Microbac

Laboratory Report Number: L12070328

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 25 2012

David Vandenberg – Managing Director

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

Microbac

Lab Report #: L12070328
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 #
0011146	H	0.0		1002239921660004575000873013166791
0012548	H	0.0		1015924621660004575000795546007098

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

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MPL05-0712-1	L12070328-01	07/11/2012 09:27	07/12/2012 10:33
MPL18-0712-1	L12070328-02	07/11/2012 10:14	07/12/2012 10:33
MPL16-0712-1	L12070328-03	07/11/2012 12:12	07/12/2012 10:33
MPL17-0712-1	L12070328-04	07/11/2012 14:00	07/12/2012 10:33
MPL17-0712-MS	L12070328-05	07/11/2012 14:00	07/12/2012 10:33
MPL17-0712-MSD	L12070328-06	07/11/2012 14:00	07/12/2012 10:33

Microbac REPORT L12070328
PREPARED FOR Environmental Waste Solutions
WORK ID:

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2.2.8.2 QC Summary Data 1011
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1.0 Summary Data

1.1 Narratives

Login Number: L12070328
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: 50495
Approved By: Deanna Hesson

Login Number: L12070328
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: WG403481 - The continuing calibration blank analyzed on 17-JUL-2012 at 13:17 yielded a result for calcium that was greater than the LOD but less than the LOQ.

BATCH QA/QC

Method Blank: WG403481 - The method blank analyzed on 17-JUL-2012 at 12:06 yielded a result for calcium that exceeded the LOD. However, the reported sample results exceeded that of the method blank by greater than a factor of ten. The calcium results were reported with a 'B' qualifier to indicate the association with a noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG403481 - Tin was not add to the initial post digestion spike, therefore, the post digestion spike was reanalyzed at 13:49 and met all acceptance criteria.

Matrix Spikes: WG403481 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) yielded noncompliant recoveries for calcium.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50104
Approved By: Sheri Pfalzgraf

Login Number: L12070328
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: WG403681 - Due to continuing calibration verification failure for silver on 18-July-2012 at 12:39, client samples 01, 04, 05(MS), and 06(MSD) were reanalyzed on a later calibration which was compliant for silver. Due to continuing calibration verification failure for silver and selenium on 18-July-2012 at 13:16, client samples 02 and 03 and the batch post spike and serial dilution were reanalyzed on a later calibration which was compliant for silver and selenium.

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: WG403681 - All acceptance criteria were met.

Matrix Spikes: WG403681 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50149
Approved By: Sheri Pfalzgraf

Login Number: L12070328
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: WG403372 - All acceptance criteria were met.

Matrix Spikes: WG403372 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50021
Approved By: Sheri Pfalzgraf

Login Number: L12070328
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: Recoveries for chloride marginally exceeded the upper control limit (111% and 113%). The analytical result for the MS and MSD were greater than the calibration range resulting in biased recoveries.

SAMPLES

Samples: All acceptance criteria were met.

MANUAL INTEGRATION: No manual integration was required.

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Narrative ID: 49941
Approved By: Mike Cochran

Login Number: L12070328
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: The blank result was greater than the absolute value of the LOD (MDL).

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Alkalinity, Total (as CaCO3), Alkalinity, Carbonate (as CaCO3), Alkalinity, Bicarbonate (as CaCO3). Please see the applicable QC report for a detailed presentation of the failures.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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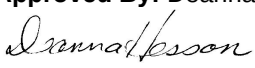
Narrative ID: 50493
Approved By: Deanna Hesson



Login Number: L12070328
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: 50499
Approved By: Deanna Hesson

Login Number: L12070328
Department: Conventionals
Analyst: Tammy Morris

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: Recoveries out of range were observed for the following analytes: Conductivity. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: All acceptance criteria were met.

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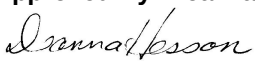
Narrative ID: 50494
Approved By: Deanna Hesson



Login Number: L12070328
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: 50496
Approved By: Deanna Hesson

Login Number: L12070328
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: Recoveries out of range were observed for the following analytes: Nitrate-Nitrite (as N). Please see the applicable QC report for a detailed presentation of the failures.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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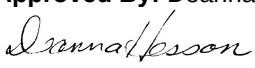
Narrative ID: 50497
Approved By: Deanna Hesson



Login Number: L12070328
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: 50498
Approved By: Deanna Hesson

Login Number: L12070328
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: 50501
Approved By: Deanna Hesson

Login Number: L12070328
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: 50500
Approved By: Deanna Hesson

Login Number: L12070328
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: The LCS/LCS duplicate had recoveries above the acceptable limit. The sample results could be biased high.

Duplicates: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Total Suspended Solids. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 50182
Approved By: Deanna Hesson

1.2 Certificate of Analysis

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL05-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:21
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	P2.071712.142106
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	47.0	B	0.200	0.100
Magnesium, Total	7439-95-4	9.20		0.500	0.250
Potassium, Total	7440-09-7	2.72		1.00	0.500
Sodium, Total	7440-23-5	24.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00684	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL05-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:53
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	NI.071912.145314
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL05-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:24
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	NI.071812.122421
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00145		0.00100	0.000500
Barium, Total	7440-39-3	0.111		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00259		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	0.00131	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00239	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00480		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 #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL05-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:50
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	HY.071612.155027
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 #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL05-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 17:37
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	I10713121737.14
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.307		0.200	0.100
Sulfate	14808-79-8	58.7		1.00	0.500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL05-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 18:29
Collect Date:	07/11/2012 09:27	**Dilution:**	4	**File ID:**	I10713121829.17
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	51.8		0.800	0.400

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL05-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:47
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	OS12071809281701
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.61		0.000	0.000

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	83.4		20.0	10.0

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	83.4		20.0	10.0

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
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 #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201545-09
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0135		0.0100	0.00500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201430-08
Sample Tag:	f	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.179		0.0100	0.00500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201400-09
Sample Tag:	4	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.181		0.0100	0.00500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL05-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	32.1207201430-16
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		474		1.00	0.500

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:37
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120723001.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.135		0.100	0.0500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 09:27	**Dilution:**	4	**File ID:**	SC12072008134601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.34		0.200	0.100

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207130825-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2		U	0.0500	0.0250
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL05-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	EN.1207131430-20
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		286		20.0	10.0

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL05-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:18
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	TC07212012.006
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.30		1.00	0.500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL05-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	EN.1207161330-09
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:28
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	P2.071712.142803
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	32.9	B	0.200	0.100
Magnesium, Total	7439-95-4	5.99		0.500	0.250
Potassium, Total	7440-09-7	1.97		1.00	0.500
Sodium, Total	7440-23-5	19.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0101		0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL18-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:45
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	NI.071812.124529
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00191		0.00100	0.000500
Barium, Total	7440-39-3	0.144		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00380		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	0.00207		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL18-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 15:09
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	NI.071912.150908
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2	0.00209		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL18-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:52
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	HY.071612.155216
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL18-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 18:46
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	I10713121846.18
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.2		0.200	0.100
Fluoride	16984-48-8	0.285		0.200	0.100
Sulfate	14808-79-8	36.9		1.00	0.500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL18-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:47
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	OS12071809282401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.43		0.000	0.000

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	89.9		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
Sample Tag:	01	**Units:**	mg/L		

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	89.9		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201400-10
Sample Tag:	5	**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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201430-09
Sample Tag:	g	**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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201545-10
Sample Tag:		**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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL18-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	32.1207201430-17
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		322		1.00	0.500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:40
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120723001.020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0814	J	0.100	0.0500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC12072008135101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.67		0.0500	0.0250

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207130825-06
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	EN.1207131430-21
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		180		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL18-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	TC07212012.007
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.16		1.00	0.500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	EN.1207161330-10
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL16-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:35
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	P2.071712.143500
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	50.6	B	0.200	0.100
Magnesium, Total	7439-95-4	8.54		0.500	0.250
Potassium, Total	7440-09-7	3.05		1.00	0.500
Sodium, Total	7440-23-5	26.3		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00841	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL16-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:48
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	NI.071812.124838
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00190		0.00100	0.000500
Barium, Total	7440-39-3	0.0724		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00158	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		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL16-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 15:12
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	NI.071912.151219
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2	0.00750		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL16-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:53
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	HY.071612.155356
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL16-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:04
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	I10713121904.19
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.260		0.200	0.100
Sulfate	14808-79-8	80.8		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL16-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:21
Collect Date:	07/11/2012 12:12	**Dilution:**	4	**File ID:**	I10713121921.20
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	45.0		0.800	0.400

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL16-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:50
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	OS12071809285101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.64		0.000	0.000

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	83.3		20.0	10.0

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	83.3		20.0	10.0

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201430-10
Sample Tag:	h	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0909		0.0100	0.00500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0146		0.0100	0.00500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201400-11
Sample Tag:	6	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0927		0.0100	0.00500

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL16-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	32.1207201430-18
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		495		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:41
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120723001.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.				

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 12:12	**Dilution:**	4	**File ID:**	SC12072008140101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.82		0.200	0.100

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207130825-07
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL16-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	EN.1207131430-22
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		296		20.0	10.0

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL16-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:43
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	TC07212012.008
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.32		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL16-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	EN.1207161330-11
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:41
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.144158
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	45.6	B	0.200	0.100
Magnesium, Total	7439-95-4	8.32		0.500	0.250
Potassium, Total	7440-09-7	2.28		1.00	0.500
Sodium, Total	7440-23-5	25.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00663	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:43
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.144349
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:10
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00181		0.00100	0.000500
Barium, Total	7440-39-3	0.0767		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00171	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		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00577		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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:58
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.155859
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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:39
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	I10713121939.21
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.231		0.200	0.100
Sulfate	14808-79-8	63.2		1.00	0.500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:56
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713121956.22
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	48.7		0.800	0.400

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0712-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:53
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	OS12071809290301
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.83		0.000	0.000

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	77.7		20.0	10.0

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	77.7		20.0	10.0

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-12
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0851		0.0100	0.00500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-12
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0133		0.0100	0.00500

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-11
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0829		0.0100	0.00500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL17-0712-1	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	32.1207201430-19
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		468		1.00	0.500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:42
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.022
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	SC12072008140901
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.48		0.200	0.100

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-08
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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		312		20.0	10.0

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 02:36
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.054
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.630	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-12
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-MS	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 15:01
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.150149
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.0227		0.00200	0.00100
Calcium, Total	7440-70-2	52.3	B	0.200	0.100
Magnesium, Total	7439-95-4	12.7		0.500	0.250
Potassium, Total	7440-09-7	26.1		1.00	0.500
Sodium, Total	7440-23-5	50.9		0.500	0.250
Tin, Total	7440-31-5	0.510		0.500	0.250
Vanadium, Total	7440-62-2	0.504		0.0100	0.00500
Zinc, Total	7440-66-6	0.472		0.0200	0.0100

B	The reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MS	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:46
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.144658
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	0.0700		0.00100	0.000500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MS	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:13
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121330
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0630		0.00100	0.000500
Arsenic, Total	7440-38-2	0.0666		0.00100	0.000500
Barium, Total	7440-39-3	0.146		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0628		0.000600	0.000300
Chromium, Total	7440-47-3	0.0671		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0671		0.00100	0.000500
Copper, Total	7440-50-8	0.0637		0.00200	0.00100
Lead, Total	7439-92-1	0.0651		0.00100	0.000500
Manganese, Total	7439-96-5	0.0677		0.00200	0.00100
Nickel, Total	7440-02-0	0.0653		0.00400	0.00200
Selenium, Total	7782-49-2	0.0708		0.00100	0.000500
Thallium, Total	7440-28-0	0.0646		0.000200	0.000100

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-MS	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:05
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 16:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.160049
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00458		0.000222	0.000111

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-MS	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 20:31
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713122031.24
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	57.6		0.800	0.400
Fluoride	16984-48-8	8.38		0.800	0.400
Sulfate	14808-79-8	97.3		4.00	2.00

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0712-MS	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:53
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	OS12071809294101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.25		0.000	0.000

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	153		20.0	10.0

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
Sample Tag:	01	**Units:**	mg/L		

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	153		20.0	10.0

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
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 #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-12
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.291		0.0100	0.00500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.225		0.0100	0.00500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-13
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.293		0.0100	0.00500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL17-0712-MS	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	32.1207201430-20
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		471		1.00	0.500

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:42
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.023
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.954		0.100	0.0500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	SC12072008143001
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.94		0.200	0.100

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-17
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.389		0.0500	0.0250

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MS	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		774		20.0	10.0

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-MS	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 02:59
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.056
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		10.4		1.00	0.500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MS	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		27.0		5.00	2.50

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 15:07
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.150746
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.0225		0.00200	0.00100
Calcium, Total	7440-70-2	52.4	B	0.200	0.100
Magnesium, Total	7439-95-4	12.7		0.500	0.250
Potassium, Total	7440-09-7	25.9		1.00	0.500
Sodium, Total	7440-23-5	51.2		0.500	0.250
Tin, Total	7440-31-5	0.513		0.500	0.250
Vanadium, Total	7440-62-2	0.508		0.0100	0.00500
Zinc, Total	7440-66-6	0.485		0.0200	0.0100

B	The reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121758
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0631		0.00100	0.000500
Arsenic, Total	7440-38-2	0.0664		0.00100	0.000500
Barium, Total	7440-39-3	0.147		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0632		0.000600	0.000300
Chromium, Total	7440-47-3	0.0666		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0671		0.00100	0.000500
Copper, Total	7440-50-8	0.0660		0.00200	0.00100
Lead, Total	7439-92-1	0.0661		0.00100	0.000500
Manganese, Total	7439-96-5	0.0693		0.00200	0.00100
Nickel, Total	7440-02-0	0.0658		0.00400	0.00200
Selenium, Total	7782-49-2	0.0701		0.00100	0.000500
Thallium, Total	7440-28-0	0.0656		0.000200	0.000100

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:50
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.145007
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	0.0720		0.00100	0.000500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-MSD	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:05
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 16:02
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.160226
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00456		0.000222	0.000111

Certificate of Analysis

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-MSD	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 20:48
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713122048.25
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	57.7		0.800	0.400
Fluoride	16984-48-8	8.39		0.800	0.400
Sulfate	14808-79-8	97.4		4.00	2.00

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0712-MSD	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:55
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	OS12071809295301
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.75		0.000	0.000

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	148		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
Sample Tag:	01	**Units:**	mg/L		

Certificate of Analysis

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 #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	148		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-14
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.294		0.0100	0.00500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.223		0.0100	0.00500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-13
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.292		0.0100	0.00500

Certificate of Analysis

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	YSI-32
Client ID:	MPL17-0712-MSD	**Prep Method:**	120.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	120.1	**Cal Date:**	
Workgroup #:	WG404009	**Analyst:**	TMM	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	32.1207201430-21
Sample Tag:		**Units:**	umhos/cm		

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		412		1.00	0.500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 08:13
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.960		0.100	0.0500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	SC12072008143601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.90		0.200	0.100

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-18
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.395		0.0500	0.0250

Certificate of Analysis

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MSD	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		780		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-MSD	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 03:12
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		10.5		1.00	0.500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MSD	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		31.5		5.00	2.50

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: L12070328
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: WG403481 - The continuing calibration blank analyzed on 17-JUL-2012 at 13:17 yielded a result for calcium that was greater than the LOD but less than the LOQ.

BATCH QA/QC

Method Blank: WG403481 - The method blank analyzed on 17-JUL-2012 at 12:06 yielded a result for calcium that exceeded the LOD. However, the reported sample results exceeded that of the method blank by greater than a factor of ten. The calcium results were reported with a 'B' qualifier to indicate the association with a noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG403481 - Tin was not add to the initial post digestion spike, therefore, the post digestion spike was reanalyzed at 13:49 and met all acceptance criteria.

Matrix Spikes: WG403481 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) yielded noncompliant recoveries for calcium.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50104
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL05-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:21
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	P2.071712.142106
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	47.0	B	0.200	0.100
Magnesium, Total	7439-95-4	9.20		0.500	0.250
Potassium, Total	7440-09-7	2.72		1.00	0.500
Sodium, Total	7440-23-5	24.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00684	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL18-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:28
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	P2.071712.142803
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	32.9	B	0.200	0.100
Magnesium, Total	7439-95-4	5.99		0.500	0.250
Potassium, Total	7440-09-7	1.97		1.00	0.500
Sodium, Total	7440-23-5	19.5		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.0101		0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

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

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL16-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:35
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	P2.071712.143500
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	50.6	B	0.200	0.100
Magnesium, Total	7439-95-4	8.54		0.500	0.250
Potassium, Total	7440-09-7	3.05		1.00	0.500
Sodium, Total	7440-23-5	26.3		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00841	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-1	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 14:41
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.144158
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	45.6	B	0.200	0.100
Magnesium, Total	7439-95-4	8.32		0.500	0.250
Potassium, Total	7440-09-7	2.28		1.00	0.500
Sodium, Total	7440-23-5	25.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2	0.00663	J	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

B	The reported result is associated with a contaminated method blank.
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 #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-MS	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 15:01
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.150149
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.0227		0.00200	0.00100
Calcium, Total	7440-70-2	52.3	B	0.200	0.100
Magnesium, Total	7439-95-4	12.7		0.500	0.250
Potassium, Total	7440-09-7	26.1		1.00	0.500
Sodium, Total	7440-23-5	50.9		0.500	0.250
Tin, Total	7440-31-5	0.510		0.500	0.250
Vanadium, Total	7440-62-2	0.504		0.0100	0.00500
Zinc, Total	7440-66-6	0.472		0.0200	0.0100

B	The reported result is associated with a contaminated method blank.

Certificate of Analysis

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	PE-ICP2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3005A	**Prep Date:**	07/16/2012 08:33
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	07/17/2012 09:16
Workgroup #:	WG403481	**Analyst:**	KHR	**Run Date:**	07/17/2012 15:07
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	P2.071712.150746
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Beryllium, Total	7440-41-7	0.0225		0.00200	0.00100
Calcium, Total	7440-70-2	52.4	B	0.200	0.100
Magnesium, Total	7439-95-4	12.7		0.500	0.250
Potassium, Total	7440-09-7	25.9		1.00	0.500
Sodium, Total	7440-23-5	51.2		0.500	0.250
Tin, Total	7440-31-5	0.513		0.500	0.250
Vanadium, Total	7440-62-2	0.508		0.0100	0.00500
Zinc, Total	7440-66-6	0.485		0.0200	0.0100

B	The reported result is associated with a contaminated method blank.

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: WG403432
Analyst: REK
Spike Analyst: REK
Method: 3005A
Run Date: 07/16/2012 08:33
Hotblock Start Temp: 95.1 @ 07:35
Hotblock End Temp: 95.1 @ 11:35

SOP: ME401 Revison 14
Spike Solution: STD52371
Spike Witness: VC
HNO3 Lot #: COA16174
ICP;WG401305 Filter Lot COA16240
Digestion Tubes Lot #: COA16262
HCL Lot #: COA16273

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG403432-03	BLANK	1	50 mL	50 mL		
2	WG403432-04	LCS	1	50 mL	50 mL	5 mL	
3	WG403432-01	REF	1	50 mL	50 mL		
4	L12070257-01	RS01	1	50 mL	50 mL		07/18/12
5	WG403432-05	MS	1	50 mL	50 mL	5 mL	
6	L12070257-09	MS01	1	50 mL	50 mL	5 mL	07/18/12
7	WG403432-06	MSD	1	50 mL	50 mL	5 mL	
8	L12070257-11	SD01	1	50 mL	50 mL	5 mL	07/18/12
9	L12070316-01	SAMP	1	50 mL	50 mL		07/19/12
10	L12070316-02	SAMP	1	50 mL	50 mL		07/19/12
11	L12070327-01	SAMP	1	50 mL	50 mL		07/23/12
12	L12070327-02	SAMP	1	50 mL	50 mL		07/23/12
13	L12070327-03	SAMP	1	50 mL	50 mL		07/23/12
14	L12070328-01	SAMP	1	50 mL	50 mL		07/23/12
15	L12070328-02	SAMP	1	50 mL	50 mL		07/23/12
16	L12070328-03	SAMP	1	50 mL	50 mL		07/23/12
17	WG403432-02	REF	1	50 mL	50 mL		
18	L12070328-04	RS01	1	50 mL	50 mL		07/23/12
19	WG403432-07	MS	1	50 mL	50 mL	5 mL	
20	L12070328-05	MS01	1	50 mL	50 mL	5 mL	07/23/12
21	WG403432-08	MSD	1	50 mL	50 mL	5 mL	
22	L12070328-06	SD01	1	50 mL	50 mL	5 mL	07/23/12
23	L12070356-08	SAMP	1	50 mL	50 mL		07/26/12
24	L12070360-02	SAMP	1	50 mL	50 mL		07/26/12
25	L12070373-01	SAMP	1	50 mL	50 mL		07/24/12
26	L12070373-02	SAMP	1	50 mL	50 mL		07/24/12
27	L12070373-03	SAMP	1	50 mL	50 mL		07/24/12
28	L12070373-06	SAMP	1	50 mL	50 mL		07/24/12

Analyst: [signature]

Reviewer: Erin Potter

HB_DIG - Modified 09/30/2009
PDF ID: 2497419
Report generated: 07/16/2012 11:46

Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 071712HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42505

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52626 Int. Std: RGT17310
CCV: STD52663 LLCCV:

Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.071712.084956	WG403609-01	Calibration Point		1		07/17/12 08:49
2	P2.071712.085650	WG403609-02	Calibration Point		1		07/17/12 08:56
3	P2.071712.090344	WG403609-03	Calibration Point		1		07/17/12 09:03
4	P2.071712.091039	WG403609-04	Calibration Point		1		07/17/12 09:10
5	P2.071712.091637	WG403609-05	Calibration Point		1		07/17/12 09:16
6	P2.071712.092238	WG403609-06	Initial Calibration Verification		1		07/17/12 09:22
7	P2.071712.092835	WG403609-07	Initial Calib Blank		1		07/17/12 09:28
8	P2.071712.093528	WG403609-08	Interference Check		1		07/17/12 09:35
9	P2.071712.094124	WG403609-09	Interference Check		1		07/17/12 09:41
10	P2.071712.094721	WG403609-10	CCV		1		07/17/12 09:47
11	P2.071712.095320	WG403609-11	CCB		1		07/17/12 09:53
12	P2.071712.100230	PBW B7	PBW B7		1		07/17/12 10:02
13	P2.071712.100925	LC-SW	LCSW B7		1		07/17/12 10:09
14	P2.071712.101524	L12070312-01	2070604-01		1		07/17/12 10:15
15	P2.071712.102220	WG403609-12	CCV		1		07/17/12 10:22
16	P2.071712.102820	WG403609-13	CCB		1		07/17/12 10:28
17	P2.071712.103513	WG403609-14	Linear Range Check		1		07/17/12 10:35
18	P2.071712.104208	WG403609-14	Linear Range Check		1		07/17/12 10:42
19	P2.071712.104903	BLANK	BLANK		1		07/17/12 10:49
20	P2.071712.105558	WG403609-15	CCV		1		07/17/12 10:55
21	P2.071712.110158	WG403609-16	CCB		1		07/17/12 11:01
22	P2.071712.110820	WG403556-01	Method/Prep Blank	5/50	1		07/17/12 11:08
23	P2.071712.111515	WG403556-02	Laboratory Control S	5/50	1		07/17/12 11:15
24	P2.071712.112116	WG403556-03	Laboratory Control S	5/50	1		07/17/12 11:21
25	P2.071712.112717	WG403511-02	TCLP Fluid Blank 2		1		07/17/12 11:27
26	P2.071712.113411	L12070312-01	2070604-01	5/50	1		07/17/12 11:34
27	P2.071712.114106	WG403578-01	Post Digestion Spike		1	L12070312-01	07/17/12 11:41
28	P2.071712.114703	WG403578-02	Serial Dilution		5	L12070312-01	07/17/12 11:47
29	P2.071712.115358	WG403609-17	CCV		1		07/17/12 11:53
30	P2.071712.120001	WG403609-18	CCB		1		07/17/12 12:00
31	P2.071712.120654	WG403432-03	Method/Prep Blank	50/50	1		07/17/12 12:06
32	P2.071712.121349	WG403432-04	Laboratory Control S	50/50	1		07/17/12 12:13
33	P2.071712.121949	WG403432-01	Reference Sample		1	L12070257-01	07/17/12 12:19
34	P2.071712.122549	WG403432-05	Matrix Spike	50/50	1	L12070257-01	07/17/12 12:25

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 071712HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42505

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52626 Int. Std: RGT17310
CCV: STD52663 LLCCV:

Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	P2.071712.123150	WG403432-06	Matrix Spike Duplica	50/50	1	L12070257-01	07/17/12 12:31
36	P2.071712.123751	L12070356-08	PTO-EB01-071112	50/50	1		07/17/12 12:37
37	P2.071712.124447	L12070360-02	PTO-EB01-071212	50/50	1		07/17/12 12:44
38	P2.071712.125140	L12070327-01	MPL10-0712-1	50/50	1		07/17/12 12:51
39	P2.071712.125835	WG403481-01	Post Digestion Spike		1	L12070327-01	07/17/12 12:58
40	P2.071712.130433	WG403481-02	Serial Dilution		5	L12070327-01	07/17/12 13:04
41	P2.071712.131128	WG403609-19	CCV		1		07/17/12 13:11
42	P2.071712.131727	WG403609-20	CCB		1		07/17/12 13:17
43	P2.071712.132542	WG403609-21	Interference Check		1		07/17/12 13:25
44	P2.071712.133138	WG403609-22	Interference Check		1		07/17/12 13:31
45	P2.071712.133735	WG403609-23	CCV		1		07/17/12 13:37
46	P2.071712.134335	WG403609-24	CCB		1		07/17/12 13:43
47	P2.071712.134912	WG403481-01	Post Digestion Spike		1	L12070327-01	07/17/12 13:49
48	P2.071712.135513	L12070316-01	3031-P	50/50	10		07/17/12 13:55
49	P2.071712.140115	L12070316-02	3031-F	50/50	10		07/17/12 14:01
50	P2.071712.140714	L12070327-02	MPL13-0712-1	50/50	1		07/17/12 14:07
51	P2.071712.141410	L12070327-03	MPL13-0712-2	50/50	1		07/17/12 14:14
52	P2.071712.142106	L12070328-01	MPL05-0712-1	50/50	1		07/17/12 14:21
53	P2.071712.142803	L12070328-02	MPL18-0712-1	50/50	1		07/17/12 14:28
54	P2.071712.143500	L12070328-03	MPL16-0712-1	50/50	1		07/17/12 14:35
55	P2.071712.144158	WG403432-02	Reference Sample		1	L12070328-04	07/17/12 14:41
56	P2.071712.144856	WG403609-25	CCV		1		07/17/12 14:48
57	P2.071712.145455	WG403609-26	CCB		1		07/17/12 14:54
58	P2.071712.150149	WG403432-07	Matrix Spike	50/50	1	L12070328-04	07/17/12 15:01
59	P2.071712.150746	WG403432-08	Matrix Spike Duplica	50/50	1	L12070328-04	07/17/12 15:07
60	P2.071712.151344	L12070373-01	T40-0712-1	50/50	1		07/17/12 15:13
61	P2.071712.152042	L12070373-02	MPL-07-0712-1	50/50	1		07/17/12 15:20
62	P2.071712.152742	L12070373-03	MPL06-0712-1	50/50	1		07/17/12 15:27
63	P2.071712.153445	L12070373-06	MPL26-0712-1	50/50	1		07/17/12 15:34
64	P2.071712.154048	WG403609-27	CCV		1		07/17/12 15:40
65	P2.071712.154651	WG403609-28	CCB		1		07/17/12 15:46
66	P2.071712.155344	WG403092-03	Method/Prep Blank	50/50	1		07/17/12 15:53
67	P2.071712.160039	WG403092-04	Laboratory Control S	50/50	1		07/17/12 16:00
68	P2.071712.160638	WG403092-01	Reference Sample		1	L12070235-02	07/17/12 16:06

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 071712HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42505

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52626 Int. Std: RGT17310
CCV: STD52663 LLCCV:

Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	P2.071712.161338	WG403092-05	Matrix Spike	50/50	1	L12070235-02	07/17/12 16:13
70	P2.071712.161938	WG403092-06	Matrix Spike Duplica	50/50	1	L12070235-02	07/17/12 16:19
71	P2.071712.162539	L12070235-08	DRL-G-MW-12A-DIS	50/50	1		07/17/12 16:25
72	P2.071712.163239	L12070235-10	DRL-G-MW-12B-DIS	50/50	1		07/17/12 16:32
73	P2.071712.163942	WG403584-01	Post Digestion Spike		1	L12070235-10	07/17/12 16:39
74	P2.071712.164547	WG403584-02	Serial Dilution		5	L12070235-10	07/17/12 16:45
75	P2.071712.165245	WG403609-29	CCV		1		07/17/12 16:52
76	P2.071712.165848	WG403609-30	CCB		1		07/17/12 16:58
77	P2.071712.170541	WG403092-02	Reference Sample		1	L12070235-12	07/17/12 17:05
78	P2.071712.171241	WG403092-07	Duplicate	50/50	1	L12070235-12	07/17/12 17:12
79	P2.071712.171940	L12070235-14	DRL-G-MW-13A-DIS	50/50	1		07/17/12 17:19
80	P2.071712.172638	L12070235-16	DRL-G-MW-21A-DIS	50/50	1		07/17/12 17:26
81	P2.071712.173337	L12070235-18	DRL-G-MW-21A-DIS-DUP	50/50	1		07/17/12 17:33
82	P2.071712.174036	L12070235-20	DRL-K-EQBLK-2-DIS	50/50	1		07/17/12 17:40
83	P2.071712.174731	L12070295-02	OUTFALL 001/COMP	50/50	1		07/17/12 17:47
84	P2.071712.175335	WG403609-31	CCV		1		07/17/12 17:53
85	P2.071712.175935	WG403609-32	CCB		1		07/17/12 17:59
86	P2.071712.180628	WG403431-03	Method/Prep Blank	50/50	1		07/17/12 18:06
87	P2.071712.181323	WG403431-04	Laboratory Control S	50/50	1		07/17/12 18:13
88	P2.071712.181922	WG403431-01	Reference Sample		1	L12070361-01	07/17/12 18:19
89	P2.071712.182523	WG403431-05	Duplicate	50/50	1	L12070361-01	07/17/12 18:25
90	P2.071712.183123	WG403431-06	Matrix Spike	50/50	1	L12070361-01	07/17/12 18:31
91	P2.071712.183722	L12070361-02	DRL-K-EQBLK-3	50/50	1		07/17/12 18:37
92	P2.071712.184416	L12070364-03	1207-123-1	50/50	1		07/17/12 18:44
93	P2.071712.185014	L12070364-04	1207-123-2	50/50	1		07/17/12 18:50
94	P2.071712.185613	WG403585-01	Post Digestion Spike		1	L12070364-04	07/17/12 18:56
95	P2.071712.190212	WG403585-02	Serial Dilution		5	L12070364-04	07/17/12 19:02
96	P2.071712.190907	WG403609-33	CCV		1		07/17/12 19:09
97	P2.071712.191506	WG403609-34	CCB		1		07/17/12 19:15
98	P2.071712.192159	L12070364-05	1207-123-3	50/50	1		07/17/12 19:21
99	P2.071712.192759	L12070389-01	MANHOLE GRAB	50/50	1		07/17/12 19:27
100	P2.071712.193359	L12070389-02	MANHOLE COMP	50/50	1		07/17/12 19:33
101	P2.071712.193959	L12070398-01	1207-170-1	50/50	1		07/17/12 19:39
102	P2.071712.194603	L12070399-01	1207-172-1	50/50	1		07/17/12 19:46

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 071712HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42505

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52626 Int. Std: RGT17310
CCV: STD52663 LLCCV:

Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	P2.071712.195203	WG403431-02	Reference Sample		1	L12070423-01	07/17/12 19:52
104	P2.071712.195802	WG403431-07	Matrix Spike	50/50	1	L12070423-01	07/17/12 19:58
105	P2.071712.200401	L12070424-01	BRR001	50/50	1		07/17/12 20:04
106	P2.071712.200959	WG403609-35	CCV		1		07/17/12 20:09
107	P2.071712.201558	WG403609-36	CCB		1		07/17/12 20:15
108	P2.071712.202252	WG403246-03	Method/Prep Blank	50/50	1		07/17/12 20:22
109	P2.071712.202946	WG403246-04	Laboratory Control S	50/50	1		07/17/12 20:29
110	P2.071712.203545	L12070309-02	OUTFALL 001/COMP	50/50	1		07/17/12 20:35
111	P2.071712.204143	L12070309-04	OUTFALL 002/COMP	50/50	1		07/17/12 20:41
112	P2.071712.204742	L12070310-02	OUTFALL 102/COMP	50/50	1		07/17/12 20:47
113	P2.071712.205341	WG403246-01	Reference Sample		1	L12070317-01	07/17/12 20:53
114	P2.071712.210041	WG403246-05	Duplicate	50/50	1	L12070317-01	07/17/12 21:00
115	P2.071712.210741	WG403246-06	Matrix Spike	50/50	1	L12070317-01	07/17/12 21:07
116	P2.071712.211341	WG403586-01	Post Digestion Spike		1	L12070317-01	07/17/12 21:13
117	P2.071712.211942	WG403586-02	Serial Dilution		5	L12070317-01	07/17/12 21:19
118	P2.071712.212639	WG403609-37	CCV		1		07/17/12 21:26
119	P2.071712.213239	WG403609-38	CCB		1		07/17/12 21:32
120	P2.071712.213936	L12070318-01	001/COMP.	50/50	1		07/17/12 21:39
121	P2.071712.214539	L12070341-01	1207-110-1	50/50	1		07/17/12 21:45
122	P2.071712.215235	L12070343-01	WOLF CREEK DOWNSTRE/	50/50	1		07/17/12 21:52
123	P2.071712.215834	L12070346-01	FC-101	50/50	1		07/17/12 21:58
124	P2.071712.220433	L12070349-01	001	50/50	1		07/17/12 22:04
125	P2.071712.221033	L12070351-02	CATEGORICAL/COMP	50/50	1		07/17/12 22:10
126	P2.071712.221732	L12070351-04	MANHOLE/COMP	50/50	1		07/17/12 22:17
127	P2.071712.222432	L12070353-01	DRL-Z-OUTLET 006	50/50	1		07/17/12 22:24
128	P2.071712.223128	WG403246-02	Reference Sample		1	L12070355-02	07/17/12 22:31
129	P2.071712.223827	WG403609-39	CCV		1		07/17/12 22:38
130	P2.071712.224432	WG403609-40	CCB		1		07/17/12 22:44
131	P2.071712.225129	WG403246-07	Matrix Spike	50/50	1	L12070355-02	07/17/12 22:51
132	P2.071712.225729	L12070355-04	DRL-G-MW-14-DIS	50/50	1		07/17/12 22:57
133	P2.071712.230329	L12070355-06	DRL-G-MW-15-DIS	50/50	1		07/17/12 23:03
134	P2.071712.231030	L12070355-08	DRL-K-EQBLK-3-DIS	50/50	1		07/17/12 23:10
135	P2.071712.231725	L12070075-02	BIF-PND-T1-W207-F	50/50	100		07/17/12 23:17
136	P2.071712.232420	L12070075-04	BEF-BC1-T1-W207-F	50/50	100		07/17/12 23:24

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 071712HR.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010 SOP: ME600E Rev: 12
Maintenance Log ID: 42505

Calibration Std: STD52748 ICV Std: STD52745 Post Spike: STD52370
ICSA: STD52744 ICSAB: STD52626 Int. Std: RGT17310
CCV: STD52663 LLCCV:

Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	P2.071712.233115	L12070075-06	BEF-BC2-T1-W207-F	50/50	100		07/17/12 23:31
138	P2.071712.233810	L12070075-10	BEF-CMB-T1-W207-F	50/50	100		07/17/12 23:38
139	P2.071712.234505	L12070135-02	BEF-PND-T1-W208-F	50/50	100		07/17/12 23:45
140	P2.071712.235200	WG403609-41	CCV		1		07/17/12 23:52
141	P2.071712.235804	WG403609-42	CCB		1		07/17/12 23:58
142	P2.071812.000501	L12070135-04	BEF-BC1-T1-W208-F	50/50	100		07/18/12 00:05
143	P2.071812.001157	L12070135-06	BEF-BC2-T1-W208-F	50/50	100		07/18/12 00:11
144	P2.071812.001852	L12070135-08	BEF-BC3-T1-W208-F	50/50	100		07/18/12 00:18
145	P2.071812.002547	L12070135-10	BEF-SMF-T1-W208-F	50/50	100		07/18/12 00:25
146	P2.071812.003243	L12070135-12	BEF-CBE-T1-W208-F	50/50	100		07/18/12 00:32
147	P2.071812.003940	WG403609-43	CCV		1		07/18/12 00:39
148	P2.071812.004539	WG403609-44	CCB		1		07/18/12 00:45

Page: 5 Approved: July 18, 2012

Microbac Laboratories Inc.

