	34.96	43.177	BMB
Total:			90.736	15.615	100.00	93.198	

49 WG404675-09 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG404675-09 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 3:32**	*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	2.21	n.a.	0.210	0.028	0.18	n.a.	BMB
2	3.15	F	19.801	1.966	12.60	8.108	BMB
3	4.39	Cl	12.216	1.404	9.00	8.543	BMb
4	5.05	NO2	13.624	1.804	11.57	5.146	bMB
5	6.19	Br	3.612	0.564	3.62	8.674	BMB
6	6.82	NO3	13.428	2.353	15.08	5.768	BMB
7	9.04	PO4	7.873	2.017	12.93	13.694	BMB
8	11.00	SO4	19.860	5.462	35.01	43.203	BMB
Total:			90.625	15.600	100.00	93.136	

IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

49 WG404675-09 ANION CCV

1,1 JBK STD48131

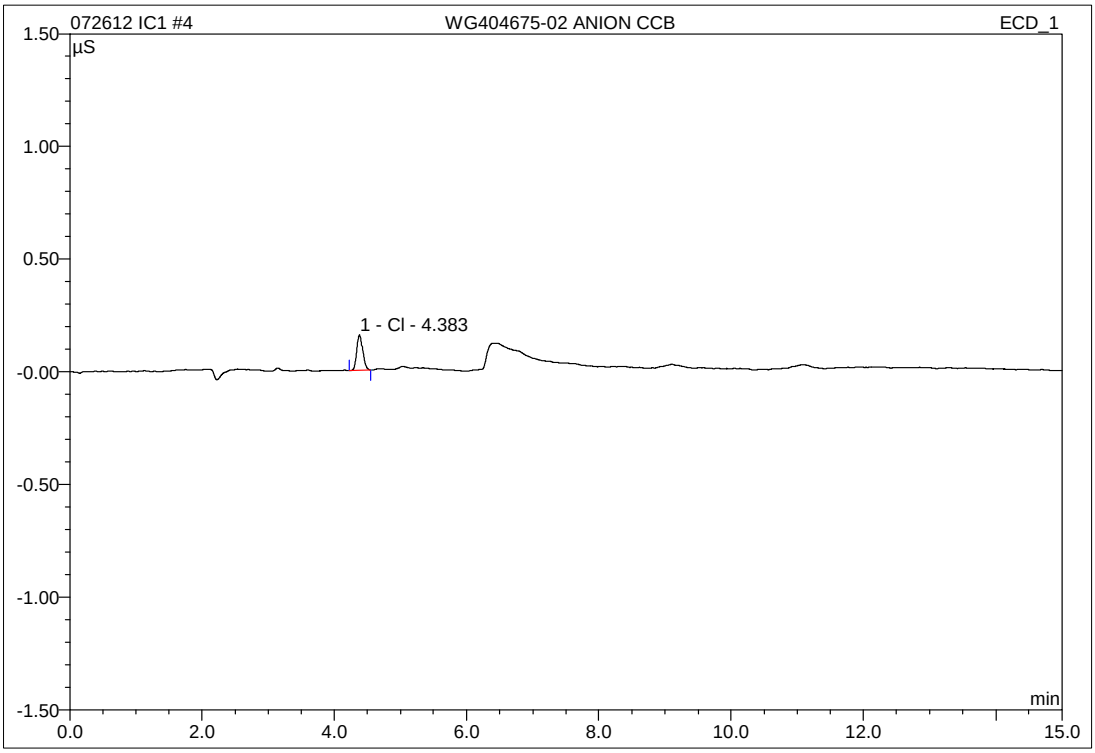
Sample Name:	**WG404675-09 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 3:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

WG404675-09 ANIOI	Actual mg/L	Recoved mg/L	%Difference	
F	8.00	8.1079	1.35	PASS
Cl	8.00	8.5427	6.78	PASS
NO2-N	4.8714	5.1465	5.65	PASS
Br	8.00	8.6739	8.42	PASS
NO3-N	5.4216	5.7679	6.39	PASS
PO4-P	13.0456	13.6940	4.97	PASS
SO4	40	43.2030	8.01	PASS

4 WG404675-02 ANION CCB

1,1 JBK

Sample Name:	**WG404675-02 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:	**7/26/2012 14:29**	*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	4.38	Cl	0.157	0.017	100.00	-0.007	BMB
Total:			0.157	0.017	100.00	-0.007	

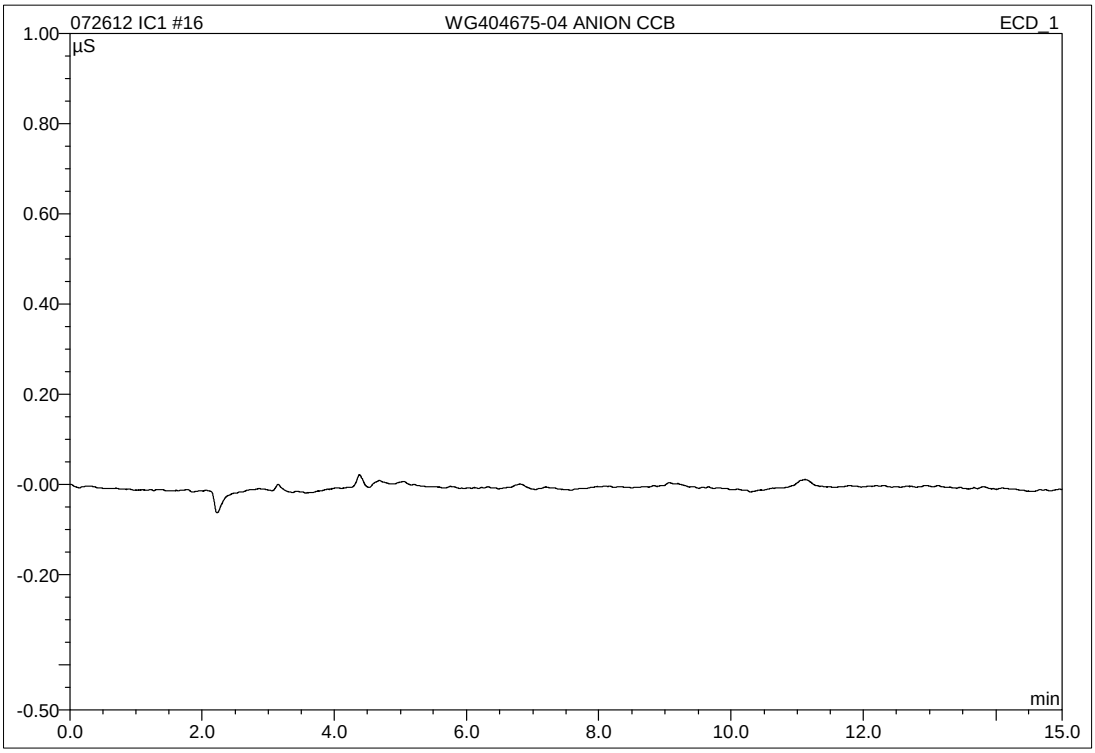
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

16 WG404675-04 ANION CCB

1,1 JBK

Sample Name:	**WG404675-04 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:	**7/26/2012 17:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

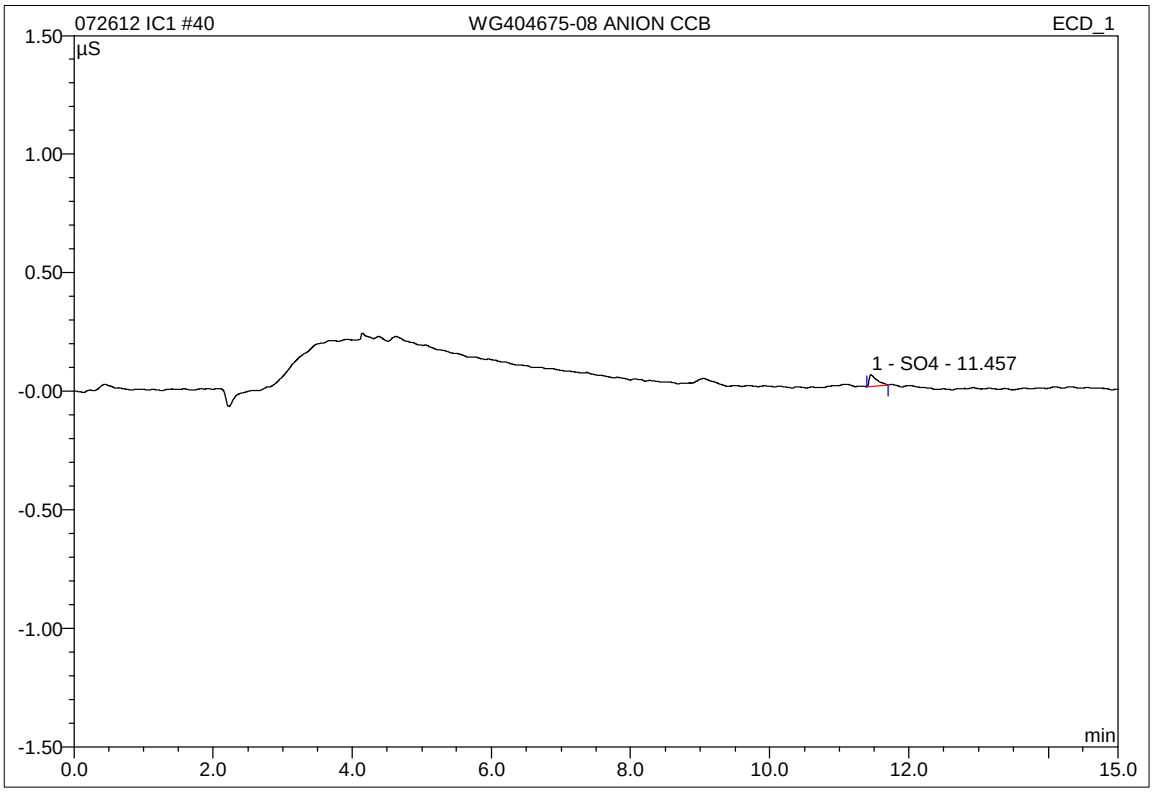


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

40 WG404675-08 ANION CCB

1,1 JBK

Sample Name:	**WG404675-08 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:	**7/27/2012 0:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

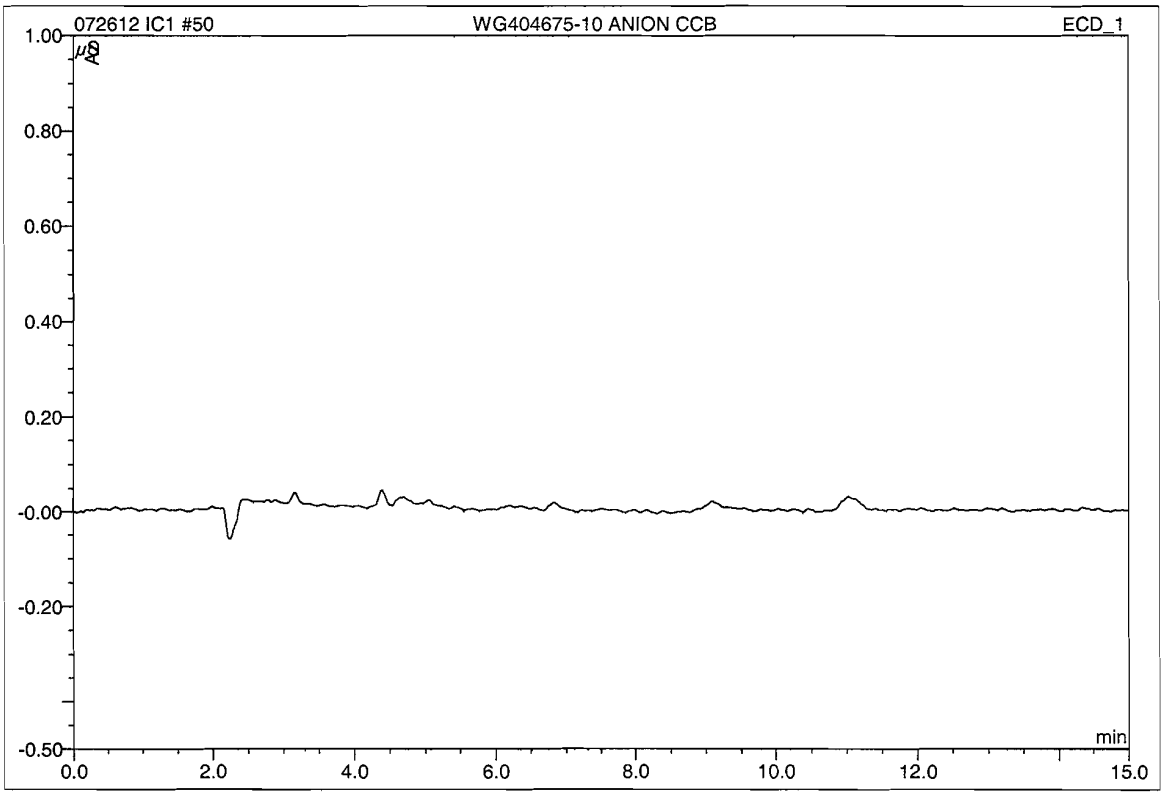


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	11.46	SO4	0.049	0.006	100.00	0.120	BMB
Total:			0.049	0.006	100.00	0.120	

50 WG404675-10 ANION CCB

1,1 JBK

Sample Name:	**WG404675-10 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 3:50**	*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	

RETENTION TIME WINDOWS

Lab Name: Microbac Laboratories, Inc.

Instrument ID: IC1

IC Column: AG14A-SC/AS14A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	9/28/2011	9/28/2011	9/29/2011
File #	WG377440-01	WG377440-07	WG377498-01
Time	13:32	23:58	13:53

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.457	3.467	3.447	0.030
Cl	4.910	4.910	4.880	0.052
NO2-N	5.734	5.730	5.690	0.073
Br	7.110	7.097	7.047	0.100
NO3-N	7.870	7.857	7.800	0.112
PO4-P	10.834	10.843	10.754	0.147
SO4	13.124	13.137	13.007	0.215

Instrument ID: IC2

IC Column: AG14A-SC/AS14A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	8/3/2010	8/3/2010	8/4/2010
File #	WG338645-02	WG338692-07	WG338870-02
Time	12:15	22:42	12:00

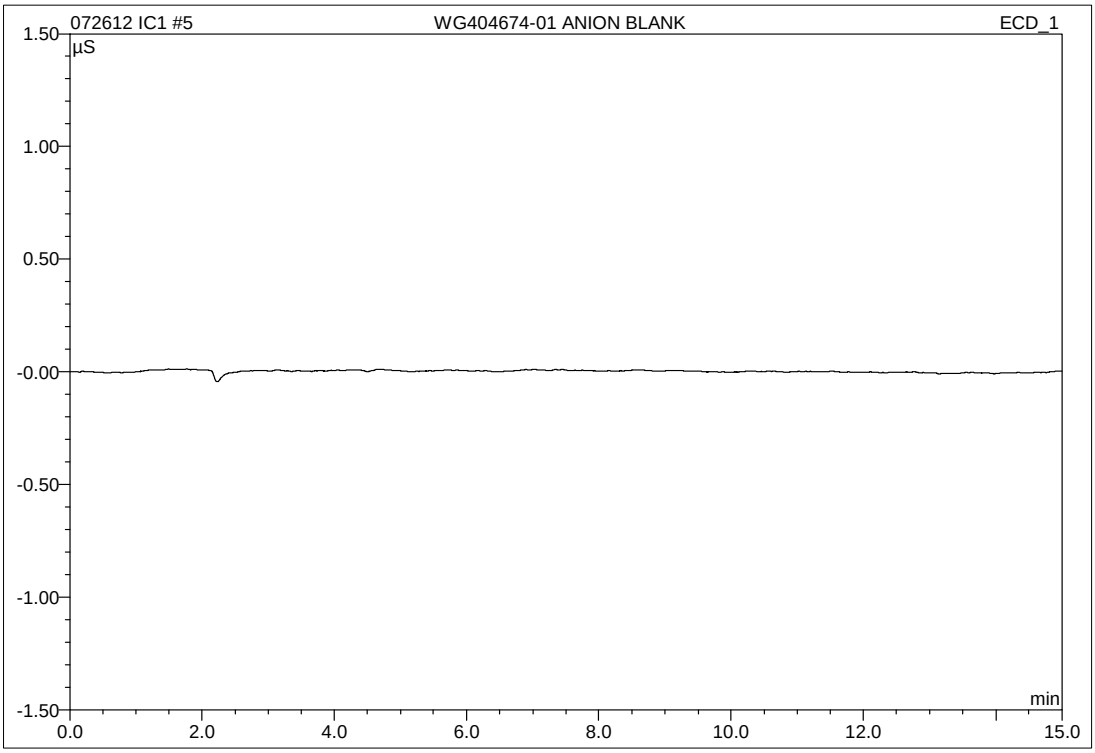
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.387	3.377	3.367	0.030
Cl	4.867	4.864	4.837	0.050
NO2-N	5.724	5.717	5.684	0.064
Br	7.174	7.160	7.117	0.089
NO3-N	8.020	8.007	7.954	0.105
PO4-P	10.640	10.607	10.580	0.090
SO4	12.580	12.574	12.507	0.122

2.2.1.5 Raw QC Data

5 WG404674-01 ANION BLANK

1,1 JBK

Sample Name:	**WG404674-01 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:	**7/26/2012 14:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

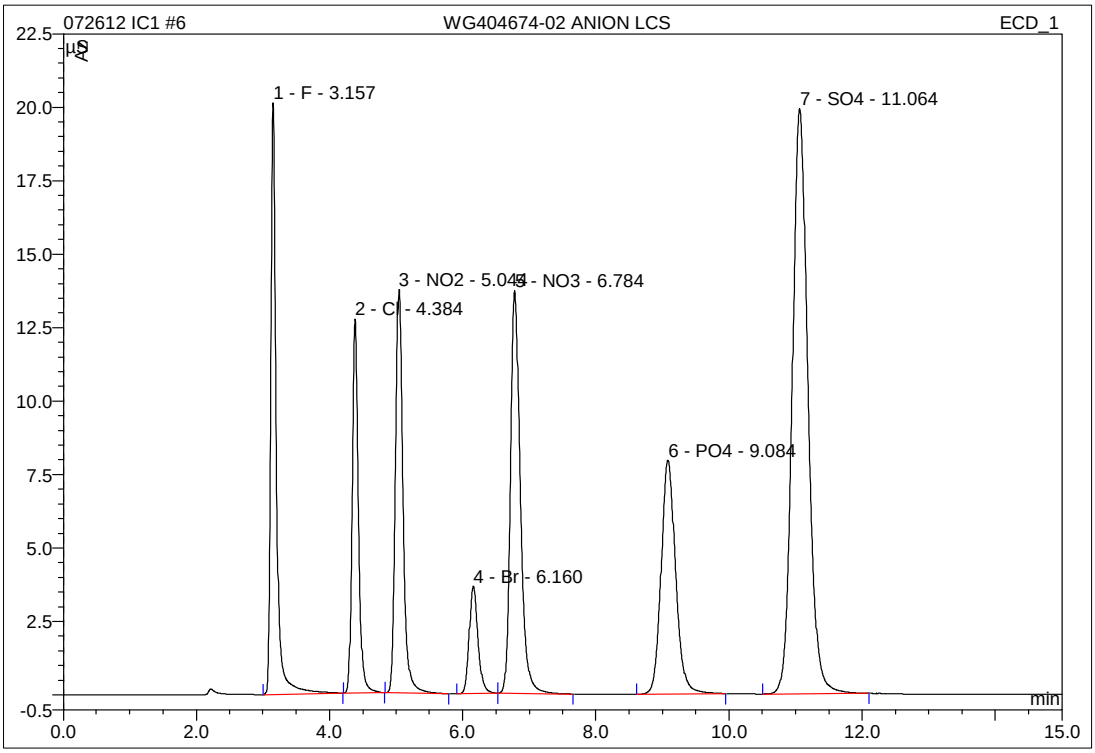


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

6 WG404674-02 ANION LCS

1,1 JBK STD48131

Sample Name:	**WG404674-02 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:	**7/26/2012 15:04**	*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	3.16	F	20.136	1.978	12.73	8.157	BMB
2	4.38	Cl	12.720	1.396	8.99	8.493	BMB
3	5.04	NO2	13.734	1.800	11.58	5.133	BMB
4	6.16	Br	3.664	0.562	3.62	8.636	BMB
5	6.78	NO3	13.699	2.354	15.15	5.770	BMB
6	9.08	PO4	7.961	2.016	12.98	13.684	BMB
7	11.06	SO4	19.918	5.431	34.96	42.958	BMB
Total:			91.833	15.537	100.00	92.831	

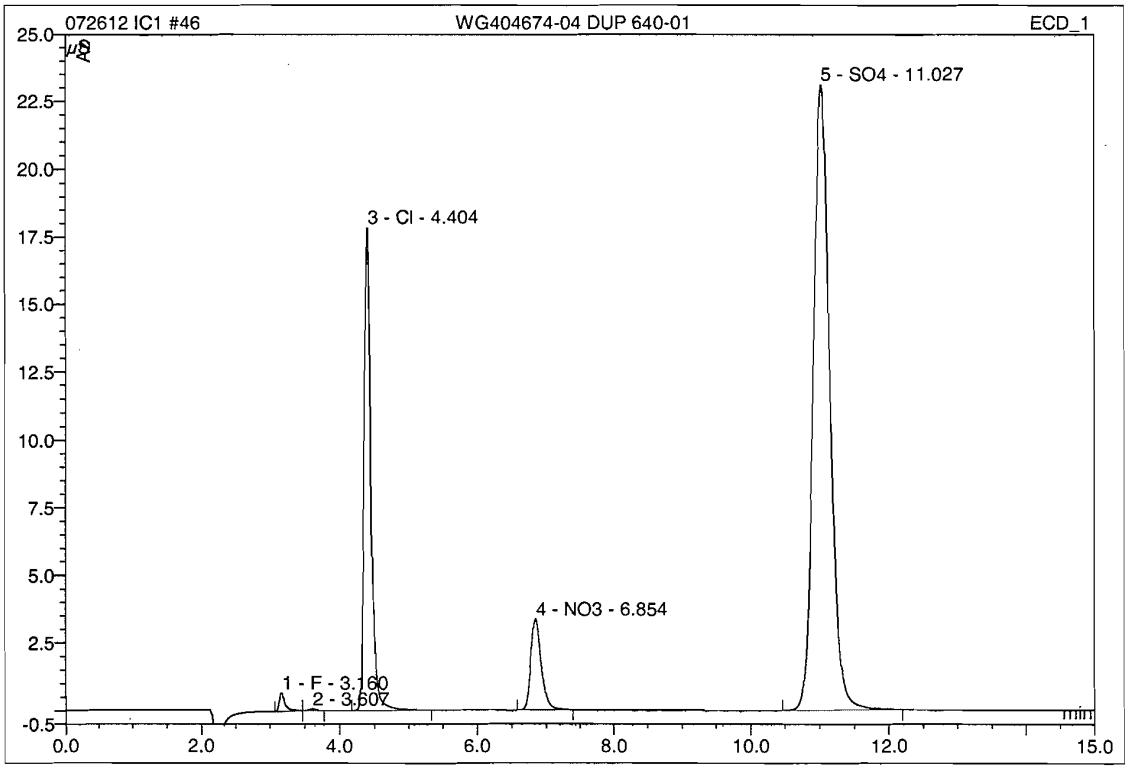
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

46 WG404674-04 DUP 640-01

1,1 JBK

Sample Name:	**WG404674-04 DUP 640-01**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 2:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

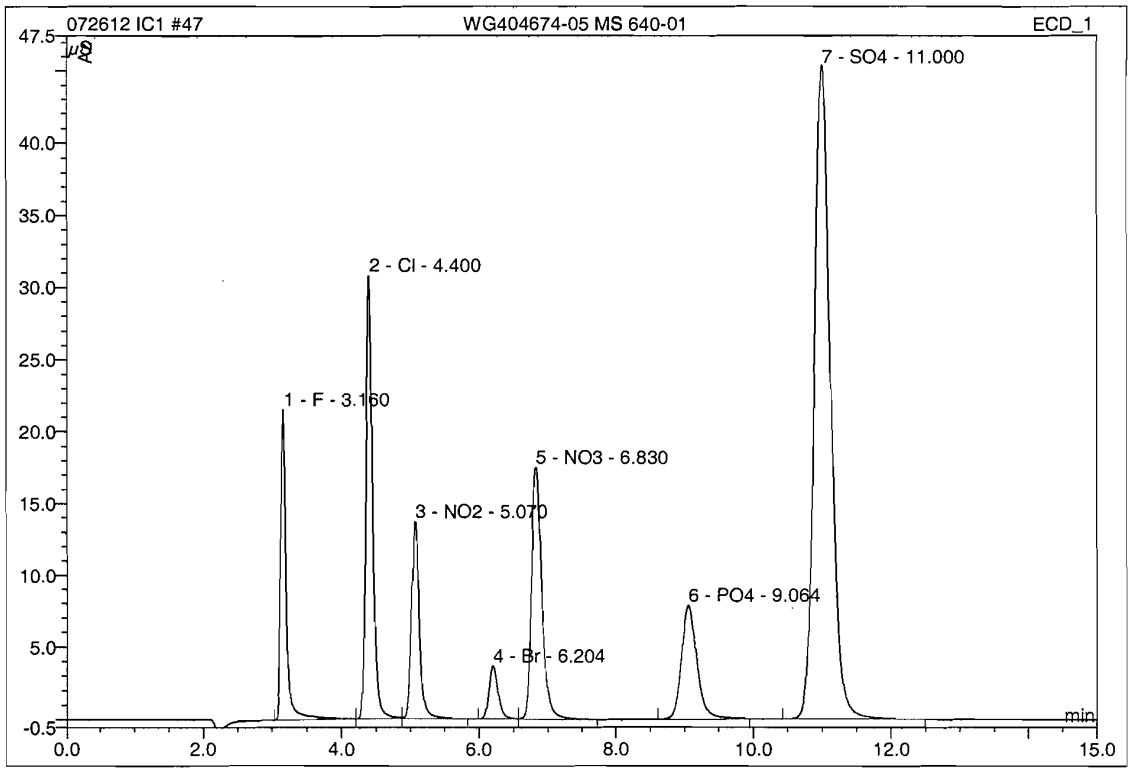


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.16	F	0.697	0.069	0.77	0.307	BMB
2	3.61	n.a.	0.061	0.006	0.07	n.a.	bMB
3	4.40	Cl	17.848	2.056	22.76	12.561	BMB
4	6.85	NO3	3.369	0.603	6.68	1.487	BMB
5	11.03	SO4	23.092	6.298	69.73	49.805	BMB
Total:			45.066	9.033	100.00	64.161	

47 WG404674-05 MS 640-01

1,1 JBK

Sample Name:	**WG404674-05 MS 640-01**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 2:57**	*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	3.16	F	21.513	2.046	8.12	8.434	BMB
2	4.40	Cl	30.682	3.507	13.93	21.499	BMb
3	5.07	NO2	13.605	1.760	6.99	5.019	bMB
4	6.20	Br	3.638	0.560	2.22	8.606	BMB
5	6.83	NO3	17.420	3.006	11.93	7.364	BMB
6	9.06	PO4	7.815	2.032	8.07	13.796	BMB
7	11.00	SO4	45.382	12.273	48.74	96.983	BMB
Total:			140.055	25.182	100.00	161.699	

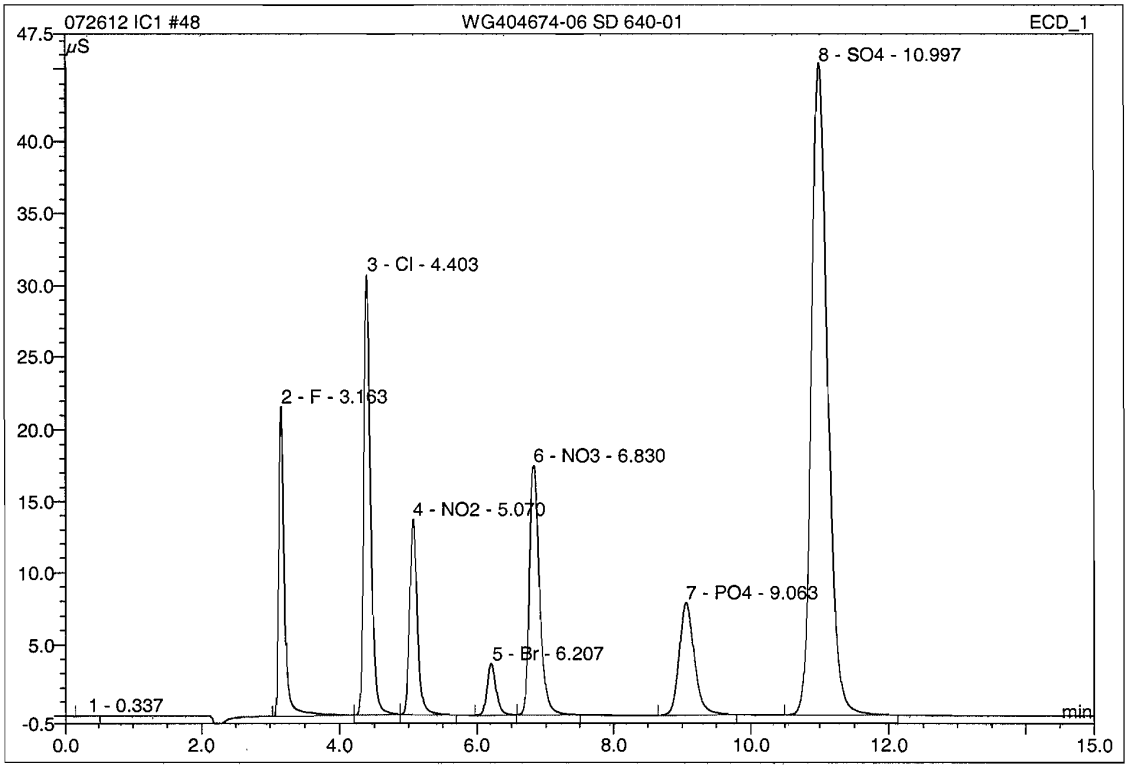
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

48 WG404674-06 SD 640-01

1,1 JBK

Sample Name:	**WG404674-06 SD 640-01**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/27/2012 3:15**	*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	0.34	n.a.	0.045	0.006	0.02	n.a.	BMB
2	3.16	F	21.594	2.048	8.15	8.444	BMB
3	4.40	Cl	30.657	3.503	13.95	21.472	BMb
4	5.07	NO2	13.618	1.753	6.98	4.999	bMB
5	6.21	Br	3.646	0.560	2.23	8.617	BMB
6	6.83	NO3	17.416	2.991	11.91	7.328	BMB
7	9.06	PO4	7.857	2.027	8.07	13.758	BMB
8	11.00	SO4	45.362	12.229	48.69	96.638	BMB
Total:			140.196	25.116	100.00	161.255	

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: L12070640
Department: Conventionals
Analyst: Justin Hesson

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.

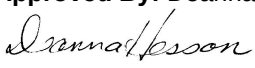
Duplicates: All acceptance criteria were met.

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: 50963
Approved By: Deanna Hesson



Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL21-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	OS12072508203401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.89		0.000	0.000

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL22-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	OS12072508204101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	8.42		0.000	0.000

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL25-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG404084	**Analyst:**	JDH	**Run Date:**	07/20/2012 17:00
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	OS12072508204401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.88		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: 20-JUL-2012
Analyst: JDH
Analyst: NA
Method: PH
Instrument: ORION 4 STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404084

Calibration/Linearity	7-20-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	
LCS/LCS Dup	
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JDH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
23-JUL-2012

Secondary Reviewer:
26-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-26-2012 15:45:40

2.2.2.3 Raw Data

W5404084

pH

Sample	Calibration Buffers	Time of Calibration	A Water Misc. Liquid	B 50% Slurry Of Solid	C 50% Water Org. Liq. Mix	Time Analyzed
LCS 6 51811	7.4,10	1645	6.00			1645
640-1			7.89			1700
2			8.42			1700
3			7.88			1700
639-01			7.88			1700
-02			7.14			1701
-03			~~8~~7.53			1701
630-01			7.54			1703
CASH 648			7.28			1703
581-01			10.09			1705
DUP 639-02			7.14			1703
LCS 9 51846			9.00			1705

B,C) SW846 9045D

A) SM 4500-H(+)-B

A) EPA 150.1

A) SW846 9040C

SOP K1501 Rev 13

Circle Instrument

Orion 4-Star

Orion 710A #1

Orion 710A #2

Bante 922

Analyst: [signature] Date: 7/20/12 1645

DCN#91661

Microbac

D3987 ✓ Extraction Daily Log ___

Date : 07-19-12

#	Microbac Sample #	Client	Due Date	9056	pH-L	NH3	PHOS	TKN	NO2NO3	ME			Comments
1	07-581-01	SHAW	7/24	✓	✓	✓	✓	✓	✓				
2	FBLK	—	—	✓		✓	✓	✓	✓				
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

Agitated	Work Group	Run ID
9056	403926	
pH-L	403923	
NH3	403924	
PHOS	403921	
TKN	403920	
NO2NO3	403919	
ME		

Filtered	Work Group	Run ID
9056		
pH-L		
NH3		
PHOS		
TKN		
NO2NO3		
ME		

√ = Perform analysis
☆ = Perform analysis and spike sample

Comments: _____

Internal Use Only

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

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: 50961
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	75.9		20.0	10.0

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:03
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726003.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	75.9		20.0	10.0

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	80.7		20.0	10.0

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/26/2012 09:54
Workgroup #:	WG404521	**Analyst:**	DIH	**Run Date:**	07/26/2012 10:04
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726003.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	80.7		20.0	10.0

2.2.3.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 26-JUL-2012
Analyst: DIH
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404525 WG404560 WG404521

Calibration/Linearity	7/26/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
28-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:20:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG404521

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/26/2012	7	14		07/26/12	7	14	
MPL25-0712-1	03	07/19/12					07/26/2012	6.8	14		07/26/12	6.8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2522579
Report generated 07/27/2012 16:30

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: SC120726003.040
Prep Date: 07/26/12 10:13
Analyzed Date: 07/26/12 10:13
Analyst: DIH

Work Group: WG404521
Blank Sample ID: WG404521-01
Instrument ID: SMARTCHEM
Method: 310.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404521-02	SC120726003.011	07/26/12 09:55	01
LCS2	WG404521-03	SC120726003.012	07/26/12 09:56	01
MPL21-0712-1	L12070640-01	SC120726003.024	07/26/12 10:03	01
MPL21-0712-1	L12070640-01	SC120726003.024	07/26/12 10:03	01
MPL21-0712-1	L12070640-01	SC120726003.024	07/26/12 10:03	01
MPL25-0712-1	L12070640-03	SC120726003.025	07/26/12 10:04	01
MPL25-0712-1	L12070640-03	SC120726003.025	07/26/12 10:04	01
MPL25-0712-1	L12070640-03	SC120726003.025	07/26/12 10:04	01
DUP	WG404521-05	SC120726003.037	07/26/12 10:11	DL01
DUP	WG404521-05	SC120726004.026	07/26/12 11:06	01

Report Name: BLANK_SUMMARY
PDF File ID: 2522580
Report generated 07/27/2012 16:30

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/26/12 10:13 Sample ID: WG404521-01
Instrument ID: SMARTCHEM Run Date: 07/26/12 10:13 Prep Method: 310.2
File ID: SC120726003.040 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG404521 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-26-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Total (as CaCO3)	10.0	20.0	10.0	1	U

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

Report Name: BLANK
PDF ID: 2522581
27-JUL-2012 16:30

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: DIH Prep Method: 310.2
Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
Workgroup (AAB#): WG404521 Units: mg/L
QC Key: DOD4 Lot #: STD52533

Sample ID: WG404521-02 LCS File ID: SC120726003.011 Run Date: 07/26/2012 09:55
Sample ID: WG404521-03 LCS2 File ID: SC120726003.012 Run Date: 07/26/2012 09:56

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	200	204	102	200	202	101	1.18	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2522582
Report generated: 07/27/2012 16:30

2.2.3.3 Raw Data

WORKGROUP: WG404521 A

404525 B

404560 C

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** A
Plan # 20120726003
2) **Workgroup** B
Plan # 20120726002
3) **Workgroup** C
Plan # _____

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	07-735-01	1/20 ~~1/10~~ dx 7/26		TCLP Leach
1-6	02	1/10		↓
1-7	03	1/10		↓
1-8	04	1/20 ~~1/10~~ dx		↓
1-9	07-757-02			+BC
1-10	04			↓
1-11	07-639-01			+BC
1-12	02			↓
1-13	03			↓
1-14	07-640-01	dx 7/26		+BC
1-15	07-640-02 03			↓
1-16	07-716-01 03			↓
1-17	07-643-01	1/2		
1-18	03	1/2		
1-19	05	1/2		
1-20	07	1/2		
1-21	09	1/2		
1-22	11	1/2		
2-1	07-727-03	1/5		color
2-2	03	1/5		↓
2-3	DUP ↓	1/5		

Position	Analyte	1	2	3
2-4 1	ICV 250			
2-5 2	BLK			
2-6 3	LCS 200			
2-7 4	LCSDUP			
2-8 5	07-727-05	1/5		color
2-9 6	06	1/5		↓
2-10 7	07-673-01			TBC
2-11 8	03			↓
2-12 9	07-724-01	dx 7/26 ~~1/5~~	1/10	color
2-13 10	02			
2-14 11	03			
2-15 12	04			
2-16 13	05			
2-17 14	DUP 05			
2-18 15	MS 06			
2-19 16	MSD 07			
2-20 17	08			
2-21 18	07-725-01	1/2		
2-22 19	03	1/2		
2-23 20	05	1/2		
2-24 21	07	1/2		
2-25 22	09	1/2		
2-26 1	11	1/2		
3-1 2	ø			
3-2 3				
4				
5				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

2-4 LCMB wg 404376-01 1/10
-5 404376-02 ~~1/10~~ dx 7/26 (−)
6 RR BLANK
7 RR
8

DCN#91725

WORKGROUP: WG404521

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3 1	ICV 250			
3-4 2	BLK			
3-5 3	LCS 200			
3-6 4	LCSDUP			
3-7 5	07-725-07	1/2		
3-8 6	09	1/2		
3-9 7	11	1/2		
3-10 8	07-753-01			
3-11 9	2			
3-12 10	3			
3-13 11	4			
3-14 12	5			
3-15 13	6			

Position	Analyte	1	2	3
3-16 14	07-753-07	~~1/2~~	—	2-5
3-17 15	08			6
3-18 16	DUP 08			7
3-19 17	MS 09			8
3-20 18	MSD 10			
3-21 19	11	~~1/2~~		
3-22 20	12	~~1/5~~		
3-23 21	13	1/5		
3-24 22	14			
3-25 1	15			
3-26 2	MS 16			
3-27 3	MSD 17			
3-28 4	18			

753 div
07-753 -19
-20

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [x] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	AIK		Reagents
SOP & Revision	K 3102 R14		Rgt 17605
Curve Stock (SC made)	Std 50178		
Curve ID (user made)			
ICV	Std 52532		
CCV	Std 52534		
LCS	Std 52533		
MS	Std 50179 Dilution 0.2/5 (2500) = 100		

Comments: 07-757, 07-639, 07-640, 07-673 pH < 8.3
WG404525 a CCB was > RL, all samples were > 7 times RL

Analyst: [signature] Date: 7/26/12

DCN#91725

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.0	0.4928	0.00		9:48:19 AM
DIL-1	RBL	0.0	0.4926	0.00		9:48:37 AM
DIL-1	RBL	0.0	0.4934	0.00		9:49:31 AM
DIL-1	Std-1	0.0	0.0029	0.00	INV	9:49:49 AM
SR5-1	Std-2	10.0	-0.0126	0.00		9:50:43 AM
SR5-2	Std-3	20.0	-0.0138	0.00		9:51:01 AM
SR5-3	Std-4	50.0	-0.0564	0.00		9:51:55 AM
SR5-4	Std-5	100.0	-0.0932	0.00		9:52:13 AM
SR5-5	Std-6	200.0	-0.2076	0.00		9:53:07 AM
SR5-6	Std-7	250.0	-0.2693	0.00		9:53:25 AM
SR5-7	Std-8	300.0	-0.3228	0.00		9:54:19 AM
1	ICV 250	249.5	-0.2649	0.00		9:54:37 AM
2	WG404521-01 BLK	-32.9	0.0336	0.00	INV,><,LL	9:55:39 AM
3	WG404521-02 LCS	204.4	-0.2134	0.00		9:55:51 AM
4	WG404521-03 LCSDUP	202.0	-0.2107	0.00		9:56:44 AM
5	L12070735-01 (20)	246.4	-0.2613	0.00		9:57:02 AM
6	L12070735-02 (10)	248.9	-0.2642	0.00		9:57:56 AM
7	L12070735-03 (10)	263.3	-0.2810	0.00		9:58:14 AM
8	L12070735-04 (20)	194.2	-0.2019	0.00		9:59:08 AM
9	L12070757-02	63.0	-0.0619	0.00		9:59:26 AM
10	L12070757-04	196.8	-0.2048	0.00		10:00:20 AM
ST-2	CCV (150 mg/L)	153.2	-0.1569	102.16		10:00:38 AM
ST-3	CCB (0 mg/L)	-28.5	0.0294	0.00	INV,><,LL	10:01:32 AM
11	L12070639-01	69.2	-0.0682	0.00		10:01:50 AM
12	L12070639-02	67.6	-0.0666	0.00		10:02:44 AM
13	L12070639-03	73.7	-0.0728	0.00		10:03:02 AM
14	L12070640-01	75.9	-0.0751	0.00		10:03:56 AM
15	L12070640-03	80.7	-0.0801	0.00		10:04:14 AM
16	L12070716-01	80.8	-0.0802	0.00		10:05:08 AM
17	L12070643-01 (2)	179.7	-0.1859	0.00		10:05:26 AM
18	L12070643-03 (2)	116.8	-0.1179	0.00		10:06:20 AM
19	L12070643-05 (2)	115.0	-0.1160	0.00		10:06:38 AM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726003**

Plan Description : ALK-C-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
20	L12070643-07 (2)	111.5	-0.1123	0.00		10:07:32 AM
ST-2	CCV (150 mg/L)	152.4	-0.1560	101.61		10:07:50 AM
ST-3	CCB (0 mg/L)	-27.4	0.0283	0.00	INV,><,LL	10:08:44 AM
21	L12070643-09 (2)	118.8	-0.1200	0.00		10:09:02 AM
22	L12070643-11 (2)	103.0	-0.1033	0.00		10:09:56 AM
23	L12070727-02 (5)	202.7	-0.2115	0.00		10:10:14 AM
24	L12070727-03 (5)	128.8	-0.1306	0.00		10:11:08 AM
25	WG404521-05 (5) DUP	127.6	-0.1293	0.00		10:11:26 AM
26	WG404376-01 (10)	260.0	-0.2771	0.00		10:12:20 AM
27	WG404376-02	-64.2	0.0637	0.00	INV,><,LL	10:12:38 AM
28	ID 28 Blank	-8.9	0.0102	0.00	INV,><,LL	10:13:32 AM
29	ID 29	-7.1	0.0085	0.00	INV,><,LL	10:13:50 AM
ST-2	CCV (150 mg/L)	160.2	-0.1645	106.82		10:14:44 AM
ST-3	CCB (0 mg/L)	4.1	-0.0026	0.00		10:15:02 AM

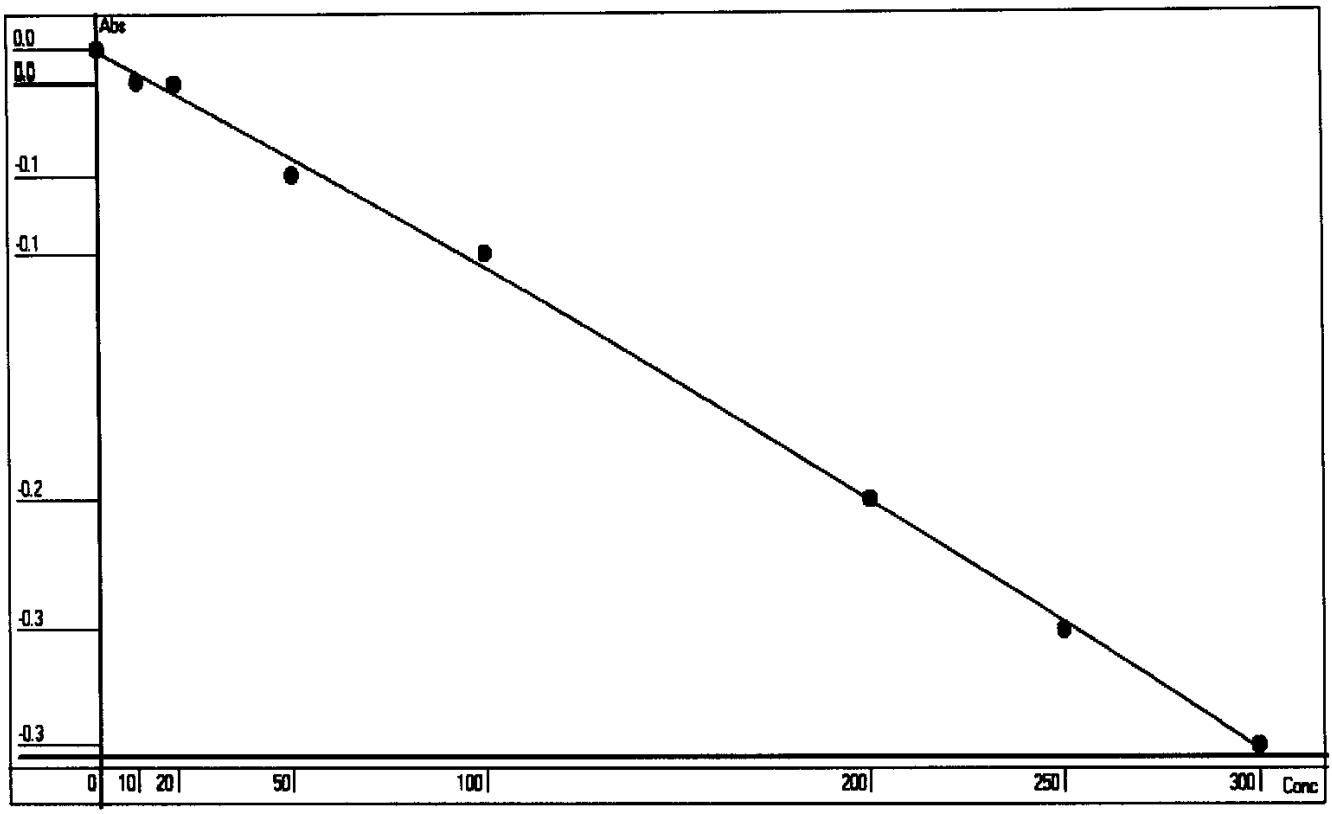
Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726003**

Plan Description : ALK-C-DIH/7/26/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120726003 Description : [ALK-C-DIH/7/26/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0029	0	-1.4582	-145.82
2	-0.0126	10	14.1884	41.88
3	-0.0138	20	15.3941	-23.03
4	-0.0564	50	57.6580	15.32
5	-0.0932	100	93.3297	-6.67
6	-0.2076	200	199.2614	-0.37
7	-0.2693	250	253.2781	1.31
8	-0.3228	300	298.3483	-0.55

Conc= -286.793*Abso^2 -1012.244*Abso +1.4797 R^2=0.9984

RBL
0.4927
0

Report Date 7/26/2012 Run Date 7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.0	0.6097	0.00		9:04:35 AM
DIL-1	RBL	0.0	0.6114	0.00		9:04:53 AM
DIL-1	RBL	0.0	0.6108	0.00		9:05:47 AM
DIL-1	Std-1	0.0	0.0041	0.00	INV	9:06:05 AM
SR5-1	Std-2	10.0	-0.0099	0.00		9:06:59 AM
SR5-2	Std-3	20.0	-0.0142	0.00		9:07:17 AM
SR5-3	Std-4	50.0	-0.0537	0.00		9:08:11 AM
SR5-4	Std-5	100.0	-0.1166	0.00		9:08:29 AM
SR5-5	Std-6	200.0	-0.2589	0.00		9:09:23 AM
SR5-6	Std-7	250.0	-0.3326	0.00		9:09:41 AM
SR5-7	Std-8	300.0	-0.3994	0.00		9:10:35 AM
1	ICV 250	252.4	-0.3318	0.00		9:10:53 AM
2	WG404525-01 BLK	1.9	0.0043	0.00	INV,><	9:11:47 AM
3	WG404525-02 LCS	209.8	-0.2701	0.00		9:12:05 AM
4	WG404525-03 LCSDUP	213.1	-0.2748	0.00		9:12:59 AM
5	L12070727-05 (5)	205.1	-0.2635	0.00		9:13:17 AM
6	L12070727-06 (5)	133.9	-0.1654	0.00		9:14:11 AM
7	L12070673-01	88.6	-0.1054	0.00		9:14:29 AM
8	L12070673-03	84.6	-0.1003	0.00		9:15:23 AM
9	L12070724-01 (10)	79.3	-0.0934	0.00		9:15:41 AM
10	L12070724-02	45.4	-0.0500	0.00		9:16:35 AM
ST-2	CCV (150 mg/L)	158.1	-0.1981	105.39		9:16:53 AM
ST-3	CCB (0 mg/L)	6.0	-0.0008	0.00		9:17:47 AM
11	L12070724-03	88.1	-0.1048	0.00		9:18:05 AM
12	L12070724-04	87.8	-0.1044	0.00		9:18:59 AM
13	L12070724-05	166.3	-0.2094	0.00		9:19:17 AM
14	WG404525-05 DUP	167.9	-0.2115	0.00		9:20:12 AM
15	L12070724-06 MS	242.2	-0.3168	0.00		9:20:29 AM
16	L12070724-07 MSD	246.7	-0.3234	0.00		9:21:24 AM
17	L12070724-08	160.0	-0.2007	0.00		9:21:41 AM
18	L12070725-01 (2)	211.1	-0.2720	0.00		9:22:36 AM
19	L12070725-03 (2)	156.7	-0.1962	0.00		9:22:53 AM
20	L12070725-05 (2)	143.6	-0.1784	0.00		9:23:47 AM
ST-2	CCV (150 mg/L)	171.4	-0.2164	114.28		9:24:05 AM
ST-3	CCB (0 mg/L)	27.5 *	-0.0275	0.00		9:24:59 AM
21	L12070725-07 (2)	144.2 X	-0.1792	0.00		9:25:17 AM

Report Date :07/26/2012 **Run Date :07/26/2012** **Operator : WESTCO** **Plan # :20120726002**

Plan Description : ALK-B-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
22	L12070725-09 (2)	152.9 X	-0.1910	0.00		9:26:12 AM
23	L12070725-11 (2)	150.2 X	-0.1874	0.00		9:26:29 AM
24	ID 24	30.7	-0.0315	0.00		9:27:23 AM
25	ID 25	25.7	-0.0253	0.00		9:27:41 AM
ST-2	CCV (150 mg/L)	176.7	-0.2237	117.80		9:28:35 AM
ST-3	CCB (0 mg/L)	19.4	-0.0174	0.00		9:28:53 AM

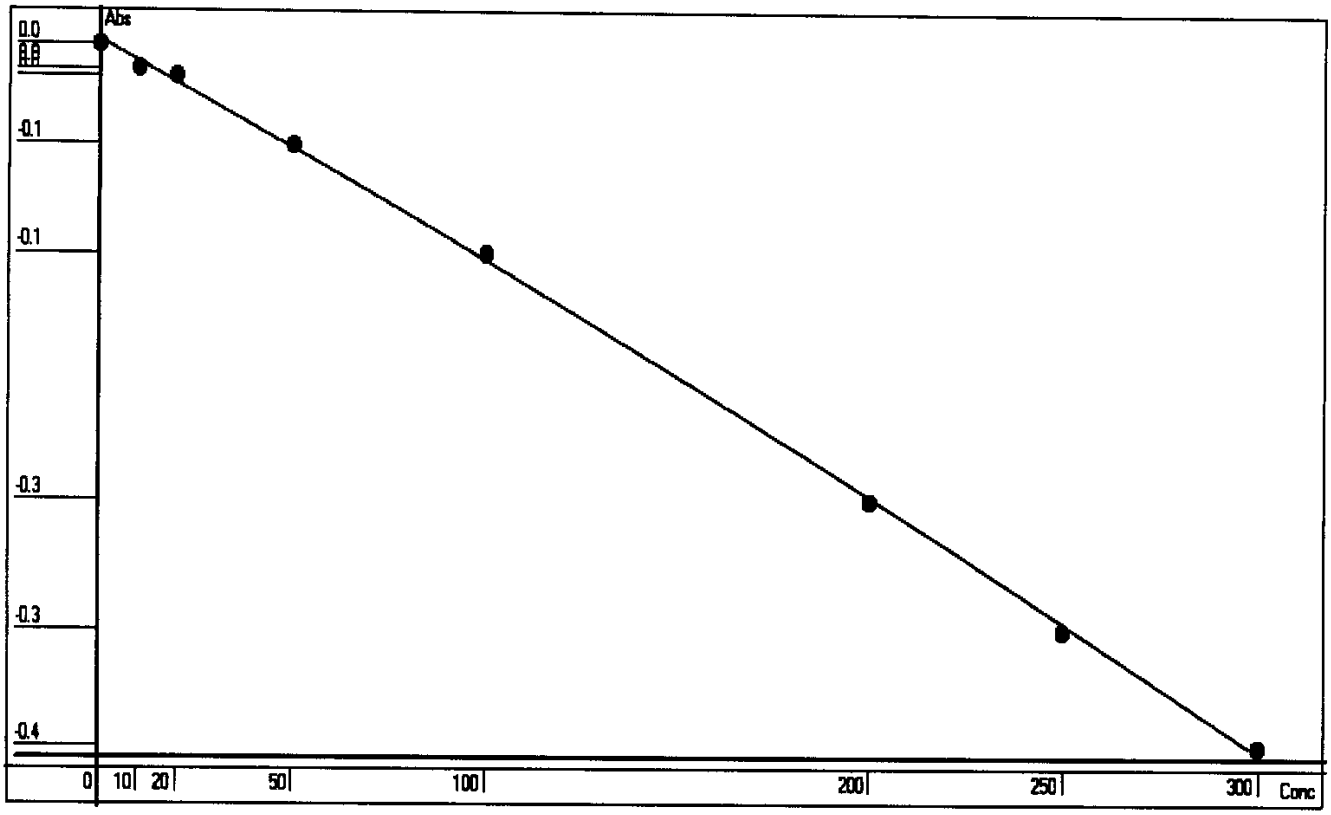
Report Date :07/26/2012 **Run Date :07/26/2012** **Operator : WESTCO** **Plan # :20120726002**

Plan Description : ALK-B-DIH/7/26/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120726002 Description : [ALK-B-DIH/7/26/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0041	0	2.0633	206.33
2	-0.0099	10	13.3847	33.85
3	-0.0142	20	16.8465	-15.77
4	-0.0537	50	48.3064	-3.39
5	-0.1166	100	97.1359	-2.86
6	-0.2589	200	201.8588	0.93
7	-0.3326	250	252.9647	1.19
8	-0.3994	300	297.4393	-0.85

Conc= -196.7569*Abso^2 -809.8127*Abso +5.3868 R^2=0.9994

RBL
0.6111
0

Report Date 7/26/2012 Run Date 7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.0	0.4245	0.00		10:50:08 AM
DIL-1	RBL	0.0	0.4258	0.00		10:50:26 AM
DIL-1	RBL	0.0	0.4281	0.00		10:51:20 AM
DIL-1	Std-1	0.0	0.0042	0.00	INV	10:51:38 AM
SR5-1	Std-2	10.0	-0.0073	0.00		10:52:32 AM
SR5-2	Std-3	20.0	-0.0167	0.00		10:52:50 AM
SR5-3	Std-4	50.0	-0.0377	0.00		10:53:44 AM
SR5-4	Std-5	100.0	-0.0889	0.00		10:54:02 AM
SR5-5	Std-6	200.0	-0.1899	0.00		10:54:56 AM
SR5-6	Std-7	250.0	-0.2356	0.00		10:55:14 AM
SR5-7	Std-8	300.0	-0.2905	0.00		10:56:08 AM
1	ICV 250	254.8	-0.2427	0.00		10:56:26 AM
2	WG404521-01 BLK	2.5	0.0013	0.00	INV	10:57:20 AM
3	WG404521-02 LCS	201.4	-0.1881	0.00		10:57:38 AM
4	WG404521-03 LCSDUP	200.8	-0.1875	0.00		10:58:32 AM
5	L12070725-07 (2)	114.0	-0.1024	0.00		10:58:50 AM
6	L12070725-09 (2)	126.8	-0.1147	0.00		10:59:45 AM
7	L12070725-11 (2)	118.6	-0.1068	0.00		11:00:02 AM
8	L12070753-01	124.0	-0.1120	0.00		11:00:57 AM
9	L12070753-02	23.4	-0.0177	0.00		11:01:14 AM
10	L12070753-03	126.5	-0.1144	0.00		11:02:09 AM
ST-2	CCV (150 mg/L)	152.3	-0.1395	101.56		11:02:27 AM
ST-3	CCB (0 mg/L)	8.1	-0.0037	0.00		11:03:21 AM
11	L12070753-04	87.8	-0.0775	0.00		11:03:39 AM
12	L12070753-05	119.3	-0.1075	0.00		11:04:33 AM
13	L12070753-06	49.9	-0.0421	0.00		11:04:51 AM
14	L12070753-07 (2)	46.5	-0.0389	0.00		11:05:45 AM
15	L12070753-08	29.4	-0.0232	0.00		11:06:03 AM
16	WG404521-05 DUP	25.8	-0.0199	0.00		11:06:57 AM
17	L12070753-09 MS	112.6	-0.1011	0.00		11:07:15 AM
18	L12070753-10 MSD	105.1	-0.0939	0.00		11:08:09 AM
19	L12070753-11 (3)	57.7	-0.0493	0.00		11:08:27 AM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726004**

Plan Description : ALK-D-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WALK - ALKALINITY EPA 310.2

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
20	L12070753-12	337.5	-0.3310	0.00	><,LH	11:09:21 AM
ST-2	CCV (150 mg/L)	153.3	-0.1404	102.17		11:09:39 AM
ST-3	CCB (0 mg/L)	3.0	0.0009	0.00	INV	11:10:33 AM
21	L12070753-13 (5)	107.4	-0.0960	0.00		11:10:51 AM
22	L12070753-14	148.9	-0.1361	0.00		11:11:45 AM
23	L12070753-15	77.1	-0.0674	0.00		11:12:03 AM
24	L12070753-16 MS	166.9	-0.1538	0.00		11:12:57 AM
25	L12070753-17 MSD	168.8	-0.1557	0.00		11:13:15 AM
26	L12070753-18	163.0	-0.1500	0.00		11:14:09 AM
27	L12070753-19	50.3	-0.0423	0.00		11:14:27 AM
28	L12070753-20	142.5	-0.1299	0.00		11:15:21 AM
29	ID 29	-12.5	0.0150	0.00	INV,><,LL	11:15:39 AM
30	ID 30	-16.0	0.0180	0.00	INV,><,LL	11:16:33 AM
ST-2	CCV (150 mg/L)	157.0	-0.1441	104.69		11:16:51 AM
ST-3	CCB (0 mg/L)	1.4	0.0024	0.00	INV	11:17:45 AM
20-[1/2]	L12070753-12	452.8	-0.2135	0.00	LH	11:25:15 AM
ST-2	CCV (150 mg/L)	153.3	-0.1404	102.17		11:25:15 AM
ST-3	CCB (0 mg/L)	-1.4	0.0049	0.00	INV,><,LL	11:26:09 AM

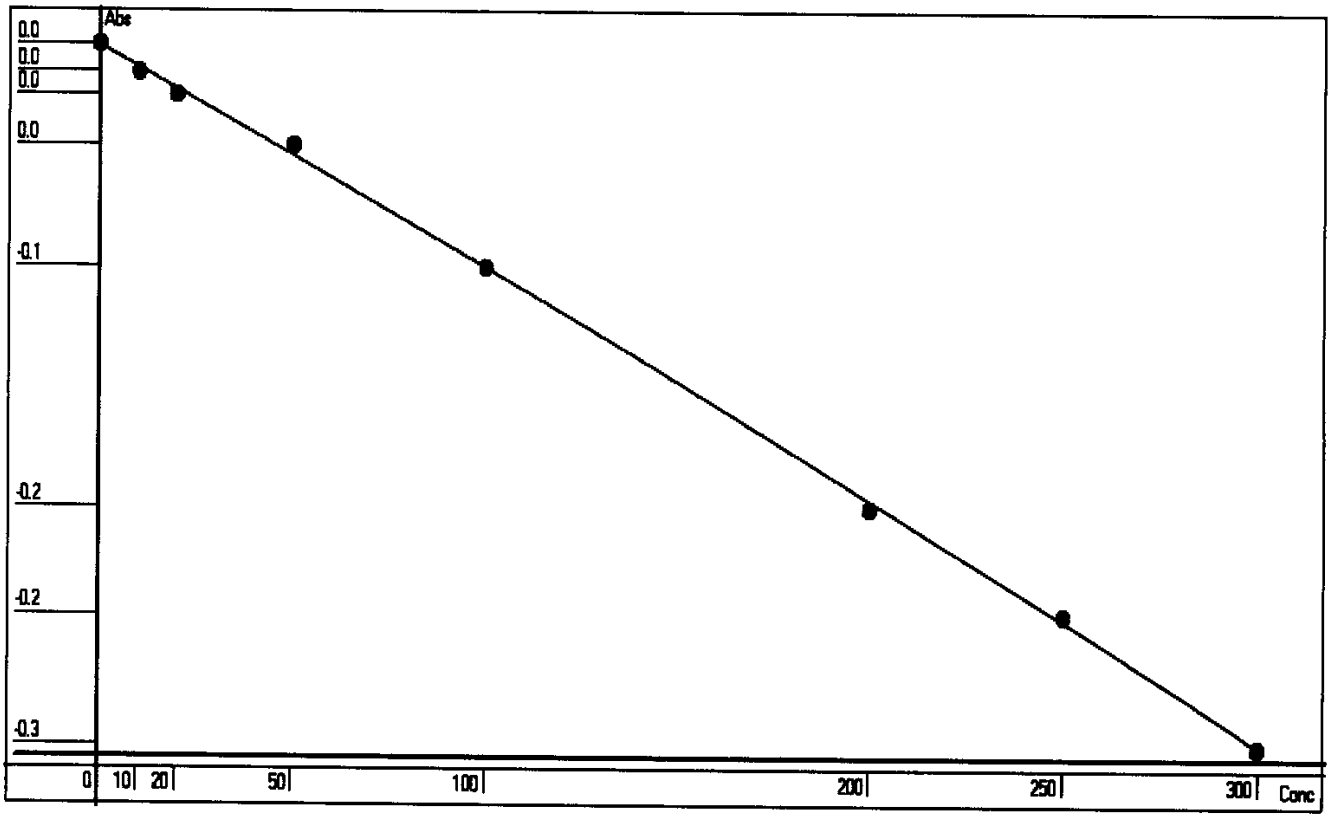
Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726004**

Plan Description : ALK-D-DIH/7/26/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120726004 Description : [ALK-D-DIH/7/26/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0042	0	-0.6150	-61.50
2	-0.0073	10	12.0742	20.74
3	-0.0167	20	22.3887	11.94
4	-0.0377	50	45.2452	-9.51
5	-0.0889	100	99.8906	-0.11
6	-0.1899	200	203.1925	1.60
7	-0.2356	250	247.9738	-0.81
8	-0.2905	300	300.1553	0.05

Conc= -292.3926*Abso^2 -1104.31*Abso +4.0283 R^2=0.9995

RBL
0.4252
0

Report Date 7/26/2012 Run Date 7/26/2012

2.2.4 Alkalinity by Titration Data

2.2.4.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis SM2320B (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: 50965
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	57.5		10.0	5.00

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	57.5		10.0	5.00

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	BURET
Client ID:	MPL22-0712-1	**Prep Method:**	SM2320B	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM2320B	**Cal Date:**	
Workgroup #:	WG404637	**Analyst:**	DLP	**Run Date:**	07/26/2012 15:45
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	ET.1207261545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)	13-01-4		U	10.0	5.00

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

Certificate of Analysis

2.2.4.2 QC Summary Data

Example Alkalinity (Titrametric) Calculations

[(A - B) * N * 50000]/volume = mg/L

P = phenolpthalein alkalinity (titrated to pH 8.3)
T = total alkalinity (Titrated to pH 4.5)

where:

A = mL of titrant used for the sample
B = mL of titrant used for the blank
N = normality of titrant
volume = volume of sample titrated
50000 = equivalent weight

	Hydroxide Alk.	Carbonate Alk.	Bicarbonate Alk.
if P = 0	<10	<10	T
if P <0.5 T	<10	2P	T - 2P
if P = 0.5T	<10	2P	<10
if P >0.5T	2P - T	2(T - P)	<10
if P = T	T	<10	<10

Microbac Laboratories Inc.

Data Checklist

Date: 26-JUL-2012
Analyst: DLP
Analyst: NA
Method: ALK-TI
Instrument: BURET
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404637

Calibration/Linearity	07-26-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	
Primary Reviewer	DLP
Secondary Reviewer	
Comments	

Primary Reviewer: 30-JUL-2012

Secondary Reviewer:

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-30-2012 08:12:17

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM2320B

AAB#: WG404637

Login Number: L12070640

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
MPL22-0712-1	02	07/19/12					07/26/2012	7.1	14		07/26/12	7.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2526380
Report generated 07/31/2012 08:09

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: ET.1207261545-01
Prep Date: 07/26/12 15:45
Analyzed Date: 07/26/12 15:45
Analyst: DLP

Work Group: WG404637
Blank Sample ID: WG404637-01
Instrument ID: BURET
Method: SM2320B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404637-02	ET.1207261545-02	07/26/12 15:45	
LCS2	WG404637-03	ET.1207261545-03	07/26/12 15:45	
MPL22-0712-1	L12070640-02	ET.1207261545-11	07/26/12 15:45	
MPL22-0712-1	L12070640-02	ET.1207261545-11	07/26/12 15:45	
MPL22-0712-1	L12070640-02	ET.1207261545-11	07/26/12 15:45	
DUP	WG404637-08	ET.1207261545-12	07/26/12 15:45	

Report Name: BLANK_SUMMARY
PDF File ID: 2526381
Report generated 07/31/2012 08:09

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/26/12 15:45 Sample ID: WG404637-01
Instrument ID: BURET Run Date: 07/26/12 15:45 Prep Method: SM2320B
File ID: ET.1207261545-01 Analyst: DLP Method: SM2320B
Workgroup (AAB#): WG404637 Matrix: Water Units: mg/L
Contract #: Cal ID: BURET-

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Total (as CaCO3)	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: 2526382
31-JUL-2012 08:09

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: DLP Prep Method: SM2320B
Instrument ID: BURET Matrix: Water Method: SM2320B
Workgroup (AAB#): WG404637 Units: mg/L
QC Key: DOD4 Lot #: STD50179

Sample ID: WG404637-02 LCS File ID: ET.1207261545-02 Run Date: 07/26/2012 15:45
Sample ID: WG404637-03 LCS2 File ID: ET.1207261545-03 Run Date: 07/26/2012 15:45

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	100	99.5	99.5	100	99.5	99.5	0.00	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2526383
Report generated: 07/31/2012 08:09

2.2.4.3 Raw Data

SOP K3101 Revision 12
EPA 310.1 / SM2320B

LCS/MS: STD 50179
LCS Daily Dilution 4(2500)/100 = 10
Titrant 1008-03-06
Standardization Date: 7-26-12
Na_2CO_3 COA 15729
LCS 8(2500)/100 = 200

Titrant Standardization

	mL Na_2CO_3	N Na_2CO_3	mL titrant
Blank	0	0.020	0.05
1	20	0.020	20.05
2	20	0.020	20.05
Blank	0.05	0.020	0.05
1		0.020	
2		0.020	

Normality = 0.020 N

Sample	Volume (mL)	Dilution	Initial pH	Normality H_2SO_4	mL Titrant to pH 8.3	Total mL to 4.5
Blank	100		5.742	0.20	—	0.05
Blank	100		5.539	0.020	—	0.05
LCS: 100	100		10.136	0.020	—	10.00
LCS DUP: 100	100		10.138	0.020	—	10.00
07-541-01	100		11.468	0.020	27.40	36.6
-02	100		11.549	0.020	29.20	34.6
-03	100	7-26-12	7.550	0.020	—	29.6
-04	~~100~~ 50		11.770	0.020	25.0	30.40
07-546-01	100		12.148	0.020	7.50	
-02	100		10.817	0.020	14.7	~~31.7~~ 31.7 7-26-12
-03	100		7.534	0.020	—	6.8
-04	100		12.259	0.020	7.50	—
-05	100		8.813	0.020	0.60	7.0
07-640-02	100		8.304	0.020	—	5.8
07-546-01	50		12.148	0.20	20.0	22.5
07-546-04	50		12.314	0.20	7.50	
LCS (200)	100		10.470	0.20	—	2.0
LCS DUP (200)	100		10.466	0.20	—	2.0
07-546-04	50	1/2	12.280	0.20	7.50	
07-546-04	100	1/10	12.119	0.20	18.70	18.8
Dup 07-546-02	100		10.818	0.020	14.7	31.7

Analyst: Quantty Rhyne

Date/Time: 07-26-12/1545

DCN#91742

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404637
Product: SM2320B
Analyte: Alkalinity, Total (as CaCO3)

Analyst: DLP
Run Date: 07/26/2012 15:45

SAMPLE NUMBER	Volume	Titrant ml	Dilution	Blank	Normality	Milliеq WT	Rep. Conc.	Units
WG404637-01	100.0	0.05	1	0.5000	0.02	50000	0.5000	mg/L
WG404637-02	100.0	10.0	1	0.5000	0.02	50000	99.50	mg/L
WG404637-03	100.0	10.0	1	0.5000	0.02	50000	99.50	mg/L
L12070541-01	100.0	36.6	1	0.5000	0.02	50000	365.5	mg/L
L12070541-02	100.0	34.6	1	0.5000	0.02	50000	345.5	mg/L
L12070541-03	100.0	29.6	1	0.5000	0.02	50000	295.5	mg/L
L12070541-04	50.0	30.4	1	0.5000	0.02	50000	607.5	mg/L
L12070546-02	100.0	31.7	1	0.5000	0.02	50000	316.5	mg/L
WG404637-07	100.0	31.7	1	0.5000	0.02	50000	316.5	mg/L
L12070546-03	100.0	6.8	1	0.5000	0.02	50000	67.50	mg/L
L12070546-05	100.0	7.0	1	0.5000	0.02	50000	69.50	mg/L
L12070640-02	100.0	5.8	1	0.5000	0.02	50000	57.50	mg/L
L12070546-01	50.0	22.5	1	5.000	0.2	50000	4495	mg/L
WG404637-04	100.0	0.05	1	5.000	0.2	50000	5.000	mg/L
WG404637-05	100.0	2.0	1	5.000	0.2	50000	195.0	mg/L
WG404637-06	100.0	2.0	1	5.000	0.2	50000	195.0	mg/L
L12070546-04	100.0	18.8	10	5.000	0.2	50000	18750	mg/L
WG404637-08	100.0	31.7	1	0.5000	0.02	50000	316.5	mg/L

ALK_TITRAMETRIC - Modified 03/05/2008
Report generated 07/30/2012 08:09

[redacted]

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404637
Product: SM2320B
Analyte: Alkalinity, Bicarbonate (as CaCO3)

Analyst: DLP
Run Date: 07/26/2012 15:45

SAMPLE NUMBER	Volume	Titrant ml	Dilution	Blank	Normality	Milliеq WT	Rep. Conc.	Units
WG404637-01	100.0	0.05	1	0.5000	0.02	50000	0.5000	mg/L
WG404637-02	100.0	10.0	1	0.5000	0.02	50000	99.50	mg/L
WG404637-03	100.0	10.0	1	0.5000	0.02	50000	99.50	mg/L
L12070541-01	100.0	36.6	1	0.5000	0.02	50000	ND	mg/L
L12070541-02	100.0	34.6	1	0.5000	0.02	50000	ND	mg/L
L12070541-03	100.0	29.6	1	0.5000	0.02	50000	295.5	mg/L
L12070541-04	50.0	30.4	1	0.5000	0.02	50000	ND	mg/L
L12070546-02	100.0	31.7	1	0.5000	0.02	50000	22.50	mg/L
WG404637-07	100.0	31.7	1	0.5000	0.02	50000	22.50	mg/L
L12070546-03	100.0	6.8	1	0.5000	0.02	50000	67.50	mg/L
L12070546-05	100.0	7.0	1	0.5000	0.02	50000	57.50	mg/L
L12070640-02	100.0	5.8	1	0.5000	0.02	50000	57.50	mg/L
L12070546-01	50.0	22.5	1	5.000	0.2	50000	ND	mg/L
WG404637-04	100.0	0.05	1	5.000	0.2	50000	5.000	mg/L
WG404637-05	100.0	2.0	1	5.000	0.2	50000	195.0	mg/L
WG404637-06	100.0	2.0	1	5.000	0.2	50000	195.0	mg/L
L12070546-04	100.0	18.8	10	5.000	0.2	50000	ND	mg/L
WG404637-08	100.0	31.7	1	0.5000	0.02	50000	22.50	mg/L

ALK_TITRAMETRIC - Modified 03/05/2008
Report generated 07/30/2012 08:09

[redacted]

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404637
Product: SM2320B
Analyte: Alkalinity, Carbonate (as CaCO3)

Analyst: DLP
Run Date: 07/26/2012 15:45

SAMPLE NUMBER	Volume	Titrant ml	Dilution	Blank	Normality	Milliеq WT	Rep. Conc.	Units
WG404637-01	100.0	0.05	1	0.00	0.02	50000		mg/L
WG404637-02	100.0	10.0	1	0.00	0.02	50000		mg/L
WG404637-03	100.0	10.0	1	0.00	0.02	50000		mg/L
L12070541-01	100.0	36.6	1	0.00	0.02	50000	183.0	mg/L
L12070541-02	100.0	34.6	1	0.00	0.02	50000	107.0	mg/L
L12070541-03	100.0	29.6	1	0.00	0.02	50000	ND	mg/L
L12070541-04	50.0	30.4	1	0.00	0.02	50000	215.0	mg/L
L12070546-02	100.0	31.7	1	0.00	0.02	50000	294.0	mg/L
WG404637-07	100.0	31.7	1	0.00	0.02	50000	294.0	mg/L
L12070546-03	100.0	6.8	1	0.00	0.02	50000	ND	mg/L
L12070546-05	100.0	7.0	1	0.00	0.02	50000	12.00	mg/L
L12070640-02	100.0	5.8	1	0.00	0.02	50000	ND	mg/L
L12070546-01	50.0	22.5	1	0.00	0.2	50000	990.0	mg/L
WG404637-04	100.0	0.05	1	0.00	0.2	50000		mg/L
WG404637-05	100.0	2.0	1	0.00	0.2	50000		mg/L
WG404637-06	100.0	2.0	1	0.00	0.2	50000		mg/L
L12070546-04	100.0	18.8	10	0.00	0.2	50000	6100	mg/L
WG404637-08	100.0	31.7	1	0.00	0.02	50000	294.0	mg/L

ALK_TITRAMETRIC - Modified 03/05/2008
Report generated 07/30/2012 08:09

[redacted]

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404637

Product: SM2320B

Analyte: Alkalinity, Hydroxide (as CaCO3)

Analyst: DLP

Run Date: 07/26/2012 15:45

SAMPLE NUMBER	Volume	Titrant ml	Dilution	Blank	Normality	Milliеq WT	Rep. Conc.	Units
WG404637-01	100.0	0.05	1	0.00	0.02	50000		mg/L
WG404637-02	100.0	10.0	1	0.00	0.02	50000		mg/L
WG404637-03	100.0	10.0	1	0.00	0.02	50000		mg/L
WG404637-07	100.0	31.7	1	0.00	0.02	50000		mg/L
WG404637-04	100.0	0.05	1	0.00	0.2	50000		mg/L
WG404637-05	100.0	2.0	1	0.00	0.2	50000		mg/L
WG404637-06	100.0	2.0	1	0.00	0.2	50000		mg/L
WG404637-08	100.0	31.7	1	0.00	0.02	50000		mg/L

ALK_TITRAMETRIC - Modified 03/05/2008
Report generated 07/30/2012 08:09

[redacted]

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404637

Product: SM2320B

Analyte: Alkalinity, Phenolphthalein (as CaCO

Analyst: DLP

Run Date: 07/26/2012 15:45

SAMPLE NUMBER	Volume	Titrant ml	Dilution	Blank	Normality	Milliеq WT	Rep. Conc.	Units
WG404637-01	100.0	0.05	1	0.00	0.02	50000		mg/L
WG404637-02	100.0	10.0	1	0.00	0.02	50000		mg/L
WG404637-03	100.0	10.0	1	0.00	0.02	50000		mg/L
WG404637-07	100.0	14.7	1	0.00	0.02	50000	147.0	mg/L
WG404637-04	100.0	0.05	1	0.00	0.2	50000		mg/L
WG404637-05	100.0	2.0	1	0.00	0.2	50000		mg/L
WG404637-06	100.0	2.0	1	0.00	0.2	50000		mg/L
WG404637-08	100.0	14.7	1	0.00	0.02	50000	147.0	mg/L

ALK_TITRAMETRIC - Modified 03/05/2008
Report generated 07/30/2012 08:09

[redacted]

2.2.5 Cyanide Data

2.2.5.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 50968
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271530-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00530	J	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271610-10
Sample Tag:	a	**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 #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207271550-11
Sample Tag:	w	**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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271530-12
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271610-11
Sample Tag:	a	**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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207271550-12
Sample Tag:	w	**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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404392	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:30
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271530-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.00597	J	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404597	**Analyst:**	HJR	**Run Date:**	07/27/2012 16:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271610-12
Sample Tag:	a	**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 #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/27/2012 11:00
Workgroup #:	WG404558	**Analyst:**	HJR	**Run Date:**	07/27/2012 15:50
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207271550-13
Sample Tag:	w	**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.