Data Checklist

Date: 17-JUL-2012
Analyst: KHR
Analyst: NA
Method: 6010
Instrument: PE-ICP2
Curve Workgroup: 403609
Runlog ID: 47885
Analytical Workgroups: 403578, 403481, 403584, 403585, 403586, 402766, 403317

Calibration/Linearity	X
ICV/CCV	X
ICV RSD <= 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
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	356, 360
Level 4	257, 327, 328, 373, 075, 135
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	SLP
Comments	

Primary Reviewer:
18-JUL-2012

Secondary Reviewer:
18-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-18-2012 13:56:54

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B

AAB#: WG403481

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/16/2012	5	180		07/17/12	6.2	180	
MPL18-0712-1	02	07/11/12					07/16/2012	4.9	180		07/17/12	6.2	180	
MPL16-0712-1	03	07/11/12					07/16/2012	4.8	180		07/17/12	6.1	180	
MPL17-0712-1	04	07/11/12					07/16/2012	4.8	180		07/17/12	6	180	
MPL17-0712-MS	05	07/11/12					07/16/2012	4.8	180		07/17/12	6	180	
MPL17-0712-MSD	06	07/11/12					07/16/2012	4.8	180		07/17/12	6	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2500883
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: P2.071712.120654
Prep Date: 07/16/12 08:33
Analyzed Date: 07/17/12 12:06
Analyst: KHR

Work Group: WG403481
Blank Sample ID: WG403432-03
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	WG403432-04	P2.071712.121349	07/17/12 12:13	01
MPL05-0712-1	L12070328-01	P2.071712.142106	07/17/12 14:21	01
MPL18-0712-1	L12070328-02	P2.071712.142803	07/17/12 14:28	01
MPL16-0712-1	L12070328-03	P2.071712.143500	07/17/12 14:35	01
MPL17-0712-1	L12070328-04	P2.071712.144158	07/17/12 14:41	01
MPL17-0712-MS	L12070328-05	P2.071712.150149	07/17/12 15:01	01
MPL17-0712-MSD	L12070328-06	P2.071712.150746	07/17/12 15:07	01

Report Name: BLANK_SUMMARY
PDF File ID: 2500884
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/16/12 08:33 Sample ID: WG403432-03
Instrument ID: PE-ICP2 Run Date: 07/17/12 12:06 Prep Method: 3005A
File ID: P2.071712.120654 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG403481 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 17-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Calcium, Total	0.100	0.200	0.131	1	*
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: 2500885
18-JUL-2012 10:20

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/17/2012 Sample ID: WG403432-04
Instrument ID: PE-ICP2 Run Time: 12:13 Prep Method: 3005A
File ID: P2.071712.121349 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG403481 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52371 Cal ID: PE-ICP-17-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Total	0.0250	0.0234	93.4	80 - 120	
Calcium, Total	5.00	4.99	99.8	80 - 120	
Magnesium, Total	5.00	4.88	97.6	80 - 120	
Potassium, Total	25.0	24.3	97.1	80 - 120	
Sodium, Total	25.0	25.7	103	80 - 120	
Tin, Total	0.500	0.511	102	80 - 120	
Vanadium, Total	0.500	0.508	102	80 - 120	
Zinc, Total	0.500	0.497	99.5	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2500886
Report generated: 07/18/2012 10:20

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: PE-ICP2- 17-JUL-12 Worknum: WG403481

Instrument ID: PE-ICP2 Contract #: Prep Method: 3005A

Parent ID: L12070328-04 File ID: P2.071712.144158 Dil: 1 Method: 6010B

Sample ID: L12070328-05 MS File ID: P2.071712.150149 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: P2.071712.150746 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Total	U	0.0250	0.0227	90.7	0.0250	0.0225	90	0.763	80 - 120	20	
Calcium, Total	45.6	5.00	52.3	135	5.00	52.4	136	0.0544	80 - 120	20	*
Magnesium, Total	8.32	5.00	12.7	88.2	5.00	12.7	86.9	0.501	80 - 120	20	
Potassium, Total	2.28	25.0	26.1	95.3	25.0	25.9	94.6	0.644	80 - 120	20	
Sodium, Total	25.6	25.0	50.9	101	25.0	51.2	102	0.600	80 - 120	20	
Tin, Total	U	0.500	0.510	102	0.500	0.513	103	0.467	80 - 120	20	
Vanadium, Total	0.00663	0.500	0.504	99.5	0.500	0.508	100	0.666	80 - 120	20	
Zinc, Total	U	0.500	0.472	94.4	0.500	0.485	96.9	2.59	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2500887
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12070328 **Worknum:** WG403481
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG403481-02 **File ID:** P2.071712.130433 **Dil:** 5 **Units:** mg/L
Sample: L12070327-01 **File ID:** P2.071712.125140 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Beryllium	ND	U	ND	U		
Calcium	53.0		54.0		2.04	
Magnesium	11.3	X	10.8	X	3.96	
Potassium	2.31	X	ND	U		
Sodium	28.6		28.1		2.01	
Tin	ND	U	ND	U		
Vanadium	0.00809	F	0.0260	F	221.00	
Zinc	ND	U	ND	U		

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

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 2500881
07/18/2012 10:20

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070328 **Worknum:** WG403481
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG403481-01 **File ID:** P2.071712.134912 **Dil:** 1 **Units:** mg/L
Sample ID: L12070327-01 **File ID:** P2.071712.125140 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
BERYLLIUM	0.0234		0	U	.025	93.4	75 - 125	
CALCIUM	55.8		53.0		5	163.2	75 - 125	N
MAGNESIUM	14.5		11.3		5	88.2	75 - 125	
POTASSIUM	26.6		2.31		25	98.1	75 - 125	
SODIUM	52.2		28.6		25	105.6	75 - 125	
TIN	0.502		0	U	.5	100.5	75 - 125	
VANADIUM	0.516		0.00809	F	.5	101.7	75 - 125	
ZINC	0.485		0	U	.5	96.9	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: 2500882
Report generated: 07/18/2012 10:20

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12070328**	Workgroup (AAB#):	**WG403481**
Analytical Method:	**6010B**	Instrument ID:	**PE-ICP2**
ICAL Worknum:	**WG403609**	Initial Calibration Date:	**17-JUL-2012 09:16**

	WG403609-01		WG403609-02		WG403609-03		WG403609-04		WG403609-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
BERYLLIUM	0	-1480	.0005	642	.001	1260	.05	62800	.1	128000	.999946	
CALCIUM	0	-60.0	NA	NA	.2	82.0	10	4810	20	10000	.99977	
MAGNESIUM	0	23.3	.1	369	.2	740	10	35100	20	71100	.999977	
POTASSIUM	0	-144	.5	1840	1	3540	50	158000	100	312000	1	
SODIUM	0	1430	.5	11300	1	22700	50	1090000	100	2190000	1	
TIN	0	29.6	.01	122	.02	252	1	12900	1	25900	1	
VANADIUM	0	13100	.01	2740	.02	5350	1	260000	2	524000	.999995	
ZINC	0	182	.01	601	.02	1230	1	61800	2	124000	.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: 2500890
Report generated: 18-JUL-2012 10:20

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-07
Instrument ID: PE-ICP2
Run Time: 09:28
Method: 6010B
File ID: P2.071712.092835
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP2 - 17-JUL-12
Matrix: WATER

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: 2500892
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-11
Instrument ID: PE-ICP2
Run Time: 09:53
Method: 6010B
File ID: P2.071712.095320
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-13
Instrument ID: PE-ICP2
Run Time: 10:28
Method: 6010B
File ID: P2.071712.102820
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-16
Instrument ID: PE-ICP2
Run Time: 11:01
Method: 6010B
File ID: P2.071712.110158
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-18
Instrument ID: PE-ICP2
Run Time: 12:00
Method: 6010B
File ID: P2.071712.120001
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-20
Instrument ID: PE-ICP2
Run Time: 13:17
Method: 6010B
File ID: P2.071712.131727
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER
QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Beryllium	0.00100	0.00200	0.00100	U
Calcium	0.100	0.200	0.102	F
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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-24
Instrument ID: PE-ICP2
Run Time: 13:43
Method: 6010B
File ID: P2.071712.134335
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-26
Instrument ID: PE-ICP2
Run Time: 14:54
Method: 6010B
File ID: P2.071712.145455
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-28
Instrument ID: PE-ICP2
Run Time: 15:46
Method: 6010B
File ID: P2.071712.154651
Analyst: KHR
Units: mg/L
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-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: 2500895
Report generated 07/18/2012 10:20

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)

(Alternate Source)

Login Number: L12070328 Run Date: 07/17/2012 Sample ID: WG403609-06

Instrument ID: PE-ICP2 Run Time: 09:22 Method: 6010B

File ID: P2.071712.092238 Analyst: KHR Units: mg/L

Workgroup (AAB#): WG403481 Cal ID: PE-ICP - 17-JUL-12

QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Beryllium		.05	0.0493	98.5	90 - 110	
Calcium		10	10.3	103	90 - 110	
Magnesium		10	9.90	99.0	90 - 110	
Potassium		50	49.7	99.3	90 - 110	
Sodium		50	49.8	99.5	90 - 110	
Tin		1	1.04	104	90 - 110	
Vanadium		1	1.00	100	90 - 110	
Zinc		1	1.03	103	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-10
Instrument ID: PE-ICP2
Run Time: 09:47
Method: 6010B
File ID: P2.071712.094721
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0498	mg/L	99.6	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Magnesium		10.0	9.95	mg/L	99.5	90 - 110		
Potassium		50.0	49.3	mg/L	98.6	90 - 110		
Sodium		50.0	50.7	mg/L	101	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.02	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-12
Instrument ID: PE-ICP2
Run Time: 10:22
Method: 6010B
File ID: P2.071712.102220
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0488	mg/L	97.6	90 - 110		
Calcium		10.0	10.2	mg/L	102	90 - 110		
Magnesium		10.0	9.87	mg/L	98.7	90 - 110		
Potassium		50.0	49.9	mg/L	99.7	90 - 110		
Sodium		50.0	50.4	mg/L	101	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	0.997	mg/L	99.7	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-15
Instrument ID: PE-ICP2
Run Time: 10:55
Method: 6010B
File ID: P2.071712.105558
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0489	mg/L	97.8	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	9.83	mg/L	98.3	90 - 110		
Potassium		50.0	49.2	mg/L	98.5	90 - 110		
Sodium		50.0	50.2	mg/L	100	90 - 110		
Tin		1.00	1.01	mg/L	101	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	0.998	mg/L	99.8	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328 Run Date: 07/17/2012 Sample ID: WG403609-17
Instrument ID: PE-ICP2 Run Time: 11:53 Method: 6010B
File ID: P2.071712.115358 Analyst: KHR QC Key: DOD4
Workgroup (AAB#): WG403481 Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0481	mg/L	96.1	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	9.74	mg/L	97.4	90 - 110		
Potassium		50.0	48.6	mg/L	97.3	90 - 110		
Sodium		50.0	49.4	mg/L	98.8	90 - 110		
Tin		1.00	0.998	mg/L	99.8	90 - 110		
Vanadium		1.00	0.999	mg/L	99.9	90 - 110		
Zinc		1.00	0.984	mg/L	98.4	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-19
Instrument ID: PE-ICP2
Run Time: 13:11
Method: 6010B
File ID: P2.071712.131128
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0495	mg/L	99.0	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	9.68	mg/L	96.8	90 - 110		
Potassium		50.0	48.7	mg/L	97.5	90 - 110		
Sodium		50.0	49.5	mg/L	98.9	90 - 110		
Tin		1.00	1.02	mg/L	102	90 - 110		
Vanadium		1.00	1.00	mg/L	100	90 - 110		
Zinc		1.00	0.998	mg/L	99.8	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-23
Instrument ID: PE-ICP2
Run Time: 13:37
Method: 6010B
File ID: P2.071712.133735
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0479	mg/L	95.7	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Magnesium		10.0	9.47	mg/L	94.7	90 - 110		
Potassium		50.0	48.2	mg/L	96.3	90 - 110		
Sodium		50.0	49.0	mg/L	98.1	90 - 110		
Tin		1.00	0.987	mg/L	98.7	90 - 110		
Vanadium		1.00	0.983	mg/L	98.3	90 - 110		
Zinc		1.00	0.959	mg/L	95.9	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-25
Instrument ID: PE-ICP2
Run Time: 14:48
Method: 6010B
File ID: P2.071712.144856
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.8	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Magnesium		10.0	9.85	mg/L	98.5	90 - 110		
Potassium		50.0	49.5	mg/L	98.9	90 - 110		
Sodium		50.0	49.9	mg/L	99.8	90 - 110		
Tin		1.00	1.02	mg/L	102	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	0.999	mg/L	99.9	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/17/2012
Sample ID: WG403609-27
Instrument ID: PE-ICP2
Run Time: 15:40
Method: 6010B
File ID: P2.071712.154048
Analyst: KHR
QC Key: DOD4
Workgroup (AAB#): WG403481
Cal ID: PE-ICP - 17-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Beryllium		0.0500	0.0494	mg/L	98.8	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Magnesium		10.0	9.95	mg/L	99.5	90 - 110		
Potassium		50.0	49.2	mg/L	98.4	90 - 110		
Sodium		50.0	50.3	mg/L	101	90 - 110		
Tin		1.00	1.02	mg/L	102	90 - 110		
Vanadium		1.00	1.01	mg/L	101	90 - 110		
Zinc		1.00	1.00	mg/L	100	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070328 **Workgroup (AAB#):** WG403481
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG403609-08 **File ID:** P2.071712.093528 **Units:** mg/L
Sol. AB : WG403609-09 **File ID:** P2.071712.094124 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.000710	NS	0.250	0.241	96.4	
Calcium	250	252	101	250	256	102	
Magnesium	250	242	96.8	250	248	99.2	
Potassium	NS	-0.0914	NS	5.00	4.83	96.6	
Sodium	NS	-0.0130	NS	5.00	5.09	102	
Tin	NS	-0.0295	NS	NS	-0.0289	NS	
Vanadium	NS	-0.0000600	NS	0.250	0.244	97.6	
Zinc	NS	0.00317	NS	0.500	0.480	96.0	

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.

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070328 **Workgroup (AAB#):** WG403481
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG403609-21 **File ID:** P2.071712.132542 **Units:** mg/L
Sol. AB : WG403609-22 **File ID:** P2.071712.133138 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Beryllium	NS	0.000580	NS	0.250	0.240	96.0	
Calcium	250	252	101	250	256	102	
Magnesium	250	239	95.6	250	242	96.8	
Potassium	NS	-0.0802	NS	5.00	4.75	95.0	
Sodium	NS	-0.0333	NS	5.00	5.14	103	
Tin	NS	-0.0274	NS	NS	-0.0292	NS	
Vanadium	NS	0	NS	0.250	0.246	98.4	
Zinc	NS	0.00179	NS	0.500	0.467	93.4	

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

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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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
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Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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: 2500889
Report generated: 07/18/2012 10:20

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L12070328 **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: 2500889
Report generated: 07/18/2012 10:20

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12070328 **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: 2500888
Report generated: 07/18/2012 10:20

2.1.1.3 Raw Data

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Reprocessing Begun
Logged In Analyst: peicp2 **Technique: ICP Continuous**

Results Data Set (original): 071712H
Results Library (original): C:\pe\peicp2\Results\Results.mdb
Results Data Set (reprocessed): 071712HR
Results Library (reprocessed): C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: S0 **Date Collected: 7/17/2012 8:49:56 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:13 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S0

Analyte	Back Pressure	Flow
All	227.0 kPa	0.50 L/min

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	2535076.3	5405.06	0.21%		
YRADIAL	314135.5	8440.60	2.69%		
Ga 417.206	1377900.9	24444.01	1.77%		
GaRADIAL	88018.6	1518.79	1.73%		
Ag 328.068†	68.3	65.09	95.35%	[0.00]	mg/L
Al 396.153†	-41.8	11.76	28.12%	[0.00]	mg/L
As 188.979†	-20.4	2.51	12.30%	[0.00]	mg/L
Ba 233.527†	-157.9	5.10	3.23%	[0.00]	mg/L
Be 234.861†	-1481.5	25.47	1.72%	[0.00]	mg/L
B 249.677†	163.3	13.57	8.31%	[0.00]	mg/L
Ca 227.546†	-60.0	2.71	4.52%	[0.00]	mg/L
Cd 228.802†	45.6	5.96	13.08%	[0.00]	mg/L
Co 228.616†	-18.5	3.56	19.28%	[0.00]	mg/L
Cr 267.716†	195.5	76.08	38.92%	[0.00]	mg/L
Cu 327.393†	-347.9	73.39	21.10%	[0.00]	mg/L
Fe 239.562†	-10.2	11.82	115.67%	[0.00]	mg/L
Mg 279.077†	23.3	6.17	26.45%	[0.00]	mg/L
Mn 257.610†	1701.3	694.13	40.80%	[0.00]	mg/L
Mo 202.031†	62.8	2.85	4.54%	[0.00]	mg/L
Ni 231.604†	-196.5	16.47	8.38%	[0.00]	mg/L
Pb 220.353†	-86.8	8.76	10.09%	[0.00]	mg/L
Sb 206.836†	9.7	3.36	34.51%	[0.00]	mg/L
Se 196.026†	21.7	3.70	17.10%	[0.00]	mg/L
Si 251.611†	997.4	61.02	6.12%	[0.00]	mg/L
Sn 189.927†	29.6	5.17	17.48%	[0.00]	mg/L
Ti 334.940†	690.4	197.24	28.57%	[0.00]	mg/L
Tl 190.801†	-75.2	7.46	9.91%	[0.00]	mg/L
V 290.880†	13094.6	248.29	1.90%	[0.00]	mg/L
Zn 206.200†	182.1	2.38	1.31%	[0.00]	mg/L
K 766.490†	-143.9	20.93	14.55%	[0.00]	mg/L
Na 589.592†	1429.7	129.08	9.03%	[0.00]	mg/L
Sr 407.771†	-1067.1	30.58	2.87%	[0.00]	mg/L
Li 670.784†	-117.4	48.25	41.10%	[0.00]	mg/L

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S1 **Date Collected: 7/17/2012 8:56:50 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:15 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S1

Analyte	Back Pressure	Flow

Approved: July 18, 2012
Kym H. Rhoden

All 227.0 kPa 0.50 L/min

Mean Data: S1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2525938.0	33800.41	1.34%		
YRADIAL	311081.0	6177.81	1.99%		
Ga 417.206	1382999.4	27521.05	1.99%		
GaRADIAL	86730.1	3255.08	3.75%		
Ag 328.068†	1399.5	82.87	5.92%	[0.0040]	mg/L
Al 396.153†	771.4	58.30	7.56%	[0.10]	mg/L
Ba 233.527†	1765.3	33.43	1.89%	[0.010]	mg/L
Be 234.861†	641.5	7.90	1.23%	[0.0005]	mg/L
Cd 228.802†	25.4	5.61	22.09%	[0.00050]	mg/L
Co 228.616†	94.4	7.59	8.03%	[0.0020]	mg/L
Cr 267.716†	617.3	33.23	5.38%	[0.0050]	mg/L
Cu 327.393†	1443.6	204.52	14.17%	[0.0050]	mg/L
Fe 239.562†	653.2	14.11	2.16%	[0.040]	mg/L
Mg 279.077†	368.8	8.97	2.43%	[0.10]	mg/L
Mn 257.610†	3876.4	319.91	8.25%	[0.0050]	mg/L
Mo 202.031†	392.2	10.02	2.55%	[0.010]	mg/L
Ni 231.604†	378.9	20.31	5.36%	[0.0050]	mg/L
Pb 220.353†	89.6	14.72	16.43%	[0.0050]	mg/L
Sb 206.836†	54.3	3.71	6.83%	[0.012]	mg/L
Si 251.611†	2834.1	93.78	3.31%	[0.050]	mg/L
Sn 189.927†	121.9	3.35	2.75%	[0.010]	mg/L
Ti 334.940†	10897.9	165.58	1.52%	[0.010]	mg/L
V 290.880†	2736.6	340.71	12.45%	[0.010]	mg/L
Zn 206.200†	600.6	10.79	1.80%	[0.010]	mg/L
K 766.490†	1841.4	35.85	1.95%	[0.50]	mg/L
Na 589.592†	11280.0	276.98	2.46%	[0.50]	mg/L
Sr 407.771†	28617.1	1011.77	3.54%	[0.010]	mg/L
Li 670.784†	1773.4	66.27	3.74%	[0.010]	mg/L

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Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S2 **Date Collected: 7/17/2012 9:03:44 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:16 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S2

Analyte	Back Pressure	Flow
All	228.0 kPa	0.50 L/min

Mean Data: S2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2517739.0	29011.74	1.15%		
YRADIAL	309062.1	4629.60	1.50%		
Ga 417.206	1394198.9	23596.60	1.69%		
GaRADIAL	86692.9	2051.29	2.37%		
Ag 328.068†	2610.5	23.64	0.91%	[0.0080]	mg/L
Al 396.153†	1930.5	753.29	39.02%	[0.20]	mg/L
As 188.979†	28.2	5.12	18.15%	[0.0080]	mg/L
Ba 233.527†	3603.1	37.12	1.03%	[0.020]	mg/L
Be 234.861†	1262.1	20.66	1.64%	[0.0010]	mg/L
B 249.677†	1003.8	111.79	11.14%	[0.010]	mg/L
Ca 227.546†	82.0	12.42	15.15%	[0.20]	mg/L
Cd 228.802†	56.0	7.53	13.46%	[0.0010]	mg/L
Co 228.616†	191.1	5.03	2.63%	[0.0040]	mg/L
Cr 267.716†	1325.8	42.39	3.20%	[0.010]	mg/L
Cu 327.393†	2727.0	54.23	1.99%	[0.010]	mg/L
Fe 239.562†	1327.0	2.24	0.17%	[0.080]	mg/L
Mg 279.077†	740.4	5.64	0.76%	[0.20]	mg/L
Mn 257.610†	7807.2	178.16	2.28%	[0.010]	mg/L
Mo 202.031†	797.6	10.84	1.36%	[0.020]	mg/L
Ni 231.604†	766.5	10.79	1.41%	[0.010]	mg/L

Approved: July 18, 2012

Kym H. Rhoden

Pb 220.353†	169.3	1.17	0.69%	[0.010]	mg/L
Sb 206.836†	121.9	2.24	1.84%	[0.024]	mg/L
Se 196.026†	15.3	4.00	26.20%	[0.0080]	mg/L
Si 251.611†	5226.9	191.88	3.67%	[0.10]	mg/L
Sn 189.927†	252.4	4.28	1.70%	[0.020]	mg/L
Ti 334.940†	22026.5	389.16	1.77%	[0.020]	mg/L
Tl 190.801†	43.4	10.57	24.35%	[0.010]	mg/L
V 290.880†	5350.0	163.37	3.05%	[0.020]	mg/L
Zn 206.200†	1231.0	22.15	1.80%	[0.020]	mg/L
K 766.490†	3544.3	48.17	1.36%	[1.00]	mg/L
Na 589.592†	22680.5	797.43	3.52%	[1.00]	mg/L
Sr 407.771†	58344.9	1597.60	2.74%	[0.020]	mg/L
Li 670.784†	3486.9	79.60	2.28%	[0.020]	mg/L

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Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S3 **Date Collected: 7/17/2012 9:10:39 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:17 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: S3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.50 L/min

Mean Data: S3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Y 371.029	2426153.9	26941.74	1.11%		
YRADIAL	316179.8	1033.75	0.33%		
Ga 417.206	1341212.4	35788.06	2.67%		
GaRADIAL	88019.9	376.76	0.43%		
Ag 328.068†	128435.7	4278.50	3.33%	[0.40]	mg/L
Al 396.153†	70392.1	223.74	0.32%	[10.00]	mg/L
As 188.979†	1549.5	30.91	1.99%	[0.40]	mg/L
Ba 233.527†	170485.3	2413.81	1.42%	[1.00]	mg/L
Be 234.861†	62796.2	2049.11	3.26%	[0.05]	mg/L
B 249.677†	58272.7	2168.85	3.72%	[0.50]	mg/L
Ca 227.546†	4805.9	159.47	3.32%	[10.00]	mg/L
Cd 228.802†	2946.4	131.78	4.47%	[0.05]	mg/L
Co 228.616†	9367.9	184.53	1.97%	[0.20]	mg/L
Cr 267.716†	64402.4	487.32	0.76%	[0.50]	mg/L
Cu 327.393†	133459.8	4021.95	3.01%	[0.50]	mg/L
Fe 239.562†	64384.8	468.55	0.73%	[4.00]	mg/L
Mg 279.077†	35084.9	198.00	0.56%	[10.00]	mg/L
Mn 257.610†	416226.3	5634.17	1.35%	[0.50]	mg/L
Mo 202.031†	38861.6	182.35	0.47%	[1.00]	mg/L
Ni 231.604†	37052.6	638.73	1.72%	[0.50]	mg/L
Pb 220.353†	7286.3	114.31	1.57%	[0.50]	mg/L
Sb 206.836†	6163.5	189.35	3.07%	[1.20]	mg/L
Se 196.026†	928.0	28.72	3.10%	[0.40]	mg/L
Si 251.611†	272955.6	6487.01	2.38%	[5.00]	mg/L
Sn 189.927†	12931.8	233.85	1.81%	[1.00]	mg/L
Ti 334.940†	1088545.5	8663.62	0.80%	[1.00]	mg/L
Tl 190.801†	2102.7	20.96	1.00%	[0.50]	mg/L
V 290.880†	260200.0	456.81	0.18%	[1.00]	mg/L
Zn 206.200†	61756.1	677.63	1.10%	[1.00]	mg/L
K 766.490†	158342.9	1244.97	0.79%	[50.00]	mg/L
Na 589.592†	1092396.4	3236.15	0.30%	[50.00]	mg/L
Sr 407.771†	2783848.4	42780.96	1.54%	[1.00]	mg/L
Li 670.784†	160003.4	1288.86	0.81%	[1.00]	mg/L

==========

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S4 **Date Collected: 7/17/2012 9:16:37 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:18 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 18, 2012
Kym H. Rhoden

Nebulizer Parameters: S4

Analyte	Back Pressure	Flow
All	231.0 kPa	0.50 L/min

Mean Data: S4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	2364258.2	22102.70	0.93%		
YRADIAL	303250.4	1282.98	0.42%		
Ga 417.206	1292804.0	33218.90	2.57%		
GaRADIAL	85610.0	256.30	0.30%		
Ag 328.068†	262120.9	8456.32	3.23%	[0.80]	mg/L
Al 396.153†	141181.3	182.26	0.13%	[20.00]	mg/L
As 188.979†	3168.7	79.08	2.50%	[0.80]	mg/L
Ba 233.527†	340711.2	1675.88	0.49%	[2.00]	mg/L
Be 234.861†	128317.6	4237.04	3.30%	[0.10]	mg/L
B 249.677†	119644.1	4215.34	3.52%	[1.00]	mg/L
Ca 227.546†	10035.2	311.51	3.10%	[20.00]	mg/L
Cd 228.802†	6021.6	275.87	4.58%	[0.10]	mg/L
Co 228.616†	18651.8	253.89	1.36%	[0.40]	mg/L
Cr 267.716†	129464.1	846.37	0.65%	[1.00]	mg/L
Cu 327.393†	271642.1	7659.15	2.82%	[1.00]	mg/L
Fe 239.562†	129984.8	1375.67	1.06%	[8.00]	mg/L
Mg 279.077†	71137.1	406.62	0.57%	[20.00]	mg/L
Mn 257.610†	830983.9	5859.09	0.71%	[1.00]	mg/L
Mo 202.031†	77947.7	339.37	0.44%	[2.00]	mg/L
Ni 231.604†	71501.9	352.44	0.49%	[1.00]	mg/L
Pb 220.353†	14490.9	154.64	1.07%	[1.00]	mg/L
Sb 206.836†	12616.6	409.79	3.25%	[2.40]	mg/L
Se 196.026†	1900.5	60.58	3.19%	[0.80]	mg/L
Si 251.611†	555053.8	13133.66	2.37%	[10.00]	mg/L
Sn 189.927†	25857.4	315.33	1.22%	[2.00]	mg/L
Ti 334.940†	2197794.9	3800.02	0.17%	[2.00]	mg/L
Tl 190.801†	4110.4	21.08	0.51%	[1.00]	mg/L
V 290.880†	523762.6	3867.37	0.74%	[2.00]	mg/L
Zn 206.200†	124048.8	755.48	0.61%	[2.00]	mg/L
K 766.490†	312491.2	1478.40	0.47%	[100.00]	mg/L
Na 589.592†	2185195.2	34282.90	1.57%	[100.00]	mg/L
Sr 407.771†	5641446.4	48813.28	0.87%	[2.00]	mg/L
Li 670.784†	313207.0	3393.48	1.08%	[2.00]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	4	Lin, Calc Int	-302.3	326800	0.00000	0.999952	
Al 396.153	4	Lin, Calc Int	157.8	7046	0.00000	0.999993	
As 188.979	3	Wt. Lin	-3.2	3923	0.00000	0.999942	
Ba 233.527	4	Lin, Calc Int	96.8	170300	0.00000	1.000000	
Be 234.861	4	Lin, Calc Int	-176.3	1280000	0.00000	0.999946	
B 249.677	3	Lin, Calc Int	-369.5	119500	0.00000	0.999915	
Ca 227.546	3	Lin, Calc Int	-46.9	500.3	0.00000	0.999770	
Cd 228.802	4	Lin, Calc Int	-10.8	60090	0.00000	0.999948	
Co 228.616	4	Lin, Calc Int	7.0	46650	0.00000	0.999998	
Cr 267.716	4	Lin, Calc Int	-40.7	129400	0.00000	0.999997	
Cu 327.393	4	Lin, Calc Int	-264.0	271000	0.00000	0.999963	
Fe 239.562	4	Lin, Calc Int	-66.2	16230	0.00000	0.999989	
Mg 279.077	4	Lin, Calc Int	-47.0	3550	0.00000	0.999977	
Mn 257.610	4	Lin, Calc Int	-153.0	831500	0.00000	0.999999	
Mo 202.031	4	Lin, Calc Int	-7.6	38960	0.00000	0.999999	
Ni 231.604	4	Lin, Calc Int	184.9	71800	0.00000	0.999847	
Pb 220.353	4	Lin, Calc Int	18.1	14490	0.00000	0.999996	
Sb 206.836	4	Lin, Calc Int	-22.1	5244	0.00000	0.999939	
Se 196.026	3	Wt. Lin	-3.6	2355	0.00000	0.999939	
Si 251.611	4	Lin, Calc Int	-651.9	55400	0.00000	0.999968	
Sn 189.927	4	Lin, Calc Int	-3.8	12930	0.00000	1.000000	
Ti 334.940	4	Lin, Calc Int	-1302.7	1098000	0.00000	0.999989	
Tl 190.801	3	Lin, Calc Int	9.7	4118	0.00000	0.999930	
V 290.880	4	Lin, Calc Int	-137.3	261600	0.00000	0.999995	

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Zn 206.200	4	Lin, Calc Int	-42.6	62000	0.00000	0.999998
K 766.490	4	Non Lin, Calc Int	192.2	3203	-0.80356	1.000000
Na 589.592	4	Non Lin, Calc Int	399.5	21830	0.15272	1.000000
Sr 407.771	4	Lin, Calc Int	-3861.1	2816000	0.00000	0.999979
Li 670.784	4	Lin, Calc Int	599.4	156900	0.00000	0.999947

Sequence No.: 6 **Autosampler Location: 11**
Sample ID: ICV 2nd Vendor **Date Collected: 7/17/2012 9:22:38 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:19 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICV 2nd Vendor

Analyte	Back Pressure	Flow
All	232.0 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	2389646.7				18003.32	0.75%
YRADIAL	319019.4				4156.97	1.30%
Ga 417.206	1326035.8				6165.72	0.46%
GaRADIAL	88438.2				1773.92	2.01%
Ag 328.068†	127194.2	0.394 mg/L	0.0052	0.394 mg/L	0.0052	1.33%
QC value within limits for Ag 328.068 Recovery = 98.40%						
Al 396.153†	72041.9	10.1 mg/L	0.02	10.1 mg/L	0.02	0.17%
QC value within limits for Al 396.153 Recovery = 101.35%						
As 188.979†	1560.4	0.394 mg/L	0.0020	0.394 mg/L	0.0020	0.51%
QC value within limits for As 188.979 Recovery = 98.42%						
Ba 233.527†	174769.1	1.03 mg/L	0.009	1.03 mg/L	0.009	0.89%
QC value within limits for Ba 233.527 Recovery = 102.57%						
Be 234.861†	63441.3	0.0493 mg/L	0.00065	0.0493 mg/L	0.00065	1.33%
QC value within limits for Be 234.861 Recovery = 98.53%						
B 249.677†	59811.7	0.500 mg/L	0.0084	0.500 mg/L	0.0084	1.67%
QC value within limits for B 249.677 Recovery = 99.96%						
Ca 227.546†	4869.8	10.3 mg/L	0.08	10.3 mg/L	0.08	0.80%
QC value within limits for Ca 227.546 Recovery = 103.10%						
Cd 228.802†	2989.5	0.0486 mg/L	0.00123	0.0486 mg/L	0.00123	2.53%
QC value within limits for Cd 228.802 Recovery = 97.18%						
Co 228.616†	9525.2	0.203 mg/L	0.0027	0.203 mg/L	0.0027	1.34%
QC value within limits for Co 228.616 Recovery = 101.57%						
Cr 267.716†	65739.5	0.509 mg/L	0.0020	0.509 mg/L	0.0020	0.40%
QC value within limits for Cr 267.716 Recovery = 101.76%						
Cu 327.393†	137994.8	0.512 mg/L	0.0083	0.512 mg/L	0.0083	1.63%
QC value within limits for Cu 327.393 Recovery = 102.34%						
Fe 239.562†	65578.3	4.04 mg/L	0.015	4.04 mg/L	0.015	0.38%
QC value within limits for Fe 239.562 Recovery = 101.11%						
Mg 279.077†	35058.8	9.90 mg/L	0.101	9.90 mg/L	0.101	1.02%
QC value within limits for Mg 279.077 Recovery = 99.04%						
Mn 257.610†	425363.2	0.512 mg/L	0.0054	0.512 mg/L	0.0054	1.06%
QC value within limits for Mn 257.610 Recovery = 102.46%						
Mo 202.031†	38420.1	0.987 mg/L	0.0048	0.987 mg/L	0.0048	0.48%
QC value within limits for Mo 202.031 Recovery = 98.72%						
Ni 231.604†	38171.1	0.529 mg/L	0.0060	0.529 mg/L	0.0060	1.13%
QC value greater than the upper limit for Ni 231.604 Recovery = 105.74%						
Pb 220.353†	7443.9	0.514 mg/L	0.0054	0.514 mg/L	0.0054	1.06%
QC value within limits for Pb 220.353 Recovery = 102.80%						
Sb 206.836†	6400.4	1.22 mg/L	0.012	1.22 mg/L	0.012	0.95%
QC value within limits for Sb 206.836 Recovery = 101.96%						
Se 196.026†	952.9	0.408 mg/L	0.0064	0.408 mg/L	0.0064	1.57%
QC value within limits for Se 196.026 Recovery = 101.91%						
Si 251.611†	275193.0	4.97 mg/L	0.037	4.97 mg/L	0.037	0.74%
QC value within limits for Si 251.611 Recovery = 99.36%						
Sn 189.927†	13415.7	1.04 mg/L	0.012	1.04 mg/L	0.012	1.18%
QC value within limits for Sn 189.927 Recovery = 103.77%						
Ti 334.940†	1118788.8	1.02 mg/L	0.002	1.02 mg/L	0.002	0.18%
QC value within limits for Ti 334.940 Recovery = 102.18%						
Tl 190.801†	2151.2	0.535 mg/L	0.0020	0.535 mg/L	0.0020	0.37%

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   QC value greater than the upper limit for Tl 190.801  Recovery = 106.96%
V 290.880†            262887.0        1.00 mg/L         0.003        1.00 mg/L         0.003   0.29%
   QC value within limits for V 290.880  Recovery = 100.42%
Zn 206.200†            63273.1        1.03 mg/L         0.011        1.03 mg/L         0.011   1.12%
   QC value within limits for Zn 206.200  Recovery = 102.61%
K 766.490†            157412.6        49.7 mg/L          0.47        49.7 mg/L          0.47   0.95%
   QC value within limits for K 766.490  Recovery = 99.30%
Na 589.592†          1087286.9        49.8 mg/L          0.78        49.8 mg/L          0.78   1.58%
   QC value within limits for Na 589.592  Recovery = 99.53%
Sr 407.771†          2771184.6       0.985 mg/L        0.0031       0.985 mg/L        0.0031   0.32%
   QC value within limits for Sr 407.771  Recovery = 98.53%
Li 670.784†           162436.2        1.03 mg/L         0.005        1.03 mg/L         0.005   0.47%
   QC value within limits for Li 670.784  Recovery = 103.13%
QC Failed.  Continue with analysis.

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Sequence No.: 7                                      Autosampler Location: 1
Sample ID: ICB                                       Date Collected: 7/17/2012 9:28:35 AM
Analyst:                                             Data Type: Reprocessed on 7/17/2012 10:01:20 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                   Initial Sample Vol:
Dilution:                                            Sample Prep Vol:

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Nebulizer Parameters: ICB
Analyte                  Back Pressure    Flow
All                      231.0 kPa        0.50 L/min

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Mean Data: ICB
                    Mean Corrected        Calib.                          Sample
Analyte                Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2530263.3                                                      32376.10   1.28%
YRADIAL               319025.5                                                       9349.93   2.93%
Ga 417.206           1407490.6                                                      18124.93   1.29%
GaRADIAL               89422.6                                                        767.84   0.86%
Ag 328.068†               -9.5     0.00090 mg/L      0.000250     0.00090 mg/L      0.000250  27.76%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†                1.0     -0.0223 mg/L       0.00059     -0.0223 mg/L       0.00059   2.66%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -1.3     0.00047 mg/L      0.000830     0.00047 mg/L      0.000830 176.26%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†                5.2    -0.00054 mg/L      0.000030    -0.00054 mg/L      0.000030   5.51%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               43.1     0.00017 mg/L      0.000015     0.00017 mg/L      0.000015   8.98%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               182.2     0.00461 mg/L      0.000503     0.00461 mg/L      0.000503  10.89%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -10.1      0.0715 mg/L       0.01591      0.0715 mg/L       0.01591  22.25%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -2.6     0.00013 mg/L      0.000012     0.00013 mg/L      0.000012   8.64%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -3.0    -0.00022 mg/L      0.000319    -0.00022 mg/L      0.000319 146.89%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -45.5    -0.00004 mg/L      0.000072    -0.00004 mg/L      0.000072 194.71%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -65.9     0.00073 mg/L      0.000511     0.00073 mg/L      0.000511  69.65%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               -1.0     0.00401 mg/L      0.000348     0.00401 mg/L      0.000348   8.66%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               18.2      0.0184 mg/L       0.00289      0.0184 mg/L       0.00289  15.71%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1076.6    -0.00111 mg/L      0.000013    -0.00111 mg/L      0.000013   1.19%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                7.2     0.00038 mg/L      0.000368     0.00038 mg/L      0.000368  96.92%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                0.5    -0.00257 mg/L      0.000069    -0.00257 mg/L      0.000069   2.70%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                5.5    -0.00087 mg/L      0.000521    -0.00087 mg/L      0.000521  59.74%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -3.2     0.00360 mg/L      0.000683     0.00360 mg/L      0.000683  18.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
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Se 196.026†                1.1     0.00201 mg/L      0.002955     0.00201 mg/L      0.002955 146.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -67.1      0.0106 mg/L       0.00132      0.0106 mg/L       0.00132  12.50%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               17.5     0.00165 mg/L      0.000472     0.00165 mg/L      0.000472  28.63%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†               81.3     0.00127 mg/L      0.000071     0.00127 mg/L      0.000071   5.61%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.2    -0.00156 mg/L      0.001097    -0.00156 mg/L      0.001097  70.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               177.6     0.00120 mg/L      0.000675     0.00120 mg/L      0.000675  56.13%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -78.0    -0.00057 mg/L      0.000051    -0.00057 mg/L      0.000051   8.95%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -11.9     -0.0637 mg/L       0.01937     -0.0637 mg/L       0.01937  30.42%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -64.8     -0.0213 mg/L       0.00609     -0.0213 mg/L       0.00609  28.64%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              -24.8     0.00136 mg/L      0.000016     0.00136 mg/L      0.000016   1.19%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              149.6    -0.00287 mg/L      0.000076    -0.00287 mg/L      0.000076   2.66%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 8                                    Autosampler Location: 12
Sample ID: ICSA                                    Date Collected: 7/17/2012 9:35:28 AM
Analyst:                                           Data Type: Reprocessed on 7/17/2012 10:01:21 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: ICSA
Analyte                  Back Pressure    Flow
All                     232.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: ICSA
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2256764.4                                                     4049.42   0.18%
YRADIAL               311578.4                                                     3324.06   1.07%
Ga 417.206           1310274.5                                                    49531.86   3.78%
GaRADIAL               88407.3                                                     1605.15   1.82%
Ag 328.068†           -13502.9    -0.00281 mg/L      0.000422    -0.00281 mg/L      0.000422  15.04%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†          1711012.4         243 mg/L           4.3         243 mg/L           4.3   1.76%
   QC value within limits for Al 396.153  Recovery = 97.13%
As 188.979†              -23.1     0.00014 mg/L      0.002875     0.00014 mg/L      0.002875 >999.9%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              816.0    -0.00111 mg/L      0.000160    -0.00111 mg/L      0.000160  14.41%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†            25800.1     0.00071 mg/L      0.000388     0.00071 mg/L      0.000388  54.76%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              5070.6     0.00672 mg/L      0.003149     0.00672 mg/L      0.003149  46.87%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†           124766.4         252 mg/L           8.7         252 mg/L           8.7   3.45%
   QC value within limits for Ca 227.546  Recovery = 100.65%
Cd 228.802†               -8.2     0.00024 mg/L      0.000248     0.00024 mg/L      0.000248 105.63%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               23.6    -0.00193 mg/L      0.000148    -0.00193 mg/L      0.000148   7.65%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -64.4    -0.00129 mg/L      0.000222    -0.00129 mg/L      0.000222  17.18%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -1322.8     0.00048 mg/L      0.000120     0.00048 mg/L      0.000120  25.02%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†          1464644.1        90.3 mg/L          1.64        90.3 mg/L          1.64   1.81%
   QC value within limits for Fe 239.562  Recovery = 90.25%
Mg 279.077†           860395.3         242 mg/L           4.0         242 mg/L           4.0   1.64%
   QC value within limits for Mg 279.077  Recovery = 96.93%
Mn 257.610†            -3327.0    -0.00360 mg/L      0.000481    -0.00360 mg/L      0.000481  13.38%
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   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -95.6     0.00217 mg/L      0.000456     0.00217 mg/L      0.000456  21.01%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               51.9    -0.00185 mg/L      0.000367    -0.00185 mg/L      0.000367  19.90%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†             -507.2    -0.00081 mg/L      0.002320    -0.00081 mg/L      0.002320 288.02%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -26.9     0.00241 mg/L      0.001067     0.00241 mg/L      0.001067  44.32%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -63.4    -0.00245 mg/L      0.005867    -0.00245 mg/L      0.005867 239.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             3165.3      0.0689 mg/L       0.00235      0.0689 mg/L       0.00235   3.40%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -384.7     -0.0295 mg/L       0.00051     -0.0295 mg/L       0.00051   1.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†           -42605.7    -0.00021 mg/L      0.003478    -0.00021 mg/L      0.003478 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -71.9     -0.0136 mg/L       0.00476     -0.0136 mg/L       0.00476  34.86%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              4611.8    -0.00006 mg/L      0.000740    -0.00006 mg/L      0.000740 >999.9%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              260.3     0.00317 mg/L      0.000444     0.00317 mg/L      0.000444  14.04%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -100.7     -0.0914 mg/L       0.00665     -0.0914 mg/L       0.00665   7.28%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              114.7     -0.0130 mg/L       0.00535     -0.0130 mg/L       0.00535  41.02%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             2816.4    -0.00312 mg/L      0.000193    -0.00312 mg/L      0.000193   6.18%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              318.9    -0.00179 mg/L      0.000277    -0.00179 mg/L      0.000277  15.52%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================================
Sequence No.: 9                                    Autosampler Location: 13
Sample ID: ICSAB                                   Date Collected: 7/17/2012 9:41:24 AM
Analyst:                                           Data Type: Reprocessed on 7/17/2012 10:01:22 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

----------------------------------------------------------------------------------------------------------
Nebulizer Parameters: ICSAB
Analyte                 Back Pressure    Flow
All                    232.0 kPa        0.50 L/min