2.2.5.2 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: 27-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404392

Calibration/Linearity	7/27/12
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:57:05

Microbac Laboratories Inc.

Data Checklist

Date: 27-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN-WD
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404558

Calibration/Linearity	7/27/12
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:57:03

Microbac Laboratories Inc.

Data Checklist

Date: 27-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN-A
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404597

Calibration/Linearity	7/27/12
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:56:59

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C

AAB#: WG404392

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/27/2012	8.2	14		07/27/12	8.2	14	
MPL22-0712-1	02	07/19/12					07/27/2012	8.1	14		07/27/12	8.1	14	
MPL25-0712-1	03	07/19/12					07/27/2012	8	14		07/27/12	8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2523079
Report generated 07/28/2012 09:53

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G

AAB#: WG404597

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/27/2012	8.2	14		07/27/12	8.2	14	
MPL22-0712-1	02	07/19/12					07/27/2012	8.1	14		07/27/12	8.1	14	
MPL25-0712-1	03	07/19/12					07/27/2012	8	14		07/27/12	8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2523049
Report generated 07/28/2012 09:53

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I

AAB#: WG404558

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/27/2012	8.2	14		07/27/12	8.2	14	
MPL22-0712-1	02	07/19/12					07/27/2012	8.1	14		07/27/12	8.1	14	
MPL25-0712-1	03	07/19/12					07/27/2012	8	14		07/27/12	8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2523109
Report generated 07/28/2012 09:54

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: 1V.1207271530-03
Prep Date: 07/27/12 15:30
Analyzed Date: 07/27/12 15:30
Analyst: HJR

Work Group: WG404392
Blank Sample ID: WG404392-01
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	WG404392-02	1V.1207271530-04	07/27/12 15:30	
LCS	WG404392-03	1V.1207271530-05	07/27/12 15:30	
MPL21-0712-1	L12070640-01	1V.1207271530-11	07/27/12 15:30	
MPL22-0712-1	L12070640-02	1V.1207271530-12	07/27/12 15:30	
MPL25-0712-1	L12070640-03	1V.1207271530-13	07/27/12 15:30	
DUP	WG404392-05	1V.1207271530-19	07/27/12 15:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2523080
Report generated 07/28/2012 09:54

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: 1V.1207271610-03
Prep Date: 07/27/12 16:10
Analyzed Date: 07/27/12 16:10
Analyst: HJR

Work Group: WG404597
Blank Sample ID: WG404597-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404597-02	1V.1207271610-04	07/27/12 16:10	a
MPL21-0712-1	L12070640-01	1V.1207271610-10	07/27/12 16:10	a
MPL22-0712-1	L12070640-02	1V.1207271610-11	07/27/12 16:10	a
MPL25-0712-1	L12070640-03	1V.1207271610-12	07/27/12 16:10	a
DUP	WG404597-04	1V.1207271610-18	07/27/12 16:10	a

Report Name: BLANK_SUMMARY
PDF File ID: 2523050
Report generated 07/28/2012 09:53

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: 1V.1207271550-03
Prep Date: 07/27/12 15:50
Analyzed Date: 07/27/12 15:50
Analyst: HJR

Work Group: WG404558
Blank Sample ID: WG404558-01
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	WG404558-02	1V.1207271550-04	07/27/12 15:50	w
LCS	WG404558-03	1V.1207271550-05	07/27/12 15:50	w
MPL21-0712-1	L12070640-01	1V.1207271550-11	07/27/12 15:50	w
MPL22-0712-1	L12070640-02	1V.1207271550-12	07/27/12 15:50	w
MPL25-0712-1	L12070640-03	1V.1207271550-13	07/27/12 15:50	w
DUP	WG404558-05	1V.1207271550-19	07/27/12 15:50	w

Report Name: BLANK_SUMMARY
PDF File ID: 2523110
Report generated 07/28/2012 09:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/27/12 15:30 Sample ID: WG404392-01
Instrument ID: UV-120-1V Run Date: 07/27/12 15:30 Prep Method: 9014-9010C
File ID: 1V.1207271530-03 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG404392 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 27-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.00500	1	U

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

Report Name:BLANK
PDF ID: 2523081
28-JUL-2012 09:54

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/27/12 16:10 Sample ID: WG404597-01
Instrument ID: UV-120-1V Run Date: 07/27/12 16:10 Prep Method: SM4500-CN-C,G
File ID: 1V.1207271610-03 Analyst: HJR Method: SM4500-CN-C,G
Workgroup (AAB#): WG404597 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 27-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.00500	1	U

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

Report Name:BLANK
PDF ID: 2523051
28-JUL-2012 09:53

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/27/12 15:50 Sample ID: WG404558-01
Instrument ID: UV-120-1V Run Date: 07/27/12 15:50 Prep Method: SM4500-CN-I
File ID: 1V.1207271550-03 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG404558 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 27-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.00500	1	U

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

Report Name: BLANK
PDF ID: 2523111
28-JUL-2012 09:54

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404392-02
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1207271530-04 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG404392 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.205	103	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2523082
Report generated: 07/28/2012 09:54

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404392-03
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1207271530-05 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG404392 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0401	100	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2523082
Report generated: 07/28/2012 09:54

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404597-02
Instrument ID: UV-120-1V Run Time: 16:10 Prep Method: SM4500-CN-C,G
File ID: 1V.1207271610-04 Analyst: HJR Method: SM4500-CN-C,G
Workgroup (AAB#): WG404597 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.200	0.0108	5.40	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2523052
Report generated: 07/28/2012 09:53

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404558-02
Instrument ID: UV-120-1V Run Time: 15:50 Prep Method: SM4500-CN-I
File ID: 1V.1207271550-04 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG404558 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.200	0.205	103	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2523112
Report generated: 07/28/2012 09:54

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/27/2012 Sample ID: WG404558-03
Instrument ID: UV-120-1V Run Time: 15:50 Prep Method: SM4500-CN-I
File ID: 1V.1207271550-05 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG404558 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120 - 27-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0402	101	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2523112
Report generated: 07/28/2012 09:54

2.2.5.3 Raw Data

WG404729

Curves

Parameter: Cyanide - Low

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std 48861

Concentration: 990

Recipe for preparation of curve standards found in:

SOP: 163354 Revision: 14 Page: 15

Second Source Stock: Std 48862 (concentration: 1000)

Daily Preparation: 5(1000)/250 = 20
10(20)/150 = 2.0
concentration = (2.0)/50 = 0.04

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.0495	50	5cm	578	0.364
0.0396				0.296
0.0297				0.220
0.0198				0.148
0.0099				0.073
0.00495				0.037
0.000				0.001
ICV (0.04)				~~0.150~~ 0.299

7/27/12

Analyst: [signature] Date/Time: 7/27/12 1100

DCN#91749

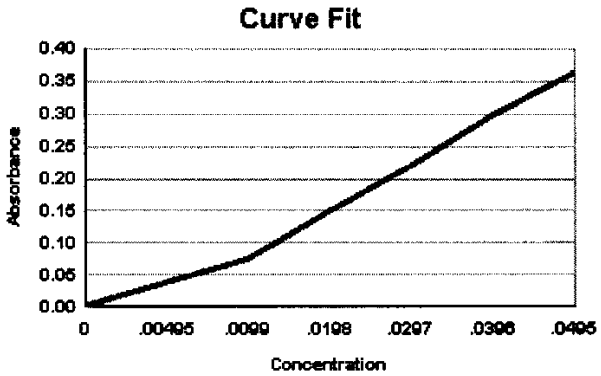
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG404729
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 07/27/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 7.38167
Y-Intercept: 0.000897611
Coef. Of Correlation (R^2): 0.999865
Coef. Of Correlation (R): 0.999933

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	0.000897611
0.00495	0.0370	0.0000245	0.000183	0.0374369
0.00990	0.0730	0.0000980	0.000723	0.0739761
0.0198	0.148	0.000392	0.00293	0.147055
0.0297	0.220	0.000882	0.00653	0.220133
0.0396	0.296	0.00157	0.0117	0.293212
0.0495	0.364	0.00245	0.0180	0.366290



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 07/27/2012 11:58

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG404729
File ID: 1V.1207271100-08
CCV ID: WG404729-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 11:00
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12 11:00:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0404	7.48	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 07/27/2012 11:58

[redacted]*

WG404728

Curves

Parameter: Cyanide -High

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: ~~Std~~ 48861

Concentration: 990

Recipe for preparation of curve standards found in:

SOP: K3354 Revision: 14 Page: 15

Second Source Stock: ~~Std~~ 48862 (concentration: 1000)

Daily Preparation: 5(1000)/250=20
10(20)/100=20

concentration = 5(20)/50=0.2

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.396	50	1cm	578	0.675
0.292				0.498
0.198				0.349
0.099				0.170
0.0396				0.070
0.0198				0.035
0.000				0.001
ICV (0.2)				0.350

Analyst: [illegible] Date/Time: 7/27/12 1050

DCN#91748

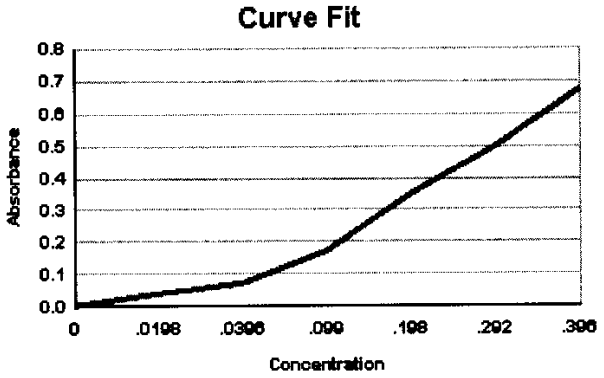
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG404728
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 07/27/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 1.70420
Y-Intercept: 0.00259067
Coef. Of Correlation (R^2): 0.999755
Coef. Of Correlation (R): 0.999878

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	0.00259067
0.0198	0.0350	0.000392	0.000693	0.0363338
0.0396	0.0700	0.00157	0.00277	0.0700769
0.0990	0.170	0.00980	0.0168	0.171306
0.198	0.349	0.0392	0.0691	0.340022
0.292	0.498	0.0853	0.145	0.500217
0.396	0.675	0.157	0.267	0.677453



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 07/27/2012 11:52

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG404728
File ID: 1V.1207271050-08
CCV ID: WG404728-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 10:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12 10:50:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.2	0.204	1.75	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 07/27/2012 11:53

[redacted]

WORKGROUP: WG404558

Cyanide

☐ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2

☑ 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: 3/27/12

CCV: Std 48861

True Value: 990

Daily Dilution: 5(990)/250=19.8
10(19.8)/100 = 1.98
10(1.98)/100 = 0.198
5(1.98)/50=0.198 5(0.198)/50=0.0198

LCS: Std 48862

True Value: 1500

Daily Dilution: ~~5(1000)/250=20~~
~~10(20)/100=0~~ 2.0
5(2)/50 = 0.2
1(2)/50 = 0.04

Spike: Std 48862 ~~1500~~

True Value: 1020

Daily Dilution: 5(2)/50=0.2

Distillation Reagents
RGT17471
RGT17470
RGT17466

Colorimetric Reagents
RGT17608
RGT17609
RGT17614

DCN#91728

Cyanide

CN-WD

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.198 ppm	50		X = None		1cm	0.347
CCV(low): 0.0198 ppm	50		X		5cm	0.149
Blank	50	✓	X		5cm	0.001
LCS: 0.2 ppm	50	✓	X		1cm	0.352
LCS: 0.04 ppm	50	✓	X		5cm	0.298
07-0507-01	50	✓	X		5cm	0.005
-02	50	✓	X		5cm	0.007
07-0639-01	50	✓	X		5cm	0.152
-02	50	✓	X		5cm	0.003
-03	50	✓	X		5cm	0.009
07-0640-01	50	✓	X		5cm	0.003
-02	50	✓	X		5cm	0.006
-03	50	✓	X		5cm	0.007
07-0643-01	50	✓	X		5cm	0.004
-03	50	✓	X		5cm	0.270
07-0716-01	50	✓	X		5cm	0.316
CCV H (0.198)	50	✓	X		1cm	0.349
CCV L (0.0198)	50	✓	X		5cm	0.149
Duplicate: 07-0507-01	50	✓	X		5cm	0.005
MS: (0.2 ppm) 07-0639-1	50	✓	X		1cm	0.387
MSD: (_____ ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.348
CCV low: (0.0198 ppm)	50		X		5cm	0.150

Distilled

Analyst: [signature] Date/Time (on) 7/26/12 1140
(off) 7/26/12 1315
(color) 7/27/12 1550

DCN#91728

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG404558
Analyte: CYANIDE

Analyst: HJR
Date: 07/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG404558-01	50	50	0.00100	7.382	0.0008976	0.000013871	0.000013871	1	mg/L
WG404558-02	50	50	0.352	1.704	0.002591	0.20503	0.20503	1	mg/L
WG404558-03	50	50	0.298	7.382	0.0008976	0.040249	0.040249	1	mg/L
L12070507-01	50	50	0.00500	7.382	0.0008976	0.00055575	ND	1	mg/L
WG404558-04	50	50	0.00500	7.382	0.0008976	0.00055575	0.00055575	1	mg/L
L12070507-02	50	50	0.00700	7.382	0.0008976	0.00082670	ND	1	mg/L
L12070639-01	50	50	0.152	7.382	0.0008976	0.020470	0.020470	1	mg/L
WG404558-06	50	50	0.152	7.382	0.0008976	0.020470	0.020470	1	mg/L
L12070639-02	50	50	0.00300	7.382	0.0008976	0.00028481	ND	1	mg/L
L12070639-03	50	50	0.00900	7.382	0.0008976	0.0010976	ND	1	mg/L
L12070640-01	50	50	0.00300	7.382	0.0008976	0.00028481	ND	1	mg/L
L12070640-02	50	50	0.00600	7.382	0.0008976	0.00069122	ND	1	mg/L
L12070640-03	50	50	0.00700	7.382	0.0008976	0.00082670	ND	1	mg/L
L12070673-01	50	50	0.00400	7.382	0.0008976	0.00042028	ND	1	mg/L
L12070673-03	50	50	0.270	7.382	0.0008976	0.036456	0.036456	1	mg/L
L12070716-01	50	50	0.316	7.382	0.0008976	0.042687	0.042687	1	mg/L
WG404558-05	50	50	0.00500	7.382	0.0008976	0.00055575	0.00055575	1	mg/L
WG404558-07	50	50	0.387	1.704	0.002591	0.22557	0.22557	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/27/2012 17:10

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-17
CCV ID: WG404808-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:13

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-18
CCV ID: WG404808-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.53	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:13

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-01
CCV ID: WG404808-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.202	1.75	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:11

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-02
CCV ID: WG404808-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.53	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:11

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-21
CCV ID: WG404808-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:11

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404808
File ID: 1V.1207271550-22
CCV ID: WG404808-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:50
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0202	7.58	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:11

[redacted]

WORKGROUP: WG404392

Cyanide

☑ Total method 9010B/9014
SM4500 CN C,E
EPA 335.2

☐ 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: 7/27/12

CCV: Std 48861

True Value: 990

Daily Dilution: 5(990)/250 = 19.8
10(19.8)/100 = 1.98
10(1.98)/100 = 0.198
5(1.98)/50 = 0.198 5(0.198)/50 = 0.0198

LCS: Std 48862

True Value: 1000

Daily Dilution: 5(1000)/250 = 20
10(20)/100 = 2
5(2)/50 = 0.2
1(2)/50 = 0.04

Spike: Std 48862

True Value: 1000

Daily Dilution: 5(2)/50 = 0.2

Distillation Reagents
RGT17496
RGT17445
RGT 17353

Colorimetric Reagents
~~RGT17608~~ RGT17608 7/27/12
~~RGT17609~~ RGT17609
~~RGT17614~~ RGT17614

DCN#91707

Cyanide

CN- Total

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.198 ppm	50		X = none		1cm	0.348
CCV(low): 0.0198 ppm	50		X		5cm	0.148
Blank	50	✓	X		5cm	0.001
LCS: 0.2 ppm	50	✓	X		1cm	0.352
LCS: 0.04 ppm	50	✓	X		5cm	0.297
07-0507-01	50	✓	X		5cm	0.015
-02	50	✓	X		5cm	0.017
07-0639-01	50	✓	X		1cm	0.358
-02	50	✓	X		5cm	0.015
-03	50	✓	X		5cm	0.034
07-0640-01	50	✓	X		5cm	0.040
-02	50	✓	X		5cm	0.020
-03	50	✓	X		5cm	0.045
07-0673-01	50	✓	X		5cm	0.042
-03	50	✓	X		1cm	0.520
07-0716-01	50	✓	X	1/2	1cm	0.332
distilled CCV(H)	50	✓	X		1cm	0.349
CCV(L)	50	✓	X		5cm	0.149
Duplicate: ~~07-0716-01~~	50	✓	X	1/2	1cm	0.335
MS: (0.2 ppm) 07-0673-03	50	✓	X		1cm	0.871
MSD: (ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.348
CCV low: (0.0198 ppm)	50		X		5cm	0.149

Analyst: [signature] Date/Time (on) 7/25/12 0915
(off) 7/25/12 1050
(color) 7/27/12 1530

DCN#91707

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG404392 **Analyst:** HJR
Analyte: CYANIDE **Date:** 07/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG404392-01	50	50	0.00100	7.382	0.0008976	0.000013871	0.000013871	1	mg/L
WG404392-02	50	50	0.352	1.704	0.002591	0.20503	0.20503	1	mg/L
WG404392-03	50	50	0.297	7.382	0.0008976	0.040113	0.040113	1	mg/L
L12070507-01	50	50	0.0150	7.382	0.0008976	0.0019105	ND	1	mg/L
L12070507-02	50	50	0.0170	7.382	0.0008976	0.0021814	ND	1	mg/L
L12070639-01	50	50	0.358	1.704	0.002591	0.20855	0.20855	1	mg/L
L12070639-02	50	50	0.0150	7.382	0.0008976	0.0019105	ND	1	mg/L
L12070639-03	50	50	0.0340	7.382	0.0008976	0.0044844	ND	1	mg/L
L12070640-01	50	50	0.0400	7.382	0.0008976	0.0052972	0.0052972 F	1	mg/L
L12070640-02	50	50	0.0200	7.382	0.0008976	0.0025878	ND	1	mg/L
L12070640-03	50	50	0.0450	7.382	0.0008976	0.0059746	0.0059746 F	1	mg/L
L12070673-01	50	50	0.0420	7.382	0.0008976	0.0055682	0.0055682 F	1	mg/L
L12070673-03	50	50	0.520	1.704	0.002591	0.30361	0.30361	1	mg/L
WG404392-06	50	50	0.520	1.704	0.002591	0.30361	0.30361	1	mg/L
L12070716-01	50	50	0.332	1.704	0.002591	0.19329	0.38659	2	mg/L
WG404392-04	50	50	0.332	1.704	0.002591	0.19329	0.38659	2	mg/L
WG404392-05	50	50	0.335	1.704	0.002591	0.19505	0.39011	2	mg/L
WG404392-07	50	50	0.871	1.704	0.002591	0.50957	0.50957	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/27/2012 17:05

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-17
CCV ID: WG404807-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:14

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-18
CCV ID: WG404807-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.53	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:14

[redacted]*

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-01
CCV ID: WG404807-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:02

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-02
CCV ID: WG404807-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0199	7.47	0.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:02

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-21
CCV ID: WG404807-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:02

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404807
File ID: 1V.1207271530-22
CCV ID: WG404807-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 15:30
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.53	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:02

[redacted]

WORKGROUP: WG404597

Cyanide

☑ Total method 9010B/9014
SM4500 CN C,E CN-A
EPA 335.2

☐ 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: 7/27/12

CCV: Std 48861

True Value: 990

Daily Dilution: 5(990)/250=19.8
10(19.8)/100=1.98
10(1.98)/100=.198
5(1.98)/50=0.198 5(0.198)/50=0.0198

LCS: Std 48862

True Value: 1000

Daily Dilution: 5(1000)/250=20
10(20)/100=2
5(2)/50=0.2
1(2)/50=0.04

Spike: Std 48862

True Value: 1000

Daily Dilution:
5(2)/50=
0.2

Distillation Reagents
RGT 17607
RGT 17496
RGT 17593

Colorimetric Reagents
RGT 17608
RGT 17609
RGT 17614

Page 1 of 2

DCN#91735

WORKGROUP: WG404597

Cyanide

CN-A

Sample	Volume mL/grams	pH > 12	Sulfide Presense	Dilution	Cell Size (cm)	Absorbance λ = 578 nm
CCV(high): 0.198 ppm	50		X = none		1cm	0.348
CCV(low): 0.0198 ppm	50		X		5cm	0.150
Blank	50	✓	X		5cm	0.001
LCS: 0.2 ppm	50	✓	X		1cm	0.021
LCS: _____ ppm	50				~~5cm~~	~~0.013~~ 7/27/12
07-0507-01	50	✓	X		5cm	0.017
-02	50	✓	X		5cm	0.020
07-0639-01	50	✓	X		5cm	0.021
-02	50	✓	X		5cm	0.017
-03	50	✓	X		5cm	0.015
07-0640-01	50	✓	X		5cm	0.022
-02	50	✓	X		5cm	0.016
-03	50	✓	X		5cm	0.017
07-0673-01	50	✓	X		5cm	0.019
-03	50	✓	X		5cm	0.016
07-0716-01	50	✓	X		5cm	0.010
ccv H (0.198)	50	✓	X		1cm	0.349
CCV L (0.0198)	50	✓	X		5cm	0.149
Duplicate: ~~07-0507-02~~	50	✓	X		5cm	0.019
MS: (0.2 ppm) 07-0639-02	50	✓	X		1cm	0.020
MSD: (_____ ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.349
CCV low: (0.0198 ppm)	50		X		5cm	0.150

Analyst: [signature]

Date/Time (on) 7/26/12 1910
(off) 7/26/12 1545
(color) 7/27/12 1610

DCN#91735

Microbac Laboratories Inc.

SAMPLE REPORT

treated

Workgroup: WG404597

Analyte: CYANIDE

Analyst: HJR

Date: 07/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG404597-01	50	50	0.00100	7.382	0.0008976	0.000013871	0.000013871	1	mg/L
WG404597-02	50	50	0.0210	1.704	0.002591	0.010802	0.010802	1	mg/L
L12070507-01	50	50	0.0170	7.382	0.0008976	0.0021814	ND	1	mg/L
L12070507-02	50	50	0.0200	7.382	0.0008976	0.0025878	ND	1	mg/L
WG404597-03	50	50	0.0200	7.382	0.0008976	0.0025878	0.0025878	1	mg/L
L12070639-01	50	50	0.0210	7.382	0.0008976	0.0027233	0.20580	1	mg/L
L12070639-02	50	50	0.0170	7.382	0.0008976	0.0021814	ND	1	mg/L
WG404597-05	50	50	0.0170	7.382	0.0008976	0.0021814	0.0021814	1	mg/L
L12070639-03	50	50	0.0150	7.382	0.0008976	0.0019105	ND	1	mg/L
L12070640-01	50	50	0.0220	7.382	0.0008976	0.0028588	ND	1	mg/L
L12070640-02	50	50	0.0160	7.382	0.0008976	0.0020459	ND	1	mg/L
L12070640-03	50	50	0.0170	7.382	0.0008976	0.0021814	ND	1	mg/L
L12070673-01	50	50	0.0190	7.382	0.0008976	0.0024523	ND	1	mg/L
L12070673-03	50	50	0.0160	7.382	0.0008976	0.0020459	0.30360	1	mg/L
L12070716-01	50	50	0.0100	7.382	0.0008976	0.0012331	0.38500	1	mg/L
WG404597-04	50	50	0.0190	7.382	0.0008976	0.0024523	0.0024523	1	mg/L
WG404597-06	50	50	0.0200	1.704	0.002591	0.010216	0.010216	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/28/2012 09:48

[redacted]

Microbac Laboratories Inc.

SAMPLE REPORT

CN-total

Workgroup: WG404392

Analyte: CYANIDE

Analyst: HJR

Date: 07/27/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG404392-01	50	50	0.00100	7.382	0.0008976	0.000013871	0.000013871	1	mg/L
WG404392-02	50	50	0.352	1.704	0.002591	0.20503	0.20503	1	mg/L
WG404392-03	50	50	0.297	7.382	0.0008976	0.040113	0.040113	1	mg/L
L12070507-01	50	50	0.0150	7.382	0.0008976	0.0019105	ND	1	mg/L
L12070507-02	50	50	0.0170	7.382	0.0008976	0.0021814	ND	1	mg/L
L12070639-01	50	50	0.358	1.704	0.002591	0.20855	0.20855	1	mg/L
L12070639-02	50	50	0.0150	7.382	0.0008976	0.0019105	ND	1	mg/L
L12070639-03	50	50	0.0340	7.382	0.0008976	0.0044844	ND	1	mg/L
L12070640-01	50	50	0.0400	7.382	0.0008976	0.0052972	0.0052972 F	1	mg/L
L12070640-02	50	50	0.0200	7.382	0.0008976	0.0025878	ND	1	mg/L
L12070640-03	50	50	0.0450	7.382	0.0008976	0.0059746	0.0059746 F	1	mg/L
L12070673-01	50	50	0.0420	7.382	0.0008976	0.0055682	0.0055682 F	1	mg/L
L12070673-03	50	50	0.520	1.704	0.002591	0.30361	0.30361	1	mg/L
WG404392-06	50	50	0.520	1.704	0.002591	0.30361	0.30361	1	mg/L
L12070716-01	50	50	0.332	1.704	0.002591	0.19329	0.38659	2	mg/L
WG404392-04	50	50	0.332	1.704	0.002591	0.19329	0.38659	2	mg/L
WG404392-05	50	50	0.335	1.704	0.002591	0.19505	0.39011	2	mg/L
WG404392-07	50	50	0.871	1.704	0.002591	0.50957	0.50957	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/27/2012 17:05

[redacted]

Cyanide, Amenable to Chlorination (mg/L)
CN (Total) - CN (Treated) = CN-A

SAMPLE	7/20/2012 CN (Total)	7/20/2012 CN (Treated)	CN-A
L12070507-01	0.0019105	0.0021814	-0.000271
l12070507-02	0.0021814	0.0025878	-0.000406
L12070639-01	0.20855	0.0027233	0.205827
L12070639-02	0.0019105	0.0021814	-0.000271
L12070639-03	0.0044844	0.0019105	0.002574
L12070640-01	0.0052972	0.0028588	0.002438
L12070640-02	0.0025878	0.0020459	0.000542
L12070640-03	0.0059746	0.0021814	0.003793
L12070673-01	0.0055682	0.0024523	0.003116
L12070673-03	0.30361	0.0020459	0.301564
L12070716-01	0.3866	0.0012331	0.385367
blank	0.000013871	0.000013871	0
lcs (0.2)	0.20503	0.010802	0.194228
dup	0.19505	0.0024523	0.192598
ms	0.20957	0.010216	0.199354
			0
			0
			0
			0

Cyanide, Amenable to Chlorination (CN-A) is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to verify that all of the cyanide in the spike solution is amenabl (the treated portion is ND)

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-16
CCV ID: WG404810-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:23

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-17
CCV ID: WG404810-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.53	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/27/2012 17:23

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-01
CCV ID: WG404810-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:21

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-02
CCV ID: WG404810-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0202	7.58	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:21

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-20
CCV ID: WG404810-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.203	1.76	2.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:21

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404810
File ID: 1V.1207271610-21
CCV ID: WG404810-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/27/2012
Run Time: 16:10
Analyst: HJR
Cal ID: UV-120 - 27-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0202	7.58	2.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/27/2012 17:21

[redacted]

2.2.6 Conductivity Data

2.2.6.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 50962
Approved By: Deanna Hesson

2.2.6.2 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: 24-JUL-2012
Analyst: DLP
Analyst: NA
Method: COND
Instrument: YSI-32
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404325

Calibration/Linearity	04-30-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	
Primary Reviewer	DLP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
27-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-27-2012 17:26:42

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 AAB#: WG404325

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/24/2012	5.2	28		07/24/12	5.2	28	
MPL22-0712-1	02	07/19/12					07/24/2012	5.2	28		07/24/12	5.2	28	
MPL25-0712-1	03	07/19/12					07/24/2012	5	28		07/24/12	5	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2521241
Report generated 07/27/2012 11:43

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: 32.1207241630-01
Prep Date: 07/24/12 16:30
Analyzed Date: 07/24/12 16:30
Analyst: DLP

Work Group: WG404325
Blank Sample ID: WG404325-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404325-02	32.1207241630-02	07/24/12 16:30	
MPL21-0712-1	L12070640-01	32.1207241630-04	07/24/12 16:30	
MPL22-0712-1	L12070640-02	32.1207241630-05	07/24/12 16:30	
MPL25-0712-1	L12070640-03	32.1207241630-06	07/24/12 16:30	
DUP	WG404325-05	32.1207241630-10	07/24/12 16:30	
LCS2	WG404325-03	32.1207241630-11	07/24/12 16:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2521242
Report generated 07/27/2012 11:43

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/24/12 16:30 Sample ID: WG404325-01
Instrument ID: YSI-32 Run Date: 07/24/12 16:30 Prep Method: 120.1
File ID: 32.1207241630-01 Analyst: DLP Method: 120.1
Workgroup (AAB#): WG404325 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	0.500	1	U

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

Report Name: BLANK
PDF ID: 2521243
27-JUL-2012 11:43

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: DLP Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG404325 Units: umhos/cm
QC Key: DOD4 Lot #: STD49788

Sample ID: WG404325-02 LCS File ID: 32.1207241630-02 Run Date: 07/24/2012 16:30
Sample ID: WG404325-03 LCS2 File ID: 32.1207241630-11 Run Date: 07/24/2012 16:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1440	102	1410	1440	102	0.150	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2521244
Report generated: 07/27/2012 11:43

2.2.6.3 Raw Data

CONDUCTIVITY

☐EPA 120.1/SM2510B SOP K1201 Revision#: 13

LCS: STD49788
Daily Dilution: 10(0.1 mS)/100 = 1412

☑Cell Constants Determined 4-30-12
☐Cells Clean

SAMPLE	DILUTION	CELL	MULTIPLIER	Direct Instrument READING
BLANK		0.1	mS	3.89
LCS: (1412)		1.0	mS	1.338
07-639-03		1.0	mS	0.342
07-640-01		1.0	mS	0.308
-02		1.0	mS	0.223
-03		1.0	mS	0.445
07-673-01		1.0	mS	0.310
-03		1.0	mS	0.596
07-716-01		1.0	mS	0.693
DUP: 07-640-01		1.0	mS	0.309
DUP:				
LCS: 1412		1.0	mS	1.336

Analyst: Dorothy Payne Date/Time: 07-24-12/1630

*LCS/CCV required at end of run
* Duplicate required on 10% of samples

DCN#91696

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404325

Product: 120.1\

Analyte: Conductivity

Analyst: DLP

Run Date: 07/24/2012 16:30

SAMPLE NUMBER	Cell	Multiplier	Reading	Dil	Analytical	Reported	Units
WG404325-01	.1021	1	3.89	1	0.3972	0.3972	umhos/cm
WG404325-02	1.078	1000	1.338	1	1442	1442	umhos/cm
L12070639-03	1.078	1000	.342	1	368.7	368.7	umhos/cm
L12070640-01	1.078	1000	.308	1	332.0	332.0	umhos/cm
WG404325-04	1.078	1000	.308	1	332.0	332.0	umhos/cm
L12070640-02	1.078	1000	.223	1	240.4	240.4	umhos/cm
L12070640-03	1.078	1000	.445	1	479.7	479.7	umhos/cm
L12070673-01	1.078	1000	.31	1	334.2	334.2	umhos/cm
L12070673-03	1.078	1000	.596	1	642.5	642.5	umhos/cm
L12070716-01	1.078	1000	.693	1	747.1	747.1	umhos/cm
WG404325-05	1.078	1000	.309	1	333.1	333.1	umhos/cm
WG404325-03	1.078	1000	1.336	1	1440	1440	umhos/cm

COND_REPORT - Modified 03/05/2008
Report generated 07/27/2012 08:57

2.2.7 Ammonia Data

2.2.7.1 Summary Data

Login Number: L12070640
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: 50964
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:25
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	SC120726005.040
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0623	J	0.100	0.0500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL22-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:26
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	SC120726005.041
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0504	J	0.100	0.0500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/26/2012 13:55
Workgroup #:	WG404589	**Analyst:**	DIH	**Run Date:**	07/26/2012 14:29
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	SC120726005.044
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0852	J	0.100	0.0500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

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: 26-JUL-2012
Analyst: DIH
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404589 WG404591 WG404588

Calibration/Linearity	7/26/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
28-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:20:57

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 AAB#: WG404589

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/26/2012	7.1	28		07/26/12	7.1	28	
MPL22-0712-1	02	07/19/12					07/26/2012	7.1	28		07/26/12	7.1	28	
MPL25-0712-1	03	07/19/12					07/26/2012	7	28		07/26/12	7	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2522450
Report generated 07/27/2012 15:50

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: SC120726005.033
Prep Date: 07/26/12 14:18
Analyzed Date: 07/26/12 14:18
Analyst: DIH

Work Group: WG404589
Blank Sample ID: WG404589-01
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	WG404589-02	SC120726005.034	07/26/12 14:20	01
MPL21-0712-1	L12070640-01	SC120726005.040	07/26/12 14:25	01
MPL22-0712-1	L12070640-02	SC120726005.041	07/26/12 14:26	01
MPL25-0712-1	L12070640-03	SC120726005.044	07/26/12 14:29	01
DUP	WG404589-04	SC120726005.059	07/26/12 14:42	01

Report Name: BLANK_SUMMARY
PDF File ID: 2522451
Report generated 07/27/2012 15:50

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/26/12 14:18 Sample ID: WG404589-01
Instrument ID: SMARTCHEM Run Date: 07/26/12 14:18 Prep Method: 350.1
File ID: SC120726005.033 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG404589 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-26-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrogen, Ammonia	0.0500	0.100	0.0500	1	U

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

Report Name: BLANK
PDF ID: 2522452
27-JUL-2012 15:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Run Date: 07/26/2012 Sample ID: WG404589-02
Instrument ID: SMARTCHEM Run Time: 14:20 Prep Method: 350.1
File ID: SC120726005.034 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG404589 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49779 Cal ID: SMARTC-26-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	1.87	93.7	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2522453
Report generated: 07/27/2012 15:50

2.2.7.3 Raw Data

WORKGROUP: WG404588

404589
404591

SMARTCHEM RUN LOG

Daily Check

- [x] Lamp On
- [x] Probe Rinse Full
- [x] DI Water > ½ Full
- [x] Wash Solution > ½ Full
- [ ] NO3 Reagent bottle connected / purged
- [ ] NO3 pH adj to pH 5-9
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # _____

1) **Workgroup** _____
Plan # 20120726009
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

Analyte		1	2	3
		NH3		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 1.5			
1-2	BLK			
1-3	LCS 2			
1-4	07-481-01			
1-5	MS02			
1-6	MSD03			
1-7	07-504-01			
1-8	05			
1-9	14			
1-10	15	25ml/50 =	1/2	
1-11	07-507-01			
1-12	02			
1-13	07-513-02			
1-14	07-645-02			
1-15	07-668-01	*	1/20	Auto 1/4
1-16	02	1ml/50 *	1/4	= 1/200
1-17	07-602-01			
1-18	02			
1-19	03			
1-20	DUP 645-02			
1-21	MS ↓			
1-22	BLK			
2-1	LCS 2			
2-2	07-611-01			
2-3	02			

Position	Analyte	1	2	3
2-4	07-639-01			
2-5	02			
2-6	03			
2-7	07-640-01			
2-8	02			
2-9	03			
2-10	07-587-01		Auto	1/2
2-11	02		"	1/2
2-12	03		"	1/2
2-13	04		"	1/2
2-14	05		"	1/2
2-15	06		"	1/2
2-16	07-673-01			
2-17	02			
2-18	07-703-01			
2-19	02			
2-20	07-716-01			
2-21	new ICS			
2-22	DUP 703-01			
2-23	MS ↓			
2-24	MS 587-01		Auto	1/2
2-25	BLK			
2-26	LCS 2			
3-1	07-735-01			
3-2	02			

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#91734

WORKGROUP: WG404588

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
3-3	07-735-03			
3-4	04			
3-5	07-737-01	10ml/50	Auto 1/3 *	
3-6	07-724-01			
3-7	02			
3-8	03			
3-9	04			
3-10	05			
3-11	ms 06			
3-12	msd 07			
3-13	08			
3-14	07-732-01			
3-15	DUP 724-08			

Position	Analyte	1	2	3
3-16	ms 732-01			
3-17				
3-18				
3-19				
3-20				
3-21				
3-22	* lost	auto	on 1/25	was manual 1/20
3-23				1/3
3-24			1/5 *	1/3 * 1/20 * 1/25
3-25				
3-26				
3-27				
3-28				

- [ ] Chloride — EPA 325.2/SM 4500-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [ ] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [x] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	NH3		Reagents
SOP & Revision	K3501 R 18		Rot 17292
Curve Stock (SC made)	std 52564		Rot 17450
Curve ID (user made)			Rot 17446
ICV	std 52567		
CCV	std 52566		
LCS			
MS	See dist log Dilution		

Comments:

Analyst: [signature] Date: 7/26/12

DCN#91734

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: STD 49779 10(100)/100 = 10

SPIKE: STD 49779 10(100)/100 = 10

WATER (mg/L)

DAILY DIL. 10(10)/50 = 2

DAILY DIL. 5(10)/50 = 1

SOIL (mg/Kg)

☒ easy-dist method

☐ macro method

RGT 17568
RGT 17380

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	NO	✓	
LCS( ) ✓	50	NO	✓	
Re 07-481-01 ✓	50	NO	✓	
MS -02 ✓	50	NO	✓	
MSD 03 ✓	50	NO	✓	
07-504 01 ✓	50	NO	✓	
-05 ✓	50	NO	✓	
-14 ✓	50	NO	✓	
* -15 ✓	25	NO	✓	
07-507-01 ✓	50	NO	✓	
02 ✓	50	NO	✓	
07-513-02 ✓	50	NO	✓	
07-645-02 ✓	50	NO	✓	
07-668-01 ✓	50	NO	✓	Valley - Final
02 ✓	1	NO	✓	Valley DAFI
07-602-01 ✓	50	NO	✓	
-02 ✓	50	NO	✓	
03 ✓	50	NO	✓	
DUP 07-645-02	50	NO	✓	
MS 07-645-02	50	NO	✓	

Analyst: Quetty Pasa

Date/Time: 07-23-12/1530

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

* 25ml was done because of not enough sample.

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: 550 49779 10(100)/100 = 10
DAILY DIL. 10(10)/50 = 2

SPIKE: 550 49779 10(100)/100 = 10
DAILY DIL. 5(10)/50 = 1

WATER (mg/L)
SOIL (mg/Kg)

☒ easy-dist method ☐ macro method

RGT 17380
RGT 17560

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	NO	yes	
LCS( ) ✓	50	NO		
07-611-01 ✓	50	NO		
-02 ✓	50	NO		
07-639-01 ✓	50	NO		
-02 ✓	50	NO		
03 ✓	50	NO		
07-640-01 ✓	50	NO		
-02 ✓	50	NO		
03 ✓	50	NO		
07-587-01 ✓	50	NO		
-02 ✓	50	NO		
-03 ✓	50	NO		
-04 ✓	50	NO		
-05 ✓	50	NO		
-06 ✓	50	NO		
07-673-01 ✓	50	NO		
-03 ✓	50	NO		
07-703-01 ✓	50	yes		
02 ✓	50	NO		
07-716-01 ✓	50	NO		
New LCS	50	NO		
DUP 07-703-01	50	yes		
MS 07-703-01	50	yes		
MS 07-587-01	50	NO		

Analyst: Quatty Pope Date/Time: 07-24-12/0900

*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 49779 10(100)/100 = 10
DAILY DIL. 10(10)/50 = 2

SPIKE: STD 49779 10(100)/100 = 10
DAILY DIL. 5(10)/50 = 1

WATER (mg/L)
SOIL (mg/Kg)

☒ easy-dist method ☐ macro method

RGT 17380
RGT 17568

SAMPLE	VOLUME DISTILLED (mL)	CHLORINE PRESENT?	pH ADJUSTED 9.5 ± 0.2	COMMENTS
BLANK ✓	50	NO	yes	
LCS( ) ✓	50	NO		
07-735-01 ✓	50	NO		
-02 ✓	50	NO		
-03 ✓	80	NO		
-04 ✓	50	NO		
*07-737-01 ✓	10	NO		Valley Spray Tank
07-724-01 ✓	50	NO		
-02 ✓	50	NO		
-03 ✓	50	NO		
-04 ✓	50	NO		
Ref -05 ✓	50	NO		
MS -06 ✓	50	NO		
MSD -07 ✓	50	NO		
-08 ✓	50	NO		
07-732-01	50	NO		
DUP 07-724-08	50	NO	yes	
MS 07-732-01	50	NO	yes	

Analyst: Quantty Pupe Date/Time: 07-25-12/1415

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

* When sample was being pH adjusted there was a strong ammonia smell.

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0592	0.00		1:47:53 PM
DIL-1	RBL	0.000	0.0580	0.00		1:48:11 PM
DIL-1	RBL	0.000	0.0621	0.00		1:49:41 PM
DIL-1	Std-1	0.000	0.0012	0.00		1:49:59 PM
SR5-1	Std-2	0.030	0.0122	0.00		1:51:29 PM
SR5-2	Std-3	0.094	0.0277	0.00		1:51:47 PM
SR5-3	Std-4	0.600	0.1692	0.00		1:53:17 PM
SR5-4	Std-5	1.050	0.3012	0.00		1:53:35 PM
SR5-5	Std-6	2.100	0.5892	0.00		1:55:05 PM
ST-1	Std-7	3.000	0.8580	0.00		1:55:23 PM
1	ICV 1.5	1.437	0.4090	0.00		1:56:53 PM
2	WG404588-01 BLK	0.059	0.0176	0.00		1:57:11 PM
3	WG404588-02 LCS	1.713	0.4875	0.00		1:58:41 PM
4	L12070481-01	0.207	0.0597	0.00		1:58:59 PM
5	L12070481-02 MS	1.066	0.3038	0.00		2:00:29 PM
6	L12070481-03 MSD	0.966	0.2754	0.00		2:00:47 PM
7	L12070504-01	0.082	0.0243	0.00		2:02:18 PM
8	L12070504-05	0.393	0.1125	0.00	EPL	2:02:35 PM
9	L12070504-14	0.082	0.0242	0.00		2:04:06 PM
10	L12070504-15 (2)	0.080	0.0238	0.00		2:04:24 PM
ST-2	CCV (1.5 mg/L)	1.465	0.4170	97.68		2:05:54 PM
ST-3	CCB (0 mg/L)	0.067	0.0199	0.00		2:06:12 PM
11	L12070507-01	0.106	0.0312	0.00		2:07:42 PM
12	L12070507-02	0.093	0.0274	0.00		2:08:00 PM
13	L12070513-02	5.008	1.4230	0.00	><,LH	2:09:30 PM
14	L12070645-02	5.099	1.4487	0.00	EPL,><,LH	2:09:48 PM
15	L12070668-01 (20)	12.538	3.5610	0.00	EPL,><,LH	2:11:18 PM
16	L12070668-02 (200)	4.212	1.1969	0.00	><,LH	2:11:36 PM
17	L12070602-01	0.263	0.0756	0.00		2:13:06 PM
18	L12070602-02	0.089	0.0263	0.00		2:13:24 PM
19	L12070602-03	0.117	0.0343	0.00		2:14:54 PM
20	WG404588-04 DUP	5.126	1.4564	0.00	><,LH	2:15:12 PM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726005**

Plan Description : NH3-A-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-2	CCV (1.5 mg/L)	1.466	0.4172	97.72		2:16:42 PM
ST-3	CCB (0 mg/L)	0.078	0.0230	0.00		2:17:00 PM
21	WG404588-05 MS	5.727	1.6271	0.00	><,LH	2:18:30 PM
22	WG404589-01 BLK	0.037	0.0115	0.00		2:18:48 PM
23	WG404589-02 LCS	1.873	0.5328	0.00		2:20:18 PM
24	L12070611-01	0.081	0.0239	0.00		2:20:36 PM
25	L12070611-02	0.308	0.0883	0.00		2:22:06 PM
26	L12070639-01	0.099	0.0292	0.00		2:22:24 PM
27	L12070639-02	0.098	0.0289	0.00		2:23:54 PM
28	L12070639-03	0.071	0.0211	0.00		2:24:12 PM
29	L12070640-01	0.062	0.0187	0.00		2:25:42 PM
30	L12070640-02	0.050	0.0153	0.00		2:26:00 PM
ST-2	CCV (1.5 mg/L)	1.427	0.4062	95.14		2:27:30 PM
ST-3	CCB (0 mg/L)	0.089	0.0262	0.00		2:27:48 PM
31	L12070640-03	0.085	0.0252	0.00		2:29:18 PM
32	L12070587-01	9.559	2.7152	0.00	EPL,><,LH	2:29:36 PM
33	L12070587-02	10.631	3.0194	0.00	EPL,><,LH	2:31:06 PM
34	L12070587-03	11.618	3.2997	0.00	><,LH	2:31:24 PM
35	L12070587-04	9.609	2.7293	0.00	EPL,><,LH	2:32:54 PM
36	L12070587-05	7.103	2.0179	0.00	><,LH	2:33:12 PM
37	L12070587-06	6.314	1.7937	0.00	EPL,><,LH	2:34:42 PM
38	L12070673-01	0.086	0.0254	0.00		2:35:01 PM
39	L12070673-03	0.161	0.0466	0.00		2:36:31 PM
40	L12070703-01	0.391	0.1119	0.00		2:36:49 PM
ST-2	CCV (1.5 mg/L)	1.443	0.4106	96.17		2:38:19 PM
ST-3	CCB (0 mg/L)	0.090	0.0265	0.00		2:38:37 PM
41	L12070703-02	0.393	0.1127	0.00		2:40:07 PM
42	L12070716-01	0.150	0.0436	0.00		2:40:25 PM
43	NEW LCS	1.816	0.5166	0.00		2:41:55 PM
44	WG404589-04 DUP	0.349	0.1001	0.00		2:42:13 PM
45	WG404589-05 MS	1.131	0.3222	0.00		2:43:43 PM
46	WG404589-07 MS	10.551	2.9968	0.00	EPL,><,LH	2:44:01 PM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726005**

Plan Description : NH3-A-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
47	WG404591-01 BLK	0.079	0.0233	0.00		2:45:31 PM
48	WG404591-02 LCS	1.914	0.5444	0.00		2:45:49 PM
49	L12070735-01	0.951	0.2709	0.00		2:47:19 PM
50	L12070735-02	0.807	0.2300	0.00		2:47:37 PM
ST-2	CCV (1.5 mg/L)	1.461	0.4157	97.37		2:49:07 PM
ST-3	CCB (0 mg/L)	0.111	0.0324	0.00		2:49:25 PM
51	L12070735-03	0.558	0.1595	0.00		2:50:55 PM
52	L12070735-04	1.487	0.4231	0.00		2:51:13 PM
53	L12070737-01 (5)	12.640 X	3.5898	0.00	EPL,><,LH	2:52:43 PM
54	L12070724-01	5.134 X	1.4586	0.00	EPL,><,LH	2:53:01 PM
55	L12070724-02	2.106	0.5989	0.00		2:54:31 PM
56	L12070724-03	1.109	0.3158	0.00		2:54:49 PM
57	L12070724-04	0.374	0.1072	0.00		2:56:19 PM
58	L12070724-05	0.235	0.0677	0.00		2:56:37 PM
59	L12070724-06 MS	1.116	0.3178	0.00		2:58:07 PM
60	L12070724-07 MSD	1.074	0.3058	0.00		2:58:25 PM
ST-2	CCV (1.5 mg/L)	1.520	0.4327	101.36		2:59:55 PM
ST-3	CCB (0 mg/L)	0.125	0.0364	0.00		3:00:13 PM
61	L12070724-08	0.325	0.0933	0.00		3:01:43 PM
62	L12070732-01	0.225	0.0648	0.00		3:02:01 PM
63	WG404591-05 DUP	0.380	0.1090	0.00		3:03:31 PM
64	WG404591-06 MS	1.078	0.3070	0.00		3:03:49 PM
65	ID 65 LCS wg 404588-02	2.060	0.5860	0.00		3:05:19 PM
66	ID 66	1.849 X	0.5260	0.00		3:05:37 PM
67	ID 67	3.483 X	0.9899	0.00	><,LH	3:07:07 PM
68	ID 68	8.663 X	2.4607	0.00	><,LH	3:07:25 PM
ST-2	CCV (1.5 mg/L)	1.533	0.4363	102.21		3:08:55 PM
ST-3	CCB (0 mg/L)	0.145	0.0421	0.00		3:09:13 PM
13-[1/2]	L12070513-02	5.326	0.7571	0.00	LH	3:21:24 PM
14-[1/2]	L12070645-02	5.478	0.7787	0.00	LH	3:23:12 PM
ST-2	CCV (1.5 mg/L)	1.539	0.4380	102.61		3:23:12 PM
ST-3	CCB (0 mg/L)	0.016	0.0056	0.00		3:24:42 PM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726005**

Plan Description : NH3-A-DIH/7/26/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
15-[1/2]	L12070668-01 (20)	11.812 X	1.6779	0.00	><,LH	3:26:48 PM
16-[1/2]	L12070668-02 (200)	4.617	0.6565	0.00	LH	3:28:36 PM
20-[1/2]	WG404588-04 DUP	5.656	0.8039	0.00	LH	3:30:24 PM
21-[1/2]	WG404588-05 MS	6.097 on	0.8665	0.00	><,LH	3:32:12 PM
32-[1/2]	L12070587-01 (2)	5.216	0.7415	0.00	LH	3:34:00 PM
33-[1/2]	L12070587-02 (2)	6.042 X	0.8587	0.00	><,LH	3:35:48 PM
34-[1/2]	L12070587-03 (3)	4.697	0.6678	0.00	LH	3:37:36 PM
35-[1/2]	L12070587-04 (2)	5.098	0.7248	0.00	LH	3:39:24 PM
36-[1/2]	L12070587-05 (2)	3.857	0.5486	0.00	LH	3:41:12 PM
37-[1/2]	L12070587-06 (2)	3.592	0.5109	0.00	LH	3:43:00 PM
ST-2	CCV (1.5 mg/L)	1.571	0.4470	104.72		3:43:00 PM
ST-3	CCB (0 mg/L)	0.007	0.0029	0.00		3:44:30 PM
46-[1/2]	WG404589-07 MS (2)	5.977	0.8496	0.00	LH	3:46:36 PM
53-[1/2]	L12070737-01 (5)(3)	26.718 X	3.7941	0.00	><,LH	3:48:24 PM
54-[1/2]	L12070724-01	5.976	0.8494	0.00	LH	3:50:12 PM
67-[1/2]	ID 67	0.573 X	0.0823	0.00		3:52:00 PM
68-[1/2]	ID 68	2.086 X	0.2971	0.00		3:53:48 PM
ST-2	CCV (1.5 mg/L)	1.590	0.4524	105.99		3:53:48 PM
ST-3	CCB (0 mg/L)	0.008	0.0033	0.00		3:55:19 PM
15-[1/5]	L12070668-01 (20)(4)	11.934	0.6787	0.00	LH	4:07:29 PM
21-[1/5]	WG404588-05 MS	6.604 X	0.3760	0.00	LH	4:09:17 PM
ST-2	CCV (1.5 mg/L)	1.562	0.4444	104.11		4:09:17 PM
ST-3	CCB (0 mg/L)	0.019	0.0065	0.00		4:10:47 PM
33-[1/5]	L12070587-02 (2)	6.266	0.3568	0.00	LH	4:12:53 PM
53-[1/5]	L12070737-01 (5)(3)	66.844 X	3.7969	0.00	><,LH	4:14:41 PM
ST-2	CCV (1.5 mg/L)	1.709	0.4863	113.95		4:14:41 PM
ST-3	CCB (0 mg/L)	0.024	0.0077	0.00		4:16:11 PM
53-[1/10]	L12070737-01 (5)(3)	134.192 X	3.8112	0.00	><,LH	4:28:21 PM
ST-2	CCV (1.5 mg/L)	1.602	0.4558	106.79		4:28:21 PM
ST-3	CCB (0 mg/L)	0.036	0.0111	0.00		4:29:51 PM
53-[1/25]	L12070737-01 (5)(3)(20)	46.146	0.5251	0.00	LH	4:42:02 PM
ST-2	CCV (1.5 mg/L)	1.589	0.4521	105.92		4:42:02 PM

Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726005**

Plan Description : NH3-A-DIH/7/26/2012

MICROBAC (OVD)
SMARTCHEM REPORT (VER3.0.53)
NH3, TKN, NO3NO2 (MG/L N)
ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-3	**CCB (0 mg/L)**	**0.028**	**0.0089**	**0.00**		**4:43:32 PM**

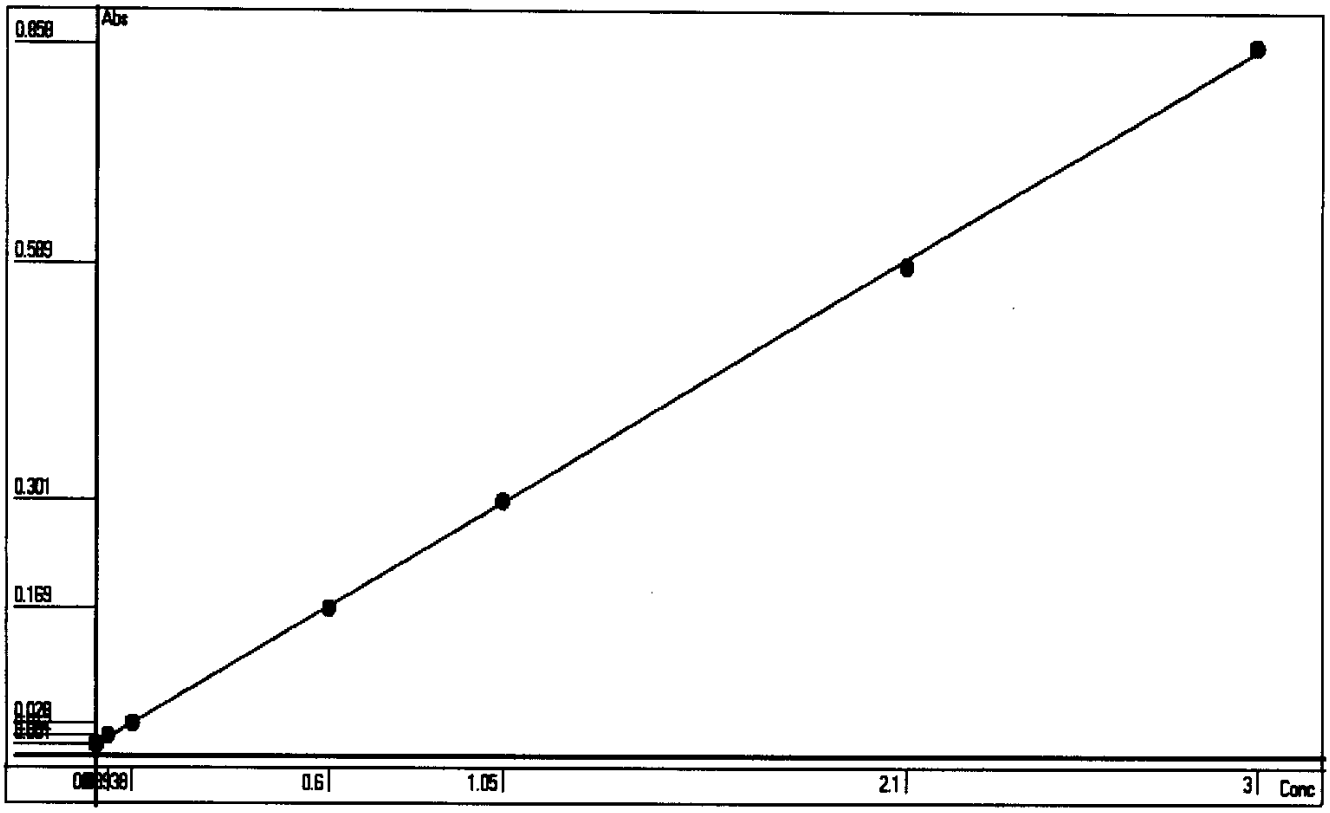
Report Date :07/26/2012 **Run Date :7/26/2012** **Operator : WESTCO** **Plan # :20120726005**

Plan Description : NH3-A-DIH/7/26/2012

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20120726005 Description : [NH3-A-DIH/7/26/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0012	0	0.0007	0.07
2	0.0122	0.03	0.0395	31.67
3	0.0277	0.0938	0.0941	0.32
4	0.1692	0.6	0.5924	-1.27
5	0.3012	1.05	1.0573	0.70
6	0.5892	2.1	2.0716	-1.35
7	0.8580	3	3.0183	0.61

Conc= +3.5219*Abso -0.0035 R^2=0.9998

RBL
0.0586
0

Report Date 7/26/2012 Run Date 7/26/2012

2.2.8 Nitrate Data

2.2.8.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Analysis: Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

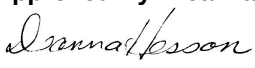
Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 50966
Approved By: Deanna Hesson



Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL21-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 11:06	**Dilution:**	4	**File ID:**	SC12072712072401
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.75		0.200	0.100

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL22-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 12:45	**Dilution:**	4	**File ID:**	SC12072712073301
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.34		0.200	0.100

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL25-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404265	**Analyst:**	DIH	**Run Date:**	07/24/2012 12:37
Collect Date:	07/19/2012 15:40	**Dilution:**	4	**File ID:**	SC12072712074701
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		4.81		0.200	0.100

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: 24-JUL-2012
Analyst: DIH
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404265

Calibration/Linearity	7/24/2012
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
28-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:21:03

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG404265

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/24/2012	5.1	28		07/24/12	5.1	28	
MPL22-0712-1	02	07/19/12					07/24/2012	5	28		07/24/12	5	28	
MPL25-0712-1	03	07/19/12					07/24/2012	4.9	28		07/24/12	4.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2522266
Report generated 07/27/2012 15:30

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: SC12072712043001
Prep Date: 07/24/12 12:37
Analyzed Date: 07/24/12 12:37
Analyst: DIH

Work Group: WG404265
Blank Sample ID: WG404265-01
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
DUP	WG404265-05	SC12072712044901	07/24/12 12:37	
MPL21-0712-1	L12070640-01	SC12072712072401	07/24/12 12:37	
LCS2	WG404265-03	SC12072712044201	07/24/12 12:37	
LCS	WG404265-02	SC12072712043701	07/24/12 12:37	
MPL25-0712-1	L12070640-03	SC12072712074701	07/24/12 12:37	
MPL22-0712-1	L12070640-02	SC12072712073301	07/24/12 12:37	

Report Name: BLANK_SUMMARY
PDF File ID: 2522267
Report generated 07/27/2012 15:30

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/24/12 12:37 Sample ID: WG404265-01
Instrument ID: SMARTCHEM Run Date: 07/24/12 12:37 Prep Method: 353.2
File ID: SC12072712043001 Analyst: DIH Method: 353.2
Workgroup (AAB#): WG404265 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-23-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Nitrate-Nitrite (as N)	0.0250	0.0500	0.0250	1	U

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

Report Name: BLANK
PDF ID: 2522269
27-JUL-2012 15:30

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: DIH Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG404265 Units: mg/L
QC Key: DOD4 Lot #: STD52632

Sample ID: WG404265-02 LCS File ID: SC12072712043701 Run Date: 07/24/2012 12:37
Sample ID: WG404265-03 LCS2 File ID: SC12072712044201 Run Date: 07/24/2012 12:37

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	0.925	92.5	1.00	0.941	94.1	1.71	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2522270
Report generated: 07/27/2012 15:30

2.2.8.3 Raw Data

SMARTCHEM RUN LOG

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
- [x] WBL Run
- [x] Reagents Full
- [x] Dilution H_2O Full
- [x] Waste Container Check

Syringe filter lot # 144403

1) **Workgroup** _____
Plan # 20120724003
2) **Workgroup** _____
Plan # _____
3) **Workgroup** _____
Plan # _____

	Analyte	1	2	3
		NO3		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 1.5			
1-2	BLK			
1-3	LCS			
1-4	LCSDUP			
1-5	NO2			
1-6	07-602-01	1/5		color
1-7	02	1/5		↓
1-8	03	1/5		↓
1-9	07-631-02			
1-10	03			
1-11	07-639-01	1/4		
1-12	02	1/4		
1-13	03	1/4		
1-14	07-640-01	1/4		
1-15	02	1/4		
1-16	03	1/4		
1-17	07-587-01			
1-18	02			
1-19	03			
1-20	04			
1-21	05			
1-22	06			
2-1	07-673-01	1/4		
2-2	03	1/4		
2-3	DUP631-02			

Position	Analyte	1	2	3
2-4	MS ~~67303~~ 631-03			
2-5	MS 631-02			
2-6	07-716-01	1/4		
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
- * LCS/LCS Dup all parameters
- *MS(10% sample): NO3, TKN, NH3

DCN#91688

SMARTCHEM RUN LOG

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-Cl⁻ E
- [ ] Sulfate — EPA 375.4/SM 426C(15th)
- [ ] Alkalinity — EPA 310.2
- [x] Nitrate-Nitrite — EPA 353.2/SM 4500-NO3 F
- [ ] Ammonia — EPA 350.1/SM 4500-NH3 B
- [ ] TKN — EPA 351.2
- [ ] Phos — EPA 365.4

Analyte	NO3		Reagents
SOP & Revision	K 3532 R18		R6+ 17254
Curve Stock (SC made)	std 52843		R6+ 17494
Curve ID (user made) NO2	std 52845		
ICV	std 52842		
CCV	std 52844		
LCS	std 52750		
MS	std 52536 Dilution 0.1/5(25)	=0.5	

Comments: _____

Analyst: Deana Hassan Date: 7/24/12

DCN#91688

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0137	0.00		12:24:11 PM
DIL-1	RBL	0.000	0.0185	0.00		12:25:23 PM
DIL-1	RBL	0.000	0.0163	0.00		12:26:35 PM
DIL-1	RBL	0.000	0.0173	0.00		12:27:47 PM
DIL-1	Std-1	0.000	-0.0016	0.00	INV	12:28:59 PM
SR5-1	Std-2	0.040	0.0162	0.00		12:30:11 PM
SR5-2	Std-3	0.100	0.0387	0.00		12:31:23 PM
SR5-3	Std-4	0.500	0.2092	0.00		12:32:35 PM
SR5-4	Std-5	1.000	0.4069	0.00		12:33:47 PM
ST-1	Std-6	2.000	0.8047	0.00		12:34:59 PM
1	ICV 1.5	1.345	0.5436	0.00		12:36:11 PM
2	WG404265-01 BLK	0.003	0.0024	0.00		12:37:23 PM
3	WG404265-02 LCS	0.925	0.3741	0.00		12:38:35 PM
4	WG404265-03 LCSDUP	0.941	0.3805	0.00		12:39:47 PM
5	NO2	0.956	0.3864	0.00		12:40:59 PM
6	L12070602-01 (5)	0.014	0.0066	0.00		12:42:11 PM
7	L12070602-02 (5)	0.006	0.0035	0.00		12:43:23 PM
8	L12070602-03 (5)	0.005	0.0029	0.00		12:44:35 PM
9	L12070631-02	0.002	0.0020	0.00		12:45:47 PM
10	L12070631-03	0.005	0.0031	0.00		12:46:59 PM
ST-2	CCV (1 mg/L)	0.966	0.3905	96.58		12:48:11 PM
ST-3	CCB (0 mg/L)	0.002	0.0019	0.00		12:49:24 PM
11	L12070639-01 (4)	0.987	0.3989	0.00		12:50:36 PM
12	L12070639-02 (4)	0.682	0.2762	0.00		12:51:48 PM
13	L12070639-03 (4)	0.775	0.3135	0.00		12:53:00 PM
14	L12070640-01 (4)	0.437	0.1772	0.00		12:54:12 PM
15	L12070640-02 (4)	0.334	0.1358	0.00		12:55:24 PM
16	L12070640-03 (4)	1.203	0.4862	0.00		12:56:36 PM
17	L12070587-01	0.115	0.0474	0.00	0.336	12:57:48 PM
18	L12070587-02	0.222	0.0906	0.00	0.319	12:59:00 PM
19	L12070587-03	0.078	0.0323	0.00	0.327	1:00:12 PM
20	L12070587-04	0.198	0.0809	0.00	0.309	1:01:24 PM

Report Date :07/24/2012 **Run Date :7/24/2012** **Operator : WESTCO** **Plan # :20120724003**

Plan Description : NO3-C-DIH/7/24/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag		Analysis Time
ST-2	CCV (1 mg/L)	0.976	0.3948	97.64			1:02:36 PM
ST-3	CCB (0 mg/L)	-0.004	-0.0005	0.00	INV,LL		1:03:48 PM
21	L12070587-05	0.146	0.0599	0.00		0.3	1:05:00 PM
22	L12070587-06	0.088	0.0364	0.00		0.7	1:06:12 PM
23	L12070673-01 (4)	0.547	0.2214	0.00			1:07:24 PM
24	L12070673-03 (4)	1.853	0.7481	0.00			1:08:36 PM
25	DUP ~~673-01~~ 631-02	0.043	0.0184	0.00			1:09:48 PM
26	MS ~~673-01~~ 631-03	0.459	0.1862	0.00			1:11:00 PM
27	MS 631-02	0.477	0.1933	0.00			1:12:12 PM
28	ID 28 07-716-01 (4)	1.869	0.7546	0.00			1:13:24 PM
29	ID 29	0.003X	0.0022	0.00			1:14:36 PM
30	ID 30	-0.003X	-0.0001	0.00	INV,LL		1:15:48 PM
ST-2	CCV (1 mg/L)	0.914	0.3696	91.39			1:17:00 PM
ST-3	CCB (0 mg/L)	0.003	0.0022	0.00			1:18:12 PM

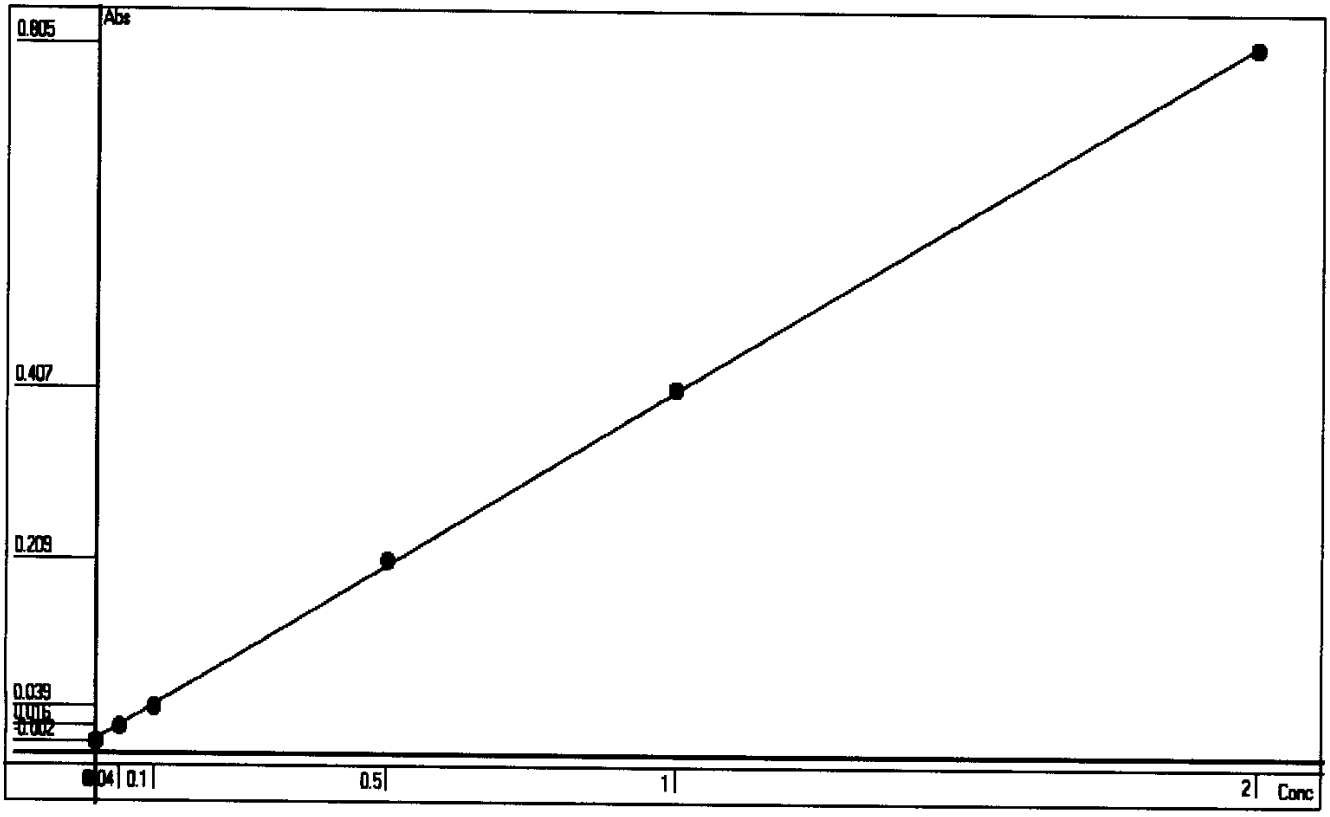
Report Date :07/24/2012 **Run Date :7/24/2012** **Operator : WESTCO** **Plan # :20120724003**

Plan Description : NO3-C-DIH/7/24/2012

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20120724003 Description : [NO3-C-DIH/7/24/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0016	0	-0.0066	-0.66
2	0.0162	0.04	0.0376	-6.00
3	0.0387	0.1	0.0934	-6.60
4	0.2092	0.5	0.5162	3.24
5	0.4069	1	1.0064	0.64
6	0.8047	2	1.9928	-0.36

Conc= +2.4797*Abso -0.0026 R^2=0.9999

RBL
0.0168
0

Report Date 7/24/2012 Run Date 7/24/2012

2.2.9 Orthophosphate Data

2.2.9.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis EPA 365.2/SM4500-P E (Orthophosphate)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 50967
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL21-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	1V.1207201155-08
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 #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL22-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	1V.1207201155-10
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.