----------------------------------------------------------------------------------------------------------
Mean Data: ICSAB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2247923.6                                                      7182.88   0.32%
YRADIAL               305698.7                                                      3947.24   1.29%
Ga 417.206           1302088.1                                                     26883.02   2.06%
GaRADIAL               86949.2                                                       896.15   1.03%
Ag 328.068†           149503.6       0.497 mg/L        0.0150       0.497 mg/L        0.0150   3.02%
   QC value within limits for Ag 328.068  Recovery = 99.45%
Al 396.153†          1763890.9         250 mg/L           1.6         250 mg/L           1.6   0.64%
   QC value within limits for Al 396.153  Recovery = 100.13%
As 188.979†              897.7       0.235 mg/L        0.0040       0.235 mg/L        0.0040   1.69%
   QC value within limits for As 188.979  Recovery = 93.96%
Ba 233.527†            42855.8       0.246 mg/L        0.0008       0.246 mg/L        0.0008   0.32%
   QC value within limits for Ba 233.527  Recovery = 98.22%
Be 234.861†           334405.1       0.241 mg/L        0.0067       0.241 mg/L        0.0067   2.78%
   QC value within limits for Be 234.861  Recovery = 96.57%
B 249.677†             4806.8    -0.00925 mg/L      0.003693    -0.00925 mg/L      0.003693  39.92%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†           126599.3         256 mg/L          10.1         256 mg/L          10.1   3.97%
   QC value within limits for Ca 227.546  Recovery = 102.28%
Cd 228.802†            27859.6       0.464 mg/L        0.0101       0.464 mg/L        0.0101   2.18%
   QC value within limits for Cd 228.802  Recovery = 92.74%
Co 228.616†            10856.6       0.230 mg/L        0.0022       0.230 mg/L        0.0022   0.97%
   QC value within limits for Co 228.616  Recovery = 92.06%
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Cr 267.716†	31112.0	0.240 mg/L	0.0034	0.240 mg/L	0.0034	1.42%
QC value within limits for Cr 267.716 Recovery = 95.93%						
Cu 327.393†	64432.5	0.243 mg/L	0.0073	0.243 mg/L	0.0073	3.00%
QC value within limits for Cu 327.393 Recovery = 97.28%						
Fe 239.562†	1496812.6	92.2 mg/L	0.44	92.2 mg/L	0.44	0.48%
QC value within limits for Fe 239.562 Recovery = 92.24%						
Mg 279.077†	879493.2	248 mg/L	1.9	248 mg/L	1.9	0.77%
QC value within limits for Mg 279.077 Recovery = 99.08%						
Mn 257.610†	197950.4	0.239 mg/L	0.0008	0.239 mg/L	0.0008	0.34%
QC value within limits for Mn 257.610 Recovery = 95.43%						
Mo 202.031†	-95.0	0.00245 mg/L	0.000153	0.00245 mg/L	0.000153	6.25%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Ni 231.604†	34027.7	0.471 mg/L	0.0039	0.471 mg/L	0.0039	0.84%
QC value within limits for Ni 231.604 Recovery = 94.19%						
Pb 220.353†	6403.1	0.477 mg/L	0.0045	0.477 mg/L	0.0045	0.94%
QC value within limits for Pb 220.353 Recovery = 95.40%						
Sb 206.836†	2517.7	0.486 mg/L	0.0121	0.486 mg/L	0.0121	2.50%
QC value within limits for Sb 206.836 Recovery = 97.25%						
Se 196.026†	512.5	0.243 mg/L	0.0076	0.243 mg/L	0.0076	3.13%
QC value within limits for Se 196.026 Recovery = 97.15%						
Si 251.611†	-449.5	0.00368 mg/L	0.002600	0.00368 mg/L	0.002600	70.68%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-377.0	-0.0289 mg/L	0.00048	-0.0289 mg/L	0.00048	1.67%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Ti 334.940†	-43090.0	-0.00018 mg/L	0.003793	-0.00018 mg/L	0.003793	>999.9%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	1970.5	0.483 mg/L	0.0055	0.483 mg/L	0.0055	1.14%
QC value within limits for Tl 190.801 Recovery = 96.55%						
V 290.880†	68576.9	0.244 mg/L	0.0074	0.244 mg/L	0.0074	3.02%
QC value within limits for V 290.880 Recovery = 97.59%						
Zn 206.200†	29680.5	0.480 mg/L	0.0034	0.480 mg/L	0.0034	0.70%
QC value within limits for Zn 206.200 Recovery = 96.00%						
K 766.490†	15671.0	4.83 mg/L	0.010	4.83 mg/L	0.010	0.22%
QC value within limits for K 766.490 Recovery = 96.66%						
Na 589.592†	111540.9	5.09 mg/L	0.047	5.09 mg/L	0.047	0.93%
QC value within limits for Na 589.592 Recovery = 101.81%						
Sr 407.771†	2814.9	-0.00320 mg/L	0.000231	-0.00320 mg/L	0.000231	7.21%
QC value within limits for Sr 407.771 Recovery = Not calculated						
Li 670.784†	368.6	-0.00147 mg/L	0.000681	-0.00147 mg/L	0.000681	46.30%
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: 6**
Sample ID: CCV **Date Collected: 7/17/2012 9:47:21 AM**
Analyst: **Data Type: Reprocessed on 7/17/2012 10:01:24 AM**
Logged In Analyst (Original) : peicp2
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	232.0 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	2411884.7						9177.47	0.38%
YRADIAL	316908.8						2354.66	0.74%
Ga 417.206	1329481.4						17827.26	1.34%
GaRADIAL	87415.3						228.19	0.26%
Ag 328.068†	130388.6	0.403	mg/L	0.0077	0.403	mg/L	0.0077	1.90%
QC value within limits for Ag 328.068 Recovery = 100.84%								
Al 396.153†	71117.2	10.0	mg/L	0.03	10.0	mg/L	0.03	0.26%
QC value within limits for Al 396.153 Recovery = 100.02%								
As 188.979†	1565.8	0.395	mg/L	0.0037	0.395	mg/L	0.0037	0.94%
QC value within limits for As 188.979 Recovery = 98.73%								
Ba 233.527†	173012.2	1.02	mg/L	0.002	1.02	mg/L	0.002	0.19%
QC value within limits for Ba 233.527 Recovery = 101.54%								
Be 234.861†	64110.1	0.0498	mg/L	0.00105	0.0498	mg/L	0.00105	2.10%

Approved: July 18, 2012

Kym H. Rhoden

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   QC value within limits for Be 234.861  Recovery = 99.62%
B 249.677†            59200.0       0.495 mg/L        0.0077       0.495 mg/L        0.0077   1.57%
   QC value within limits for B 249.677  Recovery = 98.95%
Ca 227.546†            4919.9        10.4 mg/L          0.15        10.4 mg/L          0.15   1.43%
   QC value within limits for Ca 227.546  Recovery = 104.01%
Cd 228.802†            3001.6      0.0488 mg/L       0.00160      0.0488 mg/L       0.00160   3.29%
   QC value within limits for Cd 228.802  Recovery = 97.55%
Co 228.616†            9452.7       0.202 mg/L        0.0014       0.202 mg/L        0.0014   0.69%
   QC value within limits for Co 228.616  Recovery = 100.83%
Cr 267.716†           65298.0       0.505 mg/L        0.0021       0.505 mg/L        0.0021   0.42%
   QC value within limits for Cr 267.716  Recovery = 101.08%
Cu 327.393†          135692.2       0.503 mg/L        0.0076       0.503 mg/L        0.0076   1.51%
   QC value within limits for Cu 327.393  Recovery = 100.64%
Fe 239.562†           64954.6        4.01 mg/L         0.019        4.01 mg/L         0.019   0.47%
   QC value within limits for Fe 239.562  Recovery = 100.15%
Mg 279.077†           35205.6        9.95 mg/L         0.059        9.95 mg/L         0.059   0.60%
   QC value within limits for Mg 279.077  Recovery = 99.46%
Mn 257.610†          420177.6       0.506 mg/L        0.0023       0.506 mg/L        0.0023   0.45%
   QC value within limits for Mn 257.610  Recovery = 101.21%
Mo 202.031†           39512.5        1.02 mg/L         0.002        1.02 mg/L         0.002   0.24%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Ni 231.604†           37530.9       0.520 mg/L        0.0032       0.520 mg/L        0.0032   0.61%
   QC value within limits for Ni 231.604  Recovery = 103.96%
Pb 220.353†            7390.2       0.510 mg/L        0.0028       0.510 mg/L        0.0028   0.55%
   QC value within limits for Pb 220.353  Recovery = 102.06%
Sb 206.836†            6247.5        1.19 mg/L         0.021        1.19 mg/L         0.021   1.74%
   QC value within limits for Sb 206.836  Recovery = 99.53%
Se 196.026†             943.6       0.404 mg/L        0.0043       0.404 mg/L        0.0043   1.07%
   QC value within limits for Se 196.026  Recovery = 100.92%
Si 251.611†          280238.5        5.06 mg/L         0.043        5.06 mg/L         0.043   0.86%
   QC value within limits for Si 251.611  Recovery = 101.18%
Sn 189.927†           13116.2        1.01 mg/L         0.006        1.01 mg/L         0.006   0.58%
   QC value within limits for Sn 189.927  Recovery = 101.46%
Ti 334.940†         1103023.2        1.01 mg/L         0.001        1.01 mg/L         0.001   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.75%
Tl 190.801†            2133.9       0.530 mg/L        0.0038       0.530 mg/L        0.0038   0.71%
   QC value within limits for Tl 190.801  Recovery = 106.08%
V 290.880†           263909.0        1.01 mg/L         0.002        1.01 mg/L         0.002   0.22%
   QC value within limits for V 290.880  Recovery = 100.82%
Zn 206.200†           62688.6        1.02 mg/L         0.007        1.02 mg/L         0.007   0.72%
   QC value within limits for Zn 206.200  Recovery = 101.66%
K 766.490†           156247.7        49.3 mg/L          0.34        49.3 mg/L          0.34   0.68%
   QC value within limits for K 766.490  Recovery = 98.55%
Na 589.592†         1107408.7        50.7 mg/L          0.45        50.7 mg/L          0.45   0.89%
   QC value within limits for Na 589.592  Recovery = 101.37%
Sr 407.771†         2764221.7       0.983 mg/L        0.0033       0.983 mg/L        0.0033   0.34%
   QC value within limits for Sr 407.771  Recovery = 98.29%
Li 670.784†          161307.6        1.02 mg/L         0.012        1.02 mg/L         0.012   1.18%
   QC value within limits for Li 670.784  Recovery = 102.41%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 11                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 9:53:20 AM
Analyst:                                            Data Type: Reprocessed on 7/17/2012 10:01:25 AM
Logged In Analyst (Original) : peicp2
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                       233.0 kPa       0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: CCB
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units     Std.Dev.     Conc. Units     Std.Dev.   RSD
Y 371.029            2539589.4                                                    3301.77   0.13%
YRADIAL               318485.4                                                   12164.35   3.82%
Ga 417.206           1380132.1                                                   13137.86   0.95%
GaRADIAL               89433.6                                                     617.55   0.69%
```

Approved: July 18, 2012

Kym H. Rhoden

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Al 396.153†              -12.3     -0.0242 mg/L       0.00185     -0.0242 mg/L       0.00185   7.65%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -0.4     0.00070 mg/L      0.000667     0.00070 mg/L      0.000667  95.56%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               13.6    -0.00049 mg/L      0.000111    -0.00049 mg/L      0.000111  22.71%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               38.7     0.00016 mg/L      0.000006     0.00016 mg/L      0.000006   3.80%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               160.1     0.00442 mg/L      0.000086     0.00442 mg/L      0.000086   1.95%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -6.0      0.0799 mg/L       0.01085      0.0799 mg/L       0.01085  13.58%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                2.8     0.00022 mg/L      0.000089     0.00022 mg/L      0.000089  39.99%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                6.1    -0.00002 mg/L      0.000200    -0.00002 mg/L      0.000200 873.20%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -52.0    -0.00009 mg/L      0.000059    -0.00009 mg/L      0.000059  67.42%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              134.6     0.00147 mg/L      0.000368     0.00147 mg/L      0.000368  24.95%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              165.0      0.0142 mg/L       0.00004      0.0142 mg/L       0.00004   0.26%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               30.1      0.0217 mg/L       0.00150      0.0217 mg/L       0.00150   6.89%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1031.7    -0.00106 mg/L      0.000007    -0.00106 mg/L      0.000007   0.65%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                1.2     0.00023 mg/L      0.000132     0.00023 mg/L      0.000132  58.37%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                2.7    -0.00254 mg/L      0.000222    -0.00254 mg/L      0.000222   8.75%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               14.0    -0.00029 mg/L      0.000345    -0.00029 mg/L      0.000345 118.21%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†                2.6     0.00470 mg/L      0.000765     0.00470 mg/L      0.000765  16.26%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                1.7     0.00225 mg/L      0.001923     0.00225 mg/L      0.001923  85.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -139.5     0.00925 mg/L      0.001406     0.00925 mg/L      0.001406  15.21%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                7.7     0.00089 mg/L      0.000259     0.00089 mg/L      0.000259  28.98%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†               45.6     0.00124 mg/L      0.000048     0.00124 mg/L      0.000048   3.84%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -3.9    -0.00328 mg/L      0.000810    -0.00328 mg/L      0.000810  24.66%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -193.0    -0.00022 mg/L      0.000853    -0.00022 mg/L      0.000853 389.40%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -86.2    -0.00070 mg/L      0.000200    -0.00070 mg/L      0.000200  28.32%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                53.5     -0.0432 mg/L       0.02131     -0.0432 mg/L       0.02131  49.27%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -93.9     -0.0226 mg/L       0.00271     -0.0226 mg/L       0.00271  12.01%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              107.7     0.00141 mg/L      0.000006     0.00141 mg/L      0.000006   0.40%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               22.0    -0.00368 mg/L      0.000279    -0.00368 mg/L      0.000279   7.59%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
User canceled analysis.
```

Approved: July 18, 2012

Kym H. Rhoden

```
Ag 328.068†            -139.9     0.00050 mg/L      0.000517     0.00050 mg/L      0.000517 102.84%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†             -12.3     -0.0242 mg/L       0.00185     -0.0242 mg/L       0.00185   7.65%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -0.4     0.00070 mg/L      0.000667     0.00070 mg/L      0.000667  95.56%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              13.6    -0.00049 mg/L      0.000111    -0.00049 mg/L      0.000111  22.71%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              38.7     0.00016 mg/L      0.000006     0.00016 mg/L      0.000006   3.80%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              160.1     0.00442 mg/L      0.000086     0.00442 mg/L      0.000086   1.95%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -6.0      0.0799 mg/L       0.01085      0.0799 mg/L       0.01085  13.58%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               2.8     0.00022 mg/L      0.000089     0.00022 mg/L      0.000089  39.99%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               6.1    -0.00002 mg/L      0.000200    -0.00002 mg/L      0.000200 873.20%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -52.0    -0.00009 mg/L      0.000059    -0.00009 mg/L      0.000059  67.42%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             134.6     0.00147 mg/L      0.000368     0.00147 mg/L      0.000368  24.95%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†             165.0      0.0142 mg/L       0.00004      0.0142 mg/L       0.00004   0.26%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              30.1      0.0217 mg/L       0.00150      0.0217 mg/L       0.00150   6.89%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1031.7    -0.00106 mg/L      0.000007    -0.00106 mg/L      0.000007   0.65%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               1.2     0.00023 mg/L      0.000132     0.00023 mg/L      0.000132  58.37%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               2.7    -0.00254 mg/L      0.000222    -0.00254 mg/L      0.000222   8.75%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              14.0    -0.00029 mg/L      0.000345    -0.00029 mg/L      0.000345 118.21%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               2.6     0.00470 mg/L      0.000765     0.00470 mg/L      0.000765  16.26%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.7     0.00225 mg/L      0.001923     0.00225 mg/L      0.001923  85.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -139.5     0.00925 mg/L      0.001406     0.00925 mg/L      0.001406  15.21%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               7.7     0.00089 mg/L      0.000259     0.00089 mg/L      0.000259  28.98%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              45.6     0.00124 mg/L      0.000048     0.00124 mg/L      0.000048   3.84%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -3.9    -0.00328 mg/L      0.000810    -0.00328 mg/L      0.000810  24.66%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -193.0    -0.00022 mg/L      0.000853    -0.00022 mg/L      0.000853 395.53%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†              -86.2    -0.00070 mg/L      0.000200    -0.00070 mg/L      0.000200  28.32%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               53.5     -0.0432 mg/L       0.02131     -0.0432 mg/L       0.02131  49.27%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -93.9     -0.0226 mg/L       0.00271     -0.0226 mg/L       0.00271  12.01%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             107.7     0.00141 mg/L      0.000006     0.00141 mg/L      0.000006   0.40%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              22.0    -0.00368 mg/L      0.000279    -0.00368 mg/L      0.000279   7.59%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
```

Approved: July 18, 2012

Kym H. Rhoden

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Analysis Begun

Start Time: 7/17/2012 10:02:28 AM **Plasma On Time: 7/17/2012 7:11:35 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\TUESDAY1.sif
Batch ID:
Results Data Set: 071712HR
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 41**
Sample ID: PBW B7 **Date Collected: 7/17/2012 10:02:30 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW B7

Analyte	**Back Pressure**	**Flow**
All	233.0 kPa	0.50 L/min

Mean Data: PBW B7

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
Y 371.029	2493945.1						32425.63	1.30%
YRADIAL	319883.2						1729.41	0.54%
Ga 417.206	1468942.1						11333.73	0.77%
GaRADIAL	91285.1						2909.19	3.19%
Ag 328.068†	-110.9	0.00059	mg/L	0.000162	0.00059	mg/L	0.000162	27.27%
Al 396.153†	32.3	-0.0178	mg/L	0.00154	-0.0178	mg/L	0.00154	8.62%
As 188.979†	-0.3	0.00073	mg/L	0.000833	0.00073	mg/L	0.000833	113.50%
Ba 233.527†	22.6	-0.00044	mg/L	0.000136	-0.00044	mg/L	0.000136	31.15%
Be 234.861†	157.1	0.00026	mg/L	0.000014	0.00026	mg/L	0.000014	5.34%
B 249.677†	32.5	0.00336	mg/L	0.000158	0.00336	mg/L	0.000158	4.71%
Ca 227.546†	5.0	0.102	mg/L	0.0031	0.102	mg/L	0.0031	3.03%
Cd 228.802†	-4.4	0.00010	mg/L	0.000042	0.00010	mg/L	0.000042	41.18%
Co 228.616†	-5.6	-0.00027	mg/L	0.000209	-0.00027	mg/L	0.000209	76.69%
Cr 267.716†	-64.8	-0.00019	mg/L	0.000058	-0.00019	mg/L	0.000058	31.09%
Cu 327.393†	71.6	0.00124	mg/L	0.000464	0.00124	mg/L	0.000464	37.36%
Fe 239.562†	80.1	0.00901	mg/L	0.000592	0.00901	mg/L	0.000592	6.57%
Mg 279.077†	22.3	0.0195	mg/L	0.00216	0.0195	mg/L	0.00216	11.08%
Mn 257.610†	-1126.5	-0.00117	mg/L	0.000007	-0.00117	mg/L	0.000007	0.61%
Mo 202.031†	3.1	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	26.03%
Ni 231.604†	12.3	-0.00240	mg/L	0.000153	-0.00240	mg/L	0.000153	6.38%
Pb 220.353†	13.8	-0.00030	mg/L	0.000475	-0.00030	mg/L	0.000475	159.99%
Sb 206.836†	-4.4	0.00338	mg/L	0.000218	0.00338	mg/L	0.000218	6.46%
Se 196.026†	-8.4	-0.00206	mg/L	0.002693	-0.00206	mg/L	0.002693	130.91%
Si 251.611†	-24.7	0.0113	mg/L	0.00048	0.0113	mg/L	0.00048	4.20%
Sn 189.927†	-4.1	-0.00002	mg/L	0.000392	-0.00002	mg/L	0.000392	>999.9%
Ti 334.940†	51.8	0.00125	mg/L	0.000078	0.00125	mg/L	0.000078	6.21%
Tl 190.801†	4.1	-0.00132	mg/L	0.001153	-0.00132	mg/L	0.001153	87.12%
V 290.880†	461.2	0.00229	mg/L	0.000677	0.00229	mg/L	0.000677	29.60%
Zn 206.200†	7.0	0.00080	mg/L	0.000042	0.00080	mg/L	0.000042	5.22%
K 766.490†	-18.7	-0.0658	mg/L	0.01633	-0.0658	mg/L	0.01633	24.83%
Na 589.592†	-262.1	-0.0303	mg/L	0.00055	-0.0303	mg/L	0.00055	1.82%
Sr 407.771†	140.1	0.00142	mg/L	0.000030	0.00142	mg/L	0.000030	2.14%
Li 670.784†	24.7	-0.00366	mg/L	0.000438	-0.00366	mg/L	0.000438	11.96%

==========

Sequence No.: 2 **Autosampler Location: 42**
Sample ID: LCSW B7 **Date Collected: 7/17/2012 10:09:25 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW B7

Approved: July 18, 2012

Kym H. Rhoden

Analyte	Back Pressure	Flow
All	233.0 kPa	0.50 L/min

Mean Data: LCSW B7

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2404795.6						14721.33	0.61%
YRADIAL	317794.0						2806.98	0.88%
Ga 417.206	1400190.8						27710.99	1.98%
GaRADIAL	88782.3						1160.44	1.31%
Ag 328.068†	62664.9	0.194	mg/L	0.0038	0.194	mg/L	0.0038	1.95%
Al 396.153†	34763.6	4.88	mg/L	0.014	4.88	mg/L	0.014	0.29%
As 188.979†	726.6	0.184	mg/L	0.0033	0.184	mg/L	0.0033	1.82%
Ba 233.527†	85211.9	0.500	mg/L	0.0013	0.500	mg/L	0.0013	0.26%
Be 234.861†	29941.1	0.0233	mg/L	0.00042	0.0233	mg/L	0.00042	1.80%
B 249.677†	111005.5	0.930	mg/L	0.0187	0.930	mg/L	0.0187	2.01%
Ca 227.546†	2312.7	4.94	mg/L	0.090	4.94	mg/L	0.090	1.83%
Cd 228.802†	1388.1	0.0227	mg/L	0.00064	0.0227	mg/L	0.00064	2.82%
Co 228.616†	4700.9	0.100	mg/L	0.0013	0.100	mg/L	0.0013	1.30%
Cr 267.716†	32195.6	0.249	mg/L	0.0027	0.249	mg/L	0.0027	1.07%
Cu 327.393†	65304.4	0.243	mg/L	0.0042	0.243	mg/L	0.0042	1.72%
Fe 239.562†	31121.5	1.92	mg/L	0.031	1.92	mg/L	0.031	1.63%
Mg 279.077†	17244.6	4.88	mg/L	0.053	4.88	mg/L	0.053	1.10%
Mn 257.610†	208664.6	0.251	mg/L	0.0011	0.251	mg/L	0.0011	0.46%
Mo 202.031†	19402.1	0.499	mg/L	0.0030	0.499	mg/L	0.0030	0.60%
Ni 231.604†	18143.3	0.250	mg/L	0.0014	0.250	mg/L	0.0014	0.55%
Pb 220.353†	3674.6	0.253	mg/L	0.0017	0.253	mg/L	0.0017	0.68%
Sb 206.836†	2965.8	0.569	mg/L	0.0106	0.569	mg/L	0.0106	1.86%
Se 196.026†	448.6	0.193	mg/L	0.0027	0.193	mg/L	0.0027	1.38%
Si 251.611†	135090.3	2.44	mg/L	0.043	2.44	mg/L	0.043	1.76%
Sn 189.927†	-41.5	-0.00291	mg/L	0.000412	-0.00291	mg/L	0.000412	14.14%
Ti 334.940†	540356.8	0.494	mg/L	0.0021	0.494	mg/L	0.0021	0.42%
Tl 190.801†	1085.6	0.268	mg/L	0.0051	0.268	mg/L	0.0051	1.89%
V 290.880†	131865.5	0.504	mg/L	0.0045	0.504	mg/L	0.0045	0.90%
Zn 206.200†	30912.3	0.502	mg/L	0.0042	0.502	mg/L	0.0042	0.83%
K 766.490†	76526.5	23.9	mg/L	0.27	23.9	mg/L	0.27	1.11%
Na 589.592†	559639.4	25.6	mg/L	0.62	25.6	mg/L	0.62	2.41%
Sr 407.771†	1388651.8	0.494	mg/L	0.0067	0.494	mg/L	0.0067	1.35%
Li 670.784†	81922.9	0.518	mg/L	0.0083	0.518	mg/L	0.0083	1.61%

Sequence No.: 3
Sample ID: L1207031201 HB
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 7/17/2012 10:15:24 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207031201 HB

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: L1207031201 HB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2370678.3						11725.56	0.49%
YRADIAL	311442.4						6733.29	2.16%
Ga 417.206	1445473.5						25602.73	1.77%
GaRADIAL	91789.7						1534.74	1.67%
Ag 328.068†	1392.0	0.00516	mg/L	0.000443	0.00516	mg/L	0.000443	8.57%
Al 396.153†	-66.5	-0.0321	mg/L	0.00196	-0.0321	mg/L	0.00196	6.10%
As 188.979†	-15.3	-0.00312	mg/L	0.001507	-0.00312	mg/L	0.001507	48.37%
Ba 233.527†	3467.3	0.0198	mg/L	0.00019	0.0198	mg/L	0.00019	0.94%
Be 234.861†	174.0	0.00027	mg/L	0.000017	0.00027	mg/L	0.000017	6.12%
B 249.677†	3710.0	0.0341	mg/L	0.00094	0.0341	mg/L	0.00094	2.74%
Ca 227.546†	88789.8	178	mg/L	5.2	178	mg/L	5.2	2.92%
Cd 228.802†	-7.6	0.00007	mg/L	0.000079	0.00007	mg/L	0.000079	118.29%
Co 228.616†	-1.8	-0.00012	mg/L	0.000175	-0.00012	mg/L	0.000175	148.29%
Cr 267.716†	255.8	0.00230	mg/L	0.000038	0.00230	mg/L	0.000038	1.65%
Cu 327.393†	-415.7	-0.00059	mg/L	0.000305	-0.00059	mg/L	0.000305	51.94%

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Fe 239.562†	43.6	0.00674 mg/L	0.000800	0.00674 mg/L	0.000800	11.86%
Mg 279.077†	3375.5	0.964 mg/L	0.0169	0.964 mg/L	0.0169	1.75%
Mn 257.610†	-1041.3	-0.00107 mg/L	0.000006	-0.00107 mg/L	0.000006	0.58%
Mo 202.031†	134.8	0.00366 mg/L	0.000269	0.00366 mg/L	0.000269	7.36%
Ni 231.604†	24.8	-0.00222 mg/L	0.000218	-0.00222 mg/L	0.000218	9.81%
Pb 220.353†	19.8	0.00154 mg/L	0.000631	0.00154 mg/L	0.000631	41.08%
Sb 206.836†	-3.6	0.00353 mg/L	0.000615	0.00353 mg/L	0.000615	17.43%
Se 196.026†	7.1	0.00454 mg/L	0.002208	0.00454 mg/L	0.002208	48.63%
Si 251.611†	122179.4	2.22 mg/L	0.046	2.22 mg/L	0.046	2.07%
Sn 189.927†	-373.7	-0.0286 mg/L	0.00128	-0.0286 mg/L	0.00128	4.47%
Ti 334.940†	-36237.4	-0.00520 mg/L	0.001213	-0.00520 mg/L	0.001213	23.35%
Tl 190.801†	-42.8	-0.0131 mg/L	0.00229	-0.0131 mg/L	0.00229	17.47%
V 290.880†	2411.9	0.00972 mg/L	0.001445	0.00972 mg/L	0.001445	14.87%
Zn 206.200†	-19.9	0.00038 mg/L	0.000079	0.00038 mg/L	0.000079	20.58%
K 766.490†	410.5	0.0640 mg/L	0.00193	0.0640 mg/L	0.00193	3.02%
Na 589.592†	90956.2	4.15 mg/L	0.115	4.15 mg/L	0.115	2.78%
Sr 407.771†	594484.4	0.209 mg/L	0.0074	0.209 mg/L	0.0074	3.53%
Li 670.784†	193.1	-0.00259 mg/L	0.000526	-0.00259 mg/L	0.000526	20.30%

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Sequence No.: 4 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 10:22:20 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	232.0 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	2396158.2						5830.65	0.24%
YRADIAL	317052.1						2604.11	0.82%
Ga 417.206	1347080.8						23258.63	1.73%
GaRADIAL	87621.4						624.58	0.71%
Ag 328.068†	128418.3	0.397	mg/L	0.0086	0.397	mg/L	0.0086	2.16%
QC value within limits for Ag 328.068 Recovery = 99.33%								
Al 396.153†	70898.5	9.97	mg/L	0.023	9.97	mg/L	0.023	0.23%
QC value within limits for Al 396.153 Recovery = 99.71%								
As 188.979†	1521.7	0.384	mg/L	0.0090	0.384	mg/L	0.0090	2.34%
QC value within limits for As 188.979 Recovery = 95.92%								
Ba 233.527†	170972.8	1.00	mg/L	0.003	1.00	mg/L	0.003	0.28%
QC value within limits for Ba 233.527 Recovery = 100.34%								
Be 234.861†	62791.0	0.0488	mg/L	0.00108	0.0488	mg/L	0.00108	2.21%
QC value within limits for Be 234.861 Recovery = 97.57%								
B 249.677†	58404.3	0.488	mg/L	0.0145	0.488	mg/L	0.0145	2.97%
QC value within limits for B 249.677 Recovery = 97.63%								
Ca 227.546†	4827.6	10.2	mg/L	0.23	10.2	mg/L	0.23	2.28%
QC value within limits for Ca 227.546 Recovery = 102.12%								
Cd 228.802†	2924.6	0.0475	mg/L	0.00177	0.0475	mg/L	0.00177	3.73%
QC value within limits for Cd 228.802 Recovery = 95.09%								
Co 228.616†	9376.1	0.200	mg/L	0.0018	0.200	mg/L	0.0018	0.92%
QC value within limits for Co 228.616 Recovery = 100.01%								
Cr 267.716†	64765.7	0.501	mg/L	0.0039	0.501	mg/L	0.0039	0.79%
QC value within limits for Cr 267.716 Recovery = 100.26%								
Cu 327.393†	134124.4	0.497	mg/L	0.0096	0.497	mg/L	0.0096	1.93%
QC value within limits for Cu 327.393 Recovery = 99.48%								
Fe 239.562†	64264.6	3.96	mg/L	0.003	3.96	mg/L	0.003	0.07%
QC value within limits for Fe 239.562 Recovery = 99.09%								
Mg 279.077†	34934.2	9.87	mg/L	0.066	9.87	mg/L	0.066	0.66%
QC value within limits for Mg 279.077 Recovery = 98.70%								
Mn 257.610†	416708.5	0.502	mg/L	0.0022	0.502	mg/L	0.0022	0.44%
QC value within limits for Mn 257.610 Recovery = 100.38%								
Mo 202.031†	39354.0	1.01	mg/L	0.004	1.01	mg/L	0.004	0.41%
QC value within limits for Mo 202.031 Recovery = 101.12%								
Ni 231.604†	37174.4	0.515	mg/L	0.0027	0.515	mg/L	0.0027	0.52%
QC value within limits for Ni 231.604 Recovery = 102.96%								
Pb 220.353†	7318.4	0.505	mg/L	0.0015	0.505	mg/L	0.0015	0.30%

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   QC value within limits for Pb 220.353  Recovery = 101.07%
Sb 206.836†            6116.1        1.17 mg/L        0.025        1.17 mg/L        0.025   2.16%
   QC value within limits for Sb 206.836  Recovery = 97.45%
Se 196.026†             919.1       0.393 mg/L       0.0103       0.393 mg/L       0.0103   2.62%
   QC value within limits for Se 196.026  Recovery = 98.31%
Si 251.611†          273547.3        4.94 mg/L        0.082        4.94 mg/L        0.082   1.67%
   QC value within limits for Si 251.611  Recovery = 98.76%
Sn 189.927†           13018.2        1.01 mg/L        0.005        1.01 mg/L        0.005   0.53%
   QC value within limits for Sn 189.927  Recovery = 100.70%
Ti 334.940†         1102366.3        1.01 mg/L        0.002        1.01 mg/L        0.002   0.22%
   QC value within limits for Ti 334.940  Recovery = 100.68%
Tl 190.801†            2131.2       0.530 mg/L       0.0040       0.530 mg/L       0.0040   0.75%
   QC value within limits for Tl 190.801  Recovery = 105.95%
V 290.880†           263441.8        1.01 mg/L        0.005        1.01 mg/L        0.005   0.49%
   QC value within limits for V 290.880  Recovery = 100.64%
Zn 206.200†           61482.2       0.997 mg/L       0.0077       0.997 mg/L       0.0077   0.77%
   QC value within limits for Zn 206.200  Recovery = 99.71%
K 766.490†           158054.6        49.9 mg/L         0.31        49.9 mg/L         0.31   0.63%
   QC value within limits for K 766.490  Recovery = 99.71%
Na 589.592†         1102114.6        50.4 mg/L         0.46        50.4 mg/L         0.46   0.91%
   QC value within limits for Na 589.592  Recovery = 100.89%
Sr 407.771†         2774533.4       0.987 mg/L       0.0154       0.987 mg/L       0.0154   1.57%
   QC value within limits for Sr 407.771  Recovery = 98.65%
Li 670.784†           163254.4        1.04 mg/L        0.002        1.04 mg/L        0.002   0.17%
   QC value within limits for Li 670.784  Recovery = 103.65%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 5                                   Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 7/17/2012 10:28:20 AM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                    233.0 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            2495146.2                                                  14991.04   0.60%
YRADIAL               317103.5                                                   1020.90   0.32%
Ga 417.206           1408289.9                                                  31778.08   2.26%
GaRADIAL               89731.1                                                   2836.72   3.16%
Ag 328.068†             -118.8     0.00057 mg/L      0.000242     0.00057 mg/L      0.000242  42.74%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               24.1     -0.0190 mg/L       0.00168     -0.0190 mg/L       0.00168   8.83%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -0.6     0.00065 mg/L      0.000932     0.00065 mg/L      0.000932 143.57%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               16.8    -0.00047 mg/L      0.000051    -0.00047 mg/L      0.000051  10.81%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               75.0     0.00019 mg/L      0.000022     0.00019 mg/L      0.000022  11.23%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               144.1     0.00429 mg/L      0.000197     0.00429 mg/L      0.000197   4.59%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -4.0      0.0839 mg/L       0.00745      0.0839 mg/L       0.00745   8.89%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -0.8     0.00016 mg/L      0.000126     0.00016 mg/L      0.000126  77.76%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               -3.9    -0.00024 mg/L      0.000044    -0.00024 mg/L      0.000044  18.36%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -49.0    -0.00006 mg/L      0.000097    -0.00006 mg/L      0.000097 151.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -47.9     0.00080 mg/L      0.000480     0.00080 mg/L      0.000480  60.01%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               74.4     0.00866 mg/L      0.000390     0.00866 mg/L      0.000390   4.50%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               20.6      0.0191 mg/L       0.00180      0.0191 mg/L       0.00180   9.44%
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QC value within limits for Mg 279.077 Recovery = Not calculated
Mn 257.610† -1134.1 -0.00118 mg/L 0.000019 -0.00118 mg/L 0.000019 1.58%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† 6.8 0.00037 mg/L 0.000538 0.00037 mg/L 0.000538 145.15%
QC value within limits for Mo 202.031 Recovery = Not calculated
Ni 231.604† 0.8 -0.00256 mg/L 0.000083 -0.00256 mg/L 0.000083 3.23%
QC value within limits for Ni 231.604 Recovery = Not calculated
Pb 220.353† 8.7 -0.00065 mg/L 0.000586 -0.00065 mg/L 0.000586 90.22%
QC value within limits for Pb 220.353 Recovery = Not calculated
Sb 206.836† -3.7 0.00351 mg/L 0.001230 0.00351 mg/L 0.001230 35.01%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† -5.3 -0.00075 mg/L 0.000280 -0.00075 mg/L 0.000280 37.50%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† -107.7 0.00982 mg/L 0.000720 0.00982 mg/L 0.000720 7.33%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 123.9 0.00987 mg/L 0.015273 0.00987 mg/L 0.015273 154.67%
QC value within limits for Sn 189.927 Recovery = Not calculated
Ti 334.940† 190.1 0.00137 mg/L 0.000073 0.00137 mg/L 0.000073 5.31%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† 0.7 -0.00217 mg/L 0.000719 -0.00217 mg/L 0.000719 33.08%
QC value within limits for Tl 190.801 Recovery = Not calculated
V 290.880† -66.3 0.00027 mg/L 0.000807 0.00027 mg/L 0.000807 299.15%
QC value within limits for V 290.880 Recovery = Not calculated
Zn 206.200† -111.3 -0.00111 mg/L 0.000022 -0.00111 mg/L 0.000022 1.96%
QC value within limits for Zn 206.200 Recovery = Not calculated
K 766.490† 57.8 -0.0419 mg/L 0.01128 -0.0419 mg/L 0.01128 26.90%
QC value within limits for K 766.490 Recovery = Not calculated
Na 589.592† -267.6 -0.0306 mg/L 0.00314 -0.0306 mg/L 0.00314 10.28%
QC value within limits for Na 589.592 Recovery = Not calculated
Sr 407.771† 189.7 0.00144 mg/L 0.000034 0.00144 mg/L 0.000034 2.39%
QC value within limits for Sr 407.771 Recovery = Not calculated
Li 670.784† 65.1 -0.00340 mg/L 0.000362 -0.00340 mg/L 0.000362 10.63%
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: 14**
Sample ID: LRC **Date Collected: 7/17/2012 10:35:13 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LRC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.50 L/min

Mean Data: LRC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2260198.6						16467.49	0.73%
YRADIAL	303971.1						2010.69	0.66%
Ga 417.206	1324965.6						40222.47	3.04%
GaRADIAL	86652.0						1665.44	1.92%
Ag 328.068†	3741.1	0.0124	mg/L	0.00032	0.0124	mg/L	0.00032	2.55%
Al 396.153†	-151.9	-0.0440	mg/L	0.00540	-0.0440	mg/L	0.00540	12.27%
As 188.979†	-13.6	-0.00265	mg/L	0.001977	-0.00265	mg/L	0.001977	74.75%
Ba 233.527†	81.5	-0.00009	mg/L	0.000071	-0.00009	mg/L	0.000071	78.21%
Be 234.861†	95.1	0.00021	mg/L	0.000025	0.00021	mg/L	0.000025	11.82%
B 249.677†	-129.3	0.00199	mg/L	0.000142	0.00199	mg/L	0.000142	7.11%
Ca 227.546†	252610.6	505	mg/L	3.4	505	mg/L	3.4	0.68%
Cd 228.802†	-6.7	0.00008	mg/L	0.000090	0.00008	mg/L	0.000090	111.11%
Co 228.616†	7.1	0.00020	mg/L	0.000236	0.00020	mg/L	0.000236	120.00%
Cr 267.716†	1110.8	0.00890	mg/L	0.000216	0.00890	mg/L	0.000216	2.42%
Cu 327.393†	-1294.1	-0.00389	mg/L	0.000764	-0.00389	mg/L	0.000764	19.65%
Fe 239.562†	15.1	0.00501	mg/L	0.000731	0.00501	mg/L	0.000731	14.59%
Mg 279.077†	64.5	0.0314	mg/L	0.00204	0.0314	mg/L	0.00204	6.47%
Mn 257.610†	-324.7	-0.00020	mg/L	0.000015	-0.00020	mg/L	0.000015	7.27%
Mo 202.031†	27.2	0.00090	mg/L	0.000175	0.00090	mg/L	0.000175	19.55%
Ni 231.604†	28.5	-0.00217	mg/L	0.000154	-0.00217	mg/L	0.000154	7.09%
Pb 220.353†	-39.4	0.00007	mg/L	0.001468	0.00007	mg/L	0.001468	>999.9%

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Sb 206.836†	-10.8	0.00209	mg/L	0.000353	0.00209	mg/L	0.000353	16.90%
Se 196.026†	-2.9	0.00026	mg/L	0.003141	0.00026	mg/L	0.003141	>999.9%
Si 251.611†	39.6	0.0125	mg/L	0.00138	0.0125	mg/L	0.00138	11.04%
Sn 189.927†	-496.0	-0.0381	mg/L	0.00027	-0.0381	mg/L	0.00027	0.70%
Ti 334.940†	-96947.1	-0.0114	mg/L	0.00511	-0.0114	mg/L	0.00511	44.80%
Tl 190.801†	-41.8	-0.0135	mg/L	0.00159	-0.0135	mg/L	0.00159	11.74%
V 290.880†	1434.8	0.00601	mg/L	0.001769	0.00601	mg/L	0.001769	29.44%
Zn 206.200†	-48.0	-0.00002	mg/L	0.000081	-0.00002	mg/L	0.000081	511.12%
K 766.490†	173.9	-0.00566	mg/L	0.003686	-0.00566	mg/L	0.003686	65.08%
Na 589.592†	-521.8	-0.0422	mg/L	0.00198	-0.0422	mg/L	0.00198	4.69%
Sr 407.771†	50675.1	0.00826	mg/L	0.001097	0.00826	mg/L	0.001097	13.28%
Li 670.784†	104.4	-0.00315	mg/L	0.000119	-0.00315	mg/L	0.000119	3.78%

Sequence No.: 7 **Autosampler Location: 15**
Sample ID: LRC **Date Collected: 7/17/2012 10:42:08 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LRC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: LRC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2300709.3						3455.63	0.15%
YRADIAL	301183.5						800.07	0.27%
Ga 417.206	1437557.0						15761.65	1.10%
GaRADIAL	88052.3						2716.10	3.08%
Ag 328.068†	-195.1	0.00035	mg/L	0.000270	0.00035	mg/L	0.000270	76.37%
Al 396.153†	14.0	-0.0204	mg/L	0.00205	-0.0204	mg/L	0.00205	10.04%
As 188.979†	12.2	0.00391	mg/L	0.001277	0.00391	mg/L	0.001277	32.64%
Ba 233.527†	50.8	-0.00027	mg/L	0.000062	-0.00027	mg/L	0.000062	22.64%
Be 234.861†	228.3	0.00031	mg/L	0.000008	0.00031	mg/L	0.000008	2.50%
B 249.677†	-1.4	0.00307	mg/L	0.000148	0.00307	mg/L	0.000148	4.81%
Ca 227.546†	28.9	0.0967	mg/L	0.04126	0.0967	mg/L	0.04126	42.65%
Cd 228.802†	-8.2	0.00002	mg/L	0.000069	0.00002	mg/L	0.000069	290.84%
Co 228.616†	2.3	-0.00010	mg/L	0.000143	-0.00010	mg/L	0.000143	136.63%
Cr 267.716†	378.5	0.00325	mg/L	0.000264	0.00325	mg/L	0.000264	8.15%
Cu 327.393†	179.4	0.00164	mg/L	0.000543	0.00164	mg/L	0.000543	33.03%
Fe 239.562†	97.3	-0.00012	mg/L	0.000583	-0.00012	mg/L	0.000583	496.12%
Mg 279.077†	1808510.4	509	mg/L	15.6	509	mg/L	15.6	3.06%
Mn 257.610†	-1054.1	-0.00108	mg/L	0.000011	-0.00108	mg/L	0.000011	1.04%
Mo 202.031†	-18.6	-0.00028	mg/L	0.000086	-0.00028	mg/L	0.000086	31.05%
Ni 231.604†	24.2	-0.00224	mg/L	0.000098	-0.00224	mg/L	0.000098	4.40%
Pb 220.353†	3.9	-0.00098	mg/L	0.000866	-0.00098	mg/L	0.000866	88.04%
Sb 206.836†	-4.6	0.00332	mg/L	0.000990	0.00332	mg/L	0.000990	29.81%
Se 196.026†	-5.1	-0.00066	mg/L	0.002950	-0.00066	mg/L	0.002950	447.60%
Si 251.611†	272.3	0.0167	mg/L	0.00293	0.0167	mg/L	0.00293	17.56%
Sn 189.927†	0.5	0.00033	mg/L	0.000470	0.00033	mg/L	0.000470	140.58%
Ti 334.940†	153.1	0.00135	mg/L	0.000011	0.00135	mg/L	0.000011	0.82%
Tl 190.801†	7.6	-0.00047	mg/L	0.002125	-0.00047	mg/L	0.002125	453.43%
V 290.880†	2536.2	-0.00303	mg/L	0.002585	-0.00303	mg/L	0.002585	85.36%
Zn 206.200†	-45.2	-0.00001	mg/L	0.000041	-0.00001	mg/L	0.000041	291.74%
K 766.490†	326.4	0.0420	mg/L	0.01281	0.0420	mg/L	0.01281	30.54%
Na 589.592†	-721.1	-0.0513	mg/L	0.00457	-0.0513	mg/L	0.00457	8.90%
Sr 407.771†	20.4	0.00138	mg/L	0.000025	0.00138	mg/L	0.000025	1.79%
Li 670.784†	438.9	-0.00102	mg/L	0.000599	-0.00102	mg/L	0.000599	58.55%