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL25-0712-1	**Prep Method:**	SM4500-P-E-20th	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-P-E-20th	**Cal Date:**	06/22/2012 08:14
Workgroup #:	WG404099	**Analyst:**	HJR	**Run Date:**	07/20/2012 11:55
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	1V.1207201155-09
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

2.2.9.2 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: 20-JUL-2012
Analyst: HJR
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404099

Calibration/Linearity	3/21/12
Second Source Check	
ICV/CCV (std)	X
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	HJR
Secondary Reviewer	DIH
Comments	

Primary Reviewer: 30-JUL-2012

Secondary Reviewer: 31-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-31-2012 08:20:17

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-20th

AAB#: WG404099

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/20/2012	1	2		07/20/12	1	2	
MPL22-0712-1	02	07/19/12					07/20/2012	1	2		07/20/12	1	2	
MPL25-0712-1	03	07/19/12					07/20/2012	.8	2		07/20/12	.8	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2526365
Report generated 07/31/2012 07:27

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: 1V.1207201155-02
Prep Date: 07/20/12 11:55
Analyzed Date: 07/20/12 11:55
Analyst: HJR

Work Group: WG404099
Blank Sample ID: WG404099-01
Instrument ID: UV-120-1V
Method: SM4500-P-E-20th

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404099-02	1V.1207201155-03	07/20/12 11:55	
LCS2	WG404099-03	1V.1207201155-04	07/20/12 11:55	
MPL21-0712-1	L12070640-01	1V.1207201155-08	07/20/12 11:55	
MPL25-0712-1	L12070640-03	1V.1207201155-09	07/20/12 11:55	
MPL22-0712-1	L12070640-02	1V.1207201155-10	07/20/12 11:55	
DUP	WG404099-05	1V.1207201155-11	07/20/12 11:55	

Report Name: BLANK_SUMMARY
PDF File ID: 2526366
Report generated 07/31/2012 07:27

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/20/12 11:55 Sample ID: WG404099-01
Instrument ID: UV-120-1V Run Date: 07/20/12 11:55 Prep Method: SM4500-P-E-20th
File ID: 1V.1207201155-02 Analyst: HJR Method: SM4500-P-E-20th
Workgroup (AAB#): WG404099 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Orthophosphate	0.0250	0.0500	0.0250	1	U

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

Report Name:BLANK
PDF ID: 2526367
31-JUL-2012 07:27

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: HJR Prep Method: SM4500-P-E-20th
Instrument ID: UV-120-1V Matrix: Water Method: SM4500-P-E-20th
Workgroup (AAB#): WG404099 Units: mg/L
QC Key: DOD4 Lot #: STD52909

Sample ID: WG404099-02 LCS File ID: 1V.1207201155-03 Run Date: 07/20/2012 11:55
Sample ID: WG404099-03 LCS2 File ID: 1V.1207201155-04 Run Date: 07/20/2012 11:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	0.980	98.0	1.00	0.993	99.3	1.25	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2526368
Report generated: 07/31/2012 07:28

2.2.9.3 Raw Data

WG401391

Curves

Parameter: ~~UV-120-1V-404~~

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: Std 49733

Concentration: 1000mg/L

Recipe for preparation of curve standards found in:

SOP B3653 Revision: 13 Page: 9

Second Source Stock: Std 52400 (concentration: 10mg/L

Daily Preparation: 5(10)50

concentration = 1.0 mg/L

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
1.0	50	1cm	880	0.655
0.7	50	1cm	880	0.460
0.5	50	1cm	880	0.325
0.2	50	1cm	880	0.140
0.1	50	1cm	880	0.070
0.05	50	1cm	880	0.035
0.00	50	1cm	880	0.00
Second Source (1.0)	50	1cm	880	0.660

Analyst: [signature] Date/Time: 6/22/12 0814

DCN#91326

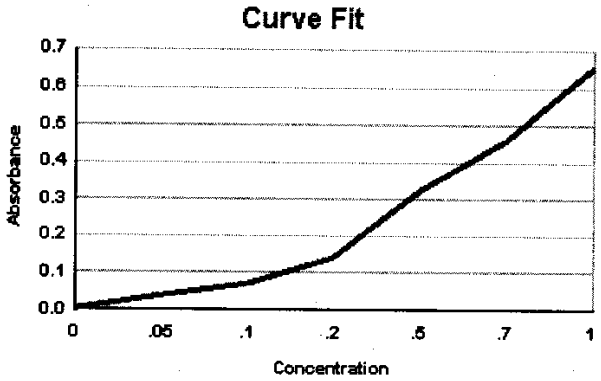
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG401391
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 06/22/2012

Analyte: ORTHOPHOSPHATE
Number of Points: 7
Slope: 0.651282
Y-Intercept: 0.00346154
Coef. Of Correlation (R^2): 0.999804
Coef. Of Correlation (R): 0.999902

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00	0.00	0.00	0.00346154
0.0500	0.0350	0.00250	0.00175	0.0360256
0.100	0.0700	0.0100	0.00700	0.0685897
0.200	0.140	0.0400	0.0280	0.133718
0.500	0.325	0.250	0.163	0.329103
0.700	0.460	0.490	0.322	0.459359
1.00	0.655	1.00	0.655	0.654744



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 06/22/2012 09:48

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG401391
File ID: 1V.1206220814-08
CCV ID: WG401391-08
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 06/22/2012
Run Time: 08:14
Analyst: HJR
Cal ID: UV-120 - 22-JUN-12 08:14:07

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	1	1.01	0.660	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 06/22/2012 09:48

[redacted]

WG404 099

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 13

Color Reagent Chemicals
RGT 17484
RGT 17074
COR 11278
RGT 17320

CCV: Std 52908
Daily Dilution: 5(5)/50
Daily Dilution: 0.5
Spectrophotometer: UV-120-14

LCS: Std 52909
Daily Dilution: 5(10)/50
Daily Dilution: 1.0
Curve ID: 3/21/12

Spike: Std 52909
Daily Dilution: 2(10)/50
Daily Dilution: 0.4

SAMPLE	VOLUME	pH 7 ± 0.2	DILUTION	ABSORBANCE @ 880 nm
CCV: 0.5 mg/L	50	✓		0.326
BLANK	50	✓		0.001
LCS: 1.0 ppm	50	✓		0.642
LCSDUP: 1.0 ppm	50	✓		0.650
1200 07-0639-01	50	✓		0.002
1502 -02	50	✓		0.003
1723 -03	50	✓		0.018
1604 07-0640-01	50	✓		0.013
1640 -03	50	✓		0.009
1245 -02	50	✓		0.007
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
	50			
1723 DUP: 07-0639-03	50	✓		0.017
1723 MS: (0.4) 07-0639-03	50	✓		0.259
MSD: ( )	50			
CCV: (0.5)	50	✓		0.325

ANALYST: Holly R Ford DATE / TIME: 7/20/12 1155

DCN#91650

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG404099 **Analyst:** HJR
Analyte: ORTHOPHOSPHATE **Date:** 07/20/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG404099-01	50	50	0.00100	0.6513	0.003462	-0.0037795	-0.0037795	1	mg/L
WG404099-02	50	50	0.642	0.6513	0.003462	0.98043	0.98043	1	mg/L
WG404099-03	50	50	0.650	0.6513	0.003462	0.99272	0.99272	1	mg/L
L12070639-01	50	50	0.00200	0.6513	0.003462	-0.0022441	ND	1	mg/L
L12070639-02	50	50	0.00300	0.6513	0.003462	-0.00070866	ND	1	mg/L
L12070639-03	50	50	0.0180	0.6513	0.003462	0.022323	ND	1	mg/L
WG404099-04	50	50	0.0180	0.6513	0.003462	0.022323	0.022323	1	mg/L
L12070640-01	50	50	0.0130	0.6513	0.003462	0.014646	ND	1	mg/L
L12070640-03	50	50	0.00900	0.6513	0.003462	0.0085039	ND	1	mg/L
L12070640-02	50	50	0.00700	0.6513	0.003462	0.0054331	ND	1	mg/L
WG404099-05	50	50	0.0170	0.6513	0.003462	0.020787	0.020787	1	mg/L
WG404099-06	50	50	0.259	0.6513	0.003462	0.39236	0.39236	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/30/2012 07:53

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404878
File ID: 1V.1207201155-01
CCV ID: WG404878-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 11:55
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.495	0.652	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/30/2012 07:52

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404878
File ID: 1V.1207201155-13
CCV ID: WG404878-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 11:55
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.494	0.650	1.2	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/30/2012 07:52

[redacted]

2.2.10 Total Dissolved Solids Data

2.2.10.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Erin R Porter

METHOD

Analysis EPA 160.1/SM2540 C(Total Dissolved Solids)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: 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: 50971
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #: L12070640-01
Client ID: MPL21-0712-1
Matrix: Water
Workgroup #: WG404328
Collect Date: 07/19/2012 11:06
Sample Tag:

PrePrep Method: N/A
Prep Method: 160.1/SM2540C
Analytical Method: 160.1
Analyst: ERP
Dilution: 1
Units: mg/L

Instrument: OVEN
Prep Date: N/A
Cal Date:
Run Date: 07/24/2012 16:10
File ID: EN.1207241610-22

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		202		20.0	10.0

Sample #: L12070640-02
Client ID: MPL22-0712-1
Matrix: Water
Workgroup #: WG404328
Collect Date: 07/19/2012 12:45
Sample Tag:

PrePrep Method: N/A
Prep Method: 160.1/SM2540C
Analytical Method: 160.1
Analyst: ERP
Dilution: 1
Units: mg/L

Instrument: OVEN
Prep Date: N/A
Cal Date:
Run Date: 07/24/2012 16:10
File ID: EN.1207241610-23

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		130		20.0	10.0

Sample #: L12070640-03
Client ID: MPL25-0712-1
Matrix: Water
Workgroup #: WG404493
Collect Date: 07/19/2012 15:40
Sample Tag:

PrePrep Method: N/A
Prep Method: 160.1/SM2540C
Analytical Method: 160.1
Analyst: ERP
Dilution: 1
Units: mg/L

Instrument: OVEN
Prep Date: N/A
Cal Date:
Run Date: 07/25/2012 14:30
File ID: EN.1207251430-04

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		328		20.0	10.0

2.2.10.2 QC Summary Data

Example Total Dissolved Solids Calculations

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 24-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404328

Calibration/Linearity	
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	
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	ERP
Secondary Reviewer	DIH
Comments	

Primary Reviewer: 26-JUL-2012

Secondary Reviewer: 27-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-27-2012 17:32:20

Microbac Laboratories Inc.

Data Checklist

Date: 25-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404493

Calibration/Linearity	
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	
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	ERP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
27-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-27-2012 17:23:51

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG404328

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/24/2012	5.2	7		07/24/12	5.2	7	
MPL22-0712-1	02	07/19/12					07/24/2012	5.1	7		07/24/12	5.1	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2519996
Report generated 07/27/2012 16:49

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG404493

Login Number: L12070640

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
MPL25-0712-1	03	07/19/12					07/25/2012	6	7		07/25/12	6	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2519996
Report generated 07/27/2012 16:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: EN.1207241610-01
Prep Date: 07/24/12 16:10
Analyzed Date: 07/24/12 16:10
Analyst: ERP

Work Group: WG404328
Blank Sample ID: WG404328-01
Instrument ID: OVEN
Method: 160.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404328-02	EN.1207241610-02	07/24/12 16:10	
LCS2	WG404328-03	EN.1207241610-03	07/24/12 16:10	
MPL21-0712-1	L12070640-01	EN.1207241610-22	07/24/12 16:10	
MPL22-0712-1	L12070640-02	EN.1207241610-23	07/24/12 16:10	
DUP	WG404328-05	EN.1207241610-24	07/24/12 16:10	
DUP	WG404328-07	EN.1207241610-25	07/24/12 16:10	

Report Name: BLANK_SUMMARY
PDF File ID: 2519998
Report generated 07/27/2012 16:49

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: EN.1207251430-01
Prep Date: 07/25/12 14:30
Analyzed Date: 07/25/12 14:30
Analyst: ERP

Work Group: WG404493
Blank Sample ID: WG404493-01
Instrument ID: OVEN
Method: 160.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404493-02	EN.1207251430-02	07/25/12 14:30	
LCS2	WG404493-03	EN.1207251430-03	07/25/12 14:30	
MPL25-0712-1	L12070640-03	EN.1207251430-04	07/25/12 14:30	
DUP	WG404493-05	EN.1207251430-24	07/25/12 14:30	
DUP	WG404493-07	EN.1207251430-25	07/25/12 14:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2519998
Report generated 07/27/2012 16:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/24/12 16:10 Sample ID: WG404328-01
Instrument ID: OVEN Run Date: 07/24/12 16:10 Prep Method: 160.1/SM2540C
File ID: EN.1207241610-01 Analyst: ERP Method: 160.1
Workgroup (AAB#): WG404328 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: 2519999
27-JUL-2012 16:49

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/25/12 14:30 Sample ID: WG404493-01
Instrument ID: OVEN Run Date: 07/25/12 14:30 Prep Method: 160.1/SM2540C
File ID: EN.1207251430-01 Analyst: ERP Method: 160.1
Workgroup (AAB#): WG404493 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: 2519999
27-JUL-2012 16:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: ERP Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG404328 Units: mg/L
QC Key: DOD4 Lot #: STD52847

Sample ID: WG404328-02 LCS File ID: EN.1207241610-02 Run Date: 07/24/2012 16:10
Sample ID: WG404328-03 LCS2 File ID: EN.1207241610-03 Run Date: 07/24/2012 16:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	458	91.6	500	468	93.6	2.16	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2520000
Report generated: 07/27/2012 16:49

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: ERP Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG404493 Units: mg/L
QC Key: DOD4 Lot #: STD52847

Sample ID: WG404493-02 LCS File ID: EN.1207251430-02 Run Date: 07/25/2012 14:30
Sample ID: WG404493-03 LCS2 File ID: EN.1207251430-03 Run Date: 07/25/2012 14:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	480	96.0	500	494	98.8	2.87	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2520000
Report generated: 07/27/2012 16:49

2.2.10.3 Raw Data

TOTAL DISSOLVED SOLIDS

SOP K1601 Revision #: _____
☐ EPA 160.1/ SM2540C
LCS: STD52847
Daily Dilution: _____

Oven: TDS1 MISC1
Balance: AND GR-202 / Other
Matrix Spike: _____
Daily Dilution: _____
Filter Lot #: 64798 180 720 180 105

On Temp: 103 150

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	P8	100				
LCS: _____mg/L	L7	50				
LCSDUP: _____mg/L	D3	50				
7-534-11	K7	50				
7-549-1	B	50				
7-550-1	P5	50				
2	P3	50				
7-551-1	10	50				
7-552-1	C7	50				
7-553-1	J1	50				
7-554-1	4X	50				
7-555-1	C3	50				
7-556-1	8X	50				
7-557-1	V	50				
7-639-1	13	50				
2	C9	50				
3	C6	50				
7-583-1	15	50				
7-599-1	C11	50				
7-630-1	C2	25				
7-636-1	4	50				
7-640-1	12A	50				
2	112X	50				
DUP: 640-1	117	50				
DUP: 640-2	Sm	50				

Off Temp: 103 150 180 120 180 1855

ANALYST: [signature]

DATE/TIME: (on) 7-24-12 1500

DATE/TIME: (off)

DATE/TIME: (off)

DATE/TIME: (off)

* Duplicate required on 10% of samples

DCN#91698

TOTAL DISSOLVED SOLIDS

Oven: TDS1 MISC1

SOP K1601 Revision #: _____

☐ EPA 160.1/ SM2540C

LCS: STDS2847

Daily Dilution: _____

Balance: AND GR-202 / Other

Matrix Spike: _____

Daily Dilution: _____

Filter Lot #: 604798

On Temp: 103 1630 180 0730 179 1700

	SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
TOSS	BLANK	K8	150	73.4517			
	LCS: _____mg/L	F	50	70.0816			
	LCSDUP: _____mg/L	N	50	72.4198			
	7-640-3	K5	50	79.5426			
	7-643-~~2~~	K6	50	81.2609			
	– 4	B4	50	66.9617			
	6	Q	50	64.2157			
	8	B7	50	63.6266			
	10	L	50	66.0215			
	12	R	50	71.2515			
	7-647-1	L14	50	77.7483			
	7-648-1	P1	50	78.8402			
	7-623-1	K4	50	82.2002			
	3	X	50	76.8847			
	~~7-6~~ 7-716-1	W2	50	77.9615			
	~~7-775~~ 775-2	N1	50	51.5742			
	4	TA	50	48.9300			
	6	N2	50	48.7772			
	8	N3	50	55.3198			
	10	T	50	60.0550			
	12	19	50	53.0614			
TOSS	AFC Tank	11	10	20.2345	7-775-1		
TOSS	EQUAL	12	10	21.8929	3		
	DUP: ~~7-640-3~~	F4	50	59.9086			
TOSS	DUP: ~~EQUAL~~	13	10	21.9391	7-775-3		

Off Temp: 103 0730 179 1700

ANALYST: Geo Pr

DATE/TIME: (on) 7-25-12 1630

DATE/TIME: (off) _____

DATE/TIME: (off) _____

DATE/TIME: (off) _____

* Duplicate required on 10% of samples

DCN#91722

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG404328
Analyst: ERP
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD52847
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG404328-01	P8	100	74.9763	74.9762	74.9762		-1.000	-1.000	mg/L
WG404328-02	L17	50	77.9711	77.994	77.994		458.0	458.0	mg/L
WG404328-03	D3	50	80.9341	80.9575	80.9575		468.0	468.0	mg/L
L12070534-11	K7	50	76.4459	76.4459	76.446		2.000	ND	mg/L
L12070549-01	B	50	73.7689	73.8086	73.8087		796.0	796.0	mg/L
L12070550-01	P5	50	75.5516	75.5636	75.5634		236.0	236.0	mg/L
L12070550-02	P3	50	75.3203	75.3481	75.3482		558.0	558.0	mg/L
L12070551-01	10	50	54.1191	54.1314	54.1319		256.0	256.0	mg/L
L12070552-01	C7	50	64.8546	64.8688	64.869		288.0	288.0	mg/L
L12070553-01	J1	50	57.0219	57.0419	57.0422		406.0	406.0	mg/L
L12070554-01	4X	50	50.6849	50.6984	50.6987		276.0	276.0	mg/L
L12070555-01	C3	50	65.4769	65.4901	65.49		262.0	262.0	mg/L
L12070556-01	8X	50	55.4975	55.5122	55.5123		296.0	296.0	mg/L
L12070557-01	V	50	51.9567	51.9665	51.967		206.0	206.0	mg/L
L12070639-01	13	50	56.5429	56.556	56.5562		266.0	266.0	mg/L
L12070639-02	C9	50	60.7758	60.7858	60.7863		210.0	210.0	mg/L
L12070639-03	C5	50	64.1585	64.1698	64.1699		228.0	228.0	mg/L
L12070583-01	15	50	50.741	50.8071	50.8072		1324	1324	mg/L
L12070599-01	C11	50	68.8782	69.0579	69.0575		3586	3586	mg/L
L12070630-01	C2	25	66.5407	66.6241	66.624		3332	3332	mg/L
L12070636-01	U	50	57.2771	57.4179	57.418		2818	2818	mg/L
L12070640-01	12A	50	53.2123	53.2228	53.2224		202.0	202.0	mg/L
WG404328-04	12A	50	53.2123	53.2228	53.2224		202.0	202.0	mg/L
L12070640-02	112X	50	52.2267	52.2335	52.2332		130.0	130.0	mg/L
WG404328-06	112X	50	52.2267	52.2335	52.2332		130.0	130.0	mg/L
WG404328-05	11T	50	51.08	51.0907	51.0908		216.0	216.0	mg/L
WG404328-07	SM	50	45.7155	45.7227	45.7223		136.0	136.0	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/24/2012 16:10
Date/Time (off): 07/25/2012 13:00
Date/Time (off): 07/25/2012 15:24
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2513577
Report generated: 07/25/2012 15:32

Microbac

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG404493
Analyst: ERP
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD52847
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG404493-01	K8	100	73.4517	73.4517	73.4517		0	0	mg/L
WG404493-02	F	50	70.0816	70.1058	70.1056		480.0	480.0	mg/L
WG404493-03	N	50	72.4198	72.4446	72.4445		494.0	494.0	mg/L
L12070640-03	K5	50	79.5426	79.5595	79.559		328.0	328.0	mg/L
WG404493-04	K5	50	79.5426	79.5595	79.559		328.0	328.0	mg/L
L12070643-02	K6	50	81.2609	81.3931	81.3932		2646	2646	mg/L
L12070643-04	B4	50	66.9617	67.0859	67.0854		2474	2474	mg/L
L12070643-06	Q	50	64.2157	64.3424	64.3424		2534	2534	mg/L
L12070643-08	B7	50	64.6266	64.7578	64.7579		2626	2626	mg/L
L12070643-10	L	50	66.0215	66.1528	66.1528		2626	2626	mg/L
L12070643-12	R	50	71.2515	71.3815	71.3811		2592	2592	mg/L
L12070647-01	L14	50	77.7423	77.7592	77.7595		344.0	344.0	mg/L
L12070648-01	P1	50	78.8402	78.8638	78.8634		464.0	464.0	mg/L
L12070673-01	K4	50	82.2002	82.2122	82.2117		230.0	230.0	mg/L
L12070673-03	X	50	76.8847	76.908	76.9077		460.0	460.0	mg/L
L12070716-01	W2	50	77.9615	77.9926	77.9921		612.0	612.0	mg/L
L12070725-02	N1	50	51.5742	51.6967	51.6964		2444	2444	mg/L
L12070725-04	TA	50	48.93	49.0514	49.0519		2438	2438	mg/L
L12070725-06	N2	50	48.7772	48.9061	48.9061		2578	2578	mg/L
L12070725-08	N3	50	55.3198	55.446	55.4463		2530	2530	mg/L
L12070725-10	T	50	60.055	60.1815	60.1817		2534	2534	mg/L
L12070725-12	19	50	53.0614	53.1911	53.1911		2594	2594	mg/L
L12070775-01	11	10	20.2345	20.3524	20.3519		11740	11740	mg/L
L12070775-03	12	10	21.8929	22.0464	22.0459		15300	15300	mg/L
WG404493-06	12	10	21.8929	22.0464	22.0459		15300	15300	mg/L
WG404493-05	F4	50	59.9086	59.9243	59.9242		312.0	312.0	mg/L
WG404493-07	13	10	21.9391	22.0907	22.0903		15120	15120	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/25/2012 14:30
Date/Time (off): 07/26/2012 13:05
Date/Time (off): 07/26/2012 16:07
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2518815
Report generated: 07/26/2012 16:18

Microbac

2.2.11 Total Organic Carbon Data

2.2.11.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)
Soil: Lloyd-Khan Methodology

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 50969
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL21-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 15:46
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	TC07252012.023
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.960	J	1.00	0.500

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL22-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 15:58
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	TC07252012.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.799	J	1.00	0.500

J	Estimated value ; the analyte concentration was less than the LOQ.

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL25-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404426	**Analyst:**	DIH	**Run Date:**	07/25/2012 16:10
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	TC07252012.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.03		1.00	0.500

2.2.11.2 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: 25-JUL-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404426 WG404427

Calibration/Linearity	12/6/2011
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
28-JUL-2012

Secondary Reviewer:
28-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-28-2012 09:18:56

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG404426

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/25/2012	6.2	28		07/25/12	6.2	28	
MPL22-0712-1	02	07/19/12					07/25/2012	6.1	28		07/25/12	6.1	28	
MPL25-0712-1	03	07/19/12					07/25/2012	6	28		07/25/12	6	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2522840
Report generated 07/27/2012 17:03

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: TC07252012.003
Prep Date: 07/25/12 11:34
Analyzed Date: 07/25/12 11:34
Analyst: DIH

Work Group: WG404426
Blank Sample ID: WG404426-01
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	WG404426-02	TC07252012.004	07/25/12 11:46	01
LCS2	WG404426-03	TC07252012.005	07/25/12 11:58	01
MPL21-0712-1	L12070640-01	TC07252012.023	07/25/12 15:46	01
MPL22-0712-1	L12070640-02	TC07252012.024	07/25/12 15:58	01
MPL25-0712-1	L12070640-03	TC07252012.025	07/25/12 16:10	01
DUP	WG404426-05	TC07252012.030	07/25/12 17:08	01

Report Name: BLANK_SUMMARY
PDF File ID: 2522841
Report generated 07/27/2012 17:03

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/25/12 11:34 Sample ID: WG404426-01
Instrument ID: TOC-VWP Run Date: 07/25/12 11:34 Prep Method: 415.1
File ID: TC07252012.003 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG404426 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-06-DEC-11

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Total Organic Carbon	0.500	1.00	0.500	1	U

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

Report Name:BLANK
PDF ID: 2522842
27-JUL-2012 17:03

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG404426 Units: mg/L
QC Key: DOD4 Lot #: STD50986

Sample ID: WG404426-02 LCS File ID: TC07252012.004 Run Date: 07/25/2012 11:46
Sample ID: WG404426-03 LCS2 File ID: TC07252012.005 Run Date: 07/25/2012 11:58

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	23.8	95.2	25.0	23.8	95.3	0.168	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2522843
Report generated: 07/27/2012 17:03

2.2.11.3 Raw Data

WG384145

TC/TIC CURVES

Total Organic Carbon

MAKE DAILY

CCV (TOC): _____ (5/200)(1000) = 25mg/L

LCS (TOC): _____ (5/200)(1000) = 25mg/L

CCV (TIC): _____ (5/200)(1000) = 25mg/L

See Below

MS (TOC): _____

Calibration Curve Date: _____

Reagent: RGT 16590 RGT 16642

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ WG_____

SOP: K 4151 Rev. 13

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full
☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate
☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution	Position	Sample ID	Dilution	Position	Sample ID	Dilution
1	TC Curve		26	TC Curve		51		
2	TIC Curve		27	STD 47222		52		
3	TC ICV		28			53	See SOP for	
4	TIC ICV		29	TIC Curve		54	Curve points	
5			30	STD 47189		55		
6			31			56		
7			32			57		
8			33			58		
9			34			59		
10			35			60		
11			36			61		
12			37	TC ICV		62		
13			38	STD 47544		63	5/200(1000)	
14			39			64	= 25 mg/L	
15			40	TIC ICV		65		
16			41	STD 47190		66		
17			42			67		
18			43			68		
19	All points analyzed		44			69		
20	in duplicate		45			70		
21			46			71		
22			47			72		
23			48			73		
24			49			74		
25			50			75		

Analyst: _____ Date/Time: 12/04/2011

DCN#89227

C:\TOC3201\Data\CURVES-12-06-2011.t32

	Analyst	Sample Name	Result	Status	Date / Time	Vial
1	TC	TC CURVE		Complet	12/06/2011 09:46:27 AM	0, 1, 2, 3, 4, 5
2	IC	TIC CURVE		Complet	12/06/2011 05:00:56 PM	0, 6, 7, 8, 9, 10
3	TC	TC ICV	✓ 93.08% TC:23.27mg/L	Complet	12/06/2011 05:13:38 PM	11
4	IC	TIC ICV	✓ 104.24% IC:26.21mg/L	Complet	12/06/2011 05:25:50 PM	12

12/07/2011 08:14:31 AM 1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Cal. Curve

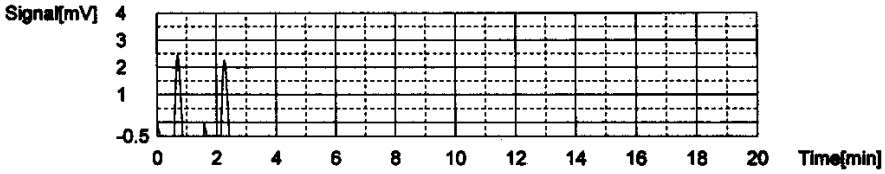
Sample Name: TC CURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-12-06-2011.2011_12_06_08_40_57.cal
Status Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	6.123	500uL	1	*******		12/06/2011 08:44:40 AM
2	5.308	500uL	1	*******		12/06/2011 08:48:33 AM

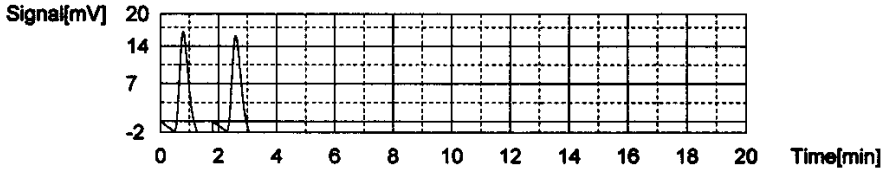
Acid Add. 0.000%
Mean Area 5.716



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	39.77	500uL	1	*******		12/06/2011 08:54:04 AM
2	39.18	500uL	1	*******		12/06/2011 08:58:10 AM

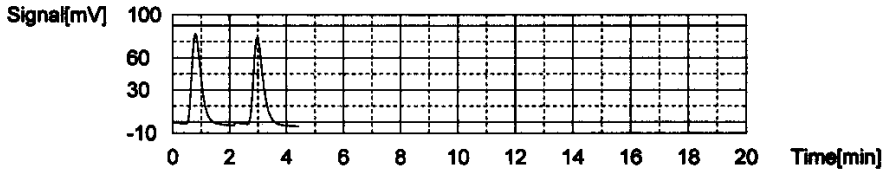
Acid Add. 0.000%
Mean Area 39.48



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	191.7	500uL	1	*******		12/06/2011 09:04:17 AM
2	189.4	500uL	1	*******		12/06/2011 09:08:49 AM

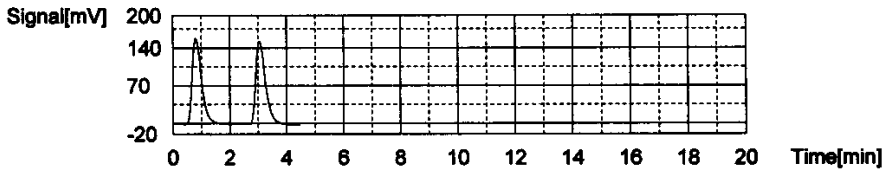
Acid Add. 0.000%
Mean Area 190.6



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	367.0	500uL	1	*******		12/06/2011 09:15:00 AM
2	367.7	500uL	1	*******		12/06/2011 09:20:26 AM

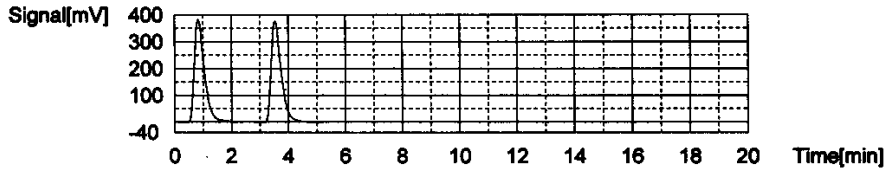
Acid Add. 0.000%
Mean Area 367.4



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	938.7	500uL	1	*******		12/06/2011 09:27:05 AM
2	928.1	500uL	1	*******		12/06/2011 09:31:51 AM

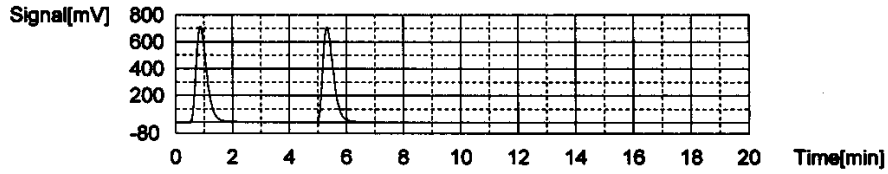
Acid Add. 0.000%
Mean Area 933.4



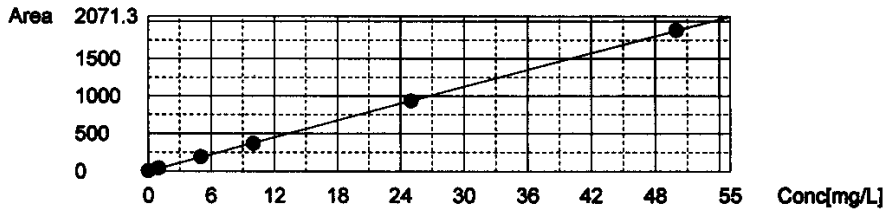
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1902	500uL	1	*******		12/06/2011 09:40:15 AM
2	1864	500uL	1	*******		12/06/2011 09:46:27 AM

Acid Add. 0.000%
Mean Area 1883



Slope: 37.57
Intercept 0.09333
r^2 0.999936 ✓
Zero Shift No



Cal. Curve

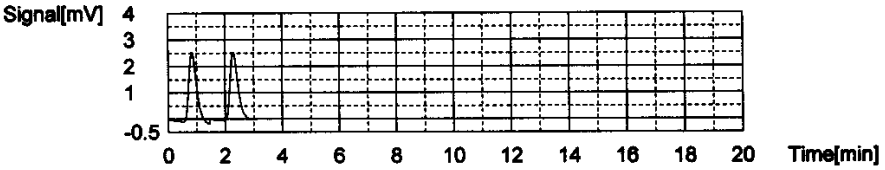
Sample Name: TIC CURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-12-06-2011B.2011_12_06_15_47_44.cal
Status Completed

Type	Anal.
Standard	IC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	5.003	500uL	1	*******		12/06/2011 03:51:39 PM
2	4.762	500uL	1	*******		12/06/2011 03:55:32 PM

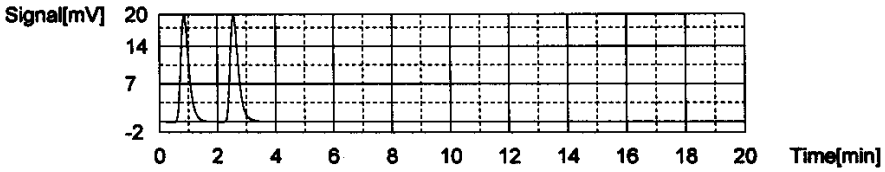
Acid Add. 10.00%
Mean Area 4.883



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	38.88	500uL	1	*******		12/06/2011 04:02:55 PM
2	38.91	500uL	1	*******		12/06/2011 04:07:20 PM

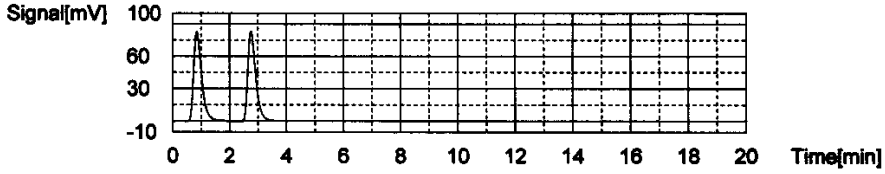
Acid Add. 10.00%
Mean Area 38.90



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.3	500uL	1	*******		12/06/2011 04:15:09 PM
2	162.3	500uL	1	*******		12/06/2011 04:19:53 PM