Sequence No.: 8 **Autosampler Location: 16**
Sample ID: BLANK **Date Collected: 7/17/2012 10:49:03 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: BLANK

Approved: July 18, 2012
Kym H. Rhoden

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: BLANK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2529985.9						24334.00	0.96%
YRADIAL	320876.1						10800.29	3.37%
Ga 417.206	1413581.3						11873.30	0.84%
GaRADIAL	89790.8						3594.45	4.00%
Ag 328.068†	-87.5	0.00066	mg/L	0.000143	0.00066	mg/L	0.000143	21.64%
Al 396.153†	1.6	-0.0222	mg/L	0.00262	-0.0222	mg/L	0.00262	11.81%
As 188.979†	-2.7	0.00013	mg/L	0.002171	0.00013	mg/L	0.002171	>999.9%
Ba 233.527†	7.9	-0.00052	mg/L	0.000046	-0.00052	mg/L	0.000046	8.89%
Be 234.861†	50.6	0.00018	mg/L	0.000020	0.00018	mg/L	0.000020	11.63%
B 249.677†	4.3	0.00312	mg/L	0.000229	0.00312	mg/L	0.000229	7.34%
Ca 227.546†	-7.7	0.0763	mg/L	0.01079	0.0763	mg/L	0.01079	14.14%
Cd 228.802†	0.4	0.00019	mg/L	0.000130	0.00019	mg/L	0.000130	69.91%
Co 228.616†	6.6	-0.00001	mg/L	0.000204	-0.00001	mg/L	0.000204	>999.9%
Cr 267.716†	-51.0	-0.00008	mg/L	0.000067	-0.00008	mg/L	0.000067	83.98%
Cu 327.393†	-1.9	0.00097	mg/L	0.000368	0.00097	mg/L	0.000368	37.99%
Fe 239.562†	33.6	0.00614	mg/L	0.000413	0.00614	mg/L	0.000413	6.72%
Mg 279.077†	55.0	0.0287	mg/L	0.00286	0.0287	mg/L	0.00286	9.95%
Mn 257.610†	-1263.3	-0.00134	mg/L	0.000001	-0.00134	mg/L	0.000001	0.08%
Mo 202.031†	3.9	0.00030	mg/L	0.000254	0.00030	mg/L	0.000254	85.85%
Ni 231.604†	0.1	-0.00257	mg/L	0.000169	-0.00257	mg/L	0.000169	6.58%
Pb 220.353†	2.3	-0.00110	mg/L	0.000433	-0.00110	mg/L	0.000433	39.48%
Sb 206.836†	-4.5	0.00336	mg/L	0.000230	0.00336	mg/L	0.000230	6.84%
Se 196.026†	1.5	0.00216	mg/L	0.000952	0.00216	mg/L	0.000952	44.10%
Si 251.611†	-260.0	0.00707	mg/L	0.000465	0.00707	mg/L	0.000465	6.57%
Sn 189.927†	-7.7	-0.00030	mg/L	0.000519	-0.00030	mg/L	0.000519	172.98%
Ti 334.940†	-14.9	0.00119	mg/L	0.000052	0.00119	mg/L	0.000052	4.36%
Tl 190.801†	3.2	-0.00156	mg/L	0.000441	-0.00156	mg/L	0.000441	28.23%
V 290.880†	-148.0	-0.00004	mg/L	0.000847	-0.00004	mg/L	0.000847	>999.9%
Zn 206.200†	-68.7	-0.00042	mg/L	0.000135	-0.00042	mg/L	0.000135	31.98%
K 766.490†	18.1	-0.0543	mg/L	0.00512	-0.0543	mg/L	0.00512	9.43%
Na 589.592†	-370.5	-0.0353	mg/L	0.00163	-0.0353	mg/L	0.00163	4.61%
Sr 407.771†	32.6	0.00138	mg/L	0.000032	0.00138	mg/L	0.000032	2.30%
Li 670.784†	-9.2	-0.00388	mg/L	0.000324	-0.00388	mg/L	0.000324	8.36%

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/17/2012 10:55:58 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	232.0 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	2397172.2						16440.72	0.69%
YRADIAL	317674.4						3960.70	1.25%
Ga 417.206	1344928.8						34348.74	2.55%
GaRADIAL	88246.8						349.41	0.40%
Ag 328.068†	128155.5	0.396	mg/L	0.0124	0.396	mg/L	0.0124	3.13%
QC value within limits for Ag 328.068 Recovery = 99.12%								
Al 396.153†	70580.7	9.93	mg/L	0.014	9.93	mg/L	0.014	0.14%
QC value within limits for Al 396.153 Recovery = 99.26%								
As 188.979†	1527.3	0.385	mg/L	0.0113	0.385	mg/L	0.0113	2.93%
QC value within limits for As 188.979 Recovery = 96.27%								
Ba 233.527†	171576.1	1.01	mg/L	0.006	1.01	mg/L	0.006	0.55%
QC value within limits for Ba 233.527 Recovery = 100.70%								
Be 234.861†	62946.2	0.0489	mg/L	0.00168	0.0489	mg/L	0.00168	3.43%
QC value within limits for Be 234.861 Recovery = 97.82%								
B 249.677†	58252.6	0.487	mg/L	0.0175	0.487	mg/L	0.0175	3.60%

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   QC value within limits for B 249.677  Recovery = 97.38%
Ca 227.546†            4862.0        10.3 mg/L          0.30        10.3 mg/L          0.30   2.96%
   QC value within limits for Ca 227.546  Recovery = 102.80%
Cd 228.802†            2929.2      0.0476 mg/L       0.00221      0.0476 mg/L       0.00221   4.63%
   QC value within limits for Cd 228.802  Recovery = 95.22%
Co 228.616†            9358.3       0.200 mg/L        0.0026       0.200 mg/L        0.0026   1.31%
   QC value within limits for Co 228.616  Recovery = 99.82%
Cr 267.716†           64583.2       0.500 mg/L        0.0055       0.500 mg/L        0.0055   1.10%
   QC value within limits for Cr 267.716  Recovery = 99.97%
Cu 327.393†          133961.5       0.497 mg/L        0.0128       0.497 mg/L        0.0128   2.57%
   QC value within limits for Cu 327.393  Recovery = 99.36%
Fe 239.562†           63812.8        3.94 mg/L         0.005        3.94 mg/L         0.005   0.13%
   QC value within limits for Fe 239.562  Recovery = 98.39%
Mg 279.077†           34780.8        9.83 mg/L         0.036        9.83 mg/L         0.036   0.36%
   QC value within limits for Mg 279.077  Recovery = 98.27%
Mn 257.610†          416862.2       0.502 mg/L        0.0027       0.502 mg/L        0.0027   0.53%
   QC value within limits for Mn 257.610  Recovery = 100.41%
Mo 202.031†           39339.8        1.01 mg/L         0.006        1.01 mg/L         0.006   0.62%
   QC value within limits for Mo 202.031  Recovery = 101.08%
Ni 231.604†           37159.1       0.515 mg/L        0.0050       0.515 mg/L        0.0050   0.98%
   QC value within limits for Ni 231.604  Recovery = 102.92%
Pb 220.353†            7319.8       0.505 mg/L        0.0046       0.505 mg/L        0.0046   0.91%
   QC value within limits for Pb 220.353  Recovery = 101.09%
Sb 206.836†            6150.0        1.18 mg/L         0.033        1.18 mg/L         0.033   2.81%
   QC value within limits for Sb 206.836  Recovery = 97.99%
Se 196.026†             920.2       0.394 mg/L        0.0107       0.394 mg/L        0.0107   2.71%
   QC value within limits for Se 196.026  Recovery = 98.44%
Si 251.611†          273755.8        4.94 mg/L         0.110        4.94 mg/L         0.110   2.23%
   QC value within limits for Si 251.611  Recovery = 98.84%
Sn 189.927†           13014.5        1.01 mg/L         0.010        1.01 mg/L         0.010   0.95%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Ti 334.940†         1101100.8        1.01 mg/L         0.001        1.01 mg/L         0.001   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.57%
Tl 190.801†            2137.3       0.531 mg/L        0.0073       0.531 mg/L        0.0073   1.38%
   QC value within limits for Tl 190.801  Recovery = 106.24%
V 290.880†           263109.0        1.01 mg/L         0.008        1.01 mg/L         0.008   0.76%
   QC value within limits for V 290.880  Recovery = 100.51%
Zn 206.200†           61509.9       0.998 mg/L        0.0093       0.998 mg/L        0.0093   0.93%
   QC value within limits for Zn 206.200  Recovery = 99.75%
K 766.490†           156113.8        49.2 mg/L          0.62        49.2 mg/L          0.62   1.27%
   QC value within limits for K 766.490  Recovery = 98.47%
Na 589.592†         1096640.0        50.2 mg/L          0.23        50.2 mg/L          0.23   0.47%
   QC value within limits for Na 589.592  Recovery = 100.39%
Sr 407.771†         2771679.3       0.986 mg/L        0.0107       0.986 mg/L        0.0107   1.09%
   QC value within limits for Sr 407.771  Recovery = 98.55%
Li 670.784†          162609.2        1.03 mg/L         0.015        1.03 mg/L         0.015   1.46%
   QC value within limits for Li 670.784  Recovery = 103.24%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 10                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 11:01:58 AM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     233.0 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           2510283.1                                                   14966.33   0.60%
YRADIAL              323963.9                                                    7279.61   2.25%
Ga 417.206          1427751.3                                                   19444.17   1.36%
GaRADIAL              91846.3                                                     865.46   0.94%
Ag 328.068†             -48.3     0.00078 mg/L      0.000523     0.00078 mg/L   0.000523  66.93%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              38.4     -0.0170 mg/L       0.00288     -0.0170 mg/L    0.00288  16.94%
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Approved: July 18, 2012

Kym H. Rhoden

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   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                3.0     0.00157 mg/L      0.001121     0.00157 mg/L      0.001121  71.55%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               42.0    -0.00032 mg/L      0.000087    -0.00032 mg/L      0.000087  27.11%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               90.7     0.00021 mg/L      0.000021     0.00021 mg/L      0.000021  10.33%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†                98.7     0.00391 mg/L      0.000143     0.00391 mg/L      0.000143   3.66%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -7.0      0.0779 mg/L       0.01726      0.0779 mg/L       0.01726  22.16%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                3.1     0.00022 mg/L      0.000036     0.00022 mg/L      0.000036  16.00%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                3.5    -0.00008 mg/L      0.000318    -0.00008 mg/L      0.000318 406.98%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -47.6    -0.00005 mg/L      0.000062    -0.00005 mg/L      0.000062 115.87%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -86.5     0.00066 mg/L      0.000121     0.00066 mg/L      0.000121  18.35%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               43.2     0.00674 mg/L      0.000322     0.00674 mg/L      0.000322   4.78%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               43.8      0.0256 mg/L       0.00241      0.0256 mg/L       0.00241   9.40%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1202.5    -0.00126 mg/L      0.000020    -0.00126 mg/L      0.000020   1.61%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               16.3     0.00061 mg/L      0.000087     0.00061 mg/L      0.000087  14.24%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                9.8    -0.00244 mg/L      0.000161    -0.00244 mg/L      0.000161   6.61%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               18.0    -0.00001 mg/L      0.000671    -0.00001 mg/L      0.000671 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -5.1     0.00325 mg/L      0.001466     0.00325 mg/L      0.001466  45.09%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -6.1    -0.00106 mg/L      0.000584    -0.00106 mg/L      0.000584  55.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -195.0     0.00824 mg/L      0.001106     0.00824 mg/L      0.001106  13.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                8.0     0.00091 mg/L      0.000540     0.00091 mg/L      0.000540  59.12%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              155.6     0.00134 mg/L      0.000110     0.00134 mg/L      0.000110   8.18%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.9    -0.00188 mg/L      0.001400    -0.00188 mg/L      0.001400  74.42%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               -29.0     0.00041 mg/L      0.000975     0.00041 mg/L      0.000975 236.51%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -129.7    -0.00141 mg/L      0.000116    -0.00141 mg/L      0.000116   8.27%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                52.2     -0.0437 mg/L       0.03647     -0.0437 mg/L       0.03647  83.53%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -353.7     -0.0345 mg/L       0.00292     -0.0345 mg/L       0.00292   8.46%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              321.1     0.00148 mg/L      0.000027     0.00148 mg/L      0.000027   1.81%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               87.6    -0.00326 mg/L      0.000309    -0.00326 mg/L      0.000309   9.49%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
User canceled analysis.
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Approved: July 18, 2012

Kym H. Rhoden

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Analysis Begun

Start Time: 7/17/2012 11:08:18 AM **Plasma On Time: 7/17/2012 7:11:35 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\TUESDAY1.sif
Batch ID:
Results Data Set: 071712HR
Results Library: C:\pe\peicp2\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 44**
Sample ID: PBW 77 WG403556-01 **Date Collected: 7/17/2012 11:08:20 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 77 WG403556-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: PBW 77 WG403556-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2546737.3						18636.66	0.73%
YRADIAL	323759.1						7362.78	2.27%
Ga 417.206	1383268.2						13507.84	0.98%
GaRADIAL	91425.3						1002.84	1.10%
Ag 328.068†	-117.1	0.00057	mg/L	0.000138	0.00057	mg/L	0.000138	24.14%
Al 396.153†	49.6	-0.0154	mg/L	0.00175	-0.0154	mg/L	0.00175	11.33%
As 188.979†	-8.8	-0.00145	mg/L	0.001150	-0.00145	mg/L	0.001150	79.36%
Ba 233.527†	-4.2	-0.00059	mg/L	0.000030	-0.00059	mg/L	0.000030	5.02%
Be 234.861†	-253.8	-0.00006	mg/L	0.000009	-0.00006	mg/L	0.000009	13.81%
B 249.677†	48.6	0.00349	mg/L	0.000093	0.00349	mg/L	0.000093	2.66%
Ca 227.546†	35.6	0.163	mg/L	0.0164	0.163	mg/L	0.0164	10.08%
Cd 228.802†	4.2	0.00026	mg/L	0.000043	0.00026	mg/L	0.000043	16.62%
Co 228.616†	1.2	-0.00013	mg/L	0.000087	-0.00013	mg/L	0.000087	68.59%
Cr 267.716†	-13.7	0.00021	mg/L	0.000121	0.00021	mg/L	0.000121	58.00%
Cu 327.393†	-194.1	0.00026	mg/L	0.000713	0.00026	mg/L	0.000713	273.75%
Fe 239.562†	35.7	0.00628	mg/L	0.000604	0.00628	mg/L	0.000604	9.62%
Mg 279.077†	267.0	0.0885	mg/L	0.00055	0.0885	mg/L	0.00055	0.62%
Mn 257.610†	-1204.4	-0.00126	mg/L	0.000030	-0.00126	mg/L	0.000030	2.41%
Mo 202.031†	18.9	0.00068	mg/L	0.000086	0.00068	mg/L	0.000086	12.64%
Ni 231.604†	-25.9	-0.00293	mg/L	0.000195	-0.00293	mg/L	0.000195	6.64%
Pb 220.353†	17.4	-0.00005	mg/L	0.000661	-0.00005	mg/L	0.000661	>999.9%
Sb 206.836†	-0.0	0.00421	mg/L	0.000630	0.00421	mg/L	0.000630	14.98%
Se 196.026†	7.9	0.00489	mg/L	0.001871	0.00489	mg/L	0.001871	38.23%
Si 251.611†	-254.3	0.00717	mg/L	0.000623	0.00717	mg/L	0.000623	8.69%
Sn 189.927†	-1.2	0.00020	mg/L	0.000635	0.00020	mg/L	0.000635	311.35%
Ti 334.940†	98.3	0.00130	mg/L	0.000198	0.00130	mg/L	0.000198	15.19%
Tl 190.801†	-8.6	-0.00442	mg/L	0.001218	-0.00442	mg/L	0.001218	27.55%
V 290.880†	56.6	0.00074	mg/L	0.001079	0.00074	mg/L	0.001079	146.23%
Zn 206.200†	-88.5	-0.00074	mg/L	0.000150	-0.00074	mg/L	0.000150	20.31%
K 766.490†	106.1	-0.0269	mg/L	0.01588	-0.0269	mg/L	0.01588	59.13%
Na 589.592†	517.7	0.00541	mg/L	0.002383	0.00541	mg/L	0.002383	44.02%
Sr 407.771†	2376.0	0.00221	mg/L	0.000005	0.00221	mg/L	0.000005	0.24%
Li 670.784†	10.3	-0.00375	mg/L	0.000245	-0.00375	mg/L	0.000245	6.52%

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Sequence No.: 2 **Autosampler Location: 45**
Sample ID: LCSW 77 WG403556-02 **Date Collected: 7/17/2012 11:15:15 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 77 WG403556-02

Approved: July 18, 2012

Kym H. Rhoden

Analyte	Back Pressure	Flow
All	233.0 kPa	0.50 L/min

Mean Data: LCSW 77 WG403556-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2433018.4						5507.73	0.23%
YRADIAL	318787.3						2117.08	0.66%
Ga 417.206	1350190.8						34876.36	2.58%
GaRADIAL	87277.9						786.64	0.90%
Ag 328.068†	63289.1	0.196	mg/L	0.0069	0.196	mg/L	0.0069	3.52%
Al 396.153†	34728.6	4.87	mg/L	0.024	4.87	mg/L	0.024	0.49%
As 188.979†	710.1	0.179	mg/L	0.0061	0.179	mg/L	0.0061	3.42%
Ba 233.527†	83663.4	0.491	mg/L	0.0018	0.491	mg/L	0.0018	0.37%
Be 234.861†	29086.5	0.0227	mg/L	0.00083	0.0227	mg/L	0.00083	3.66%
B 249.677†	108880.8	0.913	mg/L	0.0369	0.913	mg/L	0.0369	4.04%
Ca 227.546†	2299.7	4.92	mg/L	0.127	4.92	mg/L	0.127	2.58%
Cd 228.802†	1390.2	0.0227	mg/L	0.00092	0.0227	mg/L	0.00092	4.05%
Co 228.616†	4549.3	0.0970	mg/L	0.00060	0.0970	mg/L	0.00060	0.61%
Cr 267.716†	31903.7	0.247	mg/L	0.0008	0.247	mg/L	0.0008	0.32%
Cu 327.393†	67253.3	0.250	mg/L	0.0107	0.250	mg/L	0.0107	4.30%
Fe 239.562†	30949.8	1.91	mg/L	0.011	1.91	mg/L	0.011	0.55%
Mg 279.077†	17140.3	4.85	mg/L	0.049	4.85	mg/L	0.049	1.00%
Mn 257.610†	205615.9	0.248	mg/L	0.0009	0.248	mg/L	0.0009	0.37%
Mo 202.031†	19402.8	0.499	mg/L	0.0049	0.499	mg/L	0.0049	0.97%
Ni 231.604†	18179.4	0.250	mg/L	0.0013	0.250	mg/L	0.0013	0.53%
Pb 220.353†	3461.7	0.238	mg/L	0.0016	0.238	mg/L	0.0016	0.66%
Sb 206.836†	2969.5	0.570	mg/L	0.0138	0.570	mg/L	0.0138	2.42%
Se 196.026†	433.0	0.186	mg/L	0.0034	0.186	mg/L	0.0034	1.80%
Si 251.611†	135547.4	2.45	mg/L	0.078	2.45	mg/L	0.078	3.17%
Sn 189.927†	-43.4	-0.00306	mg/L	0.000626	-0.00306	mg/L	0.000626	20.45%
Ti 334.940†	538582.4	0.493	mg/L	0.0029	0.493	mg/L	0.0029	0.58%
Tl 190.801†	1004.4	0.249	mg/L	0.0008	0.249	mg/L	0.0008	0.33%
V 290.880†	132102.6	0.505	mg/L	0.0061	0.505	mg/L	0.0061	1.21%
Zn 206.200†	29419.0	0.478	mg/L	0.0052	0.478	mg/L	0.0052	1.09%
K 766.490†	75798.4	23.7	mg/L	0.27	23.7	mg/L	0.27	1.12%
Na 589.592†	558551.4	25.6	mg/L	0.23	25.6	mg/L	0.23	0.91%
Sr 407.771†	1360385.1	0.484	mg/L	0.0053	0.484	mg/L	0.0053	1.09%
Li 670.784†	81443.4	0.515	mg/L	0.0024	0.515	mg/L	0.0024	0.48%

Sequence No.: 3
Sample ID: LCSW 77 WG403556-03
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/17/2012 11:21:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW 77 WG403556-03

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: LCSW 77 WG403556-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2458825.5						19511.97	0.79%
YRADIAL	328300.3						9225.36	2.81%
Ga 417.206	1375772.2						63304.16	4.60%
GaRADIAL	90445.9						2245.39	2.48%
Ag 328.068†	62134.5	0.193	mg/L	0.0090	0.193	mg/L	0.0090	4.67%
Al 396.153†	34191.3	4.80	mg/L	0.019	4.80	mg/L	0.019	0.39%
As 188.979†	696.2	0.176	mg/L	0.0078	0.176	mg/L	0.0078	4.45%
Ba 233.527†	83279.7	0.488	mg/L	0.0035	0.488	mg/L	0.0035	0.71%
Be 234.861†	28571.6	0.0223	mg/L	0.00099	0.0223	mg/L	0.00099	4.45%
B 249.677†	106724.1	0.895	mg/L	0.0460	0.895	mg/L	0.0460	5.14%
Ca 227.546†	2341.8	4.99	mg/L	0.217	4.99	mg/L	0.217	4.34%
Cd 228.802†	1370.5	0.0224	mg/L	0.00142	0.0224	mg/L	0.00142	6.33%
Co 228.616†	4518.0	0.0963	mg/L	0.00016	0.0963	mg/L	0.00016	0.16%
Cr 267.716†	31625.5	0.245	mg/L	0.0025	0.245	mg/L	0.0025	1.02%
Cu 327.393†	65779.2	0.244	mg/L	0.0129	0.244	mg/L	0.0129	5.29%

Approved: July 18, 2012
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Fe 239.562†	30310.5	1.87	mg/L	0.038	1.87	mg/L	0.038	2.05%
Mg 279.077†	17151.1	4.85	mg/L	0.099	4.85	mg/L	0.099	2.04%
Mn 257.610†	205195.8	0.247	mg/L	0.0013	0.247	mg/L	0.0013	0.53%
Mo 202.031†	19230.7	0.494	mg/L	0.0049	0.494	mg/L	0.0049	0.98%
Ni 231.604†	17502.4	0.241	mg/L	0.0028	0.241	mg/L	0.0028	1.18%
Pb 220.353†	3454.4	0.238	mg/L	0.0009	0.238	mg/L	0.0009	0.40%
Sb 206.836†	2929.8	0.562	mg/L	0.0258	0.562	mg/L	0.0258	4.59%
Se 196.026†	428.5	0.184	mg/L	0.0074	0.184	mg/L	0.0074	4.04%
Si 251.611†	133371.5	2.41	mg/L	0.106	2.41	mg/L	0.106	4.38%
Sn 189.927†	-46.5	-0.00330	mg/L	0.000135	-0.00330	mg/L	0.000135	4.08%
Ti 334.940†	536263.2	0.490	mg/L	0.0014	0.490	mg/L	0.0014	0.30%
Tl 190.801†	1006.8	0.249	mg/L	0.0030	0.249	mg/L	0.0030	1.22%
V 290.880†	130124.7	0.497	mg/L	0.0081	0.497	mg/L	0.0081	1.63%
Zn 206.200†	29638.4	0.481	mg/L	0.0062	0.481	mg/L	0.0062	1.29%
K 766.490†	75195.2	23.5	mg/L	0.06	23.5	mg/L	0.06	0.26%
Na 589.592†	544216.7	24.9	mg/L	0.40	24.9	mg/L	0.40	1.60%
Sr 407.771†	1341874.5	0.478	mg/L	0.0092	0.478	mg/L	0.0092	1.93%
Li 670.784†	80867.1	0.512	mg/L	0.0047	0.512	mg/L	0.0047	0.92%

Sequence No.: 4 **Autosampler Location: 47**
Sample ID: FBLK2 WG403511-02 **Date Collected: 7/17/2012 11:27:17 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: FBLK2 WG403511-02

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: FBLK2 WG403511-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2546465.6						11277.62	0.44%
YRADIAL	323706.5						7079.12	2.19%
Ga 417.206	1391090.1						19970.32	1.44%
GaRADIAL	91034.2						1274.79	1.40%
Ag 328.068†	-129.4	0.00053	mg/L	0.000463	0.00053	mg/L	0.000463	86.49%
Al 396.153†	91.1	-0.00955	mg/L	0.001318	-0.00955	mg/L	0.001318	13.80%
As 188.979†	-11.4	-0.00211	mg/L	0.001426	-0.00211	mg/L	0.001426	67.57%
Ba 233.527†	50.2	-0.00027	mg/L	0.000101	-0.00027	mg/L	0.000101	36.81%
Be 234.861†	-234.2	-0.00005	mg/L	0.000006	-0.00005	mg/L	0.000006	13.04%
B 249.677†	219.1	0.00492	mg/L	0.000317	0.00492	mg/L	0.000317	6.45%
Ca 227.546†	96.7	0.285	mg/L	0.0114	0.285	mg/L	0.0114	4.00%
Cd 228.802†	4.8	0.00027	mg/L	0.000116	0.00027	mg/L	0.000116	43.02%
Co 228.616†	11.1	0.00009	mg/L	0.000105	0.00009	mg/L	0.000105	122.69%
Cr 267.716†	-1.7	0.00030	mg/L	0.000063	0.00030	mg/L	0.000063	20.94%
Cu 327.393†	66.3	0.00122	mg/L	0.000611	0.00122	mg/L	0.000611	50.00%
Fe 239.562†	127.0	0.0119	mg/L	0.00017	0.0119	mg/L	0.00017	1.39%
Mg 279.077†	433.0	0.135	mg/L	0.0028	0.135	mg/L	0.0028	2.08%
Mn 257.610†	-964.0	-0.00097	mg/L	0.000012	-0.00097	mg/L	0.000012	1.21%
Mo 202.031†	38.6	0.00119	mg/L	0.000119	0.00119	mg/L	0.000119	10.03%
Ni 231.604†	-13.8	-0.00276	mg/L	0.000096	-0.00276	mg/L	0.000096	3.47%
Pb 220.353†	6.5	-0.00080	mg/L	0.000910	-0.00080	mg/L	0.000910	113.31%
Sb 206.836†	2.8	0.00474	mg/L	0.001022	0.00474	mg/L	0.001022	21.55%
Se 196.026†	7.6	0.00474	mg/L	0.000631	0.00474	mg/L	0.000631	13.32%
Si 251.611†	92.4	0.0134	mg/L	0.00025	0.0134	mg/L	0.00025	1.83%
Sn 189.927†	-5.4	-0.00012	mg/L	0.000179	-0.00012	mg/L	0.000179	145.68%
Ti 334.940†	74.1	0.00130	mg/L	0.000148	0.00130	mg/L	0.000148	11.37%
Tl 190.801†	-20.2	-0.00723	mg/L	0.000622	-0.00723	mg/L	0.000622	8.60%
V 290.880†	17.7	0.00059	mg/L	0.001161	0.00059	mg/L	0.001161	197.62%
Zn 206.200†	277.5	0.00517	mg/L	0.000117	0.00517	mg/L	0.000117	2.27%
K 766.490†	272.3	0.0249	mg/L	0.01566	0.0249	mg/L	0.01566	62.80%
Na 589.592†	2239.5	0.0843	mg/L	0.00514	0.0843	mg/L	0.00514	6.09%
Sr 407.771†	4592.3	0.00300	mg/L	0.000039	0.00300	mg/L	0.000039	1.29%
Li 670.784†	-3.3	-0.00384	mg/L	0.000460	-0.00384	mg/L	0.000460	11.98%

Sequence No.: 5 **Autosampler Location: 48**
Sample ID: L1207031201 **Date Collected: 7/17/2012 11:34:11 AM**

Approved: July 18, 2012

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

Nebulizer Parameters: L1207031201

Analyte	Back Pressure	Flow
All	233.0 kPa	0.50 L/min

Mean Data: L1207031201

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2385047.6						45607.84	1.91%
YRADIAL	312992.2						2363.90	0.76%
Ga 417.206	1418055.1						21174.29	1.49%
GaRADIAL	91372.3						2966.74	3.25%
Ag 328.068†	1437.8	0.00532	mg/L	0.000498	0.00532	mg/L	0.000498	9.36%
Al 396.153†	251.9	0.0130	mg/L	0.00230	0.0130	mg/L	0.00230	17.66%
As 188.979†	-33.6	-0.00777	mg/L	0.001541	-0.00777	mg/L	0.001541	19.84%
Ba 233.527†	4524.1	0.0260	mg/L	0.00042	0.0260	mg/L	0.00042	1.61%
Be 234.861†	-103.4	0.00005	mg/L	0.000013	0.00005	mg/L	0.000013	28.69%
B 249.677†	3809.1	0.0349	mg/L	0.00074	0.0349	mg/L	0.00074	2.12%
Ca 227.546†	94396.4	189	mg/L	7.3	189	mg/L	7.3	3.87%
Cd 228.802†	5.1	0.00030	mg/L	0.000094	0.00030	mg/L	0.000094	31.38%
Co 228.616†	-11.5	-0.00033	mg/L	0.000298	-0.00033	mg/L	0.000298	90.81%
Cr 267.716†	302.2	0.00265	mg/L	0.000173	0.00265	mg/L	0.000173	6.53%
Cu 327.393†	-591.3	-0.00123	mg/L	0.000312	-0.00123	mg/L	0.000312	25.35%
Fe 239.562†	857.9	0.0569	mg/L	0.00111	0.0569	mg/L	0.00111	1.95%
Mg 279.077†	4061.3	1.16	mg/L	0.007	1.16	mg/L	0.007	0.57%
Mn 257.610†	1167.8	0.00159	mg/L	0.000066	0.00159	mg/L	0.000066	4.13%
Mo 202.031†	177.0	0.00475	mg/L	0.000243	0.00475	mg/L	0.000243	5.12%
Ni 231.604†	-24.3	-0.00291	mg/L	0.000140	-0.00291	mg/L	0.000140	4.83%
Pb 220.353†	12.1	0.00109	mg/L	0.000917	0.00109	mg/L	0.000917	83.80%
Sb 206.836†	-1.3	0.00395	mg/L	0.000742	0.00395	mg/L	0.000742	18.80%
Se 196.026†	10.5	0.00599	mg/L	0.000669	0.00599	mg/L	0.000669	11.17%
Si 251.611†	135287.3	2.45	mg/L	0.058	2.45	mg/L	0.058	2.36%
Sn 189.927†	-370.5	-0.0284	mg/L	0.00016	-0.0284	mg/L	0.00016	0.55%
Ti 334.940†	-35850.7	-0.00316	mg/L	0.000941	-0.00316	mg/L	0.000941	29.74%
Tl 190.801†	-47.9	-0.0143	mg/L	0.00312	-0.0143	mg/L	0.00312	21.72%
V 290.880†	2384.4	0.00960	mg/L	0.002315	0.00960	mg/L	0.002315	24.12%
Zn 206.200†	609.2	0.0105	mg/L	0.00005	0.0105	mg/L	0.00005	0.50%
K 766.490†	595.6	0.121	mg/L	0.0074	0.121	mg/L	0.0074	6.13%
Na 589.592†	100355.5	4.58	mg/L	0.105	4.58	mg/L	0.105	2.30%
Sr 407.771†	641357.0	0.225	mg/L	0.0077	0.225	mg/L	0.0077	3.41%
Li 670.784†	130.0	-0.00299	mg/L	0.000117	-0.00299	mg/L	0.000117	3.91%

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Sequence No.: 6 **Autosampler Location: 49**
Sample ID: L1207031201PS WG403578-01 **Date Collected: 7/17/2012 11:41:06 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031201PS WG403578-01

Analyte	Back Pressure	Flow
All	232.0 kPa	0.50 L/min

Mean Data: L1207031201PS WG403578-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2338143.1						4111.68	0.18%
YRADIAL	317572.5						4707.89	1.48%
Ga 417.206	1342231.3						21673.69	1.61%
GaRADIAL	88884.6						1574.15	1.77%
Ag 328.068†	64618.0	0.200	mg/L	0.0030	0.200	mg/L	0.0030	1.50%
Al 396.153†	35583.0	4.99	mg/L	0.001	4.99	mg/L	0.001	0.01%
As 188.979†	718.3	0.181	mg/L	0.0013	0.181	mg/L	0.0013	0.71%
Ba 233.527†	87493.1	0.513	mg/L	0.0040	0.513	mg/L	0.0040	0.79%
Be 234.861†	29924.6	0.0233	mg/L	0.00040	0.0233	mg/L	0.00040	1.73%

Approved: July 18, 2012
Kym H. Rhoden

B 249.677†	113710.8	0.953	mg/L	0.0164	0.953	mg/L	0.0164	1.72%
Ca 227.546†	92979.0	186	mg/L	3.3	186	mg/L	3.3	1.75%
Cd 228.802†	1391.4	0.0227	mg/L	0.00057	0.0227	mg/L	0.00057	2.52%
Co 228.616†	4528.2	0.0966	mg/L	0.00045	0.0966	mg/L	0.00045	0.47%
Cr 267.716†	32430.4	0.251	mg/L	0.0007	0.251	mg/L	0.0007	0.27%
Cu 327.393†	64492.1	0.240	mg/L	0.0031	0.240	mg/L	0.0031	1.30%
Fe 239.562†	31273.3	1.93	mg/L	0.014	1.93	mg/L	0.014	0.74%
Mg 279.077†	20492.1	5.79	mg/L	0.075	5.79	mg/L	0.075	1.29%
Mn 257.610†	209067.2	0.252	mg/L	0.0021	0.252	mg/L	0.0021	0.84%
Mo 202.031†	19847.9	0.510	mg/L	0.0039	0.510	mg/L	0.0039	0.77%
Ni 231.604†	17313.2	0.238	mg/L	0.0014	0.238	mg/L	0.0014	0.57%
Pb 220.353†	3550.9	0.246	mg/L	0.0014	0.246	mg/L	0.0014	0.58%
Sb 206.836†	3004.1	0.577	mg/L	0.0096	0.577	mg/L	0.0096	1.67%
Se 196.026†	458.8	0.197	mg/L	0.0028	0.197	mg/L	0.0028	1.40%
Si 251.611†	267434.9	4.83	mg/L	0.083	4.83	mg/L	0.083	1.71%
Sn 189.927†	-368.7	-0.0282	mg/L	0.00109	-0.0282	mg/L	0.00109	3.88%
Ti 334.940†	517996.2	0.501	mg/L	0.0034	0.501	mg/L	0.0034	0.68%
Tl 190.801†	952.2	0.236	mg/L	0.0003	0.236	mg/L	0.0003	0.13%
V 290.880†	135931.0	0.520	mg/L	0.0046	0.520	mg/L	0.0046	0.89%
Zn 206.200†	29727.8	0.483	mg/L	0.0012	0.483	mg/L	0.0012	0.25%
K 766.490†	78386.4	24.5	mg/L	0.20	24.5	mg/L	0.20	0.81%
Na 589.592†	650840.6	29.8	mg/L	0.76	29.8	mg/L	0.76	2.54%
Sr 407.771†	1904126.8	0.674	mg/L	0.0141	0.674	mg/L	0.0141	2.10%
Li 670.784†	82643.7	0.523	mg/L	0.0022	0.523	mg/L	0.0022	0.41%

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Sequence No.: 7
Sample ID: L1207031201DL WG403578-02
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 7/17/2012 11:47:03 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207031201DL WG403578-02

Analyte	Back Pressure	Flow
All	233.0 kPa	0.50 L/min

Mean Data: L1207031201DL WG403578-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2467859.6						2094.71	0.08%
YRADIAL	319706.6						5952.84	1.86%
Ga 417.206	1438585.3						26941.48	1.87%
GaRADIAL	89885.0						1275.12	1.42%
Ag 328.068†	155.9	0.00140	mg/L	0.000572	0.00140	mg/L	0.000572	40.76%
Al 396.153†	49.0	-0.0156	mg/L	0.00061	-0.0156	mg/L	0.00061	3.93%
As 188.979†	-14.7	-0.00296	mg/L	0.000189	-0.00296	mg/L	0.000189	6.40%
Ba 233.527†	939.8	0.00495	mg/L	0.000047	0.00495	mg/L	0.000047	0.94%
Be 234.861†	58.6	0.00018	mg/L	0.000009	0.00018	mg/L	0.000009	4.91%
B 249.677†	881.3	0.0105	mg/L	0.00039	0.0105	mg/L	0.00039	3.72%
Ca 227.546†	18860.1	37.8	mg/L	1.26	37.8	mg/L	1.26	3.34%
Cd 228.802†	-3.1	0.00014	mg/L	0.000210	0.00014	mg/L	0.000210	147.30%
Co 228.616†	-2.0	-0.00018	mg/L	0.000008	-0.00018	mg/L	0.000008	4.53%
Cr 267.716†	64.7	0.00082	mg/L	0.000105	0.00082	mg/L	0.000105	12.88%
Cu 327.393†	-123.3	0.00052	mg/L	0.000202	0.00052	mg/L	0.000202	39.11%
Fe 239.562†	177.0	0.0150	mg/L	0.00029	0.0150	mg/L	0.00029	1.91%
Mg 279.077†	844.0	0.251	mg/L	0.0050	0.251	mg/L	0.0050	1.98%
Mn 257.610†	-628.0	-0.00057	mg/L	0.000024	-0.00057	mg/L	0.000024	4.28%
Mo 202.031†	64.5	0.00185	mg/L	0.000203	0.00185	mg/L	0.000203	10.95%
Ni 231.604†	12.3	-0.00240	mg/L	0.000090	-0.00240	mg/L	0.000090	3.74%
Pb 220.353†	25.6	0.00082	mg/L	0.001420	0.00082	mg/L	0.001420	173.31%
Sb 206.836†	-3.1	0.00363	mg/L	0.000401	0.00363	mg/L	0.000401	11.06%
Se 196.026†	1.7	0.00225	mg/L	0.002032	0.00225	mg/L	0.002032	90.36%
Si 251.611†	27610.2	0.510	mg/L	0.0153	0.510	mg/L	0.0153	3.01%
Sn 189.927†	-251.4	-0.0191	mg/L	0.00117	-0.0191	mg/L	0.00117	6.10%
Ti 334.940†	-7621.6	-0.00009	mg/L	0.000268	-0.00009	mg/L	0.000268	300.79%
Tl 190.801†	-13.3	-0.00565	mg/L	0.001329	-0.00565	mg/L	0.001329	23.54%
V 290.880†	570.1	0.00270	mg/L	0.001543	0.00270	mg/L	0.001543	57.22%
Zn 206.200†	91.1	0.00216	mg/L	0.000063	0.00216	mg/L	0.000063	2.90%
K 766.490†	80.4	-0.0358	mg/L	0.02527	-0.0358	mg/L	0.02527	70.60%
Na 589.592†	20410.4	0.917	mg/L	0.0282	0.917	mg/L	0.0282	3.08%

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Sr 407.771†	128394.3	0.0461 mg/L	0.00125	0.0461 mg/L	0.00125	2.71%
Li 670.784†	105.8	-0.00315 mg/L	0.000355	-0.00315 mg/L	0.000355	11.29%

Sequence No.: 8 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 11:53:58 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	233.0 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	2406231.0						26680.10	1.11%
YRADIAL	322351.4						1181.47	0.37%
Ga 417.206	1364007.1						7585.31	0.56%
GaRADIAL	89741.7						585.34	0.65%
Ag 328.068†	126163.1	0.390	mg/L	0.0062	0.390	mg/L	0.0062	1.59%
QC value within limits for Ag 328.068 Recovery = 97.59%								
Al 396.153†	70627.2	9.93	mg/L	0.012	9.93	mg/L	0.012	0.12%
QC value within limits for Al 396.153 Recovery = 99.33%								
As 188.979†	1499.4	0.378	mg/L	0.0026	0.378	mg/L	0.0026	0.70%
QC value within limits for As 188.979 Recovery = 94.50%								
Ba 233.527†	169677.6	0.996	mg/L	0.0111	0.996	mg/L	0.0111	1.12%
QC value within limits for Ba 233.527 Recovery = 99.58%								
Be 234.861†	61873.4	0.0481	mg/L	0.00064	0.0481	mg/L	0.00064	1.34%
QC value within limits for Be 234.861 Recovery = 96.15%								
B 249.677†	57682.8	0.482	mg/L	0.0121	0.482	mg/L	0.0121	2.50%
QC value within limits for B 249.677 Recovery = 96.43%								
Ca 227.546†	4776.2	10.1	mg/L	0.10	10.1	mg/L	0.10	1.00%
QC value within limits for Ca 227.546 Recovery = 101.05%								
Cd 228.802†	2875.5	0.0467	mg/L	0.00114	0.0467	mg/L	0.00114	2.44%
QC value within limits for Cd 228.802 Recovery = 93.50%								
Co 228.616†	9278.1	0.198	mg/L	0.0034	0.198	mg/L	0.0034	1.70%
QC value within limits for Co 228.616 Recovery = 98.97%								
Cr 267.716†	63971.3	0.495	mg/L	0.0016	0.495	mg/L	0.0016	0.31%
QC value within limits for Cr 267.716 Recovery = 99.03%								
Cu 327.393†	132443.3	0.491	mg/L	0.0073	0.491	mg/L	0.0073	1.49%
QC value within limits for Cu 327.393 Recovery = 98.24%								
Fe 239.562†	63534.4	3.92	mg/L	0.019	3.92	mg/L	0.019	0.48%
QC value within limits for Fe 239.562 Recovery = 97.96%								
Mg 279.077†	34478.6	9.74	mg/L	0.067	9.74	mg/L	0.067	0.68%
QC value within limits for Mg 279.077 Recovery = 97.41%								
Mn 257.610†	414181.7	0.499	mg/L	0.0054	0.499	mg/L	0.0054	1.08%
QC value within limits for Mn 257.610 Recovery = 99.77%								
Mo 202.031†	39170.8	1.01	mg/L	0.007	1.01	mg/L	0.007	0.65%
QC value within limits for Mo 202.031 Recovery = 100.65%								
Ni 231.604†	36828.3	0.510	mg/L	0.0073	0.510	mg/L	0.0073	1.42%
QC value within limits for Ni 231.604 Recovery = 102.00%								
Pb 220.353†	7259.4	0.501	mg/L	0.0072	0.501	mg/L	0.0072	1.44%
QC value within limits for Pb 220.353 Recovery = 100.25%								
Sb 206.836†	6036.6	1.15	mg/L	0.012	1.15	mg/L	0.012	1.07%
QC value within limits for Sb 206.836 Recovery = 96.19%								
Se 196.026†	907.3	0.388	mg/L	0.0020	0.388	mg/L	0.0020	0.51%
QC value within limits for Se 196.026 Recovery = 97.06%								
Si 251.611†	270425.2	4.88	mg/L	0.050	4.88	mg/L	0.050	1.03%
QC value within limits for Si 251.611 Recovery = 97.64%								
Sn 189.927†	12904.2	0.998	mg/L	0.0151	0.998	mg/L	0.0151	1.51%
QC value within limits for Sn 189.927 Recovery = 99.82%								
Ti 334.940†	1096012.9	1.00	mg/L	0.004	1.00	mg/L	0.004	0.37%
QC value within limits for Ti 334.940 Recovery = 100.10%								
Tl 190.801†	2116.9	0.526	mg/L	0.0027	0.526	mg/L	0.0027	0.52%
QC value within limits for Tl 190.801 Recovery = 105.24%								
V 290.880†	261565.5	0.999	mg/L	0.0035	0.999	mg/L	0.0035	0.35%
QC value within limits for V 290.880 Recovery = 99.92%								
Zn 206.200†	60650.0	0.984	mg/L	0.0043	0.984	mg/L	0.0043	0.43%

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   QC value within limits for Zn 206.200  Recovery = 98.36%
K 766.490†           154250.2        48.6 mg/L          0.35        48.6 mg/L          0.35   0.72%
   QC value within limits for K 766.490  Recovery = 97.28%
Na 589.592†          1079116.2        49.4 mg/L          0.57        49.4 mg/L          0.57   1.16%
   QC value within limits for Na 589.592  Recovery = 98.78%
Sr 407.771†          2731697.0       0.971 mg/L        0.0170       0.971 mg/L        0.0170   1.75%
   QC value within limits for Sr 407.771  Recovery = 97.13%
Li 670.784†           161116.2        1.02 mg/L         0.006        1.02 mg/L         0.006   0.57%
   QC value within limits for Li 670.784  Recovery = 102.29%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 9                                    Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 7/17/2012 12:00:01 PM
Analyst:                                           Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     233.0 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            2529647.6                                                    31627.76   1.25%
YRADIAL               323805.8                                                     4879.29   1.51%
Ga 417.206           1431220.1                                                    20931.84   1.46%
GaRADIAL               91452.7                                                     1254.74   1.37%
Ag 328.068†              -76.6     0.00069 mg/L      0.000240     0.00069 mg/L      0.000240  34.56%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               19.0     -0.0197 mg/L       0.00079     -0.0197 mg/L       0.00079   4.00%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -2.8     0.00009 mg/L      0.000932     0.00009 mg/L      0.000932 >999.9%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               24.4    -0.00042 mg/L      0.000116    -0.00042 mg/L      0.000116  27.32%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               97.1     0.00021 mg/L      0.000037     0.00021 mg/L      0.000037  17.35%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               120.2     0.00409 mg/L      0.000060     0.00409 mg/L      0.000060   1.47%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                2.2      0.0963 mg/L       0.00787      0.0963 mg/L       0.00787   8.18%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -3.2     0.00013 mg/L      0.000081     0.00013 mg/L      0.000081  63.54%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                8.8     0.00004 mg/L      0.000138     0.00004 mg/L      0.000138 389.05%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -55.2    -0.00011 mg/L      0.000124    -0.00011 mg/L      0.000124 110.56%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -28.2     0.00087 mg/L      0.000211     0.00087 mg/L      0.000211  24.22%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               20.9     0.00536 mg/L      0.000103     0.00536 mg/L      0.000103   1.93%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               21.5      0.0193 mg/L       0.00230      0.0193 mg/L       0.00230  11.89%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1307.1    -0.00139 mg/L      0.000007    -0.00139 mg/L      0.000007   0.52%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                6.7     0.00037 mg/L      0.000028     0.00037 mg/L      0.000028   7.56%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               15.6    -0.00236 mg/L      0.000121    -0.00236 mg/L      0.000121   5.13%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                3.9    -0.00098 mg/L      0.001440    -0.00098 mg/L      0.001440 146.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -7.2     0.00285 mg/L      0.000007     0.00285 mg/L      0.000007   0.25%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.6     0.00086 mg/L      0.000580     0.00086 mg/L      0.000580  67.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -180.2     0.00851 mg/L      0.001036     0.00851 mg/L      0.001036  12.17%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.3     0.00055 mg/L      0.000228     0.00055 mg/L      0.000228  41.30%
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QC value within limits for Sn 189.927 Recovery = Not calculated

Ti 334.940†	21.8	0.00122 mg/L	0.000138	0.00122 mg/L	0.000138	11.28%

QC value within limits for Ti 334.940 Recovery = Not calculated

Tl 190.801†	0.6	-0.00219 mg/L	0.001218	-0.00219 mg/L	0.001218	55.50%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 290.880†	63.2	0.00077 mg/L	0.000840	0.00077 mg/L	0.000840	109.82%

QC value within limits for V 290.880 Recovery = Not calculated

Zn 206.200†	-162.1	-0.00193 mg/L	0.000148	-0.00193 mg/L	0.000148	7.66%

QC value within limits for Zn 206.200 Recovery = Not calculated

K 766.490†	30.9	-0.0503 mg/L	0.00284	-0.0503 mg/L	0.00284	5.65%

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	-335.6	-0.0337 mg/L	0.00295	-0.0337 mg/L	0.00295	8.75%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	236.4	0.00145 mg/L	0.000013	0.00145 mg/L	0.000013	0.87%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	130.7	-0.00299 mg/L	0.000498	-0.00299 mg/L	0.000498	16.67%

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: 17**
Sample ID: PBW 2P WG403432-03 **Date Collected: 7/17/2012 12:06:54 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 2P WG403432-03

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: PBW 2P WG403432-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2527186.2						17958.22	0.71%
YRADIAL	330404.3						7114.24	2.15%
Ga 417.206	1489230.3						5756.51	0.39%
GaRADIAL	94369.7						1382.99	1.47%
Ag 328.068†	-146.9	0.00050	mg/L	0.000359	0.00050	mg/L	0.000359	72.24%
Al 396.153†	121.3	-0.00520	mg/L	0.001192	-0.00520	mg/L	0.001192	22.94%
As 188.979†	-0.8	0.00062	mg/L	0.001172	0.00062	mg/L	0.001172	189.66%
Ba 233.527†	29.4	-0.00040	mg/L	0.000024	-0.00040	mg/L	0.000024	5.97%
Be 234.861†	177.5	0.00027	mg/L	0.000017	0.00027	mg/L	0.000017	6.21%
B 249.677†	94.9	0.00386	mg/L	0.000130	0.00386	mg/L	0.000130	3.35%
Ca 227.546†	18.9	0.131	mg/L	0.0258	0.131	mg/L	0.0258	19.72%
Cd 228.802†	-3.0	0.00013	mg/L	0.000052	0.00013	mg/L	0.000052	41.30%
Co 228.616†	1.6	-0.00012	mg/L	0.000080	-0.00012	mg/L	0.000080	66.62%
Cr 267.716†	-57.2	-0.00013	mg/L	0.000172	-0.00013	mg/L	0.000172	133.73%
Cu 327.393†	-112.3	0.00056	mg/L	0.000458	0.00056	mg/L	0.000458	81.10%
Fe 239.562†	709.3	0.0478	mg/L	0.00099	0.0478	mg/L	0.00099	2.08%
Mg 279.077†	8.8	0.0157	mg/L	0.00116	0.0157	mg/L	0.00116	7.37%
Mn 257.610†	-1165.9	-0.00122	mg/L	0.000009	-0.00122	mg/L	0.000009	0.75%
Mo 202.031†	6.8	0.00037	mg/L	0.000158	0.00037	mg/L	0.000158	42.37%
Ni 231.604†	19.2	-0.00231	mg/L	0.000136	-0.00231	mg/L	0.000136	5.89%
Pb 220.353†	13.1	-0.00035	mg/L	0.000439	-0.00035	mg/L	0.000439	125.53%
Sb 206.836†	-2.0	0.00383	mg/L	0.000905	0.00383	mg/L	0.000905	23.62%
Se 196.026†	-2.5	0.00046	mg/L	0.002841	0.00046	mg/L	0.002841	622.83%
Si 251.611†	0.8	0.0118	mg/L	0.00122	0.0118	mg/L	0.00122	10.32%
Sn 189.927†	-4.9	-0.00008	mg/L	0.000354	-0.00008	mg/L	0.000354	440.53%
Ti 334.940†	-4.3	0.00120	mg/L	0.000127	0.00120	mg/L	0.000127	10.57%
Tl 190.801†	-4.0	-0.00332	mg/L	0.002463	-0.00332	mg/L	0.002463	74.26%
V 290.880†	176.3	0.00119	mg/L	0.001423	0.00119	mg/L	0.001423	119.40%
Zn 206.200†	-11.8	0.00049	mg/L	0.000127	0.00049	mg/L	0.000127	25.63%
K 766.490†	193.8	0.00057	mg/L	0.010319	0.00057	mg/L	0.010319	>999.9%
Na 589.592†	-725.9	-0.0515	mg/L	0.00065	-0.0515	mg/L	0.00065	1.27%
Sr 407.771†	582.7	0.00158	mg/L	0.000013	0.00158	mg/L	0.000013	0.83%
Li 670.784†	105.5	-0.00315	mg/L	0.000063	-0.00315	mg/L	0.000063	1.99%

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Sequence No.: 11 **Autosampler Location: 18**
Sample ID: LCSW 2P WG403432-04 **Date Collected: 7/17/2012 12:13:49 PM**

Approved: July 18, 2012

Kym H. Rhoden

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

Nebulizer Parameters: LCSW 2P WG403432-04

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: LCSW 2P WG403432-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2458080.3						18243.34	0.74%
YRADIAL	326976.4						7296.37	2.23%
Ga 417.206	1442019.3						38459.72	2.67%
GaRADIAL	90904.6						2115.58	2.33%
Ag 328.068†	62939.0	0.195	mg/L	0.0060	0.195	mg/L	0.0060	3.08%
Al 396.153†	34957.9	4.90	mg/L	0.008	4.90	mg/L	0.008	0.16%
As 188.979†	714.3	0.180	mg/L	0.0063	0.180	mg/L	0.0063	3.52%
Ba 233.527†	85357.1	0.501	mg/L	0.0058	0.501	mg/L	0.0058	1.16%
Be 234.861†	29967.2	0.0234	mg/L	0.00068	0.0234	mg/L	0.00068	2.93%
B 249.677†	112549.0	0.943	mg/L	0.0272	0.943	mg/L	0.0272	2.88%
Ca 227.546†	2333.8	4.99	mg/L	0.124	4.99	mg/L	0.124	2.48%
Cd 228.802†	1385.4	0.0226	mg/L	0.00112	0.0226	mg/L	0.00112	4.95%
Co 228.616†	4673.2	0.0996	mg/L	0.00108	0.0996	mg/L	0.00108	1.09%
Cr 267.716†	32150.7	0.249	mg/L	0.0019	0.249	mg/L	0.0019	0.78%
Cu 327.393†	66209.1	0.246	mg/L	0.0075	0.246	mg/L	0.0075	3.05%
Fe 239.562†	31060.7	1.92	mg/L	0.021	1.92	mg/L	0.021	1.09%
Mg 279.077†	17246.6	4.88	mg/L	0.089	4.88	mg/L	0.089	1.83%
Mn 257.610†	209509.5	0.252	mg/L	0.0034	0.252	mg/L	0.0034	1.35%
Mo 202.031†	19575.6	0.503	mg/L	0.0042	0.503	mg/L	0.0042	0.84%
Ni 231.604†	18356.0	0.253	mg/L	0.0035	0.253	mg/L	0.0035	1.37%
Pb 220.353†	3679.9	0.253	mg/L	0.0029	0.253	mg/L	0.0029	1.13%
Sb 206.836†	2925.1	0.561	mg/L	0.0180	0.561	mg/L	0.0180	3.21%
Se 196.026†	446.6	0.192	mg/L	0.0108	0.192	mg/L	0.0108	5.65%
Si 251.611†	136455.4	2.47	mg/L	0.058	2.47	mg/L	0.058	2.34%
Sn 189.927†	6601.9	0.511	mg/L	0.0032	0.511	mg/L	0.0032	0.63%
Ti 334.940†	543297.5	0.497	mg/L	0.0036	0.497	mg/L	0.0036	0.73%
Tl 190.801†	1095.1	0.271	mg/L	0.0045	0.271	mg/L	0.0045	1.67%
V 290.880†	132854.3	0.508	mg/L	0.0069	0.508	mg/L	0.0069	1.35%
Zn 206.200†	30644.6	0.497	mg/L	0.0035	0.497	mg/L	0.0035	0.70%
K 766.490†	77548.4	24.3	mg/L	0.06	24.3	mg/L	0.06	0.23%
Na 589.592†	562486.4	25.7	mg/L	0.79	25.7	mg/L	0.79	3.06%
Sr 407.771†	1379225.3	0.491	mg/L	0.0153	0.491	mg/L	0.0153	3.11%
Li 670.784†	83853.5	0.531	mg/L	0.0068	0.531	mg/L	0.0068	1.27%

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Sequence No.: 12 **Autosampler Location: 19**
Sample ID: L1207025701 WG403432-01 **Date Collected: 7/17/2012 12:19:49 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207025701 WG403432-01

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: L1207025701 WG403432-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2567053.8						31595.30	1.23%
YRADIAL	338484.2						1193.26	0.35%
Ga 417.206	1458140.6						20967.00	1.44%
GaRADIAL	92865.8						1136.95	1.22%
Ag 328.068†	86.1	0.00113	mg/L	0.000402	0.00113	mg/L	0.000402	35.61%
Al 396.153†	95274.8	13.5	mg/L	0.02	13.5	mg/L	0.02	0.15%
As 188.979†	10.0	0.00249	mg/L	0.001314	0.00249	mg/L	0.001314	52.73%
Ba 233.527†	3506.9	0.0200	mg/L	0.00024	0.0200	mg/L	0.00024	1.19%
Be 234.861†	1089.0	0.00104	mg/L	0.000032	0.00104	mg/L	0.000032	3.05%

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B 249.677†	1032.8	0.0112	mg/L	0.00030	0.0112	mg/L	0.00030	2.71%
Ca 227.546†	7597.2	15.3	mg/L	0.30	15.3	mg/L	0.30	1.97%
Cd 228.802†	47.4	0.00119	mg/L	0.000064	0.00119	mg/L	0.000064	5.40%
Co 228.616†	3045.9	0.0651	mg/L	0.00086	0.0651	mg/L	0.00086	1.32%
Cr 267.716†	2920.8	0.0230	mg/L	0.00024	0.0230	mg/L	0.00024	1.03%
Cu 327.393†	12196.1	0.0460	mg/L	0.00094	0.0460	mg/L	0.00094	2.04%
Fe 239.562†	3801.6	0.238	mg/L	0.0025	0.238	mg/L	0.0025	1.04%
Mg 279.077†	114216.0	32.2	mg/L	0.13	32.2	mg/L	0.13	0.40%
Mn 257.610†	833698.8	1.00	mg/L	0.010	1.00	mg/L	0.010	0.97%
Mo 202.031†	40.5	0.00146	mg/L	0.000209	0.00146	mg/L	0.000209	14.33%
Ni 231.604†	5617.4	0.0756	mg/L	0.00097	0.0756	mg/L	0.00097	1.29%
Pb 220.353†	194.9	0.0139	mg/L	0.00170	0.0139	mg/L	0.00170	12.18%
Sb 206.836†	-9.9	0.00217	mg/L	0.000579	0.00217	mg/L	0.000579	26.74%
Se 196.026†	7.6	0.00503	mg/L	0.001739	0.00503	mg/L	0.001739	34.59%
Si 251.611†	898027.9	16.2	mg/L	0.26	16.2	mg/L	0.26	1.59%
Sn 189.927†	-147.0	-0.0111	mg/L	0.00058	-0.0111	mg/L	0.00058	5.22%
Ti 334.940†	-2144.0	0.00152	mg/L	0.000410	0.00152	mg/L	0.000410	26.98%
Tl 190.801†	-7.9	-0.00498	mg/L	0.000627	-0.00498	mg/L	0.000627	12.58%
V 290.880†	775.4	0.00262	mg/L	0.001065	0.00262	mg/L	0.001065	40.68%
Zn 206.200†	7907.3	0.128	mg/L	0.0011	0.128	mg/L	0.0011	0.86%
K 766.490†	8800.6	2.68	mg/L	0.040	2.68	mg/L	0.040	1.49%
Na 589.592†	187175.8	8.55	mg/L	0.022	8.55	mg/L	0.022	0.26%
Sr 407.771†	455199.7	0.163	mg/L	0.0026	0.163	mg/L	0.0026	1.57%
Li 670.784†	3078.0	0.0158	mg/L	0.00062	0.0158	mg/L	0.00062	3.92%

Sequence No.: 13
Sample ID: L1207025709S WG403432-05
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 20
Date Collected: 7/17/2012 12:25:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207025709S WG403432-05

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: L1207025709S WG403432-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2527891.7						12326.13	0.49%
YRADIAL	340075.5						4738.94	1.39%
Ga 417.206	1456843.0						21393.75	1.47%
GaRADIAL	92333.1						1942.47	2.10%
Ag 328.068†	60130.3	0.186	mg/L	0.0029	0.186	mg/L	0.0029	1.58%
Al 396.153†	127622.1	18.1	mg/L	0.05	18.1	mg/L	0.05	0.28%
As 188.979†	711.7	0.179	mg/L	0.0018	0.179	mg/L	0.0018	0.99%
Ba 233.527†	83118.4	0.488	mg/L	0.0034	0.488	mg/L	0.0034	0.69%
Be 234.861†	29797.2	0.0233	mg/L	0.00045	0.0233	mg/L	0.00045	1.95%
B 249.677†	110605.4	0.927	mg/L	0.0231	0.927	mg/L	0.0231	2.50%
Ca 227.546†	9764.4	19.9	mg/L	0.31	19.9	mg/L	0.31	1.57%
Cd 228.802†	1351.1	0.0223	mg/L	0.00082	0.0223	mg/L	0.00082	3.67%
Co 228.616†	7172.7	0.153	mg/L	0.0012	0.153	mg/L	0.0012	0.79%
Cr 267.716†	32699.4	0.253	mg/L	0.0024	0.253	mg/L	0.0024	0.93%
Cu 327.393†	70605.3	0.262	mg/L	0.0062	0.262	mg/L	0.0062	2.35%
Fe 239.562†	32907.7	2.03	mg/L	0.013	2.03	mg/L	0.013	0.66%
Mg 279.077†	126535.4	35.7	mg/L	0.15	35.7	mg/L	0.15	0.41%
Mn 257.610†	991921.2	1.19	mg/L	0.009	1.19	mg/L	0.009	0.74%
Mo 202.031†	18375.6	0.472	mg/L	0.0034	0.472	mg/L	0.0034	0.72%
Ni 231.604†	21549.4	0.297	mg/L	0.0018	0.297	mg/L	0.0018	0.61%
Pb 220.353†	3540.5	0.246	mg/L	0.0014	0.246	mg/L	0.0014	0.56%
Sb 206.836†	2862.2	0.549	mg/L	0.0075	0.549	mg/L	0.0075	1.37%
Se 196.026†	444.1	0.191	mg/L	0.0051	0.191	mg/L	0.0051	2.69%
Si 251.611†	999320.6	18.0	mg/L	0.20	18.0	mg/L	0.20	1.09%
Sn 189.927†	6292.4	0.487	mg/L	0.0022	0.487	mg/L	0.0022	0.44%
Ti 334.940†	512102.9	0.471	mg/L	0.0020	0.471	mg/L	0.0020	0.42%
Tl 190.801†	1019.6	0.251	mg/L	0.0036	0.251	mg/L	0.0036	1.44%
V 290.880†	125668.4	0.480	mg/L	0.0052	0.480	mg/L	0.0052	1.08%
Zn 206.200†	33886.8	0.550	mg/L	0.0119	0.550	mg/L	0.0119	2.16%
K 766.490†	85540.5	26.8	mg/L	0.16	26.8	mg/L	0.16	0.60%
Na 589.592†	744222.8	34.1	mg/L	0.94	34.1	mg/L	0.94	2.75%

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Sr 407.771†	1747488.4	0.622 mg/L	0.0078	0.622 mg/L	0.0078	1.25%
Li 670.784†	86681.0	0.549 mg/L	0.0019	0.549 mg/L	0.0019	0.34%

Sequence No.: 14 **Autosampler Location: 21**
Sample ID: L1207025711SD WG403432-06 **Date Collected: 7/17/2012 12:31:50 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207025711SD WG403432-06

Analyte	Back Pressure	Flow
All	235.0 kPa	0.50 L/min

Mean Data: L1207025711SD WG403432-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2504689.3						22648.26	0.90%
YRADIAL	338076.1						6837.98	2.02%
Ga 417.206	1442594.1						15464.72	1.07%
GaRADIAL	91461.4						1464.40	1.60%
Ag 328.068†	60324.5	0.187	mg/L	0.0007	0.187	mg/L	0.0007	0.37%
Al 396.153†	128867.8	18.2	mg/L	0.03	18.2	mg/L	0.03	0.15%
As 188.979†	725.7	0.183	mg/L	0.0020	0.183	mg/L	0.0020	1.08%
Ba 233.527†	83196.9	0.488	mg/L	0.0059	0.488	mg/L	0.0059	1.22%
Be 234.861†	29967.8	0.0234	mg/L	0.00027	0.0234	mg/L	0.00027	1.14%
B 249.677†	111491.1	0.934	mg/L	0.0079	0.934	mg/L	0.0079	0.85%
Ca 227.546†	9956.6	20.3	mg/L	0.22	20.3	mg/L	0.22	1.08%
Cd 228.802†	1367.6	0.0225	mg/L	0.00053	0.0225	mg/L	0.00053	2.36%
Co 228.616†	7219.6	0.154	mg/L	0.0025	0.154	mg/L	0.0025	1.64%
Cr 267.716†	32611.6	0.253	mg/L	0.0027	0.253	mg/L	0.0027	1.08%
Cu 327.393†	70505.5	0.262	mg/L	0.0009	0.262	mg/L	0.0009	0.34%
Fe 239.562†	32868.1	2.03	mg/L	0.015	2.03	mg/L	0.015	0.75%
Mg 279.077†	127659.0	36.0	mg/L	0.27	36.0	mg/L	0.27	0.75%
Mn 257.610†	1005121.8	1.21	mg/L	0.017	1.21	mg/L	0.017	1.37%
Mo 202.031†	18361.1	0.472	mg/L	0.0042	0.472	mg/L	0.0042	0.89%
Ni 231.604†	21641.0	0.299	mg/L	0.0053	0.299	mg/L	0.0053	1.77%
Pb 220.353†	3505.3	0.243	mg/L	0.0024	0.243	mg/L	0.0024	0.98%
Sb 206.836†	2891.2	0.555	mg/L	0.0065	0.555	mg/L	0.0065	1.18%
Se 196.026†	445.9	0.192	mg/L	0.0063	0.192	mg/L	0.0063	3.30%
Si 251.611†	1015344.0	18.3	mg/L	0.16	18.3	mg/L	0.16	0.86%
Sn 189.927†	6342.4	0.491	mg/L	0.0077	0.491	mg/L	0.0077	1.56%
Ti 334.940†	513300.7	0.472	mg/L	0.0025	0.472	mg/L	0.0025	0.53%
Tl 190.801†	1015.7	0.250	mg/L	0.0024	0.250	mg/L	0.0024	0.98%
V 290.880†	125848.3	0.480	mg/L	0.0043	0.480	mg/L	0.0043	0.89%
Zn 206.200†	33758.8	0.548	mg/L	0.0023	0.548	mg/L	0.0023	0.43%
K 766.490†	86359.4	27.0	mg/L	0.16	27.0	mg/L	0.16	0.60%
Na 589.592†	753429.4	34.5	mg/L	0.64	34.5	mg/L	0.64	1.85%
Sr 407.771†	1762301.1	0.627	mg/L	0.0137	0.627	mg/L	0.0137	2.18%
Li 670.784†	87437.1	0.553	mg/L	0.0022	0.553	mg/L	0.0022	0.40%

Sequence No.: 15 **Autosampler Location: 22**
Sample ID: L1207035608 **Date Collected: 7/17/2012 12:37:51 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035608

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: L1207035608

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2507338.6						23840.87	0.95%
YRADIAL	330129.7						2781.83	0.84%
Ga 417.206	1541564.3						11789.38	0.76%

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GaRADIAL	94461.0						3619.41	3.83%
Ag 328.068†	-99.2	0.00063	mg/L	0.000063	0.00063	mg/L	0.000063	10.04%
Al 396.153†	46.2	-0.0159	mg/L	0.00032	-0.0159	mg/L	0.00032	2.04%
As 188.979†	0.5	0.00093	mg/L	0.000484	0.00093	mg/L	0.000484	52.30%
Ba 233.527†	59.0	-0.00022	mg/L	0.000062	-0.00022	mg/L	0.000062	27.87%
Be 234.861†	197.0	0.00029	mg/L	0.000019	0.00029	mg/L	0.000019	6.41%
B 249.677†	182.0	0.00461	mg/L	0.000082	0.00461	mg/L	0.000082	1.78%
Ca 227.546†	28.3	0.148	mg/L	0.0201	0.148	mg/L	0.0201	13.54%
Cd 228.802†	-6.9	0.00006	mg/L	0.000031	0.00006	mg/L	0.000031	51.84%
Co 228.616†	9.8	0.00006	mg/L	0.000171	0.00006	mg/L	0.000171	297.16%
Cr 267.716†	-39.1	0.00001	mg/L	0.000112	0.00001	mg/L	0.000112	796.70%
Cu 327.393†	-81.0	0.00068	mg/L	0.000294	0.00068	mg/L	0.000294	43.29%
Fe 239.562†	44.8	0.00684	mg/L	0.000515	0.00684	mg/L	0.000515	7.53%
Mg 279.077†	26.9	0.0208	mg/L	0.00139	0.0208	mg/L	0.00139	6.67%
Mn 257.610†	-814.7	-0.00080	mg/L	0.000119	-0.00080	mg/L	0.000119	15.01%
Mo 202.031†	0.5	0.00021	mg/L	0.000020	0.00021	mg/L	0.000020	9.62%
Ni 231.604†	22.2	-0.00226	mg/L	0.000060	-0.00226	mg/L	0.000060	2.63%
Pb 220.353†	9.7	-0.00058	mg/L	0.000964	-0.00058	mg/L	0.000964	166.22%
Sb 206.836†	-7.3	0.00283	mg/L	0.000520	0.00283	mg/L	0.000520	18.42%
Se 196.026†	-3.4	0.00008	mg/L	0.001830	0.00008	mg/L	0.001830	>999.9%
Si 251.611†	697.3	0.0244	mg/L	0.00127	0.0244	mg/L	0.00127	5.20%
Sn 189.927†	12.6	0.00127	mg/L	0.000201	0.00127	mg/L	0.000201	15.81%
Ti 334.940†	170.4	0.00136	mg/L	0.000226	0.00136	mg/L	0.000226	16.57%
Tl 190.801†	0.0	-0.00232	mg/L	0.002078	-0.00232	mg/L	0.002078	89.55%
V 290.880†	653.7	0.00302	mg/L	0.000512	0.00302	mg/L	0.000512	16.94%
Zn 206.200†	28.8	0.00115	mg/L	0.000206	0.00115	mg/L	0.000206	17.85%
K 766.490†	40.1	-0.0477	mg/L	0.01225	-0.0477	mg/L	0.01225	25.69%
Na 589.592†	5455.0	0.232	mg/L	0.0055	0.232	mg/L	0.0055	2.35%
Sr 407.771†	521.4	0.00155	mg/L	0.000012	0.00155	mg/L	0.000012	0.78%
Li 670.784†	93.2	-0.00323	mg/L	0.000267	-0.00323	mg/L	0.000267	8.28%

Sequence No.: 16 **Autosampler Location: 23**
Sample ID: L1207036002 **Date Collected: 7/17/2012 12:44:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036002

Analyte	Back Pressure	Flow
All	234.0 kPa	0.50 L/min

Mean Data: L1207036002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2469266.3						4650.30	0.19%
YRADIAL	317143.4						5757.77	1.82%
Ga 417.206	1450163.5						37993.90	2.62%
GaRADIAL	91152.8						2313.32	2.54%
Ag 328.068†	-149.4	0.00048	mg/L	0.000426	0.00048	mg/L	0.000426	89.32%
Al 396.153†	48.2	-0.0156	mg/L	0.00011	-0.0156	mg/L	0.00011	0.67%
As 188.979†	-6.3	-0.00079	mg/L	0.001110	-0.00079	mg/L	0.001110	141.07%
Ba 233.527†	19.2	-0.00046	mg/L	0.000076	-0.00046	mg/L	0.000076	16.73%
Be 234.861†	98.7	0.00021	mg/L	0.000010	0.00021	mg/L	0.000010	4.79%
B 249.677†	208.0	0.00483	mg/L	0.000110	0.00483	mg/L	0.000110	2.29%
Ca 227.546†	12.5	0.117	mg/L	0.0190	0.117	mg/L	0.0190	16.29%
Cd 228.802†	0.8	0.00020	mg/L	0.000158	0.00020	mg/L	0.000158	80.72%
Co 228.616†	2.8	-0.00009	mg/L	0.000261	-0.00009	mg/L	0.000261	279.94%
Cr 267.716†	-36.2	0.00004	mg/L	0.000075	0.00004	mg/L	0.000075	207.40%
Cu 327.393†	-113.8	0.00056	mg/L	0.000210	0.00056	mg/L	0.000210	37.58%
Fe 239.562†	45.3	0.00687	mg/L	0.000392	0.00687	mg/L	0.000392	5.71%
Mg 279.077†	22.0	0.0195	mg/L	0.00160	0.0195	mg/L	0.00160	8.21%
Mn 257.610†	-1013.9	-0.00103	mg/L	0.000001	-0.00103	mg/L	0.000001	0.14%
Mo 202.031†	12.6	0.00052	mg/L	0.000009	0.00052	mg/L	0.000009	1.65%
Ni 231.604†	12.6	-0.00240	mg/L	0.000169	-0.00240	mg/L	0.000169	7.05%
Pb 220.353†	-3.7	-0.00151	mg/L	0.000500	-0.00151	mg/L	0.000500	33.13%
Sb 206.836†	-5.3	0.00320	mg/L	0.000378	0.00320	mg/L	0.000378	11.83%
Se 196.026†	1.0	0.00193	mg/L	0.000330	0.00193	mg/L	0.000330	17.09%
Si 251.611†	536.2	0.0214	mg/L	0.00100	0.0214	mg/L	0.00100	4.67%
Sn 189.927†	2.2	0.00047	mg/L	0.000803	0.00047	mg/L	0.000803	172.50%

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Ti 334.940†	-4.1	0.00120	mg/L	0.000061	0.00120	mg/L	0.000061	5.06%
Tl 190.801†	-7.2	-0.00408	mg/L	0.000965	-0.00408	mg/L	0.000965	23.66%
V 290.880†	651.3	0.00301	mg/L	0.000835	0.00301	mg/L	0.000835	27.71%
Zn 206.200†	51.9	0.00152	mg/L	0.000084	0.00152	mg/L	0.000084	5.52%
K 766.490†	101.7	-0.0284	mg/L	0.03415	-0.0284	mg/L	0.03415	120.15%
Na 589.592†	4683.9	0.196	mg/L	0.0032	0.196	mg/L	0.0032	1.65%
Sr 407.771†	396.4	0.00151	mg/L	0.000007	0.00151	mg/L	0.000007	0.48%
Li 670.784†	-38.0	-0.00406	mg/L	0.000309	-0.00406	mg/L	0.000309	7.61%

Sequence No.: 17 **Autosampler Location: 24**
Sample ID: L1207032701 **Date Collected: 7/17/2012 12:51:40 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032701

Analyte	Back Pressure	Flow
All	237.0 kPa	0.50 L/min

Mean Data: L1207032701

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2319434.9						32490.48	1.40%
YRADIAL	305488.6						4371.23	1.43%
Ga 417.206	1426675.7						14748.37	1.03%
GaRADIAL	91137.0						2603.60	2.86%
Ag 328.068†	407.3	0.00215	mg/L	0.000419	0.00215	mg/L	0.000419	19.45%
Al 396.153†	52.8	-0.0151	mg/L	0.00087	-0.0151	mg/L	0.00087	5.75%
As 188.979†	-14.5	-0.00287	mg/L	0.001047	-0.00287	mg/L	0.001047	36.48%
Ba 233.527†	20451.9	0.119	mg/L	0.0006	0.119	mg/L	0.0006	0.49%
Be 234.861†	156.2	0.00023	mg/L	0.000017	0.00023	mg/L	0.000017	7.25%
B 249.677†	2368.2	0.0229	mg/L	0.00039	0.0229	mg/L	0.00039	1.70%
Ca 227.546†	26453.8	53.0	mg/L	0.46	53.0	mg/L	0.46	0.87%
Cd 228.802†	-0.9	0.00018	mg/L	0.000062	0.00018	mg/L	0.000062	34.87%
Co 228.616†	-14.0	-0.00047	mg/L	0.000164	-0.00047	mg/L	0.000164	35.18%
Cr 267.716†	304.6	0.00267	mg/L	0.000221	0.00267	mg/L	0.000221	8.29%
Cu 327.393†	-59.3	0.00076	mg/L	0.000315	0.00076	mg/L	0.000315	41.67%
Fe 239.562†	2104.2	0.134	mg/L	0.0022	0.134	mg/L	0.0022	1.65%
Mg 279.077†	39935.5	11.3	mg/L	0.11	11.3	mg/L	0.11	0.99%
Mn 257.610†	1298.8	0.00175	mg/L	0.000057	0.00175	mg/L	0.000057	3.28%
Mo 202.031†	133.8	0.00364	mg/L	0.000340	0.00364	mg/L	0.000340	9.33%
Ni 231.604†	64.4	-0.00167	mg/L	0.000200	-0.00167	mg/L	0.000200	11.97%
Pb 220.353†	32.8	0.00143	mg/L	0.000986	0.00143	mg/L	0.000986	68.96%
Sb 206.836†	-11.7	0.00198	mg/L	0.000505	0.00198	mg/L	0.000505	25.55%
Se 196.026†	7.7	0.00480	mg/L	0.001770	0.00480	mg/L	0.001770	36.87%
Si 251.611†	993510.0	17.9	mg/L	0.11	17.9	mg/L	0.11	0.62%
Sn 189.927†	-287.9	-0.0220	mg/L	0.00032	-0.0220	mg/L	0.00032	1.44%
Ti 334.940†	-11237.1	-0.00111	mg/L	0.000431	-0.00111	mg/L	0.000431	38.93%
Tl 190.801†	-29.2	-0.00952	mg/L	0.001504	-0.00952	mg/L	0.001504	15.80%
V 290.880†	2062.9	0.00809	mg/L	0.000339	0.00809	mg/L	0.000339	4.19%
Zn 206.200†	327.1	0.00598	mg/L	0.000226	0.00598	mg/L	0.000226	3.78%
K 766.490†	7669.7	2.31	mg/L	0.018	2.31	mg/L	0.018	0.78%
Na 589.592†	625874.1	28.6	mg/L	0.73	28.6	mg/L	0.73	2.54%
Sr 407.771†	1280257.4	0.455	mg/L	0.0164	0.455	mg/L	0.0164	3.61%
Li 670.784†	1463.4	0.00551	mg/L	0.000233	0.00551	mg/L	0.000233	4.24%

Sequence No.: 18 **Autosampler Location: 25**
Sample ID: L1207032701PS WG403481-01 **Date Collected: 7/17/2012 12:58:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032701PS WG403481-01

Analyte	Back Pressure	Flow
All	239.0 kPa	0.50 L/min

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Mean Data: L1207032701PS WG403481-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311942.5						40145.19	1.74%
YRADIAL	314037.8						2562.98	0.82%
Ga 417.206	1378132.3						16607.09	1.21%
GaRADIAL	88923.1						334.69	0.38%
Ag 328.068†	61750.8	0.192	mg/L	0.0033	0.192	mg/L	0.0033	1.71%
Al 396.153†	34812.0	4.88	mg/L	0.023	4.88	mg/L	0.023	0.47%
As 188.979†	739.9	0.187	mg/L	0.0010	0.187	mg/L	0.0010	0.55%
Ba 233.527†	102395.8	0.601	mg/L	0.0089	0.601	mg/L	0.0089	1.47%
Be 234.861†	29986.9	0.0233	mg/L	0.00040	0.0233	mg/L	0.00040	1.72%
B 249.677†	115190.9	0.965	mg/L	0.0207	0.965	mg/L	0.0207	2.15%
Ca 227.546†	27423.3	55.1	mg/L	1.26	55.1	mg/L	1.26	2.29%
Cd 228.802†	1353.7	0.0221	mg/L	0.00092	0.0221	mg/L	0.00092	4.16%
Co 228.616†	4546.6	0.0969	mg/L	0.00237	0.0969	mg/L	0.00237	2.45%
Cr 267.716†	32154.0	0.249	mg/L	0.0020	0.249	mg/L	0.0020	0.80%
Cu 327.393†	63921.5	0.238	mg/L	0.0042	0.238	mg/L	0.0042	1.78%
Fe 239.562†	33061.3	2.04	mg/L	0.012	2.04	mg/L	0.012	0.56%
Mg 279.077†	51180.3	14.4	mg/L	0.14	14.4	mg/L	0.14	0.94%
Mn 257.610†	210567.0	0.254	mg/L	0.0047	0.254	mg/L	0.0047	1.84%
Mo 202.031†	19747.5	0.508	mg/L	0.0044	0.508	mg/L	0.0044	0.86%
Ni 231.604†	18268.1	0.252	mg/L	0.0066	0.252	mg/L	0.0066	2.61%
Pb 220.353†	3626.1	0.250	mg/L	0.0063	0.250	mg/L	0.0063	2.50%
Sb 206.836†	2981.4	0.572	mg/L	0.0108	0.572	mg/L	0.0108	1.90%
Se 196.026†	450.0	0.193	mg/L	0.0013	0.193	mg/L	0.0013	0.69%
Si 251.611†	1043485.2	18.8	mg/L	0.19	18.8	mg/L	0.19	1.01%
Sn 189.927†	-281.1	-0.0214	mg/L	0.00094	-0.0214	mg/L	0.00094	4.41%
Ti 334.940†	539861.6	0.501	mg/L	0.0041	0.501	mg/L	0.0041	0.82%
Tl 190.801†	1047.9	0.259	mg/L	0.0074	0.259	mg/L	0.0074	2.84%
V 290.880†	134872.4	0.515	mg/L	0.0027	0.515	mg/L	0.0027	0.53%
Zn 206.200†	30280.1	0.491	mg/L	0.0051	0.491	mg/L	0.0051	1.03%
K 766.490†	83024.4	26.0	mg/L	0.16	26.0	mg/L	0.16	0.62%
Na 589.592†	1141553.3	52.2	mg/L	0.48	52.2	mg/L	0.48	0.92%
Sr 407.771†	2520603.5	0.895	mg/L	0.0164	0.895	mg/L	0.0164	1.84%
Li 670.784†	83114.9	0.526	mg/L	0.0005	0.526	mg/L	0.0005	0.10%

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Sequence No.: 19 **Autosampler Location: 26**
Sample ID: L1207032701DL WG403481-02 **Date Collected: 7/17/2012 1:04:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032701DL WG403481-02

Analyte	Back Pressure	Flow
All	239.0 kPa	0.50 L/min

Mean Data: L1207032701DL WG403481-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2373316.3						9612.89	0.41%
YRADIAL	315618.6						5177.96	1.64%
Ga 417.206	1368125.2						17241.57	1.26%
GaRADIAL	91246.6						1551.24	1.70%
Ag 328.068†	33.7	0.00103	mg/L	0.000291	0.00103	mg/L	0.000291	28.17%
Al 396.153†	14.0	-0.0205	mg/L	0.00113	-0.0205	mg/L	0.00113	5.53%
As 188.979†	-10.0	-0.00174	mg/L	0.002357	-0.00174	mg/L	0.002357	135.34%
Ba 233.527†	4164.8	0.0239	mg/L	0.00012	0.0239	mg/L	0.00012	0.52%
Be 234.861†	14.4	0.00014	mg/L	0.000024	0.00014	mg/L	0.000024	16.48%
B 249.677†	3342.2	0.0310	mg/L	0.00185	0.0310	mg/L	0.00185	5.97%
Ca 227.546†	5361.9	10.8	mg/L	0.15	10.8	mg/L	0.15	1.38%
Cd 228.802†	5.8	0.00028	mg/L	0.000011	0.00028	mg/L	0.000011	4.01%
Co 228.616†	6.9	-0.00001	mg/L	0.000254	-0.00001	mg/L	0.000254	>999.9%
Cr 267.716†	35.2	0.00059	mg/L	0.000110	0.00059	mg/L	0.000110	18.70%
Cu 327.393†	17.5	0.00104	mg/L	0.000316	0.00104	mg/L	0.000316	30.32%
Fe 239.562†	424.8	0.0302	mg/L	0.00017	0.0302	mg/L	0.00017	0.57%
Mg 279.077†	7632.9	2.16	mg/L	0.032	2.16	mg/L	0.032	1.50%
Mn 257.610†	-446.5	-0.00035	mg/L	0.000028	-0.00035	mg/L	0.000028	7.98%
Mo 202.031†	47.1	0.00141	mg/L	0.000396	0.00141	mg/L	0.000396	28.13%