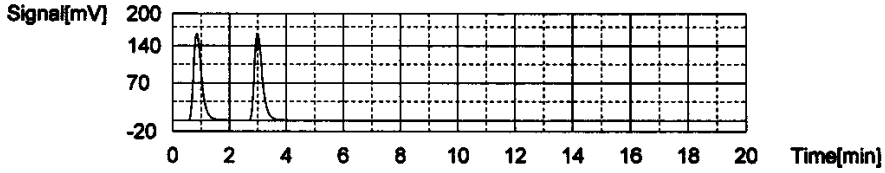
Acid Add. 10.00%
Mean Area 161.3



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	317.9	500uL	1	*******		12/06/2011 04:28:01 PM
2	319.9	500uL	1	*******		12/06/2011 04:33:00 PM

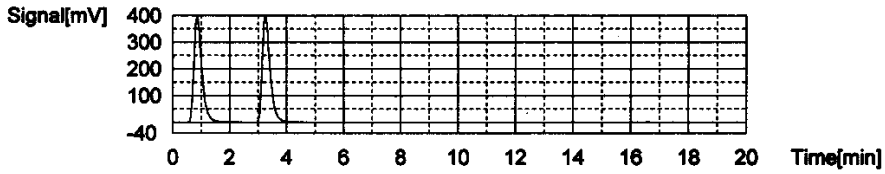
Acid Add. 10.00%
Mean Area 318.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	765.1	500uL	1	*******		12/06/2011 04:41:31 PM
2	765.8	500uL	1	*******		12/06/2011 04:46:44 PM

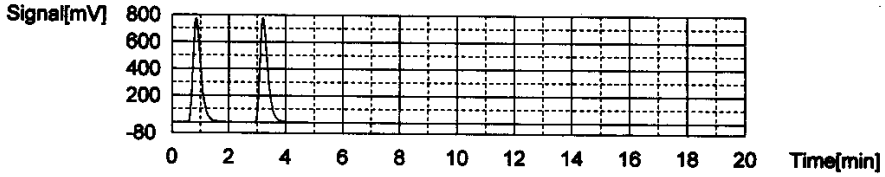
Acid Add. 10.00%
Mean Area 765.5



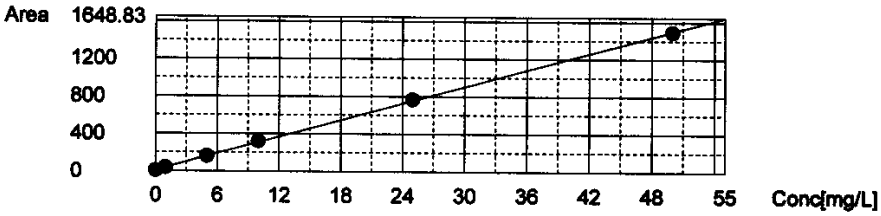
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1490	500uL	1	*******		12/06/2011 04:55:30 PM
2	1495	500uL	1	*******		12/06/2011 05:00:56 PM

Acid Add. 10.00%
Mean Area 1493



Slope: 29.72
Intercept 12.89
r^2 0.999826 ✓
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-12-06-2011.cal
Status Completed
Chk. Result

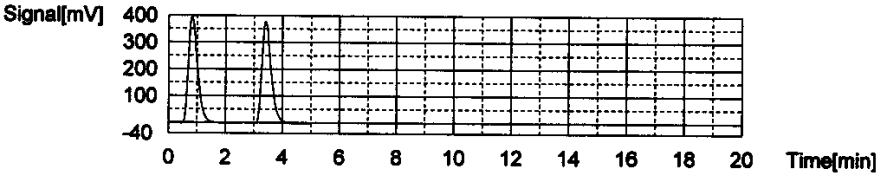
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:23.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	889.3	23.67mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:08:57 PM
2	859.5	22.87mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:13:38 PM

Mean Area 874.4
Mean Conc. 23.27mg/L



Sample

Sample Name: TIC ICV
Sample ID: Untitled
Origin: TICCURVE-12-06-2011B.cal
Status Completed
Chk. Result

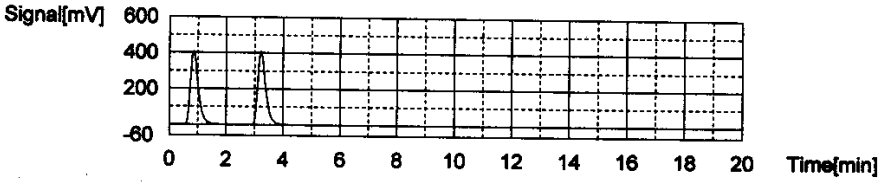
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:26.21mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	788.9	26.11mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:20:43 PM
2	794.9	26.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:25:50 PM

Mean Area 791.9
Mean Conc. 26.21mg/L



WORKGROUP: WG404426

404427

Total Organic Carbon

MAKE DAILY

CCV (TOC): std 52106 (5/200)(1000) = 25mg/L

LCS (TOC): std 50986 (5/200)(1000) = 25mg/L

CCV (TIC): std 50244 (5/200)(1000) = 25mg/L

MS (TOC): 0.4/40(1000) = 10

Calibration Curve Date: 12/6/11

Reagent: Rgt 17495 Rgt 17230

☐ SM5310-C : Matrix 2 WG 404427

☑ EPA 415.1/9060A(mod): Matrix 1 WG 404426 SOP: K 4151 Rev. 14

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	LCS25	
5	LCSDUP	
6	07-425-01	
7	02	
8	07-507-01	
9	02	
10	07-419-01	1/3
11	03	1/3
12	05	1/3
13	07	1/3
14	CCV	
15	CCB	
16	07-419-09	1/3
17	11	1/3
18	07-631-02	
19	03	1/10 gas
20	07-639-01	
21	02	
22	03	
23	07-640-01	
24	02	
25	03	

Position	Sample ID	Dilution
26	CCV	
27	CCB	
28	07-673-01	
29	03	
30	DUP	
31	MS	
32	BLK	
33	LCS 25	
34	LCSDUP	
35	07-652-01	
36	02	
37	03	
38	CCV	
39	CCB	
40	652-04	
41	07-743-01	
42	07-747-01	
43	02	
44	03	
45	DUP	
46	MS	
47	07-001-01	
48	07-003-01	
49		
50	CCV	

Position	Sample ID	Dilution
51	CCB	
52	CCV	
53	CCB	
54	R07-631-02	1/3
55	CCV	
56	CCB	
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		

Analyst: Deanna Gibson Date/Time: 7/25/12

DCN#91708

C:\TOC3201\Data\07-25-2012-DIH-TOC.t32

	Analysi	Sample Name	Result	Status	Date / Time	Vial
1	TOC	TIC 25	TOC:0.7115mg/L TC:25.23mg/L IC:24.52mg/L	Completed	7/25/2012 11:16:42 A	1
2	TOC	CCV 25	!!Error!! TOC:23.00mg/L TC:22.75mg/L IC:-0.2508mg/L	Completed	7/25/2012 11:29:02 A	2
3	TOC	WG404426-01 BLK	!!Error!! TOC:0.4085mg/L TC:0.2235mg/L IC:-0.1851mg	Completed	7/25/2012 11:38:12 A	0
4	TOC	WG404426-02 LCS	!!Error!! TOC:23.79mg/L TC:23.52mg/L IC:-0.2789mg/L	Completed	7/25/2012 11:50:24 A	4
5	TOC	WG404426-03 LCSDUP	!!Error!! TOC:23.83mg/L TC:23.55mg/L IC:-0.2790mg/L	Completed	7/25/2012 12:02:38 P	5
6	TOC	L12070425-01	TOC:1.603mg/L TC:13.72mg/L IC:12.11mg/L	Completed	7/25/2012 12:15:17 P	6
7	TOC	L12070425-02	TOC:0.9359mg/L TC:7.437mg/L IC:6.501mg/L	Completed	7/25/2012 12:27:33 P	7
8	TOC	L12070507-01	TOC:0.7779mg/L TC:6.354mg/L IC:5.576mg/L	Completed	7/25/2012 12:39:58 P	8
9	TOC	L12070507-02	TOC:0.7733mg/L TC:6.524mg/L IC:5.751mg/L	Completed	7/25/2012 12:52:18 P	9
10	TOC	L12070491-01 (3)	TOC:4.501mg/L TC:27.20mg/L IC:22.70mg/L	Completed	7/25/2012 1:05:59 PM	10
11	TOC	L12070491-03 (3)	TOC:23.08mg/L TC:35.50mg/L IC:12.42mg/L	Completed	7/25/2012 1:18:55 PM	11
12	TOC	L12070491-05 (3)	TOC:21.33mg/L TC:37.50mg/L IC:16.17mg/L	Completed	7/25/2012 1:32:22 PM	12
13	TOC	L12070491-07 (3)	TOC:12.35mg/L TC:28.29mg/L IC:15.94mg/L	Completed	7/25/2012 1:45:42 PM	13
14	TOC	CCV	!!Error!! TOC:25.72mg/L TC:25.53mg/L IC:-0.1881mg/L	Completed	7/25/2012 1:58:04 PM	14
15	TOC	CCB	!!Error!! TOC:0.3602mg/L TC:0.1745mg/L IC:-0.1857mg	Completed	7/25/2012 2:07:11 PM	0
16	TOC	L12070491-09 (3)	TOC:22.92mg/L TC:41.25mg/L IC:18.33mg/L	Completed	7/25/2012 2:20:44 PM	16
17	TOC	L12070491-11 (3)	TOC:31.08mg/L TC:43.09mg/L IC:12.01mg/L	Completed	7/25/2012 2:34:34 PM	17
18	TOC	L12070631-02 X	!!Error!! TOC:-4.738mg/L TC:72.82mg/L IC:77.56mg/L	Completed	7/25/2012 2:50:02 PM	18
19	TOC	L12070631-03 (10)	TOC:2.270mg/L TC:8.552mg/L IC:6.282mg/L	Completed	7/25/2012 3:02:42 PM	19
20	TOC	L12070639-01	TOC:1.041mg/L TC:5.244mg/L IC:4.203mg/L	Completed	7/25/2012 3:15:00 PM	20
21	TOC	L12070639-02	TOC:0.8705mg/L TC:5.544mg/L IC:4.674mg/L	Completed	7/25/2012 3:26:53 PM	21
22	TOC	L12070639-03	TOC:0.8288mg/L TC:4.887mg/L IC:4.058mg/L	Completed	7/25/2012 3:38:50 PM	22
23	TOC	L12070640-01	TOC:0.9596mg/L TC:5.576mg/L IC:4.617mg/L	Completed	7/25/2012 3:51:04 PM	23
24	TOC	L12070640-02	TOC:0.7985mg/L TC:2.658mg/L IC:1.859mg/L	Completed	7/25/2012 4:02:46 PM	24
25	TOC	L12070640-03	TOC:1.030mg/L TC:5.590mg/L IC:4.560mg/L	Completed	7/25/2012 4:15:03 PM	25
26	TOC	CCV	!!Error!! TOC:25.86mg/L TC:25.63mg/L IC:-0.2243mg/L	Completed	7/25/2012 4:28:12 PM	26
27	TOC	CCB	!!Error!! TOC:0.3683mg/L TC:0.1761mg/L IC:-0.1922mg	Completed	7/25/2012 4:37:19 PM	0
28	TOC	L12070673-01	TOC:0.7417mg/L TC:3.388mg/L IC:2.647mg/L	Completed	7/25/2012 4:49:27 PM	28
29	TOC	L12070673-03	TOC:1.039mg/L TC:4.182mg/L IC:3.143mg/L	Completed	7/25/2012 5:01:27 PM	29
30	TOC	WG404426-05 DUP	TOC:1.126mg/L TC:4.049mg/L IC:2.922mg/L	Completed	7/25/2012 5:13:34 PM	30
31	TOC	WG404426-036 MS	TOC:11.49mg/L TC:15.52mg/L IC:4.031mg/L	Completed	7/25/2012 5:26:02 PM	31
32	TOC	WG404427-01 BLK	!!Error!! TOC:0.3579mg/L TC:0.1652mg/L IC:-0.1927mg	Completed	7/25/2012 5:42:50 PM	0
33	TOC	WG404427-02 LCS	!!Error!! TOC:23.54mg/L TC:23.30mg/L IC:-0.2415mg/L	Completed	7/25/2012 6:03:42 PM	33
34	TOC	WG404427-03 LCSDUP	!!Error!! TOC:24.84mg/L TC:24.60mg/L IC:-0.2412mg/L	Completed	7/25/2012 6:25:19 PM	34
35	TOC	L12070652-01	TOC:0.7843mg/L TC:4.291mg/L IC:3.506mg/L	Completed	7/25/2012 6:46:57 PM	35
36	TOC	L12070652-02	TOC:2.079mg/L TC:16.78mg/L IC:14.70mg/L	Completed	7/25/2012 7:10:40 PM	36
37	TOC	L12070652-03	TOC:1.079mg/L TC:4.360mg/L IC:3.281mg/L	Completed	7/25/2012 7:33:30 PM	37
38	TOC	CCV	!!Error!! TOC:25.64mg/L TC:25.42mg/L IC:-0.2202mg/L	Completed	7/25/2012 7:45:43 PM	38
39	TOC	CCB	!!Error!! TOC:0.3666mg/L TC:0.1649mg/L IC:-0.2017mg	Completed	7/25/2012 7:54:48 PM	0
40	TOC	L12070652-04	TOC:0.6851mg/L TC:4.023mg/L IC:3.338mg/L	Completed	7/25/2012 8:15:32 PM	40
41	TOC	L12070743-01	TOC:8.170mg/L TC:9.497mg/L IC:1.326mg/L	Completed	7/25/2012 8:37:18 PM	41
42	TOC	L12070747-01	TOC:9.506mg/L TC:24.02mg/L IC:14.51mg/L	Completed	7/25/2012 9:01:48 PM	42
43	TOC	L12070747-02	TOC:10.32mg/L TC:22.10mg/L IC:11.78mg/L	Completed	7/25/2012 9:25:39 PM	43
44	TOC	L12070747-03	TOC:5.262mg/L TC:12.15mg/L IC:6.893mg/L	Completed	7/25/2012 9:48:17 PM	44
45	TOC	WG404427-05 DUP	TOC:5.385mg/L TC:11.07mg/L IC:5.687mg/L	Completed	7/25/2012 10:10:57 P	45
46	TOC	WG404427-06 MS	TOC:16.13mg/L TC:27.67mg/L IC:11.54mg/L	Completed	7/25/2012 10:34:29 P	46
47	TOC	L12070001-01 X	!!Error!! TOC:0.9833mg/L TC:0.7762mg/L IC:-0.2071mg	Completed	7/25/2012 10:53:59 P	47
48	TOC	L12070003-01 X	!!Error!! TOC:1.482mg/L TC:1.251mg/L IC:-0.2311mg/L	Completed	7/25/2012 11:13:38 P	48
49	TOC	<Untitled>	!!Error!! TOC:24.97mg/L TC:24.74mg/L IC:-0.2310mg/L	Completed	7/25/2012 11:34:55 P	49
50	TOC	CCV	!!Error!! TOC:23.27mg/L TC:23.04mg/L IC:-0.2323mg/L	Completed	7/25/2012 11:47:08 P	50
51	TOC	CCB	!!Error!! TOC:0.3711mg/L TC:0.1744mg/L IC:-0.1968mg	Completed	7/25/2012 11:56:15 P	0
52	TOC	CCV	!!Error!! TOC:22.95mg/L TC:22.75mg/L IC:-0.1922mg/L	Completed	7/26/2012 9:54:55 AM	52
53	TOC	CCB	!!Error!! TOC:0.4004mg/L TC:0.2092mg/L IC:-0.1912mg	Completed	7/26/2012 10:04:02 A	0
54	TOC	L12070631-02 (3)	TOC:1.604mg/L TC:1.723mg/L IC:0.1186mg/L	Completed	7/26/2012 10:15:51 A	54
55	TOC	CCV	!!Error!! TOC:24.53mg/L TC:24.33mg/L IC:-0.2059mg/L	Completed	7/26/2012 10:28:03 A	55
56	TOC	CCB	!!Error!! TOC:0.3494mg/L TC:0.1568mg/L IC:-0.1925mg	Completed	7/26/2012 10:37:09 A	0

7/26/2012 11:58:50 AM

1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

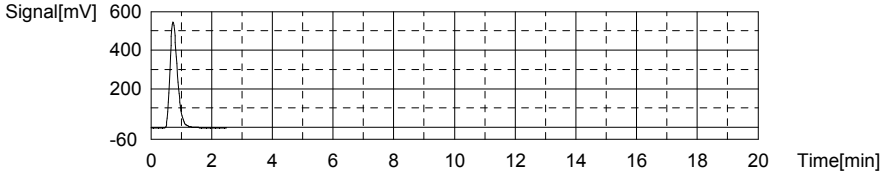
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7115mg/L TC:25.23mg/L IC:24.52mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	948.0	25.23mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:11:05 AM

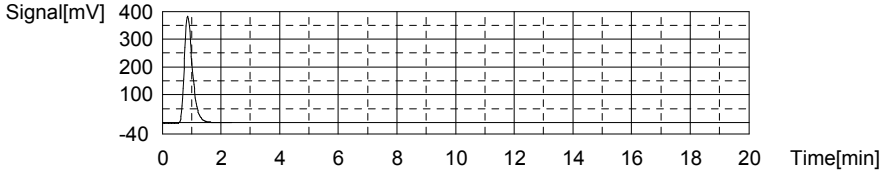
Mean Area 948.0
Mean Conc. 25.23mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	741.6	24.52mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 11:16:42 AM

Mean Area 741.6
Mean Conc. 24.52mg/L



Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

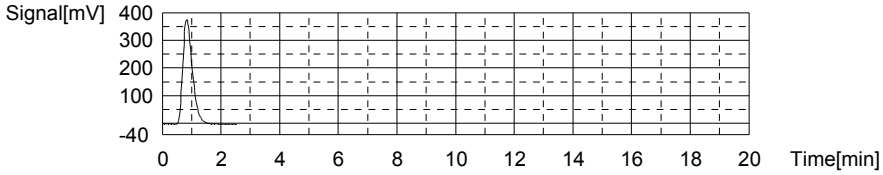
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.00mg/L TC:22.75mg/L IC:-0.2508mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	854.9	22.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:24:41 AM

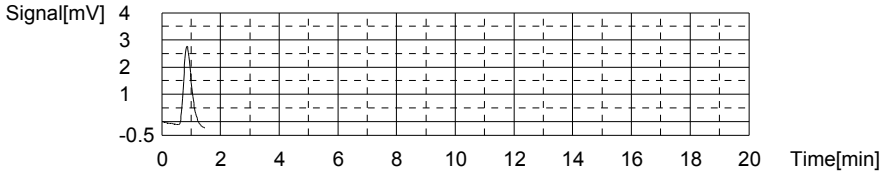
Mean Area 854.9
Mean Conc. 22.75mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.432	-0.2508mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 11:29:02 AM

Mean Area 5.432
Mean Conc. -0.2508mg/L



Sample

Sample Name: WG404426-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

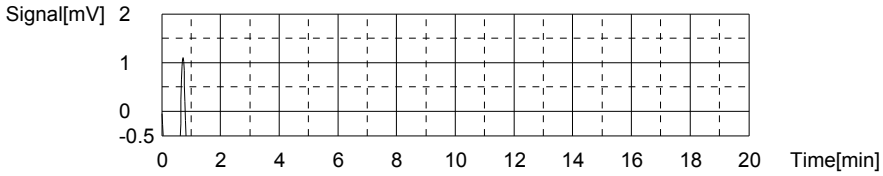
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4085mg/L TC:0.2235mg/L IC:-0.1851mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.489	0.2235mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:34:14 AM

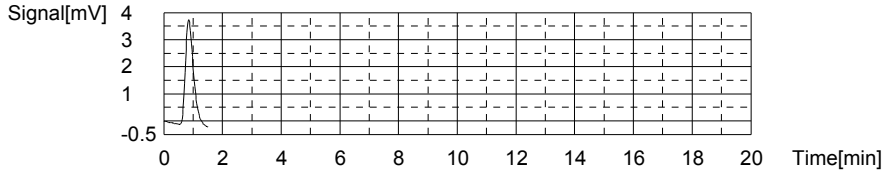
Mean Area 8.489
Mean Conc. 0.2235mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.385	-0.1851mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 11:38:12 AM

Mean Area 7.385
Mean Conc. -0.1851mg/L



Sample

Sample Name: WG404426-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

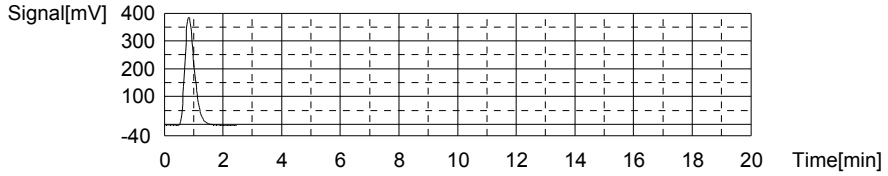
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.79mg/L TC:23.52mg/L IC:-0.2789mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	883.6	23.52mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:46:05 AM

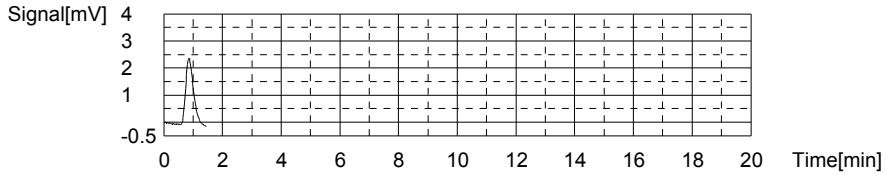
Mean Area 883.6
Mean Conc. 23.52mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.596	-0.2789mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 11:50:24 AM

Mean Area 4.596
Mean Conc. -0.2789mg/L



Sample

Sample Name: WG404426-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

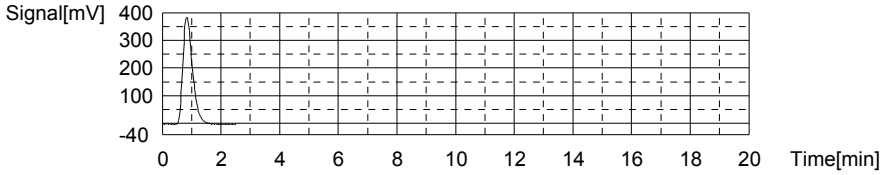
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.83mg/L TC:23.55mg/L IC:-0.2790mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	884.8	23.55mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:58:20 AM

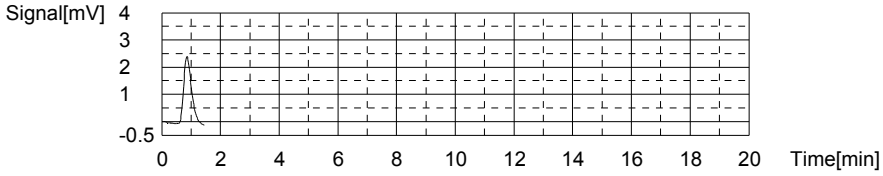
Mean Area 884.8
Mean Conc. 23.55mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.594	-0.2790mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 12:02:38 PM

Mean Area 4.594
Mean Conc. -0.2790mg/L



Sample

Sample Name: L12070425-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

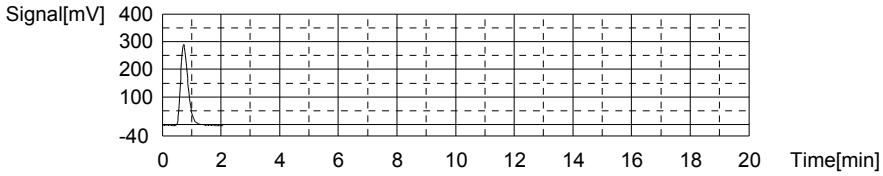
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.603mg/L TC:13.72mg/L IC:12.11mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	515.4	13.72mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 12:10:08 PM

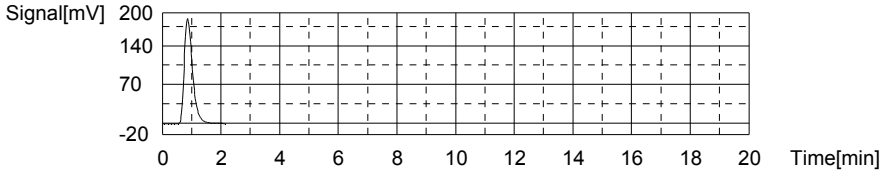
Mean Area 515.4
Mean Conc. 13.72mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	372.9	12.11mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 12:15:17 PM

Mean Area 372.9
Mean Conc. 12.11mg/L



Sample

Sample Name: L12070425-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

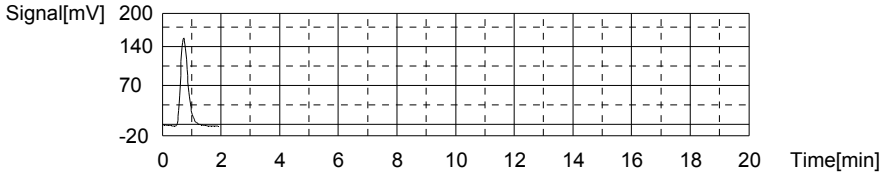
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9359mg/L TC:7.437mg/L IC:6.501mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	279.5	7.437mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 12:22:37 PM

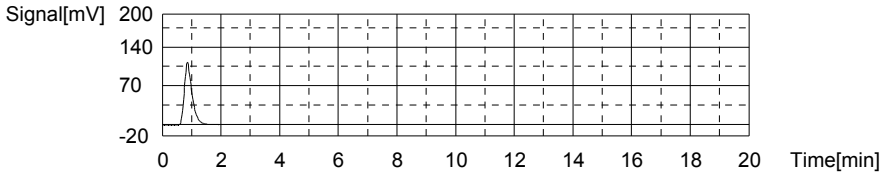
Mean Area 279.5
Mean Conc. 7.437mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	206.1	6.501mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 12:27:33 PM

Mean Area 206.1
Mean Conc. 6.501mg/L



Sample

Sample Name: L12070507-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

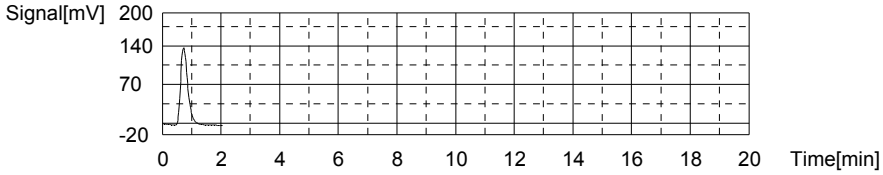
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7779mg/L TC:6.354mg/L IC:5.576mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	238.8	6.354mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 12:35:03 PM

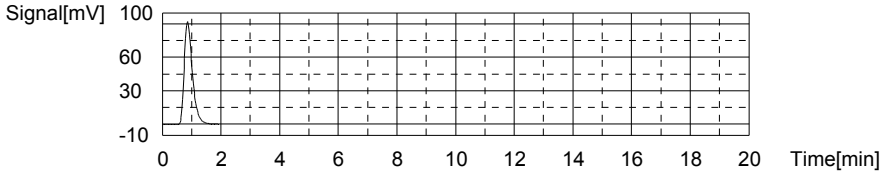
Mean Area 238.8
Mean Conc. 6.354mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	178.6	5.576mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 12:39:58 PM

Mean Area 178.6
Mean Conc. 5.576mg/L



Sample

Sample Name: L12070507-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

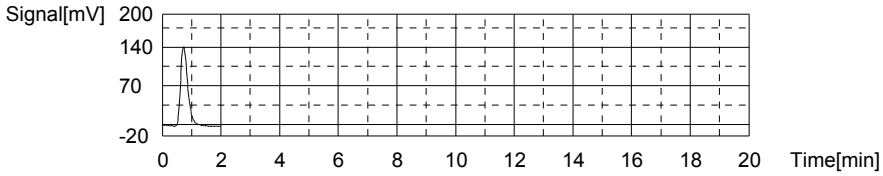
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7733mg/L TC:6.524mg/L IC:5.751mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	245.2	6.524mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 12:47:23 PM

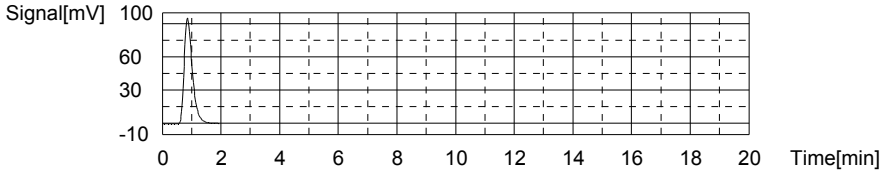
Mean Area 245.2
Mean Conc. 6.524mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	183.8	5.751mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 12:52:18 PM

Mean Area 183.8
Mean Conc. 5.751mg/L



Sample

Sample Name: L12070491-01 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

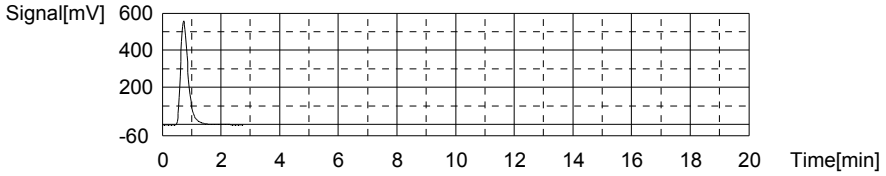
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.501mg/L TC:27.20mg/L IC:22.70mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1022	27.20mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 1:00:30 PM

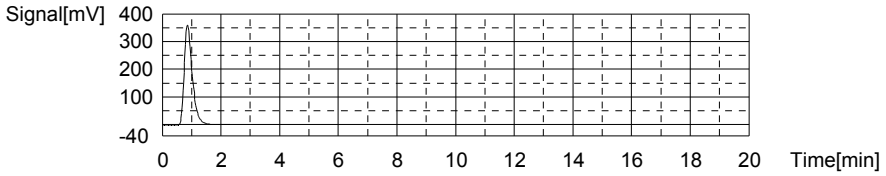
Mean Area 1022
Mean Conc. 27.20mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	687.5	22.70mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 1:05:59 PM

Mean Area 687.5
Mean Conc. 22.70mg/L



Sample

Sample Name: L12070491-03 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

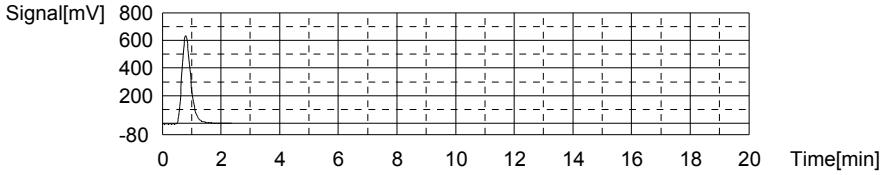
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:23.08mg/L TC:35.50mg/L IC:12.42mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1334	35.50mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 1:13:46 PM

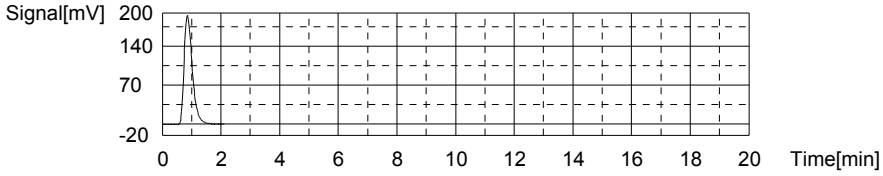
Mean Area 1334
Mean Conc. 35.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	382.1	12.42mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 1:18:55 PM

Mean Area 382.1
Mean Conc. 12.42mg/L



Sample

Sample Name: L12070491-05 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

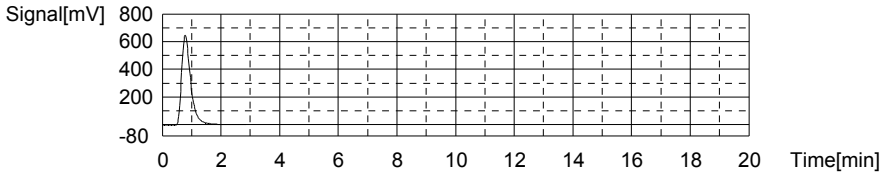
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:21.33mg/L TC:37.50mg/L IC:16.17mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1409	37.50mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 1:27:12 PM

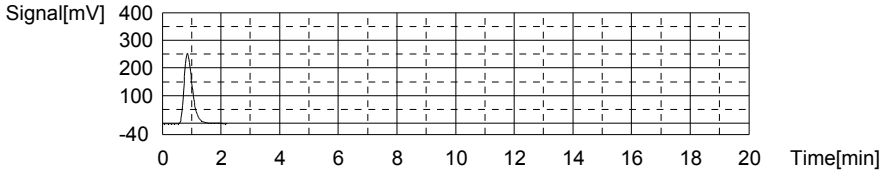
Mean Area 1409
Mean Conc. 37.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	493.6	16.17mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 1:32:22 PM

Mean Area 493.6
Mean Conc. 16.17mg/L



Sample

Sample Name: L12070491-07 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

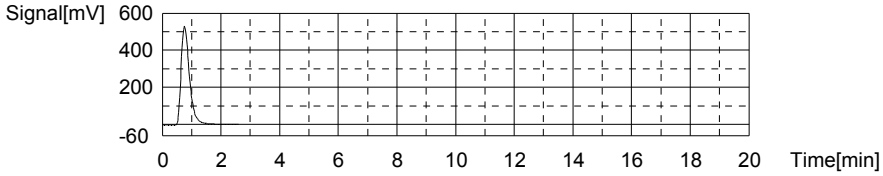
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.35mg/L TC:28.29mg/L IC:15.94mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1063	28.29mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 1:40:24 PM

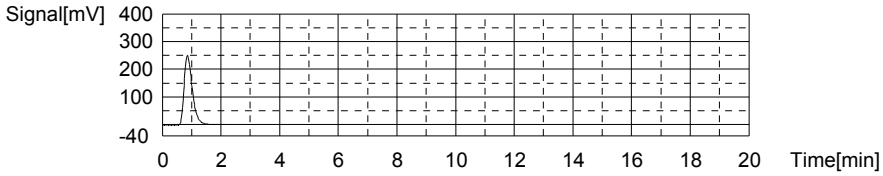
Mean Area 1063
Mean Conc. 28.29mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	486.7	15.94mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 1:45:42 PM

Mean Area 486.7
Mean Conc. 15.94mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

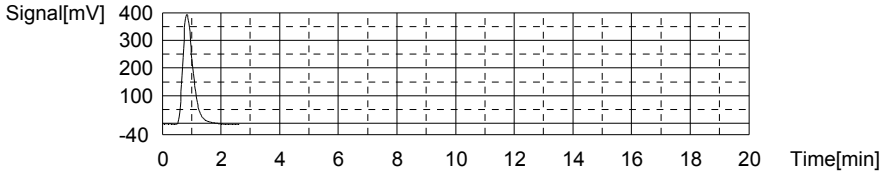
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.72mg/L TC:25.53mg/L IC:-0.1881mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	959.4	25.53mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 1:53:45 PM

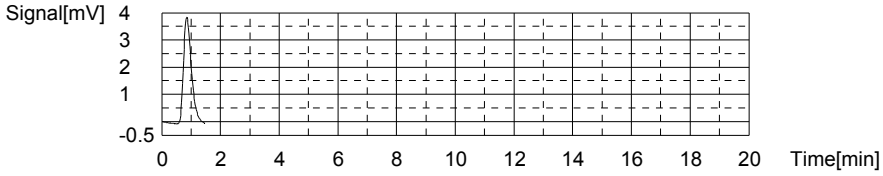
Mean Area 959.4
Mean Conc. 25.53mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.296	-0.1881mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 1:58:04 PM

Mean Area 7.296
Mean Conc. -0.1881mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

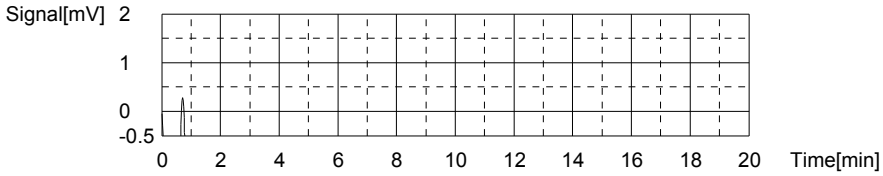
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3602mg/L TC:0.1745mg/L IC:-0.1857mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.650	0.1745mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 2:03:18 PM

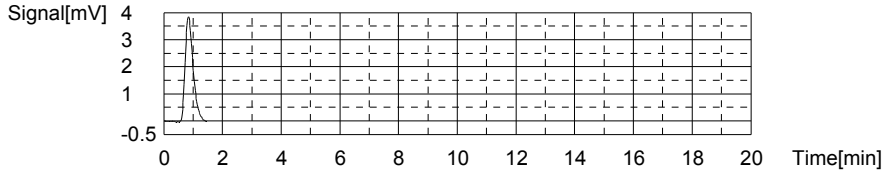
Mean Area 6.650
Mean Conc. 0.1745mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.368	-0.1857mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 2:07:11 PM

Mean Area 7.368
Mean Conc. -0.1857mg/L



Sample

Sample Name: L12070491-09 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

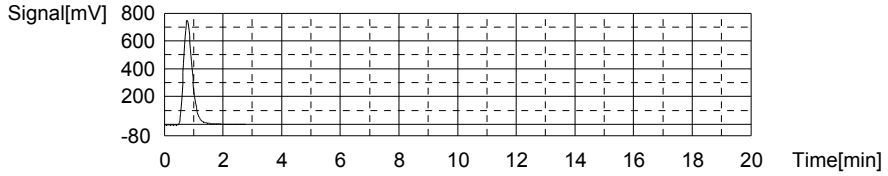
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:22.92mg/L TC:41.25mg/L IC:18.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1550	41.25mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 2:15:24 PM

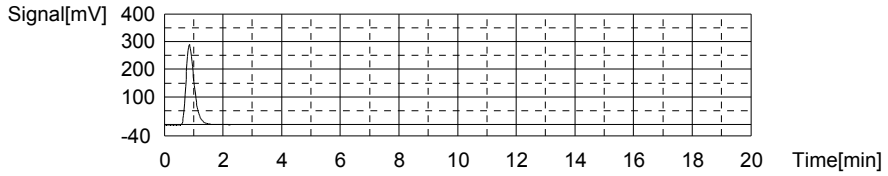
Mean Area 1550
Mean Conc. 41.25mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	557.8	18.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 2:20:44 PM

Mean Area 557.8
Mean Conc. 18.33mg/L



Sample

Sample Name: L12070491-11 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

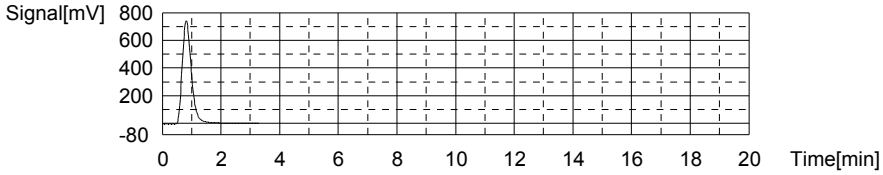
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:31.08mg/L TC:43.09mg/L IC:12.01mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1619	43.09mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 2:29:27 PM

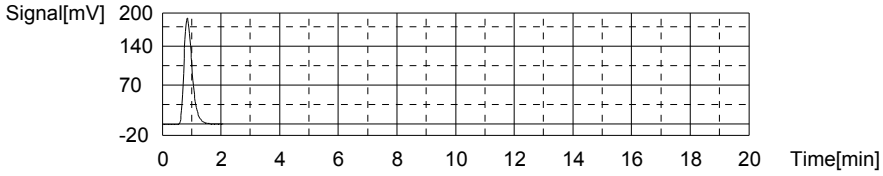
Mean Area 1619
Mean Conc. 43.09mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	369.8	12.01mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 2:34:34 PM

Mean Area 369.8
Mean Conc. 12.01mg/L



Sample

Sample Name: L12070631-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

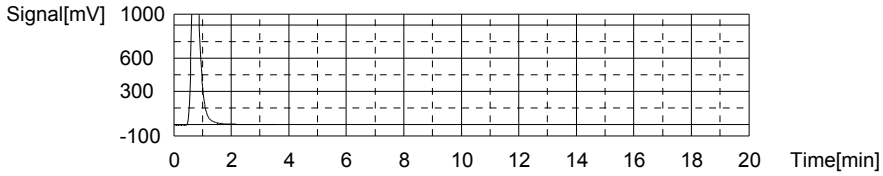
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-4.738mg/L TC:72.82mg/L IC:77.56mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2736	72.82mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 2:43:36 PM

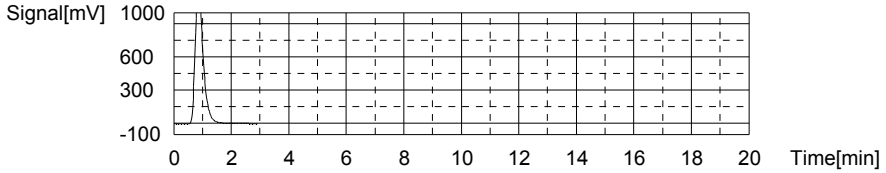
Mean Area 2736
Mean Conc. 72.82mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2318	77.56mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 2:50:02 PM

Mean Area 2318
Mean Conc. 77.56mg/L



Sample

Sample Name: L12070631-03 (10)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

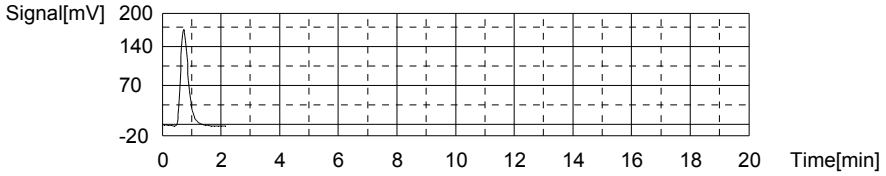
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.270mg/L TC:8.552mg/L IC:6.282mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	321.4	8.552mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 2:57:38 PM

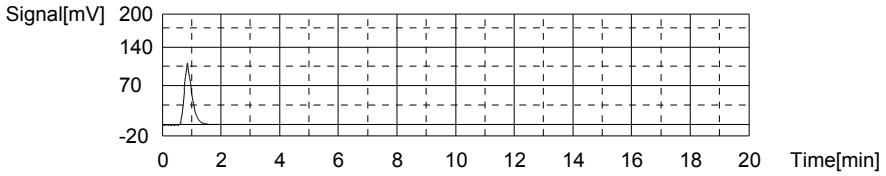
Mean Area 321.4
Mean Conc. 8.552mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	199.6	6.282mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 3:02:42 PM

Mean Area 199.6
Mean Conc. 6.282mg/L



Sample

Sample Name: L12070639-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

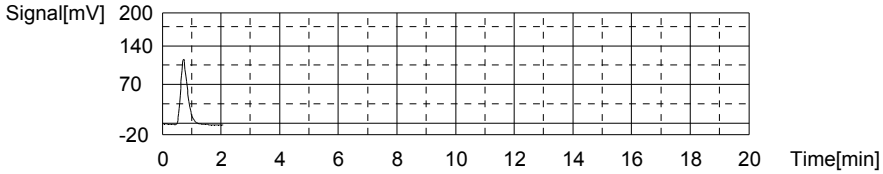
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.041mg/L TC:5.244mg/L IC:4.203mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	197.1	5.244mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 3:10:13 PM

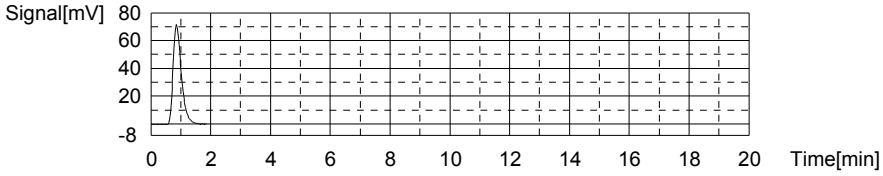
Mean Area 197.1
Mean Conc. 5.244mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	137.8	4.203mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 3:15:00 PM

Mean Area 137.8
Mean Conc. 4.203mg/L



Sample

Sample Name: L12070639-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

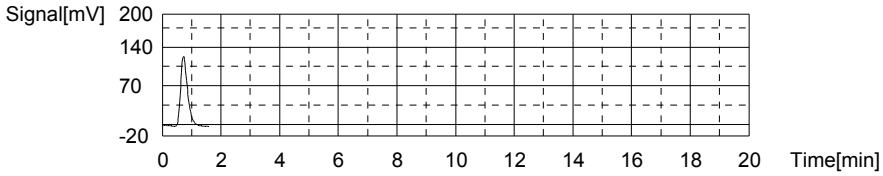
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8705mg/L TC:5.544mg/L IC:4.674mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	208.4	5.544mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 3:22:01 PM

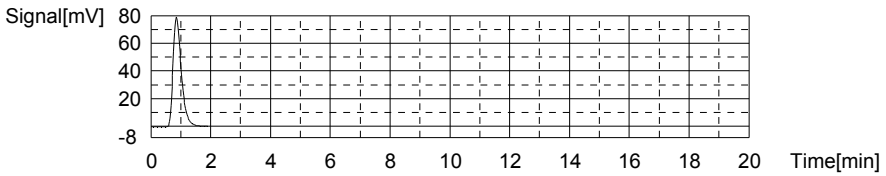
Mean Area 208.4
Mean Conc. 5.544mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	151.8	4.674mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 3:26:53 PM

Mean Area 151.8
Mean Conc. 4.674mg/L



Sample

Sample Name: L12070639-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

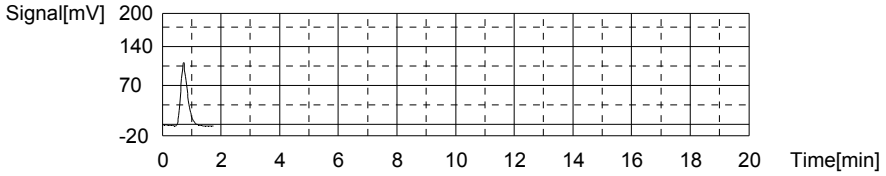
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8288mg/L TC:4.887mg/L IC:4.058mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	183.7	4.887mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 3:34:03 PM

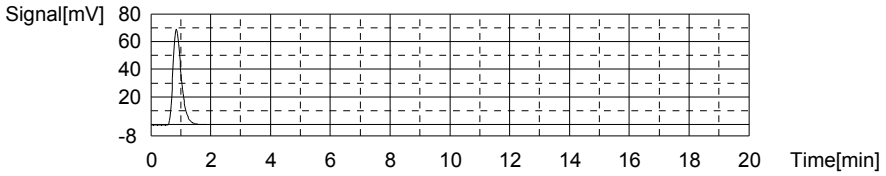
Mean Area 183.7
Mean Conc. 4.887mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	133.5	4.058mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 3:38:50 PM

Mean Area 133.5
Mean Conc. 4.058mg/L



Sample

Sample Name: L12070640-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

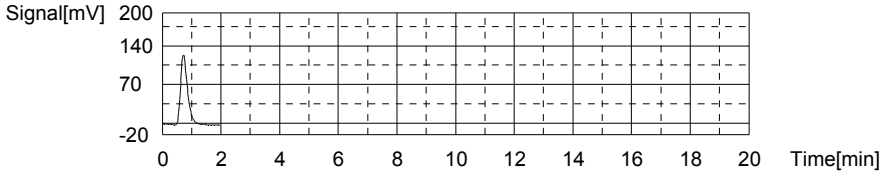
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9596mg/L TC:5.576mg/L IC:4.617mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	209.6	5.576mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 3:46:14 PM

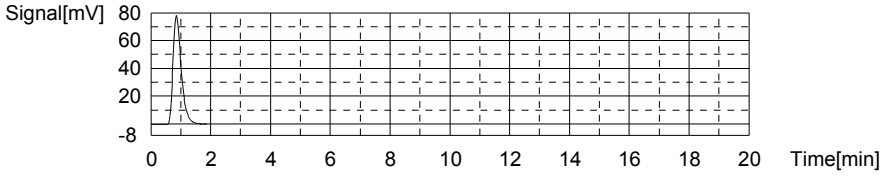
Mean Area 209.6
Mean Conc. 5.576mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	150.1	4.617mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 3:51:04 PM

Mean Area 150.1
Mean Conc. 4.617mg/L



Sample

Sample Name: L12070640-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

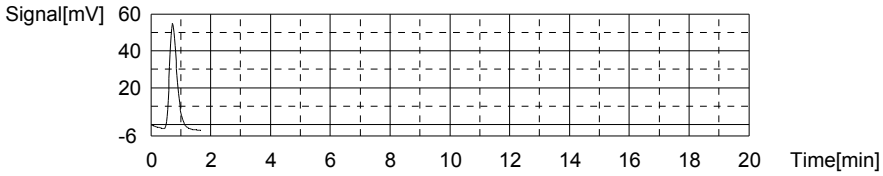
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7985mg/L TC:2.658mg/L IC:1.859mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	99.94	2.658mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 3:58:10 PM

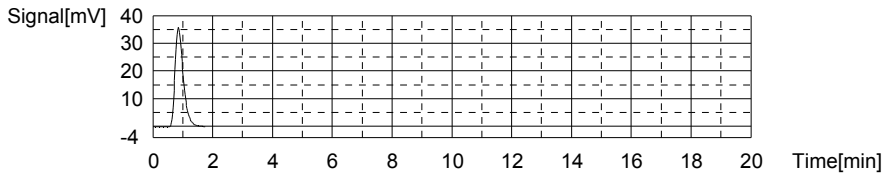
Mean Area 99.94
Mean Conc. 2.658mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.14	1.859mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 4:02:46 PM

Mean Area 68.14
Mean Conc. 1.859mg/L



Sample

Sample Name: L12070640-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

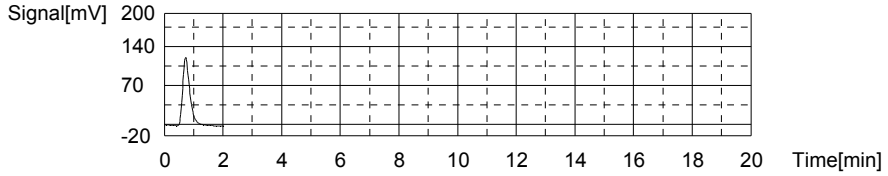
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.030mg/L TC:5.590mg/L IC:4.560mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	210.1	5.590mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 4:10:14 PM

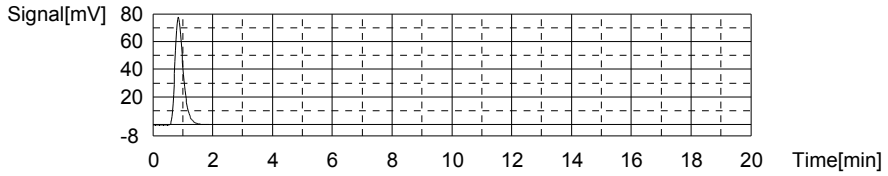
Mean Area 210.1
Mean Conc. 5.590mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	148.4	4.560mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 4:15:03 PM

Mean Area 148.4
Mean Conc. 4.560mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

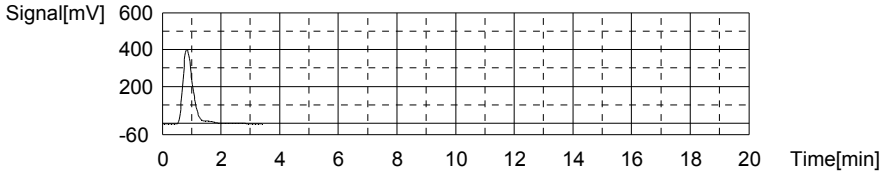
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.86mg/L TC:25.63mg/L IC:-0.2243mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	963.2	25.63mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 4:23:54 PM

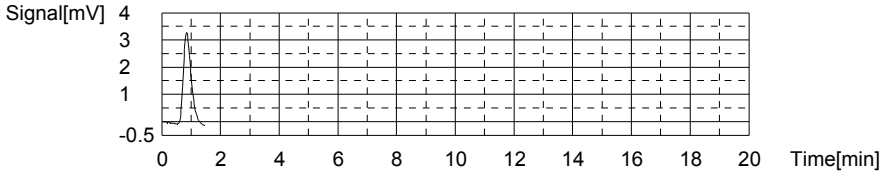
Mean Area 963.2
Mean Conc. 25.63mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.219	-0.2243mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 4:28:12 PM

Mean Area 6.219
Mean Conc. -0.2243mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

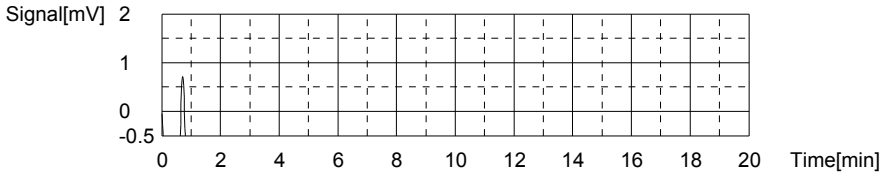
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3683mg/L TC:0.1761mg/L IC:-0.1922mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.709	0.1761mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 4:33:27 PM

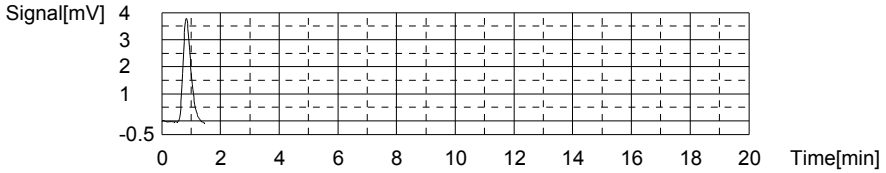
Mean Area 6.709
Mean Conc. 0.1761mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.172	-0.1922mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 4:37:19 PM

Mean Area 7.172
Mean Conc. -0.1922mg/L



Sample

Sample Name: L12070673-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

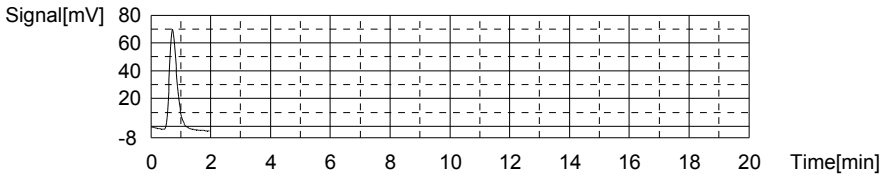
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7417mg/L TC:3.388mg/L IC:2.647mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	127.4	3.388mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 4:44:43 PM

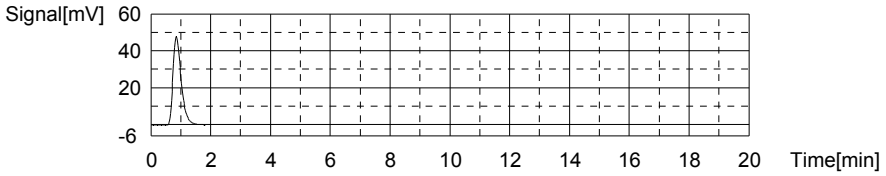
Mean Area 127.4
Mean Conc. 3.388mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	91.55	2.647mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 4:49:27 PM

Mean Area 91.55
Mean Conc. 2.647mg/L



Sample

Sample Name: L12070673-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

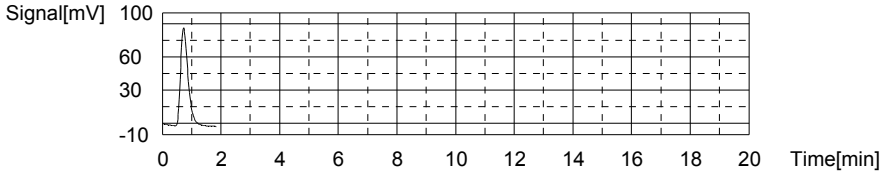
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.039mg/L TC:4.182mg/L IC:3.143mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	157.2	4.182mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 4:56:45 PM

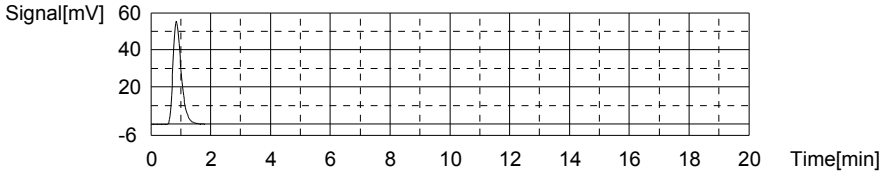
Mean Area 157.2
Mean Conc. 4.182mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	106.3	3.143mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 5:01:27 PM

Mean Area 106.3
Mean Conc. 3.143mg/L



Sample

Sample Name: WG404426-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

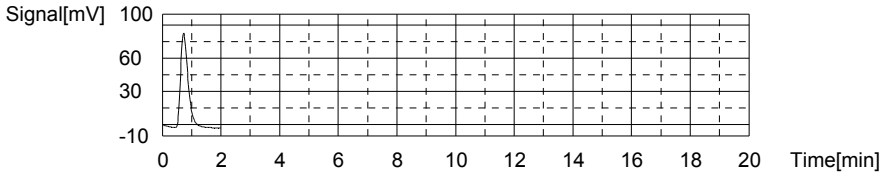
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.126mg/L TC:4.049mg/L IC:2.922mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	152.2	4.049mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:08:53 PM

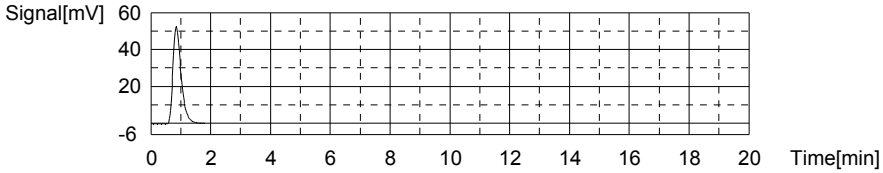
Mean Area 152.2
Mean Conc. 4.049mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	99.74	2.922mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 5:13:34 PM

Mean Area 99.74
Mean Conc. 2.922mg/L



Sample

Sample Name: WG404426-036 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

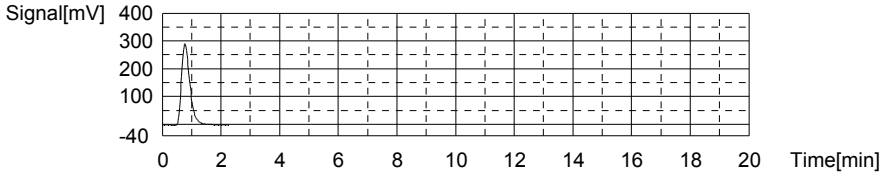
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.49mg/L TC:15.52mg/L IC:4.031mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	583.3	15.52mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:21:17 PM

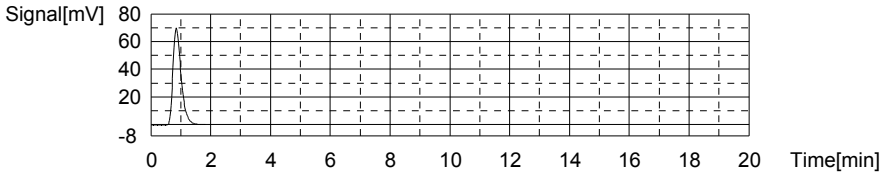
Mean Area 583.3
Mean Conc. 15.52mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	132.7	4.031mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 5:26:02 PM

Mean Area 132.7
Mean Conc. 4.031mg/L



Sample

Sample Name: WG404427-01 BLK
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

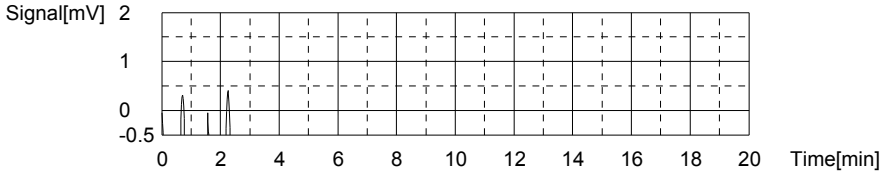
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3579mg/L TC:0.1652mg/L IC:-0.1927mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.642	0.1743mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:31:14 PM
2	5.959	0.1561mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:34:57 PM

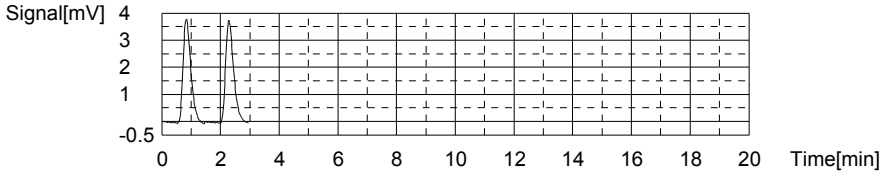
Mean Area 6.301
Mean Conc. 0.1652mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.164	-0.1925mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 5:38:51 PM
2	7.152	-0.1929mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 5:42:50 PM

Mean Area 7.158
Mean Conc. -0.1927mg/L



Sample

Sample Name: WG404427-02 LCS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

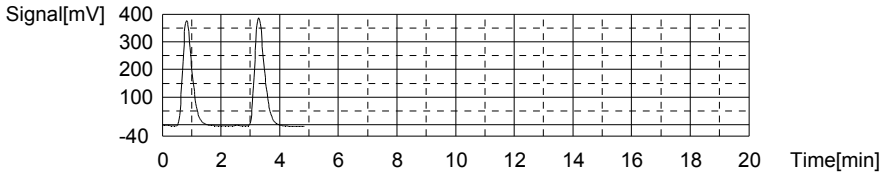
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.54mg/L TC:23.30mg/L IC:-0.2415mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	840.8	22.38mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:50:44 PM
2	910.1	24.22mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 5:55:23 PM

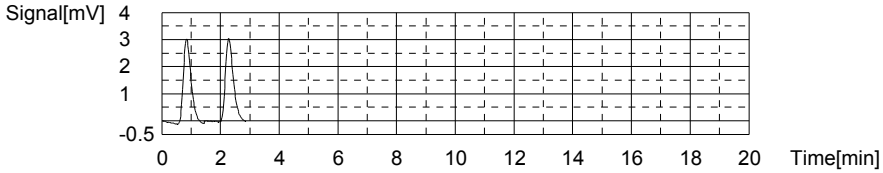
Mean Area 875.5
Mean Conc. 23.30mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.724	-0.2410mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 5:59:39 PM
2	5.690	-0.2421mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 6:03:42 PM

Mean Area 5.707
Mean Conc. -0.2415mg/L



Sample

Sample Name: WG404427-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

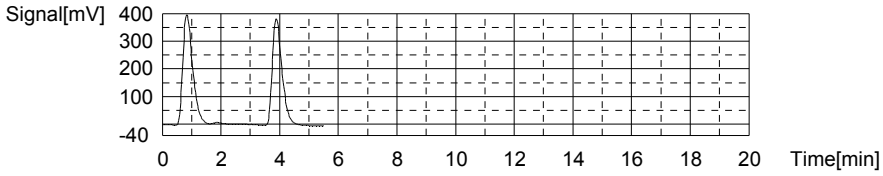
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.84mg/L TC:24.60mg/L IC:-0.2412mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	954.8	25.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 6:12:12 PM
2	893.7	23.78mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 6:16:59 PM

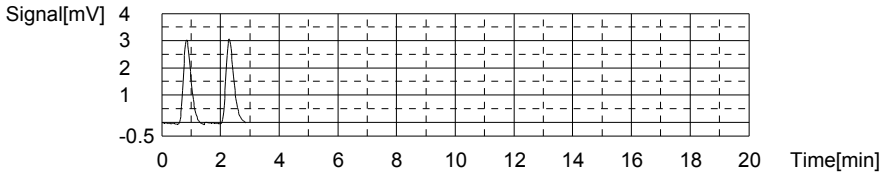
Mean Area 924.3
Mean Conc. 24.60mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.713	-0.2413mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 6:21:17 PM
2	5.719	-0.2411mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 6:25:19 PM

Mean Area 5.716
Mean Conc. -0.2412mg/L



Sample

Sample Name: L12070652-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

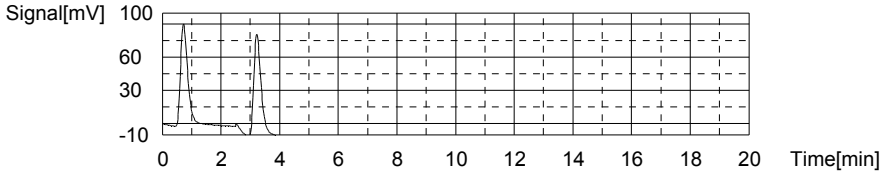
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7843mg/L TC:4.291mg/L IC:3.506mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	165.5	4.403mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 6:33:17 PM
2	157.1	4.179mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 6:37:46 PM

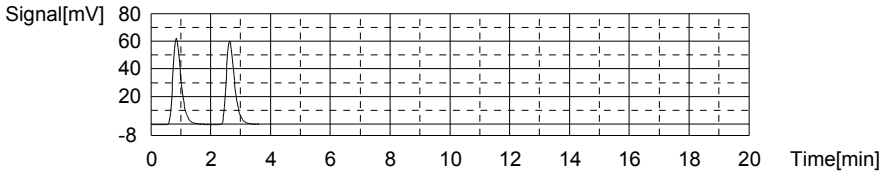
Mean Area 161.3
Mean Conc. 4.291mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	118.4	3.550mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 6:42:27 PM
2	115.8	3.463mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 6:46:57 PM

Mean Area 117.1
Mean Conc. 3.506mg/L



Sample

Sample Name: L12070652-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

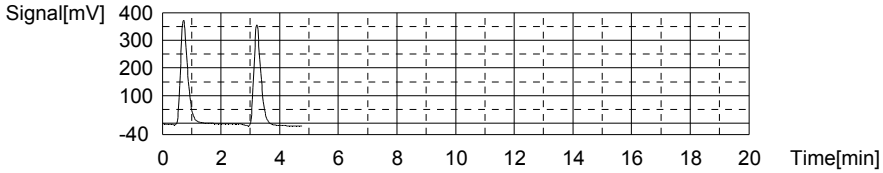
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.079mg/L TC:16.78mg/L IC:14.70mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	654.5	17.42mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 6:54:54 PM
2	606.3	16.14mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 7:00:27 PM

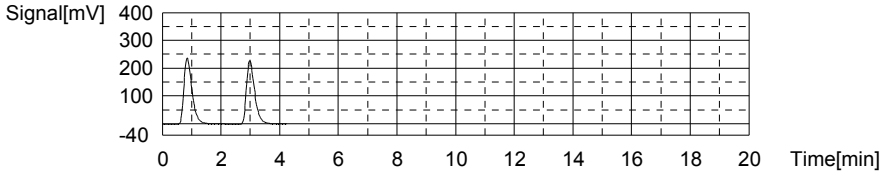
Mean Area 630.4
Mean Conc. 16.78mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	456.7	14.93mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 7:05:44 PM
2	442.7	14.46mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 7:10:40 PM

Mean Area 449.7
Mean Conc. 14.70mg/L



Sample

Sample Name: L12070652-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

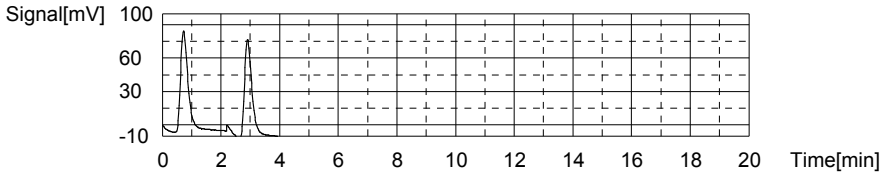
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.079mg/L TC:4.360mg/L IC:3.281mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	167.3	4.450mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 7:18:18 PM
2	160.5	4.269mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 7:24:18 PM

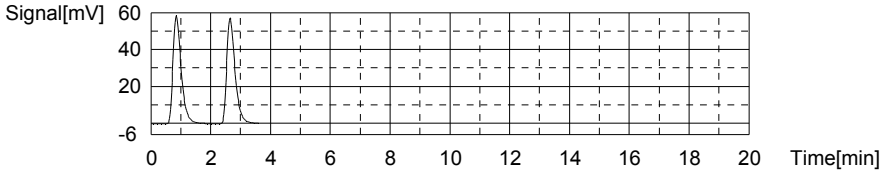
Mean Area 163.9
Mean Conc. 4.360mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	111.2	3.308mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 7:29:01 PM
2	109.6	3.254mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 7:33:30 PM

Mean Area 110.4
Mean Conc. 3.281mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

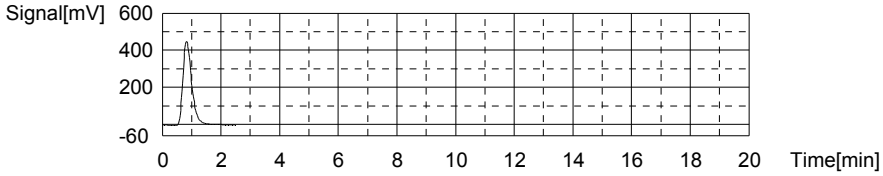
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.64mg/L TC:25.42mg/L IC:-0.2202mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	955.1	25.42mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 7:41:27 PM

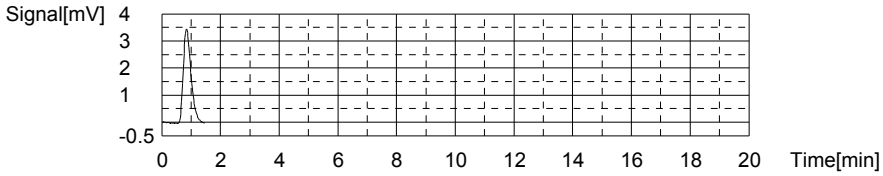
Mean Area 955.1
Mean Conc. 25.42mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.342	-0.2202mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 7:45:43 PM

Mean Area 6.342
Mean Conc. -0.2202mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

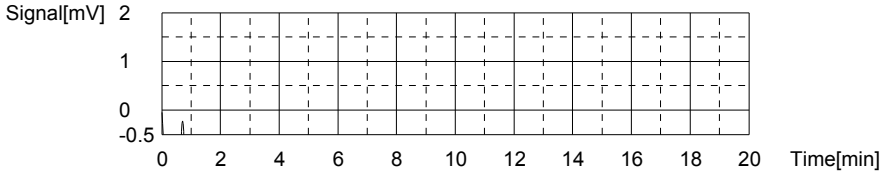
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3666mg/L TC:0.1649mg/L IC:-0.2017mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.289	0.1649mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 7:50:55 PM

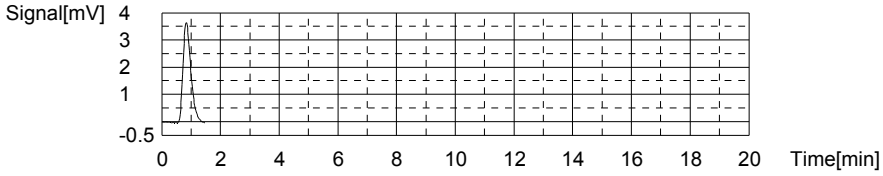
Mean Area 6.289
Mean Conc. 0.1649mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.892	-0.2017mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 7:54:48 PM

Mean Area 6.892
Mean Conc. -0.2017mg/L



Sample

Sample Name: L12070652-04
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

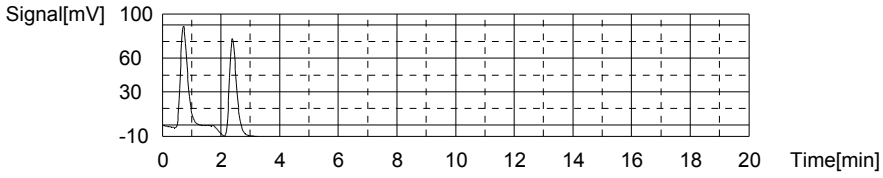
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6851mg/L TC:4.023mg/L IC:3.338mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	155.8	4.144mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:01:55 PM
2	146.7	3.902mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:06:20 PM

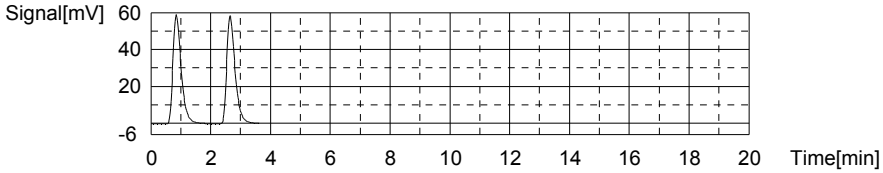
Mean Area 151.3
Mean Conc. 4.023mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	112.4	3.348mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 8:11:01 PM
2	111.8	3.328mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 8:15:32 PM

Mean Area 112.1
Mean Conc. 3.338mg/L



Sample

Sample Name: L12070743-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

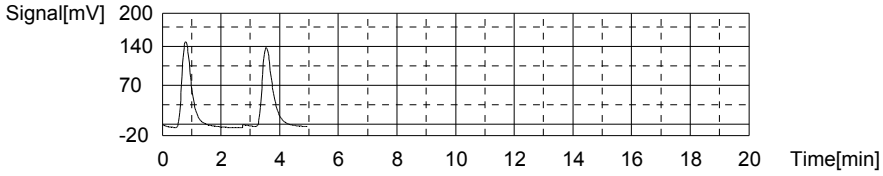
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.170mg/L TC:9.497mg/L IC:1.326mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	361.0	9.606mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:23:43 PM
2	352.8	9.388mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:28:11 PM