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Ni 231.604†	26.7	-0.00220 mg/L	0.000035	-0.00220 mg/L	0.000035	1.59%
Pb 220.353†	-2.8	-0.00136 mg/L	0.000350	-0.00136 mg/L	0.000350	25.75%
Sb 206.836†	-9.1	0.00248 mg/L	0.000531	0.00248 mg/L	0.000531	21.41%
Se 196.026†	7.8	0.00485 mg/L	0.001752	0.00485 mg/L	0.001752	36.16%
Si 251.611†	205434.6	3.72 mg/L	0.046	3.72 mg/L	0.046	1.22%
Sn 189.927†	-118.7	-0.00888 mg/L	0.000451	-0.00888 mg/L	0.000451	5.08%
Ti 334.940†	-2290.0	0.00072 mg/L	0.000114	0.00072 mg/L	0.000114	15.76%
Tl 190.801†	-15.6	-0.00613 mg/L	0.002534	-0.00613 mg/L	0.002534	41.35%
V 290.880†	1239.1	0.00520 mg/L	0.001473	0.00520 mg/L	0.001473	28.33%
Zn 206.200†	221.4	0.00426 mg/L	0.000074	0.00426 mg/L	0.000074	1.75%
K 766.490†	1651.3	0.450 mg/L	0.0039	0.450 mg/L	0.0039	0.86%
Na 589.592†	122966.3	5.61 mg/L	0.109	5.61 mg/L	0.109	1.94%
Sr 407.771†	251515.4	0.0905 mg/L	0.00226	0.0905 mg/L	0.00226	2.50%
Li 670.784†	379.2	-0.00140 mg/L	0.000173	-0.00140 mg/L	0.000173	12.30%

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Sequence No.: 20 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 1:11:28 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	241.0 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	2323405.2						13310.67	0.57%
YRADIAL	317930.6						1983.49	0.62%
Ga 417.206	1279021.7						34868.51	2.73%
GaRADIAL	87759.1						643.02	0.73%
Ag 328.068†	128499.2	0.398	mg/L	0.0123	0.398	mg/L	0.0123	3.11%
QC value within limits for Ag 328.068 Recovery = 99.38%								
Al 396.153†	70171.5	9.87	mg/L	0.013	9.87	mg/L	0.013	0.13%
QC value within limits for Al 396.153 Recovery = 98.68%								
As 188.979†	1590.7	0.401	mg/L	0.0122	0.401	mg/L	0.0122	3.03%
QC value within limits for As 188.979 Recovery = 100.31%								
Ba 233.527†	170796.5	1.00	mg/L	0.007	1.00	mg/L	0.007	0.69%
QC value within limits for Ba 233.527 Recovery = 100.24%								
Be 234.861†	63681.2	0.0495	mg/L	0.00167	0.0495	mg/L	0.00167	3.38%
QC value within limits for Be 234.861 Recovery = 98.98%								
B 249.677†	61204.4	0.512	mg/L	0.0178	0.512	mg/L	0.0178	3.47%
QC value within limits for B 249.677 Recovery = 102.32%								
Ca 227.546†	4885.4	10.3	mg/L	0.30	10.3	mg/L	0.30	2.89%
QC value within limits for Ca 227.546 Recovery = 103.29%								
Cd 228.802†	2959.4	0.0480	mg/L	0.00217	0.0480	mg/L	0.00217	4.52%
QC value within limits for Cd 228.802 Recovery = 96.07%								
Co 228.616†	9391.7	0.200	mg/L	0.0024	0.200	mg/L	0.0024	1.21%
QC value within limits for Co 228.616 Recovery = 100.18%								
Cr 267.716†	64465.7	0.499	mg/L	0.0031	0.499	mg/L	0.0031	0.62%
QC value within limits for Cr 267.716 Recovery = 99.79%								
Cu 327.393†	135468.3	0.502	mg/L	0.0134	0.502	mg/L	0.0134	2.67%
QC value within limits for Cu 327.393 Recovery = 100.47%								
Fe 239.562†	63400.0	3.91	mg/L	0.005	3.91	mg/L	0.005	0.13%
QC value within limits for Fe 239.562 Recovery = 97.76%								
Mg 279.077†	34271.1	9.68	mg/L	0.056	9.68	mg/L	0.056	0.58%
QC value within limits for Mg 279.077 Recovery = 96.83%								
Mn 257.610†	415977.1	0.501	mg/L	0.0045	0.501	mg/L	0.0045	0.91%
QC value within limits for Mn 257.610 Recovery = 100.20%								
Mo 202.031†	39400.1	1.01	mg/L	0.006	1.01	mg/L	0.006	0.57%
QC value within limits for Mo 202.031 Recovery = 101.24%								
Ni 231.604†	37414.4	0.518	mg/L	0.0052	0.518	mg/L	0.0052	1.00%
QC value within limits for Ni 231.604 Recovery = 103.63%								
Pb 220.353†	7337.5	0.507	mg/L	0.0042	0.507	mg/L	0.0042	0.82%
QC value within limits for Pb 220.353 Recovery = 101.33%								
Sb 206.836†	6302.7	1.20	mg/L	0.036	1.20	mg/L	0.036	3.02%
QC value within limits for Sb 206.836 Recovery = 100.42%								
Se 196.026†	967.8	0.414	mg/L	0.0122	0.414	mg/L	0.0122	2.94%

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   QC value within limits for Se 196.026  Recovery = 103.49%
Si 251.611†          278138.7        5.02 mg/L         0.108        5.02 mg/L         0.108   2.15%
   QC value within limits for Si 251.611  Recovery = 100.42%
Sn 189.927†           13187.0        1.02 mg/L         0.012        1.02 mg/L         0.012   1.16%
   QC value within limits for Sn 189.927  Recovery = 102.00%
Ti 334.940†         1100179.8        1.00 mg/L         0.004        1.00 mg/L         0.004   0.38%
   QC value within limits for Ti 334.940  Recovery = 100.49%
Tl 190.801†            2136.0       0.531 mg/L        0.0033       0.531 mg/L        0.0033   0.62%
   QC value within limits for Tl 190.801  Recovery = 106.18%
V 290.880†           262513.5        1.00 mg/L         0.003        1.00 mg/L         0.003   0.34%
   QC value within limits for V 290.880  Recovery = 100.28%
Zn 206.200†           61556.3       0.998 mg/L        0.0058       0.998 mg/L        0.0058   0.59%
   QC value within limits for Zn 206.200  Recovery = 99.83%
K 766.490†           154529.1        48.7 mg/L          0.17        48.7 mg/L          0.17   0.35%
   QC value within limits for K 766.490  Recovery = 97.46%
Na 589.592†         1080729.6        49.5 mg/L          0.37        49.5 mg/L          0.37   0.74%
   QC value within limits for Na 589.592  Recovery = 98.93%
Sr 407.771†         2737446.0       0.973 mg/L        0.0086       0.973 mg/L        0.0086   0.88%
   QC value within limits for Sr 407.771  Recovery = 97.34%
Li 670.784†           160691.3        1.02 mg/L         0.008        1.02 mg/L         0.008   0.83%
   QC value within limits for Li 670.784  Recovery = 102.02%
All analyte(s) passed QC.

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Sequence No.: 21                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 1:17:27 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     240.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: CCB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2467023.5                                                    19184.42   0.78%
YRADIAL               322970.1                                                     7535.13   2.33%
Ga 417.206           1369056.1                                                    15829.72   1.16%
GaRADIAL               90713.5                                                     1052.71   1.16%
Ag 328.068†             -175.5     0.00039 mg/L      0.000244     0.00039 mg/L      0.000244  62.43%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              21.7     -0.0194 mg/L       0.00097     -0.0194 mg/L       0.00097   5.03%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -1.5     0.00042 mg/L      0.001268     0.00042 mg/L      0.001268 299.37%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              17.2    -0.00047 mg/L      0.000065    -0.00047 mg/L      0.000065  13.99%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              47.2     0.00017 mg/L      0.000015     0.00017 mg/L      0.000015   8.67%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†             1133.1      0.0126 mg/L       0.00106      0.0126 mg/L       0.00106   8.43%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               5.4       0.102 mg/L        0.0234       0.102 mg/L        0.0234  22.87%
   QC value greater than the upper limit for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -8.0     0.00004 mg/L      0.000075     0.00004 mg/L      0.000075 167.37%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               3.5    -0.00008 mg/L      0.000274    -0.00008 mg/L      0.000274 354.62%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -51.0    -0.00008 mg/L      0.000077    -0.00008 mg/L      0.000077  97.08%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†            -105.7     0.00059 mg/L      0.000817     0.00059 mg/L      0.000817 139.25%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              22.4     0.00546 mg/L      0.000197     0.00546 mg/L      0.000197   3.61%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              11.8      0.0166 mg/L       0.00085      0.0166 mg/L       0.00085   5.10%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1261.8    -0.00133 mg/L      0.000015    -0.00133 mg/L      0.000015   1.16%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              15.0     0.00058 mg/L      0.000184     0.00058 mg/L      0.000184  31.63%
```

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   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†                3.9    -0.00252 mg/L      0.000246    -0.00252 mg/L      0.000246   9.75%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                9.2    -0.00062 mg/L      0.000644    -0.00062 mg/L      0.000644 104.17%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -5.5     0.00316 mg/L      0.000208     0.00316 mg/L      0.000208   6.58%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.7    -0.00047 mg/L      0.003057    -0.00047 mg/L      0.003057 651.71%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              120.4      0.0139 mg/L       0.00116      0.0139 mg/L       0.00116   8.30%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                8.2     0.00093 mg/L      0.000168     0.00093 mg/L      0.000168  18.05%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              136.1     0.00133 mg/L      0.000166     0.00133 mg/L      0.000166  12.53%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -0.4    -0.00243 mg/L      0.000991    -0.00243 mg/L      0.000991  40.78%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               -71.3     0.00025 mg/L      0.000866     0.00025 mg/L      0.000866 344.98%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -158.6    -0.00187 mg/L      0.000119    -0.00187 mg/L      0.000119   6.37%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                79.6     -0.0351 mg/L       0.02613     -0.0351 mg/L       0.02613  74.40%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -337.9     -0.0338 mg/L       0.00487     -0.0338 mg/L       0.00487  14.42%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              437.8     0.00152 mg/L      0.000016     0.00152 mg/L      0.000016   1.08%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              144.9    -0.00290 mg/L      0.000126    -0.00290 mg/L      0.000126   4.34%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.
User canceled analysis.
```

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Analysis Begun

Start Time: 7/17/2012 1:25:40 PM **Plasma On Time: 7/17/2012 7:11:35 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\TUESDAY1.sif
Batch ID:
Results Data Set: 071712HR
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 12**
Sample ID: ICSA **Date Collected: 7/17/2012 1:25:42 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: ICSA

Analyte	**Back Pressure**	**Flow**
All	240.0 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	2243592.3						25616.61	1.14%
YRADIAL	313009.4						588.45	0.19%
Ga 417.206	1298005.8						25982.90	2.00%
GaRADIAL	88654.9						703.39	0.79%
Ag 328.068†	-13252.9	-0.00246	mg/L	0.000936	-0.00246	mg/L	0.000936	38.02%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	1721691.9	244	mg/L	3.1	244	mg/L	3.1	1.28%
QC value within limits for Al 396.153 Recovery = 97.74%								
As 188.979†	-21.5	0.00021	mg/L	0.002080	0.00021	mg/L	0.002080	994.09%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	806.2	-0.00111	mg/L	0.000065	-0.00111	mg/L	0.000065	5.87%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	25349.5	0.00058	mg/L	0.000392	0.00058	mg/L	0.000392	68.05%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	5411.3	0.0100	mg/L	0.00203	0.0100	mg/L	0.00203	20.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	125057.4	252	mg/L	8.2	252	mg/L	8.2	3.27%
QC value within limits for Ca 227.546 Recovery = 100.88%								
Cd 228.802†	-3.7	0.00031	mg/L	0.000137	0.00031	mg/L	0.000137	44.71%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	8.7	-0.00223	mg/L	0.000143	-0.00223	mg/L	0.000143	6.43%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-72.2	-0.00130	mg/L	0.000367	-0.00130	mg/L	0.000367	28.22%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-1483.9	-0.00017	mg/L	0.000105	-0.00017	mg/L	0.000105	63.43%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	1448282.4	89.2	mg/L	1.30	89.2	mg/L	1.30	1.46%
QC value within limits for Fe 239.562 Recovery = 89.25%								
Mg 279.077†	848188.8	239	mg/L	3.2	239	mg/L	3.2	1.32%
QC value within limits for Mg 279.077 Recovery = 95.56%								
Mn 257.610†	-3405.3	-0.00369	mg/L	0.000858	-0.00369	mg/L	0.000858	23.22%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	-96.0	0.00211	mg/L	0.000563	0.00211	mg/L	0.000563	26.68%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	67.7	-0.00163	mg/L	0.000256	-0.00163	mg/L	0.000256	15.78%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	-502.2	-0.00011	mg/L	0.002450	-0.00011	mg/L	0.002450	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-28.1	0.00214	mg/L	0.000681	0.00214	mg/L	0.000681	31.88%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-71.5	-0.00598	mg/L	0.004151	-0.00598	mg/L	0.004151	69.40%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	3303.1	0.0714	mg/L	0.00122	0.0714	mg/L	0.00122	1.71%

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   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -357.6     -0.0274 mg/L       0.00305     -0.0274 mg/L       0.00305  11.16%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†          -42701.6    -0.00021 mg/L      0.003332    -0.00021 mg/L      0.003332 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -62.5     -0.0113 mg/L       0.00133     -0.0113 mg/L       0.00133  11.73%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†             4569.9     0.00000 mg/L      0.003081     0.00000 mg/L      0.003081 >999.9%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             173.7     0.00179 mg/L      0.000552     0.00179 mg/L      0.000552  30.89%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -64.8     -0.0802 mg/L       0.02130     -0.0802 mg/L       0.02130  26.57%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -328.0     -0.0333 mg/L       0.00426     -0.0333 mg/L       0.00426  12.79%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            2871.4    -0.00311 mg/L      0.000183    -0.00311 mg/L      0.000183   5.89%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             360.2    -0.00152 mg/L      0.000662    -0.00152 mg/L      0.000662  43.43%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 2                                   Autosampler Location: 13
Sample ID: ICSAB                                  Date Collected: 7/17/2012 1:31:38 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: ICSAB
Analyte                 Back Pressure    Flow
All                    240.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: ICSAB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2205734.4                                                     7915.47   0.36%
YRADIAL               308907.9                                                     4978.01   1.61%
Ga 417.206           1279684.7                                                    43406.16   3.39%
GaRADIAL               87499.2                                                     1605.30   1.83%
Ag 328.068†           149336.3       0.496 mg/L        0.0175       0.496 mg/L        0.0175   3.54%
   QC value within limits for Ag 328.068  Recovery = 99.18%
Al 396.153†          1753596.6         249 mg/L           7.0         249 mg/L           7.0   2.83%
   QC value within limits for Al 396.153  Recovery = 99.55%
As 188.979†              898.1       0.235 mg/L        0.0094       0.235 mg/L        0.0094   3.99%
   QC value within limits for As 188.979  Recovery = 93.83%
Ba 233.527†            42522.3       0.244 mg/L        0.0029       0.244 mg/L        0.0029   1.19%
   QC value within limits for Ba 233.527  Recovery = 97.49%
Be 234.861†           332586.9       0.240 mg/L        0.0089       0.240 mg/L        0.0089   3.68%
   QC value within limits for Be 234.861  Recovery = 96.19%
B 249.677†              4962.1    -0.00688 mg/L      0.001981    -0.00688 mg/L      0.001981  28.78%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†           126886.2         256 mg/L           8.5         256 mg/L           8.5   3.30%
   QC value within limits for Ca 227.546  Recovery = 102.48%
Cd 228.802†            27498.6       0.458 mg/L        0.0155       0.458 mg/L        0.0155   3.39%
   QC value within limits for Cd 228.802  Recovery = 91.53%
Co 228.616†            10709.2       0.227 mg/L        0.0023       0.227 mg/L        0.0023   1.01%
   QC value within limits for Co 228.616  Recovery = 90.81%
Cr 267.716†            30922.3       0.238 mg/L        0.0020       0.238 mg/L        0.0020   0.85%
   QC value within limits for Cr 267.716  Recovery = 95.37%
Cu 327.393†            64898.3       0.245 mg/L        0.0064       0.245 mg/L        0.0064   2.60%
   QC value within limits for Cu 327.393  Recovery = 97.92%
Fe 239.562†          1462791.6        90.1 mg/L          1.55        90.1 mg/L          1.55   1.72%
   QC value within limits for Fe 239.562  Recovery = 90.14%
Mg 279.077†           857971.5         242 mg/L           4.3         242 mg/L           4.3   1.79%
   QC value within limits for Mg 279.077  Recovery = 96.66%
Mn 257.610†           196568.0       0.237 mg/L        0.0011       0.237 mg/L        0.0011   0.45%
   QC value within limits for Mn 257.610  Recovery = 94.77%
Mo 202.031†              -77.7     0.00279 mg/L      0.000144     0.00279 mg/L      0.000144   5.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†            33678.4       0.466 mg/L        0.0033       0.466 mg/L        0.0033   0.70%
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   QC value within limits for Ni 231.604  Recovery = 93.22%
Pb 220.353†            6336.9       0.472 mg/L        0.0049       0.472 mg/L        0.0049   1.04%
   QC value within limits for Pb 220.353  Recovery = 94.48%
Sb 206.836†            2504.6       0.484 mg/L        0.0180       0.484 mg/L        0.0180   3.73%
   QC value within limits for Sb 206.836  Recovery = 96.74%
Se 196.026†             512.8       0.243 mg/L        0.0101       0.243 mg/L        0.0101   4.17%
   QC value within limits for Se 196.026  Recovery = 97.06%
Si 251.611†            -545.2     0.00195 mg/L      0.001212     0.00195 mg/L      0.001212  62.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -381.0     -0.0292 mg/L       0.00110     -0.0292 mg/L       0.00110   3.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†          -43429.6    -0.00040 mg/L      0.003831    -0.00040 mg/L      0.003831 962.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†            1974.6       0.484 mg/L        0.0005       0.484 mg/L        0.0005   0.11%
   QC value within limits for Tl 190.801  Recovery = 96.74%
V 290.880†            68994.3       0.246 mg/L        0.0018       0.246 mg/L        0.0018   0.72%
   QC value within limits for V 290.880  Recovery = 98.40%
Zn 206.200†           28879.7       0.467 mg/L        0.0012       0.467 mg/L        0.0012   0.27%
   QC value within limits for Zn 206.200  Recovery = 93.42%
K 766.490†            15396.8        4.75 mg/L         0.034        4.75 mg/L         0.034   0.71%
   QC value within limits for K 766.490  Recovery = 94.94%
Na 589.592†          112587.4        5.14 mg/L         0.021        5.14 mg/L         0.021   0.42%
   QC value within limits for Na 589.592  Recovery = 102.77%
Sr 407.771†            2847.9    -0.00320 mg/L      0.000207    -0.00320 mg/L      0.000207   6.47%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             311.2    -0.00184 mg/L      0.000212    -0.00184 mg/L      0.000212  11.55%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 3                                   Autosampler Location: 6
Sample ID: CCV                                    Date Collected: 7/17/2012 1:37:35 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCV
Analyte                 Back Pressure    Flow
All                    241.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: CCV
                  Mean Corrected         Calib.                          Sample
Analyte              Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029           2391222.8                                                     27086.12   1.13%
YRADIAL              328308.0                                                      3906.87   1.19%
Ga 417.206          1336585.5                                                     27854.27   2.08%
GaRADIAL              91657.4                                                      2019.81   2.20%
Ag 328.068†          126460.6       0.391 mg/L        0.0112       0.391 mg/L        0.0112   2.87%
   QC value within limits for Ag 328.068  Recovery = 97.80%
Al 396.153†           68783.6        9.67 mg/L         0.129        9.67 mg/L         0.129   1.33%
   QC value within limits for Al 396.153  Recovery = 96.72%
As 188.979†            1508.1       0.380 mg/L        0.0094       0.380 mg/L        0.0094   2.47%
   QC value within limits for As 188.979  Recovery = 95.08%
Ba 233.527†          166113.2       0.975 mg/L        0.0040       0.975 mg/L        0.0040   0.41%
   QC value within limits for Ba 233.527  Recovery = 97.49%
Be 234.861†           61571.6      0.0479 mg/L       0.00167      0.0479 mg/L       0.00167   3.49%
   QC value within limits for Be 234.861  Recovery = 95.71%
B 249.677†            57746.2       0.483 mg/L        0.0136       0.483 mg/L        0.0136   2.82%
   QC value within limits for B 249.677  Recovery = 96.55%
Ca 227.546†            4783.4        10.1 mg/L          0.26        10.1 mg/L          0.26   2.55%
   QC value within limits for Ca 227.546  Recovery = 101.12%
Cd 228.802†            2864.3      0.0465 mg/L       0.00191      0.0465 mg/L       0.00191   4.11%
   QC value within limits for Cd 228.802  Recovery = 93.09%
Co 228.616†            9169.0       0.196 mg/L        0.0028       0.196 mg/L        0.0028   1.42%
   QC value within limits for Co 228.616  Recovery = 97.80%
Cr 267.716†           63096.9       0.488 mg/L        0.0010       0.488 mg/L        0.0010   0.21%
   QC value within limits for Cr 267.716  Recovery = 97.67%
Cu 327.393†          134017.9       0.497 mg/L        0.0124       0.497 mg/L        0.0124   2.49%
   QC value within limits for Cu 327.393  Recovery = 99.39%
Fe 239.562†           61806.4        3.81 mg/L         0.021        3.81 mg/L         0.021   0.56%
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   QC value within limits for Fe 239.562  Recovery = 95.30%
Mg 279.077†            33503.3        9.47 mg/L         0.063        9.47 mg/L         0.063   0.66%
   QC value within limits for Mg 279.077  Recovery = 94.66%
Mn 257.610†           406987.6       0.490 mg/L        0.0049       0.490 mg/L        0.0049   1.00%
   QC value within limits for Mn 257.610  Recovery = 98.04%
Mo 202.031†            38409.4       0.987 mg/L        0.0042       0.987 mg/L        0.0042   0.42%
   QC value within limits for Mo 202.031  Recovery = 98.69%
Ni 231.604†            36382.4       0.504 mg/L        0.0061       0.504 mg/L        0.0061   1.22%
   QC value within limits for Ni 231.604  Recovery = 100.76%
Pb 220.353†             7172.7       0.495 mg/L        0.0043       0.495 mg/L        0.0043   0.86%
   QC value within limits for Pb 220.353  Recovery = 99.05%
Sb 206.836†             6048.3        1.16 mg/L         0.030        1.16 mg/L         0.030   2.62%
   QC value within limits for Sb 206.836  Recovery = 96.37%
Se 196.026†              915.2       0.392 mg/L        0.0131       0.392 mg/L        0.0131   3.34%
   QC value within limits for Se 196.026  Recovery = 97.89%
Si 251.611†           269781.2        4.87 mg/L         0.099        4.87 mg/L         0.099   2.03%
   QC value within limits for Si 251.611  Recovery = 97.41%
Sn 189.927†            12753.3       0.987 mg/L        0.0136       0.987 mg/L        0.0136   1.38%
   QC value within limits for Sn 189.927  Recovery = 98.65%
Ti 334.940†          1082473.1       0.989 mg/L        0.0061       0.989 mg/L        0.0061   0.62%
   QC value within limits for Ti 334.940  Recovery = 98.87%
Tl 190.801†             2094.3       0.521 mg/L        0.0031       0.521 mg/L        0.0031   0.60%
   QC value within limits for Tl 190.801  Recovery = 104.10%
V 290.880†            257335.4       0.983 mg/L        0.0051       0.983 mg/L        0.0051   0.52%
   QC value within limits for V 290.880  Recovery = 98.31%
Zn 206.200†            59142.7       0.959 mg/L        0.0068       0.959 mg/L        0.0068   0.71%
   QC value within limits for Zn 206.200  Recovery = 95.93%
K 766.490†            152770.8        48.2 mg/L          0.77        48.2 mg/L          0.77   1.60%
   QC value within limits for K 766.490  Recovery = 96.33%
Na 589.592†          1071530.5        49.0 mg/L          2.26        49.0 mg/L          2.26   4.61%
   QC value within limits for Na 589.592  Recovery = 98.09%
Sr 407.771†          2733287.6       0.972 mg/L        0.0256       0.972 mg/L        0.0256   2.64%
   QC value within limits for Sr 407.771  Recovery = 97.19%
Li 670.784†           160040.7        1.02 mg/L         0.013        1.02 mg/L         0.013   1.30%
   QC value within limits for Li 670.784  Recovery = 101.61%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 4                                   Autosampler Location: 1
Sample ID: CCB                                    Date Collected: 7/17/2012 1:43:35 PM
Analyst:                                          Data Type: Original
Initial Sample Wt:                                Initial Sample Vol:
Dilution:                                         Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     240.0 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            2487732.6                                                   5727.33   0.23%
YRADIAL               319966.1                                                   1691.36   0.53%
Ga 417.206           1374257.4                                                   6440.98   0.47%
GaRADIAL               89546.2                                                   2852.01   3.18%
Ag 328.068†             -186.0     0.00036 mg/L      0.000198     0.00036 mg/L      0.000198  54.68%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               15.3     -0.0203 mg/L       0.00116     -0.0203 mg/L       0.00116   5.73%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†                1.8     0.00126 mg/L      0.000854     0.00126 mg/L      0.000854  67.71%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               42.5    -0.00032 mg/L      0.000077    -0.00032 mg/L      0.000077  24.14%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               27.6     0.00016 mg/L      0.000022     0.00016 mg/L      0.000022  14.01%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               310.2     0.00568 mg/L      0.000286     0.00568 mg/L      0.000286   5.04%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               -5.2      0.0815 mg/L       0.02336      0.0815 mg/L       0.02336  28.65%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                3.8     0.00024 mg/L      0.000072     0.00024 mg/L      0.000072  30.41%
```

Approved: July 18, 2012

Kym H. Rhoden