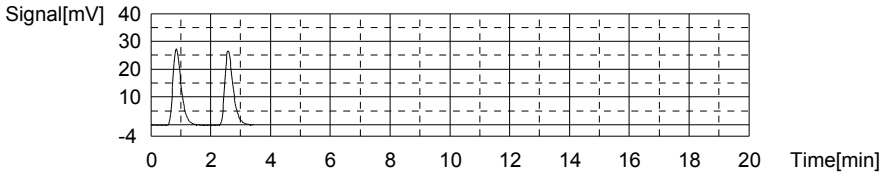
Mean Area 356.9
Mean Conc. 9.497mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.07	1.352mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 8:32:47 PM
2	51.55	1.301mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 8:37:18 PM

Mean Area 52.31
Mean Conc. 1.326mg/L



Sample

Sample Name: L12070747-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

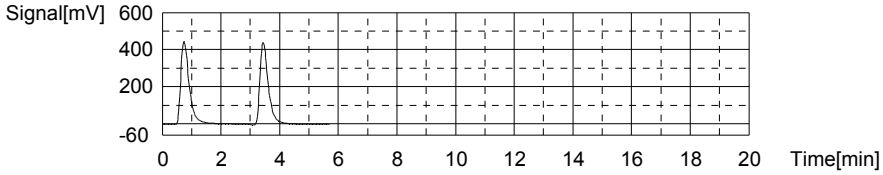
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.506mg/L TC:24.02mg/L IC:14.51mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	910.0	24.22mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:45:28 PM
2	895.1	23.82mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 8:51:41 PM

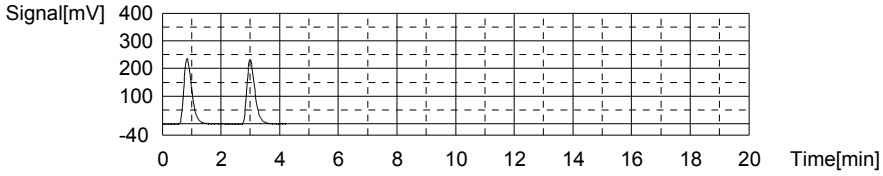
Mean Area 902.5
Mean Conc. 24.02mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	448.0	14.64mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 8:56:55 PM
2	440.5	14.39mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 9:01:48 PM

Mean Area 444.3
Mean Conc. 14.51mg/L



Sample

Sample Name: L12070747-02
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

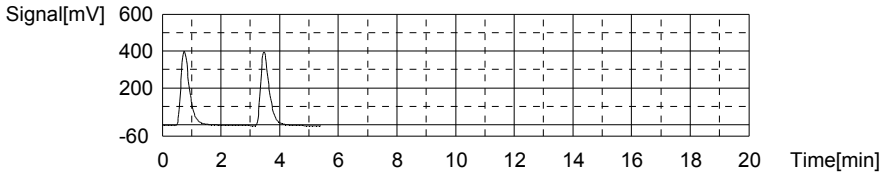
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.32mg/L TC:22.10mg/L IC:11.78mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	836.0	22.25mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 9:09:58 PM
2	824.6	21.95mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 9:15:49 PM

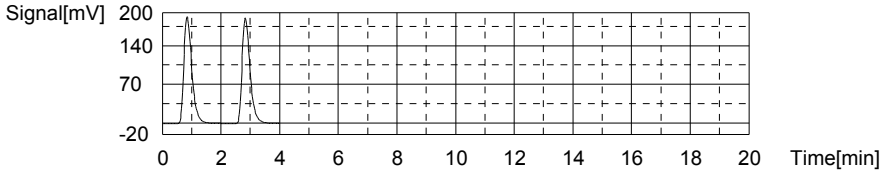
Mean Area 830.3
Mean Conc. 22.10mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	364.7	11.84mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 9:20:52 PM
2	361.2	11.72mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 9:25:39 PM

Mean Area 363.0
Mean Conc. 11.78mg/L



Sample

Sample Name: L12070747-03
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

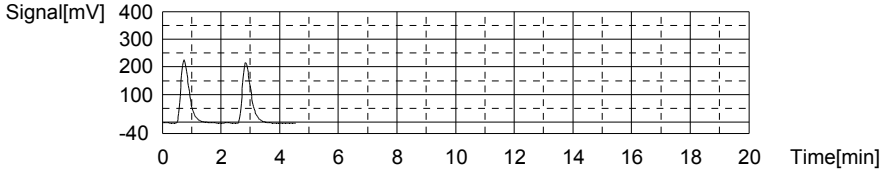
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.262mg/L TC:12.15mg/L IC:6.893mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	459.0	12.21mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 9:33:12 PM
2	454.5	12.09mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 9:38:49 PM

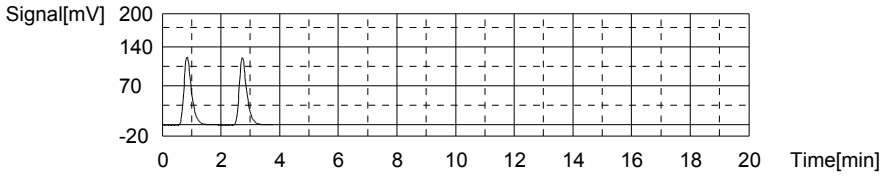
Mean Area 456.8
Mean Conc. 12.15mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	219.1	6.938mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 9:43:39 PM
2	216.4	6.847mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 9:48:17 PM

Mean Area 217.8
Mean Conc. 6.893mg/L



Sample

Sample Name: WG404427-05 DUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

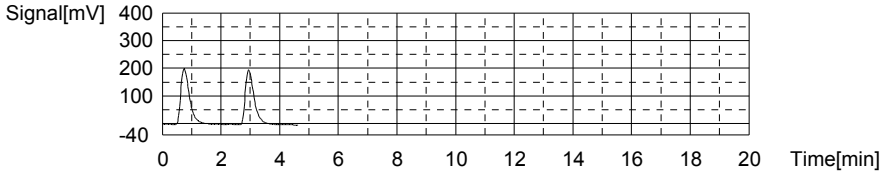
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.385mg/L TC:11.07mg/L IC:5.687mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	418.4	11.13mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 9:55:57 PM
2	413.7	11.01mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 10:01:31 PM

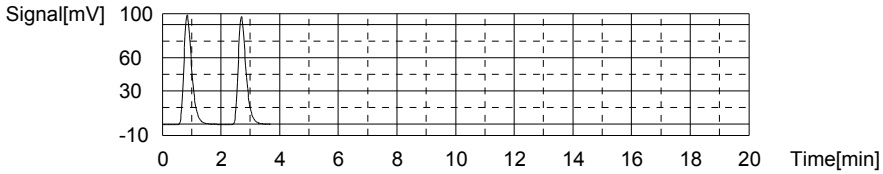
Mean Area 416.1
Mean Conc. 11.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	183.0	5.724mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 10:06:24 PM
2	180.8	5.650mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 10:10:57 PM

Mean Area 181.9
Mean Conc. 5.687mg/L



Sample

Sample Name: WG404427-06 MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

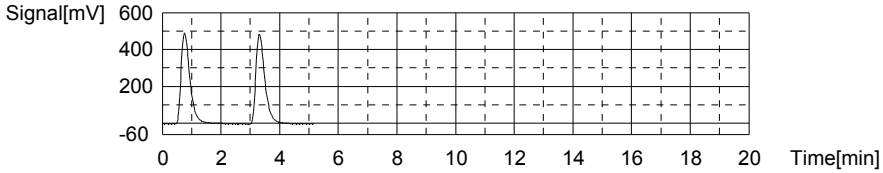
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:16.13mg/L TC:27.67mg/L IC:11.54mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1037	27.60mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 10:18:57 PM
2	1042	27.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 10:24:45 PM

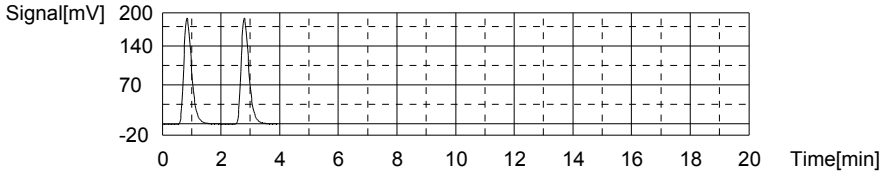
Mean Area 1040
Mean Conc. 27.67mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	355.1	11.51mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 10:29:42 PM
2	356.4	11.56mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 10:34:29 PM

Mean Area 355.8
Mean Conc. 11.54mg/L



Sample

Sample Name: L12070001-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

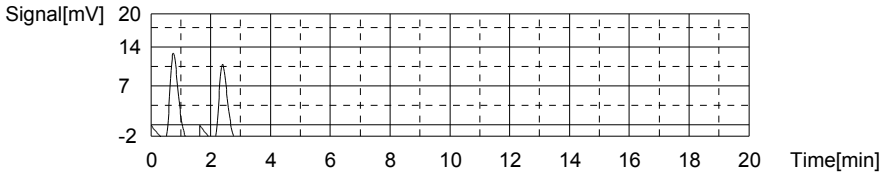
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.9833mg/L TC:0.7762mg/L IC:-0.2071mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	30.66	0.8136mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 10:41:35 PM
2	27.85	0.7388mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 10:45:33 PM

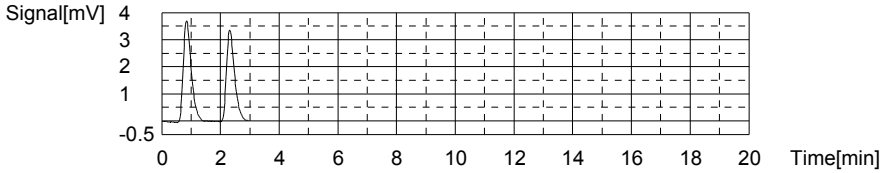
Mean Area 29.26
Mean Conc. 0.7762mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.128	-0.1937mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 10:49:53 PM
2	6.332	-0.2205mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 10:53:59 PM

Mean Area 6.730
Mean Conc. -0.2071mg/L



Sample

Sample Name: L12070003-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

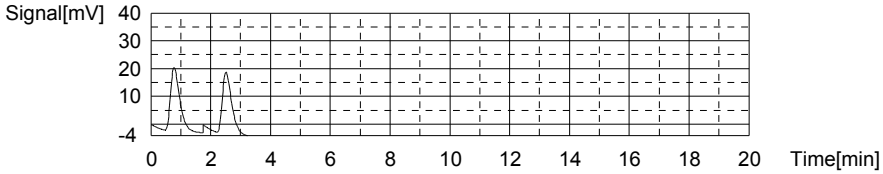
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:1.482mg/L TC:1.251mg/L IC:-0.2311mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	47.83	1.271mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:01:12 PM
2	46.37	1.232mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:05:16 PM

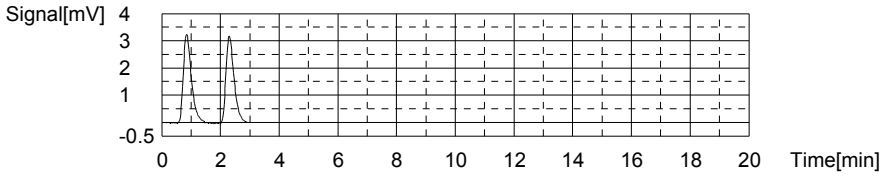
Mean Area 47.10
Mean Conc. 1.251mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.042	-0.2303mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 11:09:35 PM
2	5.994	-0.2319mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 11:13:38 PM

Mean Area 6.018
Mean Conc. -0.2311mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

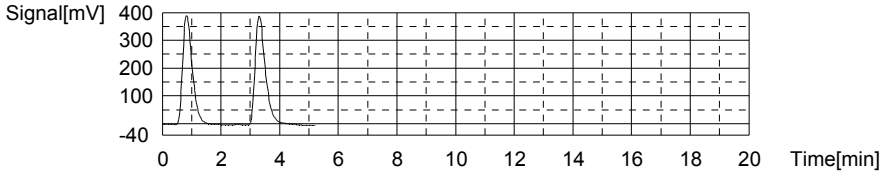
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.97mg/L TC:24.74mg/L IC:-0.2310mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	894.8	23.81mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:21:34 PM
2	964.6	25.67mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:26:34 PM

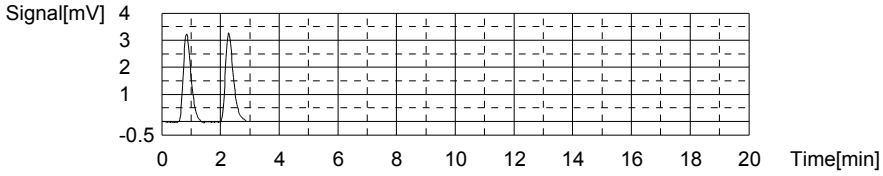
Mean Area 929.7
Mean Conc. 24.74mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.024	-0.2309mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 11:30:50 PM
2	6.018	-0.2311mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/25/2012 11:34:55 PM

Mean Area 6.021
Mean Conc. -0.2310mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

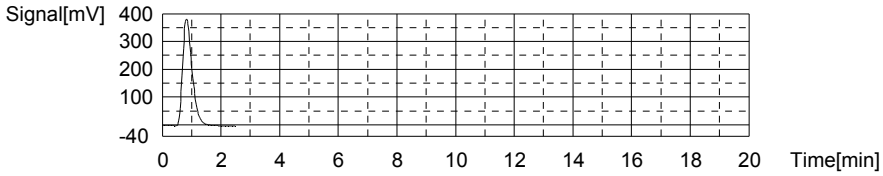
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.27mg/L TC:23.04mg/L IC:-0.2323mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	865.8	23.04mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:42:52 PM

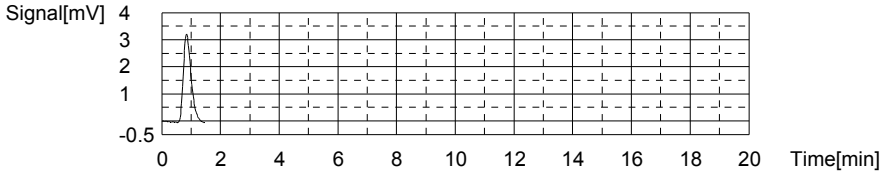
Mean Area 865.8
Mean Conc. 23.04mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.983	-0.2323mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 11:47:08 PM

Mean Area 5.983
Mean Conc. -0.2323mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

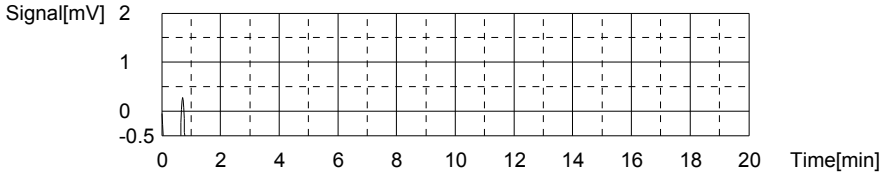
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3711mg/L TC:0.1744mg/L IC:-0.1968mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.644	0.1744mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/25/2012 11:52:23 PM

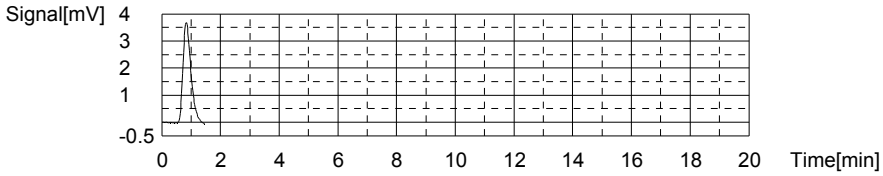
Mean Area 6.644
Mean Conc. 0.1744mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.038	-0.1968mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/25/2012 11:56:15 PM

Mean Area 7.038
Mean Conc. -0.1968mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

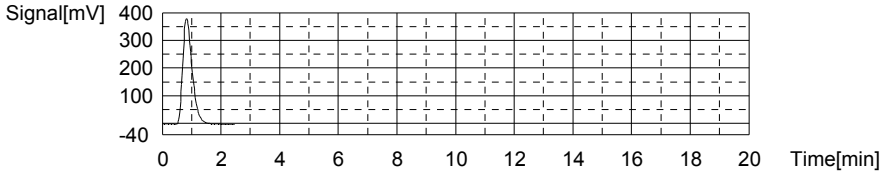
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:22.95mg/L TC:22.75mg/L IC:-0.1922mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	855.0	22.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/26/2012 9:50:36 AM

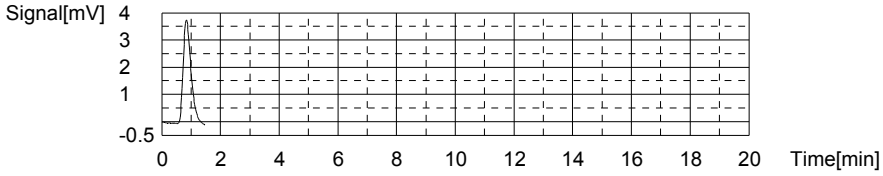
Mean Area 855.0
Mean Conc. 22.75mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.172	-0.1922mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/26/2012 9:54:55 AM

Mean Area 7.172
Mean Conc. -0.1922mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

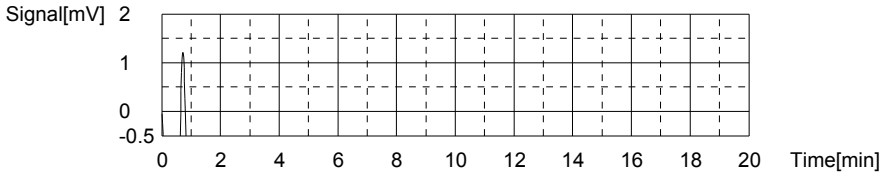
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4004mg/L TC:0.2092mg/L IC:-0.1912mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.952	0.2092mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/26/2012 10:00:10 AM

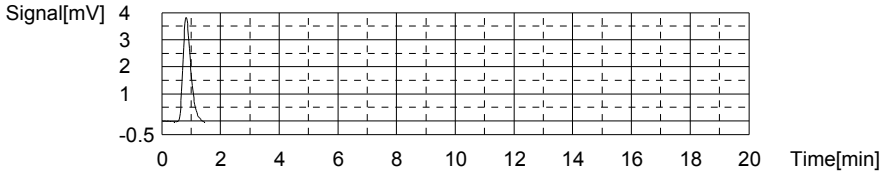
Mean Area 7.952
Mean Conc. 0.2092mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.203	-0.1912mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/26/2012 10:04:02 AM

Mean Area 7.203
Mean Conc. -0.1912mg/L



Sample

Sample Name: L12070631-02 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

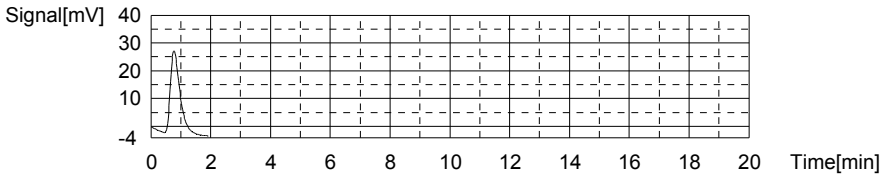
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.604mg/L TC:1.723mg/L IC:0.1186mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.81	1.723mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/26/2012 10:11:25 AM

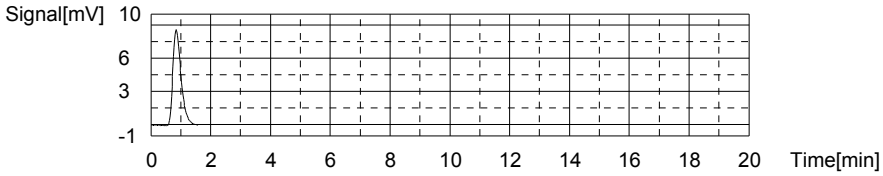
Mean Area 64.81
Mean Conc. 1.723mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.41	0.1186mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/26/2012 10:15:51 AM

Mean Area 16.41
Mean Conc. 0.1186mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

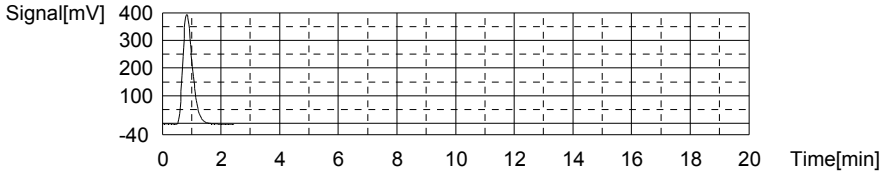
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.53mg/L TC:24.33mg/L IC:-0.2059mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	914.1	24.33mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/26/2012 10:23:46 AM

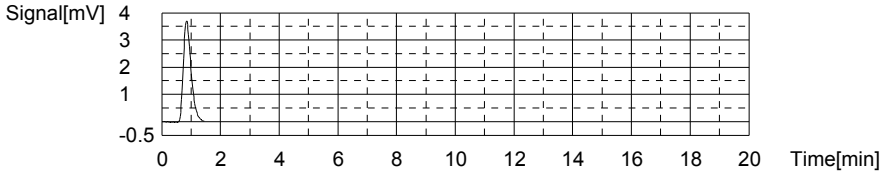
Mean Area 914.1
Mean Conc. 24.33mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.766	-0.2059mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/26/2012 10:28:03 AM

Mean Area 6.766
Mean Conc. -0.2059mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

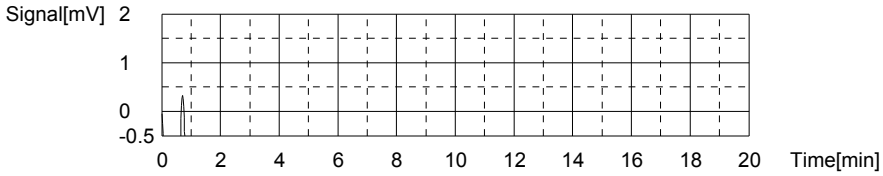
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3494mg/L TC:0.1568mg/L IC:-0.1925mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.985	0.1568mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/26/2012 10:33:18 AM

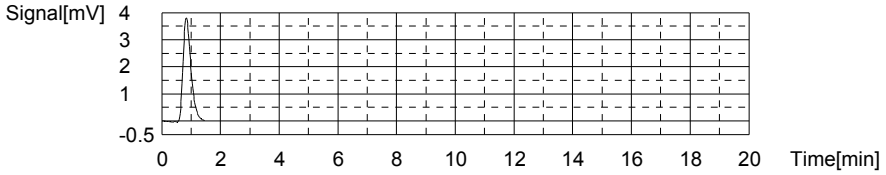
Mean Area 5.985
Mean Conc. 0.1568mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.163	-0.1925mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/26/2012 10:37:09 AM

Mean Area 7.163
Mean Conc. -0.1925mg/L



2.2.12 Total Suspended Solids Data

2.2.12.1 Summary Data

Login Number: L12070640
Department: Conventionals
Analyst: Erin R Porter

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: 50970
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070640
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070640-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL21-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 11:06	**Dilution:**	1	**File ID:**	EN.1207251240-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		4.00	J	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

Sample #:	L12070640-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL22-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 12:45	**Dilution:**	1	**File ID:**	EN.1207251240-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		9.00		5.00	2.50

Sample #:	L12070640-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL25-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG404450	**Analyst:**	ERP	**Run Date:**	07/25/2012 12:40
Collect Date:	07/19/2012 15:40	**Dilution:**	1	**File ID:**	EN.1207251240-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		4.50	J	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.

Certificate of Analysis

2.2.12.2 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: 27-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TSS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404450

Calibration/Linearity	
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	
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	ERP
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
27-JUL-2012

Secondary Reviewer:
27-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-27-2012 17:23:52

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.2 AAB#: WG404450

Login Number: L12070640

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
MPL21-0712-1	01	07/19/12					07/25/2012	6.1	7		07/25/12	6.1	7	
MPL22-0712-1	02	07/19/12					07/25/2012	6	7		07/25/12	6	7	
MPL25-0712-1	03	07/19/12					07/25/2012	5.9	7		07/25/12	5.9	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2522709
Report generated 07/27/2012 16:52

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070640
Blank File ID: EN.1207251240-01
Prep Date: 07/25/12 12:40
Analyzed Date: 07/25/12 12:40
Analyst: ERP

Work Group: WG404450
Blank Sample ID: WG404450-01
Instrument ID: OVEN
Method: 160.2

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG404450-02	EN.1207251240-02	07/25/12 12:40	
LCS2	WG404450-03	EN.1207251240-03	07/25/12 12:40	
MPL21-0712-1	L12070640-01	EN.1207251240-05	07/25/12 12:40	
MPL22-0712-1	L12070640-02	EN.1207251240-06	07/25/12 12:40	
MPL25-0712-1	L12070640-03	EN.1207251240-07	07/25/12 12:40	
DUP	WG404450-05	EN.1207251240-24	07/25/12 12:40	
DUP	WG404450-07	EN.1207251240-25	07/25/12 12:40	

Report Name: BLANK_SUMMARY
PDF File ID: 2522710
Report generated 07/27/2012 16:52

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070640 Prep Date: 07/25/12 12:40 Sample ID: WG404450-01
Instrument ID: OVEN Run Date: 07/25/12 12:40 Prep Method: 160.2/SM2540D
File ID: EN.1207251240-01 Analyst: ERP Method: 160.2
Workgroup (AAB#): WG404450 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: 2522711
27-JUL-2012 16:52

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070640 Analyst: ERP Prep Method: 160.2/SM2540D
Instrument ID: OVEN Matrix: Water Method: 160.2
Workgroup (AAB#): WG404450 Units: mg/L
QC Key: DOD4 Lot #: STD52991

Sample ID: WG404450-02 LCS File ID: EN.1207251240-02 Run Date: 07/25/2012 12:40
Sample ID: WG404450-03 LCS2 File ID: EN.1207251240-03 Run Date: 07/25/2012 12:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	56.0	112	50.0	58.0	116	3.51	75 - 125	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2522712
Report generated: 07/27/2012 16:52

2.2.12.3 Raw Data

TRAY 8

WORKGROUP: WG404450

TOTAL SUSPENDED SOLIDS

Oven: TSS1 Other

LCS: STDS2991
MS: _____ mL LCS & _____ mL sample
Balance: AND GR-202 / Other
Method: EPA 160.2 / SM2540D SOP #: K1602 Revision #: _____ Filter Lot#: _____

On Temp: 103 215 | 107 105 | _____ | _____

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	BLK	200				
LCS: _____mg/L	LCS	100				
LCSDUP: _____mg/L	LCS2	100				
7-633-5	1	10				
7-640-1	2	200				
2	3	200				
3	4	200				
7-643-1	5	200				
3	6	50				
5	7	50				
7	8	50				
9	9	50				
11	10	50				
7-667-4	11	100				
5	12	50				
7-633-1	13	50				
2	14	10				
3	15	20				
7-648-1	16	200				
7-667-7	17	100				
8	18	50				
7-673-1	19	200				
3	20	200				
DUP: 7-673-1	Dup1	200				
DUP: 7-673-3	Dup2	200				

Off Temp: 103 1200 | 103 200 | _____ | _____

ANALYST: Eric Pro

DATE/TIME: (on) 7-25-12 1415

DATE/TIME: (off) _____

DATE/TIME: (off) _____

DATE/TIME: (off) _____

* Duplicate required on 10% of samples

DCN#91714

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG404450
Analyst: ERP
Analyte: TOTAL SUSPENDED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.2/SM2540D
SOP: K1602 Revison 13
Spike Solution: STD52991
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG404450-01	BLK	200	0.0938	0.0942	0.0938		0	0	mg/L
WG404450-02	LCS	100	0.094	0.0998	0.0996		56.00	56.00	mg/L
WG404450-03	LCS2	100	0.0941	0.1	0.0999		58.00	58.00	mg/L
L12070633-05	1	10	0.0942	0.1291	0.1292		3500	3500	mg/L
L12070640-01	2	200	0.095	0.0963	0.0958		4.000	4.000	mg/L
L12070640-02	3	200	0.0914	0.0932	0.0932		9.000	9.000	mg/L
L12070640-03	4	200	0.0978	0.0992	0.0987		4.500	4.500	mg/L
L12070643-01	5	200	0.098	0.1001	0.0999		9.500	9.500	mg/L
L12070643-03	6	50	0.097	0.0984	0.0984		28.00	28.00	mg/L
L12070643-05	7	50	0.0963	0.0982	0.0979		32.00	32.00	mg/L
L12070643-07	8	50	0.0949	0.0965	0.0964		30.00	30.00	mg/L
L12070643-09	9	50	0.096	0.098	0.098		40.00	40.00	mg/L
L12070643-11	10	50	0.1004	0.1017	0.1017		26.00	26.00	mg/L
L12070667-04	11	100	0.0982	0.1036	0.1035		53.00	53.00	mg/L
L12070667-05	12	50	0.0938	0.1024	0.102		164.0	164.0	mg/L
L12070633-01	13	50	0.0962	0.0998	0.0997		70.00	70.00	mg/L
L12070633-02	14	10	0.0973	0.1319	0.1319		3460	3460	mg/L
L12070633-03	15	20	0.0968	0.1085	0.108		560.0	560.0	mg/L
L12070648-01	16	200	0.0957	0.0976	0.0971		7.000	7.000	mg/L
L12070667-07	17	100	0.0945	0.0995	0.099		45.00	45.00	mg/L
L12070667-08	18	50	0.095	0.1118	0.1115		330.0	330.0	mg/L
L12070673-01	19	200	0.092	0.0928	0.0928		4.000	4.000	mg/L
WG404450-04	19	200	0.092	0.0928	0.0928		4.000	4.000	mg/L
L12070673-03	20	200	0.0963	0.0968	0.0967		2.000	ND	mg/L
WG404450-06	20	200	0.0963	0.0968	0.0967		2.000	2.000	mg/L
WG404450-05	DUP1	200	0.0978	0.0989	0.0989		5.500	5.500	mg/L
WG404450-07	DUP2	200	0.0963	0.0969	0.0966		1.500	1.500	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/25/2012 12:40
Date/Time (off): 07/26/2012 12:51
Date/Time (off): 07/26/2012 16:47
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2516258
Report generated: 07/26/2012 15:55

Microbac

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
July 31, 2012

ADC - ANTHONY D. CANTER
AGK - ANDREW G. KASICK
AJF - AMANDA J. FICKIESEN
ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE
AML - TONY M. LONG
AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER
CSH - CHRIS S. HILL
DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
EDL - ERIN D. LONG
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
HAV - HEMA VILASAGAR
HJR - HOLLY J. REED
JAL - JOHN A. LENT
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JKS - JANE K. SCHAAD
JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RLK - ROBIN L. KLINGER
RS - ROSEMARY SCOTT
RWC - RODNEY W. CAMPBELL
SJP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TIP - TAE I. PARRISH
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
July 31, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

L12070640 / Revision: 0 / 1207 total pages

COC No. A 30688

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: SHAW / Zia

Project Contact: Mark Lyon

Contact Phone #: 505-262-8920

Turn Around Requirements: Normal

Location: WSMR STP

Project ID: WSMR STP SWMU 82

Sampler (print): Allison Jenness

Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Anions (Fl, Cl, SO4)	Conductivity	pH	PO4	CN-Total	CN-Amenable	CN-WAD-Free	Metals	TSS-TDS	Alkalinity	NH3	NO3-NO2	TOC	Na, K, Ca, Mg, Mn	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MPL21-0712-1		X	7-19-12	1106	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL22-0712-1		X	7-19-12	1245	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL25-0712-1		X	7-19-12	1540	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Microbac OVD
Received: 07/20/2012 10:42
By: ROSEMARY SCOTT
221000026987

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Brady T. Dao	7-19-12	1700			
Relinquished by: (Signature)	Date	Time	Remarks:		

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Generated: 07/31/2012 16:30

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-01	992409	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	SEM	25-JUL-2012 13:54	JBK	CLS	

Samplenum	Container ID	Products
L12070640-01	992410	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	26-JUL-2012 06:49	DIH	AZH	
3	STORE	WET	A1	26-JUL-2012 11:23	BLG	DIH	

Samplenum	Container ID	Products
L12070640-01	992411	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	20-JUL-2012 14:39	DLP	CLS	
3	STORE	WET	A1	25-JUL-2012 08:07	JKS	DLP	

Samplenum	Container ID	Products
L12070640-01	992412	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 12:31	ERP	CLS	
3	ANALYZ	W1	WET	24-JUL-2012 12:38	ERP	CLS	
4	STORE	WET	A1	25-JUL-2012 16:30	BLG	ERP	

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: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-01	992413	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		<2
2	ANALYZ	W1	WET	24-JUL-2012 06:40	DIH	CLS	
3	STORE	WET	A1	26-JUL-2012 06:40	AZH	DIH	

Samplenum	Container ID	Products
L12070640-01	992414	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	20-JUL-2012 13:29	JKT		
2	PREP	W1	DIG	23-JUL-2012 04:47	REK	AZH	
3	STORE	DIG	A1	24-JUL-2012 14:33	CLS	REK	
4	ANALYZ*	DIG	METALS	25-JUL-2012 08:54	LMK	REK	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	STORE	W1	A1	31-JUL-2012 15:28	BLG	BLG	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070640-01	992415	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 09:56	HJR	CLS	
3	STORE	WET	A1	30-JUL-2012 08:09	HJR	CLS	

Samplenum	Container ID	Products
L12070640-02	992416	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	SEM	25-JUL-2012 13:53	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: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-02	992417	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	26-JUL-2012 06:49	DIH	AZH	
Comments:Products cancelled.							
3	STORE	WET	A1	27-JUL-2012 08:08	JKS	DLP	
Comments:Products cancelled.							

Samplenum	Container ID	Products
L12070640-02	992418	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	20-JUL-2012 14:39	DLP	CLS	
3	STORE	WET	A1	25-JUL-2012 08:07	JKS	DLP	

Samplenum	Container ID	Products
L12070640-02	992419	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 12:31	ERP	CLS	
3	ANALYZ	W1	WET	24-JUL-2012 12:38	ERP	CLS	
4	STORE	WET	A1	25-JUL-2012 16:30	BLG	ERP	

Samplenum	Container ID	Products
L12070640-02	992420	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		<2
2	ANALYZ	W1	WET	24-JUL-2012 06:40	DIH	CLS	
3	STORE	WET	A1	26-JUL-2012 06:40	AZH	DIH	

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: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-02	992421	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	20-JUL-2012 13:29	JKT		
2	PREP	W1	DIG	23-JUL-2012 04:47	REK	AZH	
3	STORE	DIG	A1	24-JUL-2012 14:33	CLS	REK	
4	ANALYZ*	DIG	METALS	25-JUL-2012 08:54	LMK	REK	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	STORE	W1	A1	31-JUL-2012 15:28	BLG	BLG	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070640-02	992422	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 09:56	HJR	CLS	
3	STORE	WET	A1	30-JUL-2012 08:09	HJR	CLS	

Samplenum	Container ID	Products
L12070640-03	992423	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	SEM	25-JUL-2012 13:54	JBK	CLS	

Samplenum	Container ID	Products
L12070640-03	992424	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	26-JUL-2012 06:49	DIH	AZH	
3	STORE	WET	A1	26-JUL-2012 11:23	BLG	DIH	

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: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-03	992425	COND COR-PH PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	20-JUL-2012 14:39	DLP	CLS	
3	STORE	WET	A1	25-JUL-2012 08:07	JKS	DLP	

Samplenum	Container ID	Products
L12070640-03	992426	TDS TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 12:31	ERP	CLS	
3	ANALYZ	W1	WET	24-JUL-2012 12:38	ERP	CLS	
4	STORE	WET	A1	25-JUL-2012 16:32	BLG	ERP	

Samplenum	Container ID	Products
L12070640-03	992427	NH3 NO3NO2 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		<2
2	ANALYZ	W1	WET	24-JUL-2012 06:40	DIH	CLS	
3	STORE	WET	A1	26-JUL-2012 06:40	AZH	DIH	

Samplenum	Container ID	Products
L12070640-03	992428	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	20-JUL-2012 13:29	JKT		
2	PREP	W1	DIG	23-JUL-2012 04:47	REK	AZH	
3	STORE	DIG	A1	24-JUL-2012 14:34	CLS	REK	
4	ANALYZ*	DIG	METALS	25-JUL-2012 08:54	LMK	REK	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		

Sample extract/digestate/leachate

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: L12070640
Account: 3005
Project: 3005.011
Samples: 3
Due Date: 31-JUL-2012

Samplenum	Container ID	Products
L12070640-03	992429	CN CN-A CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	20-JUL-2012 13:29	JKT		
2	ANALYZ	W1	WET	23-JUL-2012 09:56	HJR	CLS	
3	STORE	WET	A1	30-JUL-2012 08:09	HJR	CLS	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login