```
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              -0.5    -0.00016 mg/L      0.000060    -0.00016 mg/L      0.000060  36.99%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -27.3     0.00010 mg/L      0.000147     0.00010 mg/L      0.000147 142.49%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              86.6     0.00130 mg/L      0.000346     0.00130 mg/L      0.000346  26.67%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†             159.5      0.0139 mg/L       0.00066      0.0139 mg/L       0.00066   4.78%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              35.0      0.0231 mg/L       0.00143      0.0231 mg/L       0.00143   6.17%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1131.9    -0.00118 mg/L      0.000049    -0.00118 mg/L      0.000049   4.19%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              14.1     0.00056 mg/L      0.000165     0.00056 mg/L      0.000165  29.60%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               5.3    -0.00250 mg/L      0.000040    -0.00250 mg/L      0.000040   1.60%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               6.5    -0.00081 mg/L      0.001403    -0.00081 mg/L      0.001403 173.86%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -0.3     0.00416 mg/L      0.000831     0.00416 mg/L      0.000831  19.97%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.5     0.00174 mg/L      0.001756     0.00174 mg/L      0.001756 100.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -141.6     0.00921 mg/L      0.000642     0.00921 mg/L      0.000642   6.97%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               2.7     0.00050 mg/L      0.000212     0.00050 mg/L      0.000212  42.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              91.8     0.00128 mg/L      0.000058     0.00128 mg/L      0.000058   4.48%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -5.5    -0.00366 mg/L      0.000731    -0.00366 mg/L      0.000731  19.95%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               -80.1     0.00022 mg/L      0.001438     0.00022 mg/L      0.001438 666.23%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -157.4    -0.00185 mg/L      0.000207    -0.00185 mg/L      0.000207  11.16%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -2.7     -0.0608 mg/L       0.01676     -0.0608 mg/L       0.01676  27.57%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -323.8     -0.0331 mg/L       0.00408     -0.0331 mg/L       0.00408  12.32%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             540.5     0.00156 mg/L      0.000016     0.00156 mg/L      0.000016   1.03%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             109.5    -0.00312 mg/L      0.000179    -0.00312 mg/L      0.000179   5.73%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.
User canceled analysis.
```

Approved: July 18, 2012

Kym H. Rhoden

==========

Analysis Begun

Start Time: 7/17/2012 1:49:09 PM **Plasma On Time: 7/17/2012 7:11:35 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\TUESDAY1.sif
Batch ID:
Results Data Set: 071712HR
Results Library: C:\pe\peicp2\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 118**
Sample ID: L1207032701PS WG403481-01 **Date Collected: 7/17/2012 1:49:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032701PS WG403481-01

Analyte	Back Pressure	Flow
All	242.0 kPa	0.50 L/min

Mean Data: L1207032701PS WG403481-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2331784.9						24169.57	1.04%
YRADIAL	315144.9						1977.12	0.63%
Ga 417.206	1386358.9						29102.61	2.10%
GaRADIAL	90164.9						841.59	0.93%
Ag 328.068†	62657.2	0.194	mg/L	0.0056	0.194	mg/L	0.0056	2.88%
Al 396.153†	35339.1	4.96	mg/L	0.011	4.96	mg/L	0.011	0.23%
As 188.979†	734.1	0.185	mg/L	0.0020	0.185	mg/L	0.0020	1.06%
Ba 233.527†	102160.7	0.599	mg/L	0.0068	0.599	mg/L	0.0068	1.13%
Be 234.861†	30001.1	0.0234	mg/L	0.00059	0.0234	mg/L	0.00059	2.51%
B 249.677†	116312.7	0.975	mg/L	0.0307	0.975	mg/L	0.0307	3.15%
Ca 227.546†	27774.4	55.8	mg/L	1.29	55.8	mg/L	1.29	2.31%
Cd 228.802†	1368.9	0.0223	mg/L	0.00103	0.0223	mg/L	0.00103	4.61%
Co 228.616†	4541.6	0.0968	mg/L	0.00074	0.0968	mg/L	0.00074	0.76%
Cr 267.716†	31994.6	0.248	mg/L	0.0008	0.248	mg/L	0.0008	0.30%
Cu 327.393†	65293.9	0.243	mg/L	0.0060	0.243	mg/L	0.0060	2.46%
Fe 239.562†	33495.0	2.07	mg/L	0.037	2.07	mg/L	0.037	1.79%
Mg 279.077†	51568.5	14.5	mg/L	0.22	14.5	mg/L	0.22	1.50%
Mn 257.610†	227843.3	0.274	mg/L	0.0054	0.274	mg/L	0.0054	1.95%
Mo 202.031†	19753.8	0.508	mg/L	0.0056	0.508	mg/L	0.0056	1.11%
Ni 231.604†	17565.8	0.242	mg/L	0.0046	0.242	mg/L	0.0046	1.91%
Pb 220.353†	3645.3	0.251	mg/L	0.0030	0.251	mg/L	0.0030	1.21%
Sb 206.836†	2970.5	0.570	mg/L	0.0166	0.570	mg/L	0.0166	2.91%
Se 196.026†	451.6	0.194	mg/L	0.0034	0.194	mg/L	0.0034	1.76%
Si 251.611†	1044693.0	18.9	mg/L	0.40	18.9	mg/L	0.40	2.12%
Sn 189.927†	6493.7	0.502	mg/L	0.0259	0.502	mg/L	0.0259	5.16%
Ti 334.940†	543001.2	0.504	mg/L	0.0015	0.504	mg/L	0.0015	0.30%
Tl 190.801†	1053.3	0.261	mg/L	0.0011	0.261	mg/L	0.0011	0.43%
V 290.880†	134966.3	0.516	mg/L	0.0050	0.516	mg/L	0.0050	0.97%
Zn 206.200†	29860.8	0.485	mg/L	0.0028	0.485	mg/L	0.0028	0.58%
K 766.490†	84984.1	26.6	mg/L	0.09	26.6	mg/L	0.09	0.34%
Na 589.592†	1139896.6	52.2	mg/L	0.20	52.2	mg/L	0.20	0.38%
Sr 407.771†	2544973.8	0.904	mg/L	0.0027	0.904	mg/L	0.0027	0.29%
Li 670.784†	84445.5	0.534	mg/L	0.0084	0.534	mg/L	0.0084	1.56%

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Sequence No.: 2 **Autosampler Location: 27**
Sample ID: L1207031601 0.1 **Date Collected: 7/17/2012 1:55:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031601 0.1

Approved: July 18, 2012
Kym H. Rhoden

Analyte	Back Pressure	Flow
All	242.0 kPa	0.50 L/min

Mean Data: L1207031601 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2409976.7						11728.97	0.49%
YRADIAL	318585.1						5194.84	1.63%
Ga 417.206	1381425.5						33110.17	2.40%
GaRADIAL	91713.4						1845.89	2.01%
Ag 328.068†	-12486.3	-0.00275	mg/L	0.000624	-0.00275	mg/L	0.000624	22.70%
Al 396.153†	71.3	-0.00194	mg/L	0.002643	-0.00194	mg/L	0.002643	136.23%
As 188.979†	-25.7	0.0149	mg/L	0.00079	0.0149	mg/L	0.00079	5.29%
Ba 233.527†	1786.5	0.00487	mg/L	0.000216	0.00487	mg/L	0.000216	4.44%
Be 234.861†	23494.7	0.00075	mg/L	0.000123	0.00075	mg/L	0.000123	16.46%
B 249.677†	13133.5	0.0761	mg/L	0.00337	0.0761	mg/L	0.00337	4.43%
Ca 227.546†	6362.6	14.9	mg/L	0.91	14.9	mg/L	0.91	6.14%
Cd 228.802†	-12.5	0.00024	mg/L	0.000065	0.00024	mg/L	0.000065	26.62%
Co 228.616†	1076.8	0.0207	mg/L	0.00038	0.0207	mg/L	0.00038	1.83%
Cr 267.716†	-446.0	-0.00626	mg/L	0.000090	-0.00626	mg/L	0.000090	1.44%
Cu 327.393†	-1127.0	0.00100	mg/L	0.000340	0.00100	mg/L	0.000340	34.09%
Fe 239.562†	1390235.5	85.7	mg/L	0.80	85.7	mg/L	0.80	0.93%
Mg 279.077†	5268.8	1.45	mg/L	0.029	1.45	mg/L	0.029	2.03%
Mn 257.610†	7036980.4	8.46	mg/L	0.098	8.46	mg/L	0.098	1.16%
Mo 202.031†	-85.2	0.00398	mg/L	0.000126	0.00398	mg/L	0.000126	3.18%
Ni 231.604†	3377.2	0.0444	mg/L	0.00076	0.0444	mg/L	0.00076	1.71%
Pb 220.353†	152.4	-0.00313	mg/L	0.000686	-0.00313	mg/L	0.000686	21.90%
Sb 206.836†	-21.4	0.00331	mg/L	0.000991	0.00331	mg/L	0.000991	29.93%
Se 196.026†	-48.5	-0.00804	mg/L	0.005603	-0.00804	mg/L	0.005603	69.74%
Si 251.611†	139019.6	2.52	mg/L	0.110	2.52	mg/L	0.110	4.37%
Sn 189.927†	-164.2	-0.0124	mg/L	0.00074	-0.0124	mg/L	0.00074	5.95%
Ti 334.940†	-3245.8	0.00015	mg/L	0.000232	0.00015	mg/L	0.000232	152.44%
Tl 190.801†	18.7	-0.00629	mg/L	0.000213	-0.00629	mg/L	0.000213	3.38%
V 290.880†	2403.5	-0.00164	mg/L	0.001204	-0.00164	mg/L	0.001204	73.66%
Zn 206.200†	3436.3	0.0545	mg/L	0.00096	0.0545	mg/L	0.00096	1.76%
K 766.490†	3178.4	0.924	mg/L	0.0189	0.924	mg/L	0.0189	2.04%
Na 589.592†	174210.5	7.96	mg/L	0.039	7.96	mg/L	0.039	0.49%
Sr 407.771†	388361.4	0.139	mg/L	0.0013	0.139	mg/L	0.0013	0.93%
Li 670.784†	1016.9	0.00266	mg/L	0.000462	0.00266	mg/L	0.000462	17.37%

Sequence No.: 3
Sample ID: L1207031602 0.1
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 28
Date Collected: 7/17/2012 2:01:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207031602 0.1

Analyte	Back Pressure	Flow
All	247.0 kPa	0.50 L/min

Mean Data: L1207031602 0.1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2425022.9						21104.36	0.87%
YRADIAL	311604.9						2498.12	0.80%
Ga 417.206	1429380.1						11052.65	0.77%
GaRADIAL	91202.5						851.86	0.93%
Ag 328.068†	-4256.9	0.00083	mg/L	0.000541	0.00083	mg/L	0.000541	65.00%
Al 396.153†	344.9	0.0305	mg/L	0.00284	0.0305	mg/L	0.00284	9.31%
As 188.979†	-9.7	0.00627	mg/L	0.001789	0.00627	mg/L	0.001789	28.52%
Ba 233.527†	1891.8	0.00860	mg/L	0.000160	0.00860	mg/L	0.000160	1.86%
Be 234.861†	9141.7	0.00071	mg/L	0.000265	0.00071	mg/L	0.000265	37.59%
B 249.677†	4391.4	0.0254	mg/L	0.00088	0.0254	mg/L	0.00088	3.46%
Ca 227.546†	19628.5	40.2	mg/L	1.44	40.2	mg/L	1.44	3.59%
Cd 228.802†	1.9	0.00044	mg/L	0.000038	0.00044	mg/L	0.000038	8.58%
Co 228.616†	2022.3	0.0423	mg/L	0.00029	0.0423	mg/L	0.00029	0.68%
Cr 267.716†	-157.4	-0.00210	mg/L	0.000183	-0.00210	mg/L	0.000183	8.71%
Cu 327.393†	-388.2	0.00113	mg/L	0.000043	0.00113	mg/L	0.000043	3.78%

Approved: July 18, 2012

Fe 239.562†	535340.9	33.0	mg/L	0.41	33.0	mg/L	0.41	1.26%
Mg 279.077†	18533.1	5.22	mg/L	0.055	5.22	mg/L	0.055	1.06%
Mn 257.610†	4853612.9	5.84	mg/L	0.040	5.84	mg/L	0.040	0.68%
Mo 202.031†	-13.8	0.00268	mg/L	0.000066	0.00268	mg/L	0.000066	2.45%
Ni 231.604†	7898.7	0.107	mg/L	0.0009	0.107	mg/L	0.0009	0.81%
Pb 220.353†	86.1	-0.00135	mg/L	0.001010	-0.00135	mg/L	0.001010	75.01%
Sb 206.836†	-18.3	0.00199	mg/L	0.001707	0.00199	mg/L	0.001707	85.83%
Se 196.026†	-18.7	-0.00293	mg/L	0.002922	-0.00293	mg/L	0.002922	99.85%
Si 251.611†	133669.3	2.42	mg/L	0.030	2.42	mg/L	0.030	1.26%
Sn 189.927†	-253.3	-0.0193	mg/L	0.00025	-0.0193	mg/L	0.00025	1.27%
Ti 334.940†	-7790.5	-0.00001	mg/L	0.000436	-0.00001	mg/L	0.000436	>999.9%
Tl 190.801†	-4.2	-0.00931	mg/L	0.003399	-0.00931	mg/L	0.003399	36.50%
V 290.880†	1259.0	0.00085	mg/L	0.001370	0.00085	mg/L	0.001370	161.93%
Zn 206.200†	3536.9	0.0571	mg/L	0.00086	0.0571	mg/L	0.00086	1.51%
K 766.490†	3450.5	1.01	mg/L	0.026	1.01	mg/L	0.026	2.62%
Na 589.592†	199361.4	9.11	mg/L	0.082	9.11	mg/L	0.082	0.90%
Sr 407.771†	636670.6	0.227	mg/L	0.0017	0.227	mg/L	0.0017	0.76%
Li 670.784†	863.4	0.00168	mg/L	0.000556	0.00168	mg/L	0.000556	33.07%

Sequence No.: 4 **Autosampler Location: 29**
Sample ID: L1207032702 **Date Collected: 7/17/2012 2:07:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032702

Analyte	Back Pressure	Flow
All	246.0 kPa	0.50 L/min

Mean Data: L1207032702

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2404070.8						9268.73	0.39%
YRADIAL	313662.0						3848.61	1.23%
Ga 417.206	1466018.6						25339.44	1.73%
GaRADIAL	94048.6						1527.45	1.62%
Ag 328.068†	251.1	0.00167	mg/L	0.000605	0.00167	mg/L	0.000605	36.23%
Al 396.153†	346.2	0.0265	mg/L	0.00122	0.0265	mg/L	0.00122	4.61%
As 188.979†	-12.0	-0.00224	mg/L	0.003331	-0.00224	mg/L	0.003331	148.63%
Ba 233.527†	16533.2	0.0965	mg/L	0.00107	0.0965	mg/L	0.00107	1.10%
Be 234.861†	200.8	0.00027	mg/L	0.000010	0.00027	mg/L	0.000010	3.84%
B 249.677†	2402.9	0.0232	mg/L	0.00044	0.0232	mg/L	0.00044	1.91%
Ca 227.546†	20542.4	41.1	mg/L	1.00	41.1	mg/L	1.00	2.42%
Cd 228.802†	-1.0	0.00017	mg/L	0.000096	0.00017	mg/L	0.000096	56.22%
Co 228.616†	-15.8	-0.00050	mg/L	0.000170	-0.00050	mg/L	0.000170	33.73%
Cr 267.716†	331.9	0.00288	mg/L	0.000206	0.00288	mg/L	0.000206	7.16%
Cu 327.393†	-247.3	0.00006	mg/L	0.000245	0.00006	mg/L	0.000245	383.22%
Fe 239.562†	1634.4	0.105	mg/L	0.0007	0.105	mg/L	0.0007	0.68%
Mg 279.077†	24377.0	6.88	mg/L	0.079	6.88	mg/L	0.079	1.15%
Mn 257.610†	73.4	0.00028	mg/L	0.000218	0.00028	mg/L	0.000218	79.09%
Mo 202.031†	144.5	0.00391	mg/L	0.000211	0.00391	mg/L	0.000211	5.40%
Ni 231.604†	15.0	-0.00236	mg/L	0.000212	-0.00236	mg/L	0.000212	8.96%
Pb 220.353†	40.2	0.00185	mg/L	0.001305	0.00185	mg/L	0.001305	70.47%
Sb 206.836†	-8.0	0.00268	mg/L	0.000600	0.00268	mg/L	0.000600	22.37%
Se 196.026†	1.8	0.00229	mg/L	0.000785	0.00229	mg/L	0.000785	34.19%
Si 251.611†	900435.1	16.3	mg/L	0.23	16.3	mg/L	0.23	1.39%
Sn 189.927†	-261.5	-0.0199	mg/L	0.00078	-0.0199	mg/L	0.00078	3.91%
Ti 334.940†	-7745.6	0.00030	mg/L	0.000124	0.00030	mg/L	0.000124	40.98%
Tl 190.801†	-25.9	-0.00868	mg/L	0.002342	-0.00868	mg/L	0.002342	26.98%
V 290.880†	1803.3	0.00722	mg/L	0.001166	0.00722	mg/L	0.001166	16.15%
Zn 206.200†	333.6	0.00609	mg/L	0.000149	0.00609	mg/L	0.000149	2.45%
K 766.490†	7028.7	2.11	mg/L	0.018	2.11	mg/L	0.018	0.86%
Na 589.592†	478324.3	21.9	mg/L	0.55	21.9	mg/L	0.55	2.52%
Sr 407.771†	1144622.2	0.407	mg/L	0.0095	0.407	mg/L	0.0095	2.33%
Li 670.784†	1393.0	0.00506	mg/L	0.000126	0.00506	mg/L	0.000126	2.48%

Sequence No.: 5 **Autosampler Location: 30**
Sample ID: L1207032703 **Date Collected: 7/17/2012 2:14:10 PM**

Approved: July 18, 2012
Kym H. Rhoden

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

Nebulizer Parameters: L1207032703

Analyte	Back Pressure	Flow
All	249.0 kPa	0.50 L/min

Mean Data: L1207032703

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2388171.8						35237.78	1.48%
YRADIAL	314471.8						2836.12	0.90%
Ga 417.206	1463517.4						12308.02	0.84%
GaRADIAL	94295.8						2891.37	3.07%
Ag 328.068†	322.1	0.00189	mg/L	0.000233	0.00189	mg/L	0.000233	12.29%
Al 396.153†	442.0	0.0400	mg/L	0.00075	0.0400	mg/L	0.00075	1.86%
As 188.979†	-3.8	-0.00017	mg/L	0.000560	-0.00017	mg/L	0.000560	324.23%
Ba 233.527†	16327.1	0.0953	mg/L	0.00063	0.0953	mg/L	0.00063	0.66%
Be 234.861†	187.9	0.00026	mg/L	0.000022	0.00026	mg/L	0.000022	8.51%
B 249.677†	2325.6	0.0225	mg/L	0.00014	0.0225	mg/L	0.00014	0.62%
Ca 227.546†	20186.8	40.4	mg/L	0.57	40.4	mg/L	0.57	1.40%
Cd 228.802†	-7.2	0.00006	mg/L	0.000099	0.00006	mg/L	0.000099	168.10%
Co 228.616†	-12.9	-0.00044	mg/L	0.000110	-0.00044	mg/L	0.000110	24.90%
Cr 267.716†	381.7	0.00326	mg/L	0.000066	0.00326	mg/L	0.000066	2.02%
Cu 327.393†	-168.6	0.00036	mg/L	0.000222	0.00036	mg/L	0.000222	62.50%
Fe 239.562†	1790.0	0.114	mg/L	0.0004	0.114	mg/L	0.0004	0.39%
Mg 279.077†	23846.6	6.73	mg/L	0.057	6.73	mg/L	0.057	0.85%
Mn 257.610†	346.0	0.00060	mg/L	0.000092	0.00060	mg/L	0.000092	15.26%
Mo 202.031†	164.8	0.00443	mg/L	0.000234	0.00443	mg/L	0.000234	5.28%
Ni 231.604†	36.9	-0.00206	mg/L	0.000199	-0.00206	mg/L	0.000199	9.68%
Pb 220.353†	35.4	0.00152	mg/L	0.000605	0.00152	mg/L	0.000605	39.80%
Sb 206.836†	-10.0	0.00230	mg/L	0.000947	0.00230	mg/L	0.000947	41.23%
Se 196.026†	4.7	0.00355	mg/L	0.001348	0.00355	mg/L	0.001348	37.92%
Si 251.611†	888462.2	16.0	mg/L	0.19	16.0	mg/L	0.19	1.16%
Sn 189.927†	-260.6	-0.0199	mg/L	0.00051	-0.0199	mg/L	0.00051	2.58%
Ti 334.940†	-7150.8	0.00074	mg/L	0.000286	0.00074	mg/L	0.000286	38.83%
Tl 190.801†	-16.7	-0.00644	mg/L	0.001298	-0.00644	mg/L	0.001298	20.16%
V 290.880†	1717.9	0.00690	mg/L	0.000576	0.00690	mg/L	0.000576	8.35%
Zn 206.200†	349.9	0.00636	mg/L	0.000174	0.00636	mg/L	0.000174	2.74%
K 766.490†	6891.2	2.07	mg/L	0.021	2.07	mg/L	0.021	1.02%
Na 589.592†	471107.7	21.6	mg/L	0.47	21.6	mg/L	0.47	2.20%
Sr 407.771†	1125393.5	0.400	mg/L	0.0148	0.400	mg/L	0.0148	3.69%
Li 670.784†	1363.2	0.00487	mg/L	0.000290	0.00487	mg/L	0.000290	5.96%

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Sequence No.: 6 **Autosampler Location: 31**
Sample ID: L1207032801 **Date Collected: 7/17/2012 2:21:06 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032801

Analyte	Back Pressure	Flow
All	252.0 kPa	0.50 L/min

Mean Data: L1207032801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2384046.7						10433.07	0.44%
YRADIAL	309389.4						2140.06	0.69%
Ga 417.206	1476648.9						30505.84	2.07%
GaRADIAL	93124.5						2705.01	2.90%
Ag 328.068†	231.4	0.00157	mg/L	0.000385	0.00157	mg/L	0.000385	24.53%
Al 396.153†	49.2	-0.0156	mg/L	0.00089	-0.0156	mg/L	0.00089	5.71%
As 188.979†	-9.8	-0.00171	mg/L	0.002704	-0.00171	mg/L	0.002704	158.35%
Ba 233.527†	18669.2	0.109	mg/L	0.0019	0.109	mg/L	0.0019	1.78%
Be 234.861†	186.6	0.00027	mg/L	0.000033	0.00027	mg/L	0.000033	12.13%

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B 249.677†	3221.2	0.0300	mg/L	0.00049	0.0300	mg/L	0.00049	1.64%
Ca 227.546†	23490.6	47.0	mg/L	0.51	47.0	mg/L	0.51	1.08%
Cd 228.802†	-2.8	0.00014	mg/L	0.000095	0.00014	mg/L	0.000095	68.78%
Co 228.616†	-25.5	-0.00071	mg/L	0.000134	-0.00071	mg/L	0.000134	18.87%
Cr 267.716†	335.6	0.00291	mg/L	0.000136	0.00291	mg/L	0.000136	4.69%
Cu 327.393†	-194.6	0.00025	mg/L	0.000707	0.00025	mg/L	0.000707	280.62%
Fe 239.562†	711.6	0.0477	mg/L	0.00054	0.0477	mg/L	0.00054	1.14%
Mg 279.077†	32629.4	9.20	mg/L	0.079	9.20	mg/L	0.079	0.85%
Mn 257.610†	-756.3	-0.00072	mg/L	0.000049	-0.00072	mg/L	0.000049	6.79%
Mo 202.031†	130.6	0.00355	mg/L	0.000214	0.00355	mg/L	0.000214	6.04%
Ni 231.604†	82.6	-0.00142	mg/L	0.000151	-0.00142	mg/L	0.000151	10.62%
Pb 220.353†	47.2	0.00238	mg/L	0.000734	0.00238	mg/L	0.000734	30.81%
Sb 206.836†	-7.5	0.00278	mg/L	0.001250	0.00278	mg/L	0.001250	44.99%
Se 196.026†	6.1	0.00410	mg/L	0.001571	0.00410	mg/L	0.001571	38.27%
Si 251.611†	955911.5	17.3	mg/L	0.31	17.3	mg/L	0.31	1.81%
Sn 189.927†	-268.7	-0.0205	mg/L	0.00092	-0.0205	mg/L	0.00092	4.48%
Ti 334.940†	-10494.6	-0.00132	mg/L	0.000301	-0.00132	mg/L	0.000301	22.82%
Tl 190.801†	-14.1	-0.00585	mg/L	0.000183	-0.00585	mg/L	0.000183	3.13%
V 290.880†	1717.8	0.00684	mg/L	0.001745	0.00684	mg/L	0.001745	25.51%
Zn 206.200†	259.1	0.00489	mg/L	0.000130	0.00489	mg/L	0.000130	2.66%
K 766.490†	8987.6	2.72	mg/L	0.033	2.72	mg/L	0.033	1.21%
Na 589.592†	534614.0	24.5	mg/L	0.56	24.5	mg/L	0.56	2.29%
Sr 407.771†	1358363.1	0.483	mg/L	0.0148	0.483	mg/L	0.0148	3.07%
Li 670.784†	1872.4	0.00811	mg/L	0.000478	0.00811	mg/L	0.000478	5.89%

Sequence No.: 7
Sample ID: L1207032802
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 32
Date Collected: 7/17/2012 2:28:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207032802

Analyte	Back Pressure	Flow
All	253.0 kPa	0.50 L/min

Mean Data: L1207032802

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2379756.6						45504.70	1.91%
YRADIAL	312307.5						2206.06	0.71%
Ga 417.206	1442799.1						28445.38	1.97%
GaRADIAL	94064.4						2415.92	2.57%
Ag 328.068†	187.1	0.00149	mg/L	0.000267	0.00149	mg/L	0.000267	17.91%
Al 396.153†	390.4	0.0327	mg/L	0.00165	0.0327	mg/L	0.00165	5.05%
As 188.979†	-2.4	0.00020	mg/L	0.000707	0.00020	mg/L	0.000707	350.42%
Ba 233.527†	24229.5	0.142	mg/L	0.0016	0.142	mg/L	0.0016	1.15%
Be 234.861†	158.7	0.00024	mg/L	0.000027	0.00024	mg/L	0.000027	11.34%
B 249.677†	3537.2	0.0327	mg/L	0.00065	0.0327	mg/L	0.00065	2.00%
Ca 227.546†	16419.2	32.9	mg/L	1.15	32.9	mg/L	1.15	3.49%
Cd 228.802†	-1.4	0.00015	mg/L	0.000044	0.00015	mg/L	0.000044	28.39%
Co 228.616†	-13.6	-0.00047	mg/L	0.000155	-0.00047	mg/L	0.000155	32.77%
Cr 267.716†	551.1	0.00458	mg/L	0.000158	0.00458	mg/L	0.000158	3.44%
Cu 327.393†	-14.7	0.00093	mg/L	0.000175	0.00093	mg/L	0.000175	18.91%
Fe 239.562†	1625.2	0.104	mg/L	0.0009	0.104	mg/L	0.0009	0.83%
Mg 279.077†	21211.9	5.99	mg/L	0.046	5.99	mg/L	0.046	0.77%
Mn 257.610†	503.5	0.00079	mg/L	0.000031	0.00079	mg/L	0.000031	3.90%
Mo 202.031†	188.6	0.00504	mg/L	0.000320	0.00504	mg/L	0.000320	6.34%
Ni 231.604†	27.9	-0.00218	mg/L	0.000193	-0.00218	mg/L	0.000193	8.82%
Pb 220.353†	39.1	0.00171	mg/L	0.000664	0.00171	mg/L	0.000664	38.79%
Sb 206.836†	-4.3	0.00338	mg/L	0.000768	0.00338	mg/L	0.000768	22.71%
Se 196.026†	0.5	0.00176	mg/L	0.002831	0.00176	mg/L	0.002831	160.73%
Si 251.611†	914639.5	16.5	mg/L	0.16	16.5	mg/L	0.16	0.96%
Sn 189.927†	-251.4	-0.0191	mg/L	0.00084	-0.0191	mg/L	0.00084	4.37%
Ti 334.940†	-5282.2	0.00131	mg/L	0.000349	0.00131	mg/L	0.000349	26.63%
Tl 190.801†	-19.5	-0.00709	mg/L	0.002580	-0.00709	mg/L	0.002580	36.36%
V 290.880†	2545.5	0.0101	mg/L	0.00124	0.0101	mg/L	0.00124	12.33%
Zn 206.200†	95.3	0.00226	mg/L	0.000195	0.00226	mg/L	0.000195	8.62%
K 766.490†	6573.1	1.97	mg/L	0.007	1.97	mg/L	0.007	0.36%
Na 589.592†	426793.0	19.5	mg/L	0.53	19.5	mg/L	0.53	2.72%

Approved: July 18, 2012

Kym H. Rhoden

Sr 407.771†	983946.7	0.350	mg/L	0.0099	0.350	mg/L	0.0099	2.81%
Li 670.784†	1724.2	0.00717	mg/L	0.000245	0.00717	mg/L	0.000245	3.42%

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Sequence No.: 8 **Autosampler Location: 33**
Sample ID: L1207032803 **Date Collected: 7/17/2012 2:35:00 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032803

Analyte	Back Pressure	Flow
All	257.0 kPa	0.50 L/min

Mean Data: L1207032803

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2339824.5						31869.97	1.36%
YRADIAL	312013.7						2788.61	0.89%
Ga 417.206	1454093.2						23955.08	1.65%
GaRADIAL	92915.5						2426.81	2.61%
Ag 328.068†	289.1	0.00177	mg/L	0.000557	0.00177	mg/L	0.000557	31.56%
Al 396.153†	75.9	-0.0118	mg/L	0.00054	-0.0118	mg/L	0.00054	4.53%
As 188.979†	-6.9	-0.00095	mg/L	0.001169	-0.00095	mg/L	0.001169	123.12%
Ba 233.527†	11892.0	0.0692	mg/L	0.00075	0.0692	mg/L	0.00075	1.09%
Be 234.861†	165.9	0.00025	mg/L	0.000031	0.00025	mg/L	0.000031	12.18%
B 249.677†	2163.7	0.0212	mg/L	0.00038	0.0212	mg/L	0.00038	1.77%
Ca 227.546†	25272.3	50.6	mg/L	0.41	50.6	mg/L	0.41	0.80%
Cd 228.802†	-0.8	0.00017	mg/L	0.000119	0.00017	mg/L	0.000119	70.44%
Co 228.616†	-16.5	-0.00050	mg/L	0.000109	-0.00050	mg/L	0.000109	21.63%
Cr 267.716†	193.7	0.00181	mg/L	0.000048	0.00181	mg/L	0.000048	2.66%
Cu 327.393†	-204.3	0.00022	mg/L	0.000421	0.00022	mg/L	0.000421	193.47%
Fe 239.562†	952.6	0.0626	mg/L	0.00054	0.0626	mg/L	0.00054	0.86%
Mg 279.077†	30255.2	8.54	mg/L	0.070	8.54	mg/L	0.070	0.82%
Mn 257.610†	-827.1	-0.00081	mg/L	0.000051	-0.00081	mg/L	0.000051	6.26%
Mo 202.031†	119.7	0.00327	mg/L	0.000077	0.00327	mg/L	0.000077	2.37%
Ni 231.604†	2.9	-0.00253	mg/L	0.000097	-0.00253	mg/L	0.000097	3.85%
Pb 220.353†	38.3	0.00180	mg/L	0.000133	0.00180	mg/L	0.000133	7.40%
Sb 206.836†	-5.8	0.00311	mg/L	0.000504	0.00311	mg/L	0.000504	16.21%
Se 196.026†	-5.1	-0.00063	mg/L	0.001494	-0.00063	mg/L	0.001494	237.20%
Si 251.611†	1107105.7	20.0	mg/L	0.19	20.0	mg/L	0.19	0.94%
Sn 189.927†	-285.6	-0.0218	mg/L	0.00076	-0.0218	mg/L	0.00076	3.51%
Ti 334.940†	-11049.6	-0.00129	mg/L	0.000291	-0.00129	mg/L	0.000291	22.53%
Tl 190.801†	-31.6	-0.0101	mg/L	0.00272	-0.0101	mg/L	0.00272	26.91%
V 290.880†	2124.2	0.00841	mg/L	0.000972	0.00841	mg/L	0.000972	11.55%
Zn 206.200†	153.6	0.00318	mg/L	0.000097	0.00318	mg/L	0.000097	3.06%
K 766.490†	10033.3	3.05	mg/L	0.025	3.05	mg/L	0.025	0.81%
Na 589.592†	575082.1	26.3	mg/L	0.56	26.3	mg/L	0.56	2.12%
Sr 407.771†	1224454.4	0.435	mg/L	0.0165	0.435	mg/L	0.0165	3.78%
Li 670.784†	1774.3	0.00749	mg/L	0.000334	0.00749	mg/L	0.000334	4.46%

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Sequence No.: 9 **Autosampler Location: 34**
Sample ID: L1207032804 WG403432-02 **Date Collected: 7/17/2012 2:41:58 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207032804 WG403432-02

Analyte	Back Pressure	Flow
All	260.0 kPa	0.50 L/min

Mean Data: L1207032804 WG403432-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2408194.0						24031.81	1.00%
YRADIAL	311960.9						4463.75	1.43%
Ga 417.206	1474900.5						28062.42	1.90%

Approved: July 18, 2012
Kym H. Rhoden

GaRADIAL	93799.7				1781.54	1.90%
Ag 328.068†	281.9	0.00174 mg/L	0.000105	0.00174 mg/L	0.000105	6.04%
Al 396.153†	95.4	-0.00907 mg/L	0.001354	-0.00907 mg/L	0.001354	14.93%
As 188.979†	-8.7	-0.00141 mg/L	0.001541	-0.00141 mg/L	0.001541	109.35%
Ba 233.527†	12522.7	0.0730 mg/L	0.00166	0.0730 mg/L	0.00166	2.28%
Be 234.861†	180.1	0.00027 mg/L	0.000019	0.00027 mg/L	0.000019	7.01%
B 249.677†	2160.0	0.0212 mg/L	0.00032	0.0212 mg/L	0.00032	1.51%
Ca 227.546†	22755.8	45.6 mg/L	0.92	45.6 mg/L	0.92	2.02%
Cd 228.802†	-4.1	0.00012 mg/L	0.000038	0.00012 mg/L	0.000038	32.61%
Co 228.616†	-14.4	-0.00046 mg/L	0.000308	-0.00046 mg/L	0.000308	66.52%
Cr 267.716†	255.2	0.00229 mg/L	0.000085	0.00229 mg/L	0.000085	3.74%
Cu 327.393†	-137.8	0.00046 mg/L	0.000270	0.00046 mg/L	0.000270	58.40%
Fe 239.562†	668.8	0.0451 mg/L	0.00104	0.0451 mg/L	0.00104	2.31%
Mg 279.077†	29489.3	8.32 mg/L	0.125	8.32 mg/L	0.125	1.51%
Mn 257.610†	-874.1	-0.00086 mg/L	0.000021	-0.00086 mg/L	0.000021	2.39%
Mo 202.031†	118.2	0.00323 mg/L	0.000182	0.00323 mg/L	0.000182	5.64%
Ni 231.604†	16.2	-0.00235 mg/L	0.000095	-0.00235 mg/L	0.000095	4.07%
Pb 220.353†	27.9	0.00104 mg/L	0.000304	0.00104 mg/L	0.000304	29.18%
Sb 206.836†	-12.4	0.00185 mg/L	0.000467	0.00185 mg/L	0.000467	25.26%
Se 196.026†	1.8	0.00227 mg/L	0.003180	0.00227 mg/L	0.003180	139.98%
Si 251.611†	1065637.7	19.2 mg/L	0.34	19.2 mg/L	0.34	1.77%
Sn 189.927†	-280.4	-0.0214 mg/L	0.00062	-0.0214 mg/L	0.00062	2.91%
Ti 334.940†	-9636.1	-0.00076 mg/L	0.000453	-0.00076 mg/L	0.000453	59.86%
Tl 190.801†	-15.3	-0.00614 mg/L	0.001363	-0.00614 mg/L	0.001363	22.19%
V 290.880†	1655.3	0.00663 mg/L	0.000283	0.00663 mg/L	0.000283	4.27%
Zn 206.200†	96.0	0.00225 mg/L	0.000059	0.00225 mg/L	0.000059	2.60%
K 766.490†	7562.8	2.28 mg/L	0.021	2.28 mg/L	0.021	0.94%
Na 589.592†	560085.6	25.6 mg/L	0.32	25.6 mg/L	0.32	1.25%
Sr 407.771†	1115039.1	0.396 mg/L	0.0153	0.396 mg/L	0.0153	3.86%
Li 670.784†	1598.3	0.00637 mg/L	0.000166	0.00637 mg/L	0.000166	2.60%

Sequence No.: 10 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 2:48:56 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	263.0 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	2357826.7						9269.02	0.39%
YRADIAL	316257.6						1704.62	0.54%
Ga 417.206	1308522.1						38052.46	2.91%
GaRADIAL	88295.2						718.64	0.81%
Ag 328.068†	129848.7	0.402	mg/L	0.0117	0.402	mg/L	0.0117	2.92%
QC value within limits for Ag 328.068 Recovery = 100.42%								
Al 396.153†	71005.7	9.99	mg/L	0.059	9.99	mg/L	0.059	0.60%
QC value within limits for Al 396.153 Recovery = 99.86%								
As 188.979†	1552.9	0.392	mg/L	0.0109	0.392	mg/L	0.0109	2.79%
QC value within limits for As 188.979 Recovery = 97.90%								
Ba 233.527†	171171.6	1.00	mg/L	0.005	1.00	mg/L	0.005	0.52%
QC value within limits for Ba 233.527 Recovery = 100.46%								
Be 234.861†	63559.0	0.0494	mg/L	0.00160	0.0494	mg/L	0.00160	3.24%
QC value within limits for Be 234.861 Recovery = 98.78%								
B 249.677†	59364.9	0.496	mg/L	0.0156	0.496	mg/L	0.0156	3.14%
QC value within limits for B 249.677 Recovery = 99.24%								
Ca 227.546†	4858.6	10.3	mg/L	0.31	10.3	mg/L	0.31	3.00%
QC value within limits for Ca 227.546 Recovery = 102.76%								
Cd 228.802†	2954.8	0.0480	mg/L	0.00238	0.0480	mg/L	0.00238	4.95%
QC value within limits for Cd 228.802 Recovery = 96.02%								
Co 228.616†	9401.8	0.201	mg/L	0.0009	0.201	mg/L	0.0009	0.45%
QC value within limits for Co 228.616 Recovery = 100.29%								
Cr 267.716†	64895.2	0.502	mg/L	0.0037	0.502	mg/L	0.0037	0.75%
QC value within limits for Cr 267.716 Recovery = 100.46%								
Cu 327.393†	136002.8	0.504	mg/L	0.0123	0.504	mg/L	0.0123	2.44%

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QC value within limits for Cu 327.393 Recovery = 100.87%
Fe 239.562† 64127.1 3.96 mg/L 0.024 3.96 mg/L 0.024 0.62%
QC value within limits for Fe 239.562 Recovery = 98.88%
Mg 279.077† 34865.1 9.85 mg/L 0.068 9.85 mg/L 0.068 0.69%
QC value within limits for Mg 279.077 Recovery = 98.50%
Mn 257.610† 418615.8 0.504 mg/L 0.0007 0.504 mg/L 0.0007 0.15%
QC value within limits for Mn 257.610 Recovery = 100.84%
Mo 202.031† 39551.7 1.02 mg/L 0.005 1.02 mg/L 0.005 0.47%
QC value within limits for Mo 202.031 Recovery = 101.63%
Ni 231.604† 37345.7 0.517 mg/L 0.0017 0.517 mg/L 0.0017 0.33%
QC value within limits for Ni 231.604 Recovery = 103.44%
Pb 220.353† 7335.4 0.507 mg/L 0.0011 0.507 mg/L 0.0011 0.22%
QC value within limits for Pb 220.353 Recovery = 101.30%
Sb 206.836† 6202.5 1.19 mg/L 0.041 1.19 mg/L 0.041 3.46%
QC value within limits for Sb 206.836 Recovery = 98.82%
Se 196.026† 947.0 0.405 mg/L 0.0088 0.405 mg/L 0.0088 2.17%
QC value within limits for Se 196.026 Recovery = 101.28%
Si 251.611† 277589.7 5.01 mg/L 0.100 5.01 mg/L 0.100 1.99%
QC value within limits for Si 251.611 Recovery = 100.22%
Sn 189.927† 13216.6 1.02 mg/L 0.004 1.02 mg/L 0.004 0.43%
QC value within limits for Sn 189.927 Recovery = 102.23%
Ti 334.940† 1106001.6 1.01 mg/L 0.001 1.01 mg/L 0.001 0.11%
QC value within limits for Ti 334.940 Recovery = 101.01%
Tl 190.801† 2139.7 0.532 mg/L 0.0052 0.532 mg/L 0.0052 0.97%
QC value within limits for Tl 190.801 Recovery = 106.37%
V 290.880† 263350.3 1.01 mg/L 0.008 1.01 mg/L 0.008 0.77%
QC value within limits for V 290.880 Recovery = 100.60%
Zn 206.200† 61624.7 0.999 mg/L 0.0122 0.999 mg/L 0.0122 1.22%
QC value within limits for Zn 206.200 Recovery = 99.94%
K 766.490† 156852.0 49.5 mg/L 0.02 49.5 mg/L 0.02 0.04%
QC value within limits for K 766.490 Recovery = 98.94%
Na 589.592† 1089966.0 49.9 mg/L 0.82 49.9 mg/L 0.82 1.64%
QC value within limits for Na 589.592 Recovery = 99.78%
Sr 407.771† 2791683.8 0.993 mg/L 0.0119 0.993 mg/L 0.0119 1.20%
QC value within limits for Sr 407.771 Recovery = 99.26%
Li 670.784† 161857.7 1.03 mg/L 0.007 1.03 mg/L 0.007 0.64%
QC value within limits for Li 670.784 Recovery = 102.76%
All analyte(s) passed QC.

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Sequence No.: 11 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/17/2012 2:54:55 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	261.0 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	2432148.9						31728.34	1.30%
YRADIAL	315621.0						1196.91	0.38%
Ga 417.206	1355210.2						28056.99	2.07%
GaRADIAL	89100.9						2907.84	3.26%
Ag 328.068†	-215.9	0.00027	mg/L	0.000241	0.00027	mg/L	0.000241	89.62%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	11.0	-0.0208	mg/L	0.00065	-0.0208	mg/L	0.00065	3.12%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-5.0	-0.00046	mg/L	0.001099	-0.00046	mg/L	0.001099	241.47%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	16.6	-0.00047	mg/L	0.000050	-0.00047	mg/L	0.000050	10.57%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	11.0	0.00014	mg/L	0.000020	0.00014	mg/L	0.000020	13.85%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	133.0	0.00420	mg/L	0.000087	0.00420	mg/L	0.000087	2.06%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	2.2	0.0961	mg/L	0.01770	0.0961	mg/L	0.01770	18.41%

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   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -2.6     0.00014 mg/L      0.000038     0.00014 mg/L      0.000038  27.52%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†              10.6     0.00007 mg/L      0.000303     0.00007 mg/L      0.000303 411.86%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -36.9     0.00003 mg/L      0.000155     0.00003 mg/L      0.000155 529.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -46.8     0.00080 mg/L      0.000176     0.00080 mg/L      0.000176  21.89%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              85.7     0.00936 mg/L      0.000399     0.00936 mg/L      0.000399   4.26%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              35.2      0.0232 mg/L       0.00396      0.0232 mg/L       0.00396  17.07%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1208.5    -0.00127 mg/L      0.000016    -0.00127 mg/L      0.000016   1.24%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.6     0.00021 mg/L      0.000229     0.00021 mg/L      0.000229 109.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -6.2    -0.00266 mg/L      0.000130    -0.00266 mg/L      0.000130   4.89%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               6.6    -0.00080 mg/L      0.000584    -0.00080 mg/L      0.000584  73.13%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -4.7     0.00332 mg/L      0.000726     0.00332 mg/L      0.000726  21.84%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.4     0.00137 mg/L      0.001048     0.00137 mg/L      0.001048  76.36%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              77.6      0.0132 mg/L       0.00154      0.0132 mg/L       0.00154  11.71%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               6.9     0.00083 mg/L      0.000254     0.00083 mg/L      0.000254  30.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              74.5     0.00127 mg/L      0.000054     0.00127 mg/L      0.000054   4.27%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -4.2    -0.00337 mg/L      0.000686    -0.00337 mg/L      0.000686  20.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -83.8     0.00020 mg/L      0.001971     0.00020 mg/L      0.001971 972.69%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -167.4    -0.00201 mg/L      0.000138    -0.00201 mg/L      0.000138   6.84%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -9.5     -0.0629 mg/L       0.00713     -0.0629 mg/L       0.00713  11.33%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -463.2     -0.0395 mg/L       0.00107     -0.0395 mg/L       0.00107   2.71%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             229.7     0.00145 mg/L      0.000009     0.00145 mg/L      0.000009   0.65%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              20.5    -0.00369 mg/L      0.000546    -0.00369 mg/L      0.000546  14.80%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 12                                    Autosampler Location: 35
Sample ID: L1207032805S WG403432-07                 Date Collected: 7/17/2012 3:01:49 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1207032805S WG403432-07
Analyte                  Back Pressure    Flow
All                    262.0 kPa         0.50 L/min

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Mean Data: L1207032805S WG403432-07
                    Mean Corrected          Calib.                          Sample
Analyte                Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2345631.8                                                       31670.13   1.35%
YRADIAL               318783.5                                                        4958.21   1.56%
Ga 417.206           1401814.2                                                       20213.43   1.44%
GaRADIAL               91292.8                                                         691.25   0.76%
Ag 328.068†            60695.1       0.188 mg/L        0.0030       0.188 mg/L        0.0030   1.62%
Al 396.153†            34446.0        4.83 mg/L         0.008        4.83 mg/L         0.008   0.17%
As 188.979†              710.5       0.179 mg/L        0.0018       0.179 mg/L        0.0018   0.99%
Ba 233.527†            95251.3       0.559 mg/L        0.0087       0.559 mg/L        0.0087   1.55%
Be 234.861†            29087.5      0.0227 mg/L       0.00034      0.0227 mg/L       0.00034   1.48%
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B 249.677†	112657.9	0.944	mg/L	0.0130	0.944	mg/L	0.0130	1.38%
Ca 227.546†	26019.9	52.3	mg/L	0.63	52.3	mg/L	0.63	1.20%
Cd 228.802†	1315.2	0.0215	mg/L	0.00069	0.0215	mg/L	0.00069	3.21%
Co 228.616†	4453.0	0.0949	mg/L	0.00191	0.0949	mg/L	0.00191	2.02%
Cr 267.716†	31554.0	0.244	mg/L	0.0022	0.244	mg/L	0.0022	0.88%
Cu 327.393†	62827.7	0.234	mg/L	0.0025	0.234	mg/L	0.0025	1.05%
Fe 239.562†	31373.5	1.94	mg/L	0.017	1.94	mg/L	0.017	0.90%
Mg 279.077†	45118.6	12.7	mg/L	0.12	12.7	mg/L	0.12	0.93%
Mn 257.610†	203447.3	0.245	mg/L	0.0046	0.245	mg/L	0.0046	1.88%
Mo 202.031†	19383.7	0.498	mg/L	0.0068	0.498	mg/L	0.0068	1.36%
Ni 231.604†	17838.9	0.246	mg/L	0.0039	0.246	mg/L	0.0039	1.60%
Pb 220.353†	3559.4	0.246	mg/L	0.0032	0.246	mg/L	0.0032	1.29%
Sb 206.836†	2878.2	0.553	mg/L	0.0074	0.553	mg/L	0.0074	1.34%
Se 196.026†	433.1	0.186	mg/L	0.0037	0.186	mg/L	0.0037	1.98%
Si 251.611†	1210351.9	21.9	mg/L	0.30	21.9	mg/L	0.30	1.37%
Sn 189.927†	6595.5	0.510	mg/L	0.0077	0.510	mg/L	0.0077	1.51%
Ti 334.940†	530294.1	0.492	mg/L	0.0020	0.492	mg/L	0.0020	0.40%
Tl 190.801†	1034.5	0.256	mg/L	0.0032	0.256	mg/L	0.0032	1.27%
V 290.880†	131967.9	0.504	mg/L	0.0052	0.504	mg/L	0.0052	1.02%
Zn 206.200†	29087.5	0.472	mg/L	0.0083	0.472	mg/L	0.0083	1.76%
K 766.490†	83431.3	26.1	mg/L	0.11	26.1	mg/L	0.11	0.43%
Na 589.592†	1112205.8	50.9	mg/L	0.41	50.9	mg/L	0.41	0.80%
Sr 407.771†	2439098.5	0.866	mg/L	0.0158	0.866	mg/L	0.0158	1.82%
Li 670.784†	82524.0	0.522	mg/L	0.0010	0.522	mg/L	0.0010	0.19%

Sequence No.: 13
Sample ID: L1207032806SD WG403432-08
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 36
Date Collected: 7/17/2012 3:07:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207032806SD WG403432-08

Analyte	Back Pressure	Flow
All	263.0 kPa	0.50 L/min

Mean Data: L1207032806SD WG403432-08

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2318753.8						13503.54	0.58%
YRADIAL	316724.0						5401.03	1.71%
Ga 417.206	1404599.1						41721.08	2.97%
GaRADIAL	90412.1						616.84	0.68%
Ag 328.068†	60043.4	0.186	mg/L	0.0066	0.186	mg/L	0.0066	3.54%
Al 396.153†	34536.2	4.85	mg/L	0.034	4.85	mg/L	0.034	0.71%
As 188.979†	698.4	0.176	mg/L	0.0039	0.176	mg/L	0.0039	2.20%
Ba 233.527†	95888.4	0.562	mg/L	0.0044	0.562	mg/L	0.0044	0.78%
Be 234.861†	28884.0	0.0225	mg/L	0.00079	0.0225	mg/L	0.00079	3.51%
B 249.677†	111670.5	0.936	mg/L	0.0379	0.936	mg/L	0.0379	4.05%
Ca 227.546†	26032.8	52.4	mg/L	2.12	52.4	mg/L	2.12	4.05%
Cd 228.802†	1313.3	0.0214	mg/L	0.00093	0.0214	mg/L	0.00093	4.32%
Co 228.616†	4460.3	0.0951	mg/L	0.00128	0.0951	mg/L	0.00128	1.34%
Cr 267.716†	31760.5	0.246	mg/L	0.0030	0.246	mg/L	0.0030	1.24%
Cu 327.393†	62556.5	0.233	mg/L	0.0076	0.233	mg/L	0.0076	3.27%
Fe 239.562†	32367.7	2.00	mg/L	0.019	2.00	mg/L	0.019	0.97%
Mg 279.077†	44892.8	12.7	mg/L	0.12	12.7	mg/L	0.12	0.98%
Mn 257.610†	205712.2	0.248	mg/L	0.0022	0.248	mg/L	0.0022	0.88%
Mo 202.031†	19361.8	0.498	mg/L	0.0031	0.498	mg/L	0.0031	0.62%
Ni 231.604†	17926.1	0.247	mg/L	0.0030	0.247	mg/L	0.0030	1.22%
Pb 220.353†	3581.7	0.247	mg/L	0.0021	0.247	mg/L	0.0021	0.86%
Sb 206.836†	2850.4	0.547	mg/L	0.0179	0.547	mg/L	0.0179	3.28%
Se 196.026†	437.6	0.188	mg/L	0.0055	0.188	mg/L	0.0055	2.92%
Si 251.611†	1200846.2	21.7	mg/L	0.46	21.7	mg/L	0.46	2.13%
Sn 189.927†	6626.4	0.513	mg/L	0.0071	0.513	mg/L	0.0071	1.39%
Ti 334.940†	527996.8	0.490	mg/L	0.0014	0.490	mg/L	0.0014	0.28%
Tl 190.801†	1028.3	0.254	mg/L	0.0012	0.254	mg/L	0.0012	0.46%
V 290.880†	132850.7	0.508	mg/L	0.0068	0.508	mg/L	0.0068	1.33%
Zn 206.200†	29855.3	0.485	mg/L	0.0084	0.485	mg/L	0.0084	1.74%
K 766.490†	82902.2	25.9	mg/L	0.17	25.9	mg/L	0.17	0.64%
Na 589.592†	1118900.3	51.2	mg/L	0.44	51.2	mg/L	0.44	0.85%

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Sr 407.771†	2440487.1	0.867 mg/L	0.0128	0.867 mg/L	0.0128	1.47%
Li 670.784†	81642.4	0.516 mg/L	0.0015	0.516 mg/L	0.0015	0.28%

Sequence No.: 14 **Autosampler Location: 37**
Sample ID: L1207037301 **Date Collected: 7/17/2012 3:13:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207037301

Analyte	Back Pressure	Flow
All	264.0 kPa	0.50 L/min

Mean Data: L1207037301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2371994.9						26272.14	1.11%
YRADIAL	318170.0						4103.06	1.29%
Ga 417.206	1460492.0						8922.00	0.61%
GaRADIAL	93773.2						2080.53	2.22%
Ag 328.068†	313.1	0.00183	mg/L	0.000404	0.00183	mg/L	0.000404	22.04%
Al 396.153†	152.6	-0.00109	mg/L	0.003654	-0.00109	mg/L	0.003654	334.00%
As 188.979†	-9.3	-0.00159	mg/L	0.000351	-0.00159	mg/L	0.000351	22.09%
Ba 233.527†	23016.4	0.135	mg/L	0.0014	0.135	mg/L	0.0014	1.05%
Be 234.861†	189.5	0.00028	mg/L	0.000022	0.00028	mg/L	0.000022	7.62%
B 249.677†	3132.6	0.0293	mg/L	0.00025	0.0293	mg/L	0.00025	0.85%
Ca 227.546†	21495.7	43.1	mg/L	0.95	43.1	mg/L	0.95	2.22%
Cd 228.802†	-4.6	0.00011	mg/L	0.000102	0.00011	mg/L	0.000102	93.81%
Co 228.616†	-25.8	-0.00072	mg/L	0.000373	-0.00072	mg/L	0.000373	51.50%
Cr 267.716†	804.0	0.00653	mg/L	0.000077	0.00653	mg/L	0.000077	1.18%
Cu 327.393†	-165.4	0.00036	mg/L	0.000267	0.00036	mg/L	0.000267	74.12%
Fe 239.562†	350.3	0.0255	mg/L	0.00035	0.0255	mg/L	0.00035	1.36%
Mg 279.077†	26311.4	7.42	mg/L	0.037	7.42	mg/L	0.037	0.49%
Mn 257.610†	-209.0	-0.00006	mg/L	0.000036	-0.00006	mg/L	0.000036	57.21%
Mo 202.031†	199.2	0.00531	mg/L	0.000141	0.00531	mg/L	0.000141	2.66%
Ni 231.604†	331.6	0.00205	mg/L	0.000429	0.00205	mg/L	0.000429	20.96%
Pb 220.353†	44.4	0.00216	mg/L	0.000276	0.00216	mg/L	0.000276	12.78%
Sb 206.836†	-4.6	0.00331	mg/L	0.001404	0.00331	mg/L	0.001404	42.42%
Se 196.026†	2.9	0.00278	mg/L	0.003564	0.00278	mg/L	0.003564	128.25%
Si 251.611†	1376375.3	24.9	mg/L	0.30	24.9	mg/L	0.30	1.22%
Sn 189.927†	-271.7	-0.0207	mg/L	0.00102	-0.0207	mg/L	0.00102	4.94%
Ti 334.940†	-9347.2	-0.00087	mg/L	0.000116	-0.00087	mg/L	0.000116	13.34%
Tl 190.801†	-17.1	-0.00656	mg/L	0.002655	-0.00656	mg/L	0.002655	40.48%
V 290.880†	2389.1	0.00945	mg/L	0.001734	0.00945	mg/L	0.001734	18.35%
Zn 206.200†	192.2	0.00384	mg/L	0.000096	0.00384	mg/L	0.000096	2.51%
K 766.490†	11443.1	3.50	mg/L	0.041	3.50	mg/L	0.041	1.18%
Na 589.592†	441074.4	20.2	mg/L	0.38	20.2	mg/L	0.38	1.88%
Sr 407.771†	1117579.7	0.397	mg/L	0.0176	0.397	mg/L	0.0176	4.43%
Li 670.784†	2106.5	0.00960	mg/L	0.000317	0.00960	mg/L	0.000317	3.30%

Sequence No.: 15 **Autosampler Location: 38**
Sample ID: L1207037302 **Date Collected: 7/17/2012 3:20:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207037302

Analyte	Back Pressure	Flow
All	273.0 kPa	0.50 L/min

Mean Data: L1207037302

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2321187.8						36154.49	1.56%
YRADIAL	309249.7						4699.20	1.52%
Ga 417.206	1463016.6						7863.95	0.54%

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GaRADIAL	92735.2					3556.86	3.84%
Ag 328.068†	574.8	0.00261	mg/L	0.000199	0.00261 mg/L	0.000199	7.62%
Al 396.153†	60.2	-0.0140	mg/L	0.00098	-0.0140 mg/L	0.00098	7.02%
As 188.979†	-13.3	-0.00256	mg/L	0.000254	-0.00256 mg/L	0.000254	9.93%
Ba 233.527†	9700.4	0.0564	mg/L	0.00059	0.0564 mg/L	0.00059	1.04%
Be 234.861†	235.7	0.00029	mg/L	0.000014	0.00029 mg/L	0.000014	4.96%
B 249.677†	10772.5	0.0932	mg/L	0.00020	0.0932 mg/L	0.00020	0.22%
Ca 227.546†	49017.1	98.1	mg/L	1.10	98.1 mg/L	1.10	1.12%
Cd 228.802†	-2.8	0.00014	mg/L	0.000042	0.00014 mg/L	0.000042	28.87%
Co 228.616†	-13.0	-0.00041	mg/L	0.000170	-0.00041 mg/L	0.000170	41.64%
Cr 267.716†	252.0	0.00226	mg/L	0.000144	0.00226 mg/L	0.000144	6.37%
Cu 327.393†	-402.8	-0.00052	mg/L	0.000316	-0.00052 mg/L	0.000316	60.58%
Fe 239.562†	2496.9	0.158	mg/L	0.0038	0.158 mg/L	0.0038	2.43%
Mg 279.077†	66206.1	18.7	mg/L	0.10	18.7 mg/L	0.10	0.56%
Mn 257.610†	91.0	0.00030	mg/L	0.000026	0.00030 mg/L	0.000026	8.79%
Mo 202.031†	65.3	0.00188	mg/L	0.000191	0.00188 mg/L	0.000191	10.16%
Ni 231.604†	63.7	-0.00168	mg/L	0.000112	-0.00168 mg/L	0.000112	6.63%
Pb 220.353†	51.0	0.00304	mg/L	0.000370	0.00304 mg/L	0.000370	12.17%
Sb 206.836†	-11.0	0.00211	mg/L	0.001282	0.00211 mg/L	0.001282	60.91%
Se 196.026†	-0.3	0.00140	mg/L	0.001373	0.00140 mg/L	0.001373	97.85%
Si 251.611†	982029.7	17.7	mg/L	0.04	17.7 mg/L	0.04	0.22%
Sn 189.927†	-327.0	-0.0250	mg/L	0.00069	-0.0250 mg/L	0.00069	2.78%
Ti 334.940†	-20707.1	-0.00297	mg/L	0.000698	-0.00297 mg/L	0.000698	23.51%
Tl 190.801†	-41.4	-0.0126	mg/L	0.00121	-0.0126 mg/L	0.00121	9.58%
V 290.880†	1438.7	0.00552	mg/L	0.001237	0.00552 mg/L	0.001237	22.43%
Zn 206.200†	64.1	0.00174	mg/L	0.000031	0.00174 mg/L	0.000031	1.79%
K 766.490†	10697.4	3.24	mg/L	0.058	3.24 mg/L	0.058	1.80%
Na 589.592†	985131.8	45.1	mg/L	2.03	45.1 mg/L	2.03	4.51%
Sr 407.771†	2180358.9	0.774	mg/L	0.0228	0.774 mg/L	0.0228	2.95%
Li 670.784†	2510.9	0.0122	mg/L	0.00058	0.0122 mg/L	0.00058	4.78%

Sequence No.: 16 **Autosampler Location: 39**
Sample ID: L1207037303 **Date Collected: 7/17/2012 3:27:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207037303

Analyte	Back Pressure	Flow
All	273.0 kPa	0.50 L/min

Mean Data: L1207037303

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2392012.3						16541.88	0.69%
YRADIAL	319784.2						3093.62	0.97%
Ga 417.206	1505445.5						22836.50	1.52%
GaRADIAL	93972.6						2276.07	2.42%
Ag 328.068†	164.0	0.00139	mg/L	0.000280	0.00139	mg/L	0.000280	20.17%
Al 396.153†	143.3	-0.00240	mg/L	0.001359	-0.00240	mg/L	0.001359	56.68%
As 188.979†	-11.9	-0.00226	mg/L	0.000572	-0.00226	mg/L	0.000572	25.30%
Ba 233.527†	20236.1	0.118	mg/L	0.0014	0.118	mg/L	0.0014	1.16%
Be 234.861†	190.8	0.00028	mg/L	0.000015	0.00028	mg/L	0.000015	5.11%
B 249.677†	3010.5	0.0283	mg/L	0.00049	0.0283	mg/L	0.00049	1.73%
Ca 227.546†	15936.3	31.9	mg/L	0.39	31.9	mg/L	0.39	1.22%
Cd 228.802†	-6.4	0.00008	mg/L	0.000055	0.00008	mg/L	0.000055	65.87%
Co 228.616†	-9.4	-0.00037	mg/L	0.000109	-0.00037	mg/L	0.000109	29.26%
Cr 267.716†	504.5	0.00422	mg/L	0.000159	0.00422	mg/L	0.000159	3.78%
Cu 327.393†	-124.7	0.00051	mg/L	0.000346	0.00051	mg/L	0.000346	67.29%
Fe 239.562†	261.4	0.0201	mg/L	0.00049	0.0201	mg/L	0.00049	2.46%
Mg 279.077†	22288.1	6.29	mg/L	0.039	6.29	mg/L	0.039	0.61%
Mn 257.610†	665.3	0.00099	mg/L	0.000029	0.00099	mg/L	0.000029	2.95%
Mo 202.031†	188.7	0.00504	mg/L	0.000083	0.00504	mg/L	0.000083	1.65%
Ni 231.604†	-5.9	-0.00265	mg/L	0.000351	-0.00265	mg/L	0.000351	13.22%
Pb 220.353†	40.9	0.00183	mg/L	0.000404	0.00183	mg/L	0.000404	22.02%
Sb 206.836†	-6.2	0.00301	mg/L	0.000733	0.00301	mg/L	0.000733	24.35%
Se 196.026†	2.9	0.00276	mg/L	0.000941	0.00276	mg/L	0.000941	34.14%
Si 251.611†	871116.4	15.7	mg/L	0.25	15.7	mg/L	0.25	1.61%
Sn 189.927†	-241.6	-0.0184	mg/L	0.00069	-0.0184	mg/L	0.00069	3.76%

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Ti 334.940†	-7087.3	-0.00048	mg/L	0.000282	-0.00048	mg/L	0.000282	58.78%
Tl 190.801†	-10.6	-0.00496	mg/L	0.002177	-0.00496	mg/L	0.002177	43.91%
V 290.880†	2279.6	0.00907	mg/L	0.000156	0.00907	mg/L	0.000156	1.72%
Zn 206.200†	125.6	0.00275	mg/L	0.000069	0.00275	mg/L	0.000069	2.49%
K 766.490†	5581.6	1.66	mg/L	0.031	1.66	mg/L	0.031	1.85%
Na 589.592†	432832.6	19.8	mg/L	0.71	19.8	mg/L	0.71	3.60%
Sr 407.771†	915624.8	0.326	mg/L	0.0090	0.326	mg/L	0.0090	2.78%
Li 670.784†	1299.5	0.00446	mg/L	0.000130	0.00446	mg/L	0.000130	2.92%

Sequence No.: 17 **Autosampler Location: 40**
Sample ID: L1207037306 **Date Collected: 7/17/2012 3:34:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207037306

Analyte	Back Pressure	Flow
All	289.0 kPa	0.50 L/min

Mean Data: L1207037306

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2277379.6						28903.98	1.27%
YRADIAL	309345.0						5413.09	1.75%
Ga 417.206	1419096.9						15923.20	1.12%
GaRADIAL	92744.3						936.89	1.01%
Ag 328.068†	1471.3	0.00531	mg/L	0.000410	0.00531	mg/L	0.000410	7.72%
Al 396.153†	2585.7	0.344	mg/L	0.0055	0.344	mg/L	0.0055	1.60%
As 188.979†	-13.5	-0.00259	mg/L	0.000322	-0.00259	mg/L	0.000322	12.43%
Ba 233.527†	10142.6	0.0590	mg/L	0.00068	0.0590	mg/L	0.00068	1.15%
Be 234.861†	331.8	0.00032	mg/L	0.000052	0.00032	mg/L	0.000052	16.13%
B 249.677†	1900.5	0.0188	mg/L	0.00022	0.0188	mg/L	0.00022	1.17%
Ca 227.546†	97985.4	196	mg/L	3.0	196	mg/L	3.0	1.51%
Cd 228.802†	7.8	0.00032	mg/L	0.000199	0.00032	mg/L	0.000199	61.67%
Co 228.616†	16.3	0.00021	mg/L	0.000355	0.00021	mg/L	0.000355	166.75%
Cr 267.716†	453.7	0.00382	mg/L	0.000115	0.00382	mg/L	0.000115	3.01%
Cu 327.393†	-496.6	-0.00086	mg/L	0.000739	-0.00086	mg/L	0.000739	86.40%
Fe 239.562†	5685.8	0.353	mg/L	0.0009	0.353	mg/L	0.0009	0.24%
Mg 279.077†	169208.2	47.7	mg/L	0.34	47.7	mg/L	0.34	0.71%
Mn 257.610†	8148.3	0.00999	mg/L	0.000198	0.00999	mg/L	0.000198	1.99%
Mo 202.031†	110.6	0.00306	mg/L	0.000274	0.00306	mg/L	0.000274	8.97%
Ni 231.604†	63.4	-0.00169	mg/L	0.000396	-0.00169	mg/L	0.000396	23.49%
Pb 220.353†	5.8	0.00075	mg/L	0.000187	0.00075	mg/L	0.000187	25.00%
Sb 206.836†	-14.6	0.00142	mg/L	0.001153	0.00142	mg/L	0.001153	81.25%
Se 196.026†	11.8	0.00660	mg/L	0.004074	0.00660	mg/L	0.004074	61.71%
Si 251.611†	1126540.7	20.3	mg/L	0.26	20.3	mg/L	0.26	1.29%
Sn 189.927†	-384.1	-0.0294	mg/L	0.00054	-0.0294	mg/L	0.00054	1.84%
Ti 334.940†	-19510.1	0.0128	mg/L	0.00158	0.0128	mg/L	0.00158	12.35%
Tl 190.801†	-35.7	-0.0112	mg/L	0.00251	-0.0112	mg/L	0.00251	22.41%
V 290.880†	2727.6	0.00966	mg/L	0.000243	0.00966	mg/L	0.000243	2.52%
Zn 206.200†	83.2	0.00205	mg/L	0.000056	0.00205	mg/L	0.000056	2.70%
K 766.490†	12270.2	3.72	mg/L	0.107	3.72	mg/L	0.107	2.88%
Na 589.592†	1082727.8	49.6	mg/L	0.27	49.6	mg/L	0.27	0.54%
Sr 407.771†	4042687.6	1.43	mg/L	0.028	1.43	mg/L	0.028	1.95%
Li 670.784†	2842.3	0.0143	mg/L	0.00083	0.0143	mg/L	0.00083	5.83%

Sequence No.: 18 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 3:40:48 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	281.0 kPa	0.50 L/min

Approved: July 18, 2012

Kym H. Rhoden

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2357790.0						19666.23	0.83%
YRADIAL	311652.7						4286.28	1.38%
Ga 417.206	1305653.3						19814.61	1.52%
GaRADIAL	86981.9						585.01	0.67%
Ag 328.068†	130009.7	0.402	mg/L	0.0069	0.402	mg/L	0.0069	1.72%
QC value within limits for Ag 328.068 Recovery = 100.55%								
Al 396.153†	71516.9	10.1	mg/L	0.02	10.1	mg/L	0.02	0.16%
QC value within limits for Al 396.153 Recovery = 100.58%								
As 188.979†	1555.0	0.392	mg/L	0.0053	0.392	mg/L	0.0053	1.36%
QC value within limits for As 188.979 Recovery = 98.02%								
Ba 233.527†	172123.7	1.01	mg/L	0.006	1.01	mg/L	0.006	0.64%
QC value within limits for Ba 233.527 Recovery = 101.02%								
Be 234.861†	63575.8	0.0494	mg/L	0.00091	0.0494	mg/L	0.00091	1.85%
QC value within limits for Be 234.861 Recovery = 98.79%								
B 249.677†	58892.6	0.492	mg/L	0.0111	0.492	mg/L	0.0111	2.25%
QC value within limits for B 249.677 Recovery = 98.45%								
Ca 227.546†	4904.0	10.4	mg/L	0.24	10.4	mg/L	0.24	2.28%
QC value within limits for Ca 227.546 Recovery = 103.66%								
Cd 228.802†	2947.1	0.0479	mg/L	0.00175	0.0479	mg/L	0.00175	3.66%
QC value within limits for Cd 228.802 Recovery = 95.75%								
Co 228.616†	9361.5	0.200	mg/L	0.0020	0.200	mg/L	0.0020	0.98%
QC value within limits for Co 228.616 Recovery = 99.86%								
Cr 267.716†	65145.2	0.504	mg/L	0.0037	0.504	mg/L	0.0037	0.74%
QC value within limits for Cr 267.716 Recovery = 100.84%								
Cu 327.393†	136166.4	0.505	mg/L	0.0117	0.505	mg/L	0.0117	2.32%
QC value within limits for Cu 327.393 Recovery = 100.99%								
Fe 239.562†	64577.2	3.98	mg/L	0.021	3.98	mg/L	0.021	0.52%
QC value within limits for Fe 239.562 Recovery = 99.57%								
Mg 279.077†	35229.7	9.95	mg/L	0.096	9.95	mg/L	0.096	0.97%
QC value within limits for Mg 279.077 Recovery = 99.53%								
Mn 257.610†	419283.7	0.505	mg/L	0.0052	0.505	mg/L	0.0052	1.03%
QC value within limits for Mn 257.610 Recovery = 101.00%								
Mo 202.031†	39725.5	1.02	mg/L	0.011	1.02	mg/L	0.011	1.09%
QC value within limits for Mo 202.031 Recovery = 102.07%								
Ni 231.604†	37217.9	0.515	mg/L	0.0047	0.515	mg/L	0.0047	0.92%
QC value within limits for Ni 231.604 Recovery = 103.09%								
Pb 220.353†	7321.2	0.506	mg/L	0.0028	0.506	mg/L	0.0028	0.55%
QC value within limits for Pb 220.353 Recovery = 101.11%								
Sb 206.836†	6211.5	1.19	mg/L	0.025	1.19	mg/L	0.025	2.08%
QC value within limits for Sb 206.836 Recovery = 98.96%								
Se 196.026†	934.1	0.400	mg/L	0.0072	0.400	mg/L	0.0072	1.79%
QC value within limits for Se 196.026 Recovery = 99.91%								
Si 251.611†	277897.5	5.02	mg/L	0.057	5.02	mg/L	0.057	1.14%
QC value within limits for Si 251.611 Recovery = 100.33%								
Sn 189.927†	13208.6	1.02	mg/L	0.010	1.02	mg/L	0.010	1.02%
QC value within limits for Sn 189.927 Recovery = 102.17%								
Ti 334.940†	1106349.4	1.01	mg/L	0.002	1.01	mg/L	0.002	0.17%
QC value within limits for Ti 334.940 Recovery = 101.05%								
Tl 190.801†	2128.1	0.529	mg/L	0.0058	0.529	mg/L	0.0058	1.09%
QC value within limits for Tl 190.801 Recovery = 105.81%								
V 290.880†	264098.5	1.01	mg/L	0.005	1.01	mg/L	0.005	0.46%
QC value within limits for V 290.880 Recovery = 100.89%								
Zn 206.200†	61872.9	1.00	mg/L	0.008	1.00	mg/L	0.008	0.77%
QC value within limits for Zn 206.200 Recovery = 100.34%								
K 766.490†	156036.2	49.2	mg/L	0.40	49.2	mg/L	0.40	0.81%
QC value within limits for K 766.490 Recovery = 98.42%								
Na 589.592†	1099421.8	50.3	mg/L	0.75	50.3	mg/L	0.75	1.50%
QC value within limits for Na 589.592 Recovery = 100.64%								
Sr 407.771†	2802270.4	0.996	mg/L	0.0239	0.996	mg/L	0.0239	2.40%
QC value within limits for Sr 407.771 Recovery = 99.64%								
Li 670.784†	162790.2	1.03	mg/L	0.013	1.03	mg/L	0.013	1.24%
QC value within limits for Li 670.784 Recovery = 103.36%								

All analyte(s) passed QC.

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Sequence No.: 19 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/17/2012 3:46:51 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: July 18, 2012

Kym H. Rhoden

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	279.0 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	2441948.3						25653.74	1.05%
YRADIAL	316105.8						4607.68	1.46%
Ga 417.206	1370550.2						4882.79	0.36%
GaRADIAL	89924.9						1463.40	1.63%
Ag 328.068†	-38.8	0.00081	mg/L	0.000334	0.00081	mg/L	0.000334	41.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	19.6	-0.0196	mg/L	0.00115	-0.0196	mg/L	0.00115	5.86%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-3.0	0.00004	mg/L	0.001662	0.00004	mg/L	0.001662	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	24.1	-0.00043	mg/L	0.000076	-0.00043	mg/L	0.000076	17.75%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	23.8	0.00015	mg/L	0.000015	0.00015	mg/L	0.000015	9.71%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	103.6	0.00395	mg/L	0.000144	0.00395	mg/L	0.000144	3.65%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-7.2	0.0772	mg/L	0.01262	0.0772	mg/L	0.01262	16.35%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-2.0	0.00015	mg/L	0.000044	0.00015	mg/L	0.000044	30.43%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	-1.0	-0.00017	mg/L	0.000159	-0.00017	mg/L	0.000159	91.84%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-37.8	0.00002	mg/L	0.000030	0.00002	mg/L	0.000030	134.25%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-165.7	0.00037	mg/L	0.000338	0.00037	mg/L	0.000338	92.62%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	59.5	0.00774	mg/L	0.000238	0.00774	mg/L	0.000238	3.08%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	37.3	0.0238	mg/L	0.00256	0.0238	mg/L	0.00256	10.77%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	-1239.9	-0.00131	mg/L	0.000035	-0.00131	mg/L	0.000035	2.65%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	6.3	0.00036	mg/L	0.000185	0.00036	mg/L	0.000185	51.78%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	-3.9	-0.00263	mg/L	0.000289	-0.00263	mg/L	0.000289	11.00%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	7.6	-0.00073	mg/L	0.000706	-0.00073	mg/L	0.000706	96.78%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-9.2	0.00247	mg/L	0.000811	0.00247	mg/L	0.000811	32.84%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	-6.5	-0.00125	mg/L	0.002016	-0.00125	mg/L	0.002016	161.38%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	86.4	0.0133	mg/L	0.00131	0.0133	mg/L	0.00131	9.84%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	1.5	0.00042	mg/L	0.000461	0.00042	mg/L	0.000461	111.04%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-82.1	0.00112	mg/L	0.000187	0.00112	mg/L	0.000187	16.68%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	-0.5	-0.00247	mg/L	0.001619	-0.00247	mg/L	0.001619	65.59%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	-126.2	0.00004	mg/L	0.001151	0.00004	mg/L	0.001151	>999.9%
QC value within limits for V 290.880 Recovery = Not calculated								
Zn 206.200†	-166.8	-0.00200	mg/L	0.000142	-0.00200	mg/L	0.000142	7.10%
QC value within limits for Zn 206.200 Recovery = Not calculated								
K 766.490†	66.2	-0.0393	mg/L	0.01451	-0.0393	mg/L	0.01451	36.95%
QC value within limits for K 766.490 Recovery = Not calculated								
Na 589.592†	-373.8	-0.0354	mg/L	0.00313	-0.0354	mg/L	0.00313	8.84%
QC value within limits for Na 589.592 Recovery = Not calculated								
Sr 407.771†	419.5	0.00152	mg/L	0.000010	0.00152	mg/L	0.000010	0.65%
QC value within limits for Sr 407.771 Recovery = Not calculated								
Li 670.784†	97.6	-0.00320	mg/L	0.000347	-0.00320	mg/L	0.000347	10.86%

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QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 20 **Autosampler Location: 51**
Sample ID: PBW 96 WG403092-03 **Date Collected: 7/17/2012 3:53:44 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: PBW 96 WG403092-03

Analyte	Back Pressure	Flow
All	278.0 kPa	0.50 L/min

Mean Data: PBW 96 WG403092-03

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2447059.8						5005.33	0.20%
YRADIAL	316574.9						4206.91	1.33%
Ga 417.206	1421102.6						30862.86	2.17%
GaRADIAL	90767.4						1974.42	2.18%
Ag 328.068†	-101.6	0.00062	mg/L	0.000037	0.00062	mg/L	0.000037	5.91%
Al 396.153†	22.2	-0.0193	mg/L	0.00136	-0.0193	mg/L	0.00136	7.08%
As 188.979†	-8.2	-0.00128	mg/L	0.001512	-0.00128	mg/L	0.001512	118.17%
Ba 233.527†	149.9	0.00031	mg/L	0.000094	0.00031	mg/L	0.000094	30.20%
Be 234.861†	76.0	0.00020	mg/L	0.000016	0.00020	mg/L	0.000016	8.12%
B 249.677†	97.7	0.00390	mg/L	0.000164	0.00390	mg/L	0.000164	4.21%
Ca 227.546†	13.8	0.119	mg/L	0.0116	0.119	mg/L	0.0116	9.74%
Cd 228.802†	3.8	0.00025	mg/L	0.000092	0.00025	mg/L	0.000092	36.85%
Co 228.616†	9.1	0.00004	mg/L	0.000192	0.00004	mg/L	0.000192	470.51%
Cr 267.716†	-50.7	-0.00008	mg/L	0.000009	-0.00008	mg/L	0.000009	11.41%
Cu 327.393†	-152.9	0.00041	mg/L	0.000360	0.00041	mg/L	0.000360	87.12%
Fe 239.562†	34.8	0.00622	mg/L	0.000826	0.00622	mg/L	0.000826	13.27%
Mg 279.077†	33.2	0.0226	mg/L	0.00241	0.0226	mg/L	0.00241	10.65%
Mn 257.610†	-1234.4	-0.00130	mg/L	0.000046	-0.00130	mg/L	0.000046	3.55%
Mo 202.031†	5.3	0.00033	mg/L	0.000095	0.00033	mg/L	0.000095	28.84%
Ni 231.604†	2.9	-0.00253	mg/L	0.000258	-0.00253	mg/L	0.000258	10.18%
Pb 220.353†	20.1	0.00013	mg/L	0.000622	0.00013	mg/L	0.000622	464.28%
Sb 206.836†	-4.5	0.00337	mg/L	0.000535	0.00337	mg/L	0.000535	15.89%
Se 196.026†	-0.6	0.00128	mg/L	0.001664	0.00128	mg/L	0.001664	130.07%
Si 251.611†	796.1	0.0261	mg/L	0.00128	0.0261	mg/L	0.00128	4.89%
Sn 189.927†	-1.1	0.00021	mg/L	0.000148	0.00021	mg/L	0.000148	71.21%
Ti 334.940†	206.1	0.00139	mg/L	0.000138	0.00139	mg/L	0.000138	9.92%
Tl 190.801†	3.4	-0.00152	mg/L	0.002341	-0.00152	mg/L	0.002341	154.49%
V 290.880†	177.0	0.00120	mg/L	0.000690	0.00120	mg/L	0.000690	57.46%
Zn 206.200†	-59.7	-0.00028	mg/L	0.000153	-0.00028	mg/L	0.000153	55.42%
K 766.490†	-14.8	-0.0646	mg/L	0.04216	-0.0646	mg/L	0.04216	65.28%
Na 589.592†	-397.1	-0.0365	mg/L	0.00100	-0.0365	mg/L	0.00100	2.73%
Sr 407.771†	506.1	0.00155	mg/L	0.000093	0.00155	mg/L	0.000093	6.03%
Li 670.784†	46.4	-0.00352	mg/L	0.000164	-0.00352	mg/L	0.000164	4.66%

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Sequence No.: 21 **Autosampler Location: 52**
Sample ID: LCSW 96 WG403092-04 **Date Collected: 7/17/2012 4:00:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 96 WG403092-04

Analyte	Back Pressure	Flow
All	278.0 kPa	0.50 L/min

Mean Data: LCSW 96 WG403092-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2363242.7						14716.12	0.62%
YRADIAL	318073.8						2524.15	0.79%
Ga 417.206	1368576.8						19950.75	1.46%

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GaRADIAL	88873.2					879.59	0.99%
Ag 328.068†	64142.6	0.199	mg/L	0.0027	0.199 mg/L	0.0027	1.34%
Al 396.153†	35359.8	4.96	mg/L	0.012	4.96 mg/L	0.012	0.23%
As 188.979†	737.7	0.186	mg/L	0.0031	0.186 mg/L	0.0031	1.66%
Ba 233.527†	86799.7	0.509	mg/L	0.0086	0.509 mg/L	0.0086	1.69%
Be 234.861†	30425.7	0.0237	mg/L	0.00020	0.0237 mg/L	0.00020	0.86%
B 249.677†	113834.9	0.954	mg/L	0.0113	0.954 mg/L	0.0113	1.18%
Ca 227.546†	2336.2	5.00	mg/L	0.066	5.00 mg/L	0.066	1.31%
Cd 228.802†	1420.8	0.0232	mg/L	0.00085	0.0232 mg/L	0.00085	3.66%
Co 228.616†	4752.8	0.101	mg/L	0.0014	0.101 mg/L	0.0014	1.34%
Cr 267.716†	32690.8	0.253	mg/L	0.0039	0.253 mg/L	0.0039	1.55%
Cu 327.393†	66848.4	0.248	mg/L	0.0031	0.248 mg/L	0.0031	1.25%
Fe 239.562†	31439.0	1.94	mg/L	0.012	1.94 mg/L	0.012	0.59%
Mg 279.077†	17451.6	4.94	mg/L	0.020	4.94 mg/L	0.020	0.41%
Mn 257.610†	212419.9	0.256	mg/L	0.0056	0.256 mg/L	0.0056	2.20%
Mo 202.031†	19753.1	0.508	mg/L	0.0099	0.508 mg/L	0.0099	1.96%
Ni 231.604†	18554.6	0.256	mg/L	0.0059	0.256 mg/L	0.0059	2.32%
Pb 220.353†	3728.1	0.257	mg/L	0.0036	0.257 mg/L	0.0036	1.41%
Sb 206.836†	3008.0	0.577	mg/L	0.0097	0.577 mg/L	0.0097	1.68%
Se 196.026†	455.3	0.196	mg/L	0.0028	0.196 mg/L	0.0028	1.45%
Si 251.611†	137800.1	2.49	mg/L	0.014	2.49 mg/L	0.014	0.57%
Sn 189.927†	6636.1	0.513	mg/L	0.0050	0.513 mg/L	0.0050	0.98%
Ti 334.940†	551705.8	0.504	mg/L	0.0021	0.504 mg/L	0.0021	0.42%
Tl 190.801†	1110.0	0.275	mg/L	0.0019	0.275 mg/L	0.0019	0.70%
V 290.880†	134160.6	0.513	mg/L	0.0053	0.513 mg/L	0.0053	1.04%
Zn 206.200†	31148.4	0.505	mg/L	0.0098	0.505 mg/L	0.0098	1.93%
K 766.490†	77803.6	24.4	mg/L	0.13	24.4 mg/L	0.13	0.53%
Na 589.592†	568889.0	26.0	mg/L	0.27	26.0 mg/L	0.27	1.03%
Sr 407.771†	1414707.7	0.504	mg/L	0.0103	0.504 mg/L	0.0103	2.04%
Li 670.784†	83857.1	0.531	mg/L	0.0015	0.531 mg/L	0.0015	0.28%

Sequence No.: 22 **Autosampler Location: 53**
Sample ID: L1207023502 WG403092-01 **Date Collected: 7/17/2012 4:06:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023502 WG403092-01

Analyte	Back Pressure	Flow
All	284.0 kPa	0.50 L/min

Mean Data: L1207023502 WG403092-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2299105.4						35971.37	1.56%
YRADIAL	312096.2						2675.86	0.86%
Ga 417.206	1403113.5						20480.07	1.46%
GaRADIAL	91182.7						1900.05	2.08%
Ag 328.068†	-44.6	0.00076	mg/L	0.000301	0.00076	mg/L	0.000301	39.49%
Al 396.153†	27.6	-0.0186	mg/L	0.00144	-0.0186	mg/L	0.00144	7.72%
As 188.979†	20.2	0.00593	mg/L	0.001152	0.00593	mg/L	0.001152	19.41%
Ba 233.527†	10626.2	0.0618	mg/L	0.00138	0.0618	mg/L	0.00138	2.23%
Be 234.861†	80.7	0.00020	mg/L	0.000033	0.00020	mg/L	0.000033	16.63%
B 249.677†	12448.2	0.107	mg/L	0.0014	0.107	mg/L	0.0014	1.34%
Ca 227.546†	2718.9	5.53	mg/L	0.062	5.53	mg/L	0.062	1.12%
Cd 228.802†	-2.2	0.00011	mg/L	0.000067	0.00011	mg/L	0.000067	59.79%
Co 228.616†	-0.7	-0.00018	mg/L	0.000099	-0.00018	mg/L	0.000099	54.45%
Cr 267.716†	6.6	0.00037	mg/L	0.000155	0.00037	mg/L	0.000155	42.22%
Cu 327.393†	-55.5	0.00077	mg/L	0.000606	0.00077	mg/L	0.000606	78.64%
Fe 239.562†	43.5	0.00672	mg/L	0.000258	0.00672	mg/L	0.000258	3.84%
Mg 279.077†	6084.6	1.73	mg/L	0.011	1.73	mg/L	0.011	0.65%
Mn 257.610†	-902.9	-0.00090	mg/L	0.000017	-0.00090	mg/L	0.000017	1.89%
Mo 202.031†	80.7	0.00227	mg/L	0.000224	0.00227	mg/L	0.000224	9.89%
Ni 231.604†	-18.0	-0.00282	mg/L	0.000359	-0.00282	mg/L	0.000359	12.72%
Pb 220.353†	7.7	-0.00067	mg/L	0.000595	-0.00067	mg/L	0.000595	88.24%
Sb 206.836†	-4.4	0.00338	mg/L	0.001588	0.00338	mg/L	0.001588	46.93%
Se 196.026†	-4.3	-0.00031	mg/L	0.001345	-0.00031	mg/L	0.001345	435.64%
Si 251.611†	252715.5	4.57	mg/L	0.030	4.57	mg/L	0.030	0.66%
Sn 189.927†	-74.3	-0.00545	mg/L	0.000442	-0.00545	mg/L	0.000442	8.11%

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Ti 334.940†	-1229.5	0.00090 mg/L	0.000081	0.00090 mg/L	0.000081	9.06%
Tl 190.801†	-10.8	-0.00496 mg/L	0.000609	-0.00496 mg/L	0.000609	12.28%
V 290.880†	1267.8	0.00532 mg/L	0.000911	0.00532 mg/L	0.000911	17.13%
Zn 206.200†	47.2	0.00145 mg/L	0.000121	0.00145 mg/L	0.000121	8.33%
K 766.490†	2890.7	0.641 mg/L	0.0118	0.641 mg/L	0.0118	1.84%
Na 589.592†	4405114.5	201 mg/L	3.6	201 mg/L	3.6	1.78%
Sr 407.771†	579896.9	0.207 mg/L	0.0085	0.207 mg/L	0.0085	4.09%
Li 670.784†	2244.1	0.0105 mg/L	0.00046	0.0105 mg/L	0.00046	4.41%

Sequence No.: 23 **Autosampler Location: 54**
Sample ID: L1207023504S WG403092-05 **Date Collected: 7/17/2012 4:13:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023504S WG403092-05

Analyte	Back Pressure	Flow
All	289.0 kPa	0.50 L/min

Mean Data: L1207023504S WG403092-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2294896.8						20832.56	0.91%
YRADIAL	317224.6						916.22	0.29%
Ga 417.206	1353954.3						20191.01	1.49%
GaRADIAL	88802.3						1367.27	1.54%
Ag 328.068†	62256.9	0.193	mg/L	0.0036	0.193	mg/L	0.0036	1.88%
Al 396.153†	34763.6	4.88	mg/L	0.010	4.88	mg/L	0.010	0.20%
As 188.979†	762.1	0.193	mg/L	0.0030	0.193	mg/L	0.0030	1.57%
Ba 233.527†	95113.3	0.558	mg/L	0.0051	0.558	mg/L	0.0051	0.91%
Be 234.861†	29840.5	0.0233	mg/L	0.00046	0.0233	mg/L	0.00046	1.98%
B 249.677†	123871.2	1.04	mg/L	0.017	1.04	mg/L	0.017	1.65%
Ca 227.546†	5213.5	10.7	mg/L	0.22	10.7	mg/L	0.22	2.05%
Cd 228.802†	1389.7	0.0226	mg/L	0.00073	0.0226	mg/L	0.00073	3.20%
Co 228.616†	4617.1	0.0984	mg/L	0.00145	0.0984	mg/L	0.00145	1.48%
Cr 267.716†	31678.4	0.245	mg/L	0.0022	0.245	mg/L	0.0022	0.90%
Cu 327.393†	65200.6	0.242	mg/L	0.0044	0.242	mg/L	0.0044	1.80%
Fe 239.562†	31030.0	1.92	mg/L	0.010	1.92	mg/L	0.010	0.55%
Mg 279.077†	23029.0	6.51	mg/L	0.023	6.51	mg/L	0.023	0.35%
Mn 257.610†	206377.2	0.249	mg/L	0.0036	0.249	mg/L	0.0036	1.46%
Mo 202.031†	19491.9	0.501	mg/L	0.0057	0.501	mg/L	0.0057	1.14%
Ni 231.604†	18546.5	0.256	mg/L	0.0033	0.256	mg/L	0.0033	1.28%
Pb 220.353†	3574.2	0.246	mg/L	0.0044	0.246	mg/L	0.0044	1.77%
Sb 206.836†	2936.6	0.564	mg/L	0.0091	0.564	mg/L	0.0091	1.61%
Se 196.026†	450.6	0.194	mg/L	0.0033	0.194	mg/L	0.0033	1.69%
Si 251.611†	400440.3	7.23	mg/L	0.084	7.23	mg/L	0.084	1.16%
Sn 189.927†	6539.8	0.506	mg/L	0.0068	0.506	mg/L	0.0068	1.35%
Ti 334.940†	542760.5	0.497	mg/L	0.0024	0.497	mg/L	0.0024	0.49%
Tl 190.801†	1020.1	0.253	mg/L	0.0037	0.253	mg/L	0.0037	1.47%
V 290.880†	132372.7	0.506	mg/L	0.0044	0.506	mg/L	0.0044	0.87%
Zn 206.200†	30640.9	0.497	mg/L	0.0064	0.497	mg/L	0.0064	1.29%
K 766.490†	78931.3	24.5	mg/L	0.17	24.5	mg/L	0.17	0.68%
Na 589.592†	5061951.2	231	mg/L	7.5	231	mg/L	7.5	3.25%
Sr 407.771†	1935221.8	0.688	mg/L	0.0175	0.688	mg/L	0.0175	2.55%
Li 670.784†	82826.6	0.524	mg/L	0.0054	0.524	mg/L	0.0054	1.02%

Sequence No.: 24 **Autosampler Location: 55**
Sample ID: L1207023506SD WG403092-06 **Date Collected: 7/17/2012 4:19:38 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023506SD WG403092-06

Analyte	Back Pressure	Flow
All	295.0 kPa	0.50 L/min

Approved: July 18, 2012
Kym H. Rhoden

Mean Data: L1207023506SD WG403092-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2311858.1						11650.25	0.50%
YRADIAL	312363.6						4233.77	1.36%
Ga 417.206	1363707.4						33454.19	2.45%
GaRADIAL	87989.4						1654.57	1.88%
Ag 328.068†	63225.2	0.196	mg/L	0.0066	0.196	mg/L	0.0066	3.38%
Al 396.153†	35161.8	4.93	mg/L	0.027	4.93	mg/L	0.027	0.54%
As 188.979†	764.3	0.193	mg/L	0.0055	0.193	mg/L	0.0055	2.87%
Ba 233.527†	95742.7	0.562	mg/L	0.0006	0.562	mg/L	0.0006	0.11%
Be 234.861†	30150.4	0.0235	mg/L	0.00084	0.0235	mg/L	0.00084	3.58%
B 249.677†	126979.3	1.06	mg/L	0.042	1.06	mg/L	0.042	3.93%
Ca 227.546†	5304.4	10.9	mg/L	0.26	10.9	mg/L	0.26	2.34%
Cd 228.802†	1406.9	0.0229	mg/L	0.00108	0.0229	mg/L	0.00108	4.72%
Co 228.616†	4649.9	0.0991	mg/L	0.00098	0.0991	mg/L	0.00098	0.99%
Cr 267.716†	31993.5	0.248	mg/L	0.0025	0.248	mg/L	0.0025	0.99%
Cu 327.393†	67155.0	0.250	mg/L	0.0083	0.250	mg/L	0.0083	3.31%
Fe 239.562†	31441.3	1.94	mg/L	0.026	1.94	mg/L	0.026	1.33%
Mg 279.077†	23323.2	6.59	mg/L	0.074	6.59	mg/L	0.074	1.13%
Mn 257.610†	208338.2	0.251	mg/L	0.0017	0.251	mg/L	0.0017	0.67%
Mo 202.031†	19617.2	0.504	mg/L	0.0028	0.504	mg/L	0.0028	0.56%
Ni 231.604†	18651.9	0.257	mg/L	0.0016	0.257	mg/L	0.0016	0.61%
Pb 220.353†	3586.9	0.247	mg/L	0.0016	0.247	mg/L	0.0016	0.63%
Sb 206.836†	2962.7	0.569	mg/L	0.0169	0.569	mg/L	0.0169	2.97%
Se 196.026†	452.8	0.195	mg/L	0.0017	0.195	mg/L	0.0017	0.86%
Si 251.611†	411362.7	7.43	mg/L	0.190	7.43	mg/L	0.190	2.55%
Sn 189.927†	6629.4	0.513	mg/L	0.0046	0.513	mg/L	0.0046	0.90%
Ti 334.940†	546992.2	0.501	mg/L	0.0034	0.501	mg/L	0.0034	0.67%
Tl 190.801†	1032.3	0.256	mg/L	0.0010	0.256	mg/L	0.0010	0.40%
V 290.880†	133756.1	0.511	mg/L	0.0030	0.511	mg/L	0.0030	0.59%
Zn 206.200†	30607.8	0.497	mg/L	0.0038	0.497	mg/L	0.0038	0.76%
K 766.490†	79855.6	24.8	mg/L	0.02	24.8	mg/L	0.02	0.08%
Na 589.592†	5219155.4	239	mg/L	3.1	239	mg/L	3.1	1.28%
Sr 407.771†	1988785.8	0.707	mg/L	0.0051	0.707	mg/L	0.0051	0.72%
Li 670.784†	84049.9	0.532	mg/L	0.0020	0.532	mg/L	0.0020	0.38%

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Sequence No.: 25 **Autosampler Location: 56**
Sample ID: L1207023508 **Date Collected: 7/17/2012 4:25:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023508

Analyte	Back Pressure	Flow
All	291.0 kPa	0.50 L/min

Mean Data: L1207023508

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2336770.6						27857.01	1.19%
YRADIAL	313209.7						6352.23	2.03%
Ga 417.206	1455244.5						23227.00	1.60%
GaRADIAL	91389.1						1570.30	1.72%
Ag 328.068†	427.3	0.00207	mg/L	0.000086	0.00207	mg/L	0.000086	4.18%
Al 396.153†	-24.3	-0.0260	mg/L	0.00072	-0.0260	mg/L	0.00072	2.76%
As 188.979†	-12.6	-0.00240	mg/L	0.000139	-0.00240	mg/L	0.000139	5.80%
Ba 233.527†	17167.9	0.100	mg/L	0.0011	0.100	mg/L	0.0011	1.12%
Be 234.861†	140.6	0.00025	mg/L	0.000022	0.00025	mg/L	0.000022	8.96%
B 249.677†	2787.2	0.0264	mg/L	0.00064	0.0264	mg/L	0.00064	2.43%
Ca 227.546†	30551.3	61.1	mg/L	1.15	61.1	mg/L	1.15	1.88%
Cd 228.802†	-2.1	0.00016	mg/L	0.000122	0.00016	mg/L	0.000122	78.08%
Co 228.616†	0.9	-0.00014	mg/L	0.000113	-0.00014	mg/L	0.000113	82.92%
Cr 267.716†	114.0	0.00120	mg/L	0.000080	0.00120	mg/L	0.000080	6.66%
Cu 327.393†	-244.4	0.00006	mg/L	0.000248	0.00006	mg/L	0.000248	399.56%
Fe 239.562†	50.5	0.00650	mg/L	0.000747	0.00650	mg/L	0.000747	11.50%
Mg 279.077†	122330.3	34.5	mg/L	0.50	34.5	mg/L	0.50	1.44%
Mn 257.610†	-543.5	-0.00047	mg/L	0.000007	-0.00047	mg/L	0.000007	1.48%
Mo 202.031†	65.6	0.00188	mg/L	0.000284	0.00188	mg/L	0.000284	15.12%

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Ni 231.604†	0.9	-0.00256	mg/L	0.000301	-0.00256	mg/L	0.000301	11.74%
Pb 220.353†	31.1	0.00138	mg/L	0.000517	0.00138	mg/L	0.000517	37.41%
Sb 206.836†	-6.8	0.00291	mg/L	0.000779	0.00291	mg/L	0.000779	26.78%
Se 196.026†	-0.7	0.00121	mg/L	0.001003	0.00121	mg/L	0.001003	83.10%
Si 251.611†	173770.6	3.15	mg/L	0.054	3.15	mg/L	0.054	1.71%
Sn 189.927†	-283.3	-0.0216	mg/L	0.00070	-0.0216	mg/L	0.00070	3.22%
Ti 334.940†	-13363.0	-0.00182	mg/L	0.000439	-0.00182	mg/L	0.000439	24.20%
Tl 190.801†	-19.7	-0.00725	mg/L	0.001877	-0.00725	mg/L	0.001877	25.89%
V 290.880†	1096.8	0.00382	mg/L	0.000414	0.00382	mg/L	0.000414	10.84%
Zn 206.200†	-54.0	-0.00017	mg/L	0.000071	-0.00017	mg/L	0.000071	40.36%
K 766.490†	11999.1	3.65	mg/L	0.012	3.65	mg/L	0.012	0.32%
Na 589.592†	937826.6	42.9	mg/L	0.77	42.9	mg/L	0.77	1.79%
Sr 407.771†	2531487.1	0.899	mg/L	0.0467	0.899	mg/L	0.0467	5.19%
Li 670.784†	2182.8	0.0101	mg/L	0.00085	0.0101	mg/L	0.00085	8.40%

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Sequence No.: 26 **Autosampler Location: 57**
Sample ID: L1207023510 **Date Collected: 7/17/2012 4:32:39 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023510

Analyte	Back Pressure	Flow
All	291.0 kPa	0.50 L/min

Mean Data: L1207023510

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2333428.4						33785.70	1.45%
YRADIAL	303186.8						4332.67	1.43%
Ga 417.206	1429013.8						13673.27	0.96%
GaRADIAL	89465.9						1665.75	1.86%
Ag 328.068†	647.8	0.00238	mg/L	0.000514	0.00238	mg/L	0.000514	21.57%
Al 396.153†	16.3	-0.0201	mg/L	0.00150	-0.0201	mg/L	0.00150	7.46%
As 188.979†	-14.8	-0.00295	mg/L	0.001678	-0.00295	mg/L	0.001678	56.93%
Ba 233.527†	19380.0	0.113	mg/L	0.0019	0.113	mg/L	0.0019	1.67%
Be 234.861†	0.6	0.00040	mg/L	0.000013	0.00040	mg/L	0.000013	3.30%
B 249.677†	3122.4	0.0292	mg/L	0.00035	0.0292	mg/L	0.00035	1.19%
Ca 227.546†	30071.4	60.2	mg/L	0.78	60.2	mg/L	0.78	1.29%
Cd 228.802†	-3.2	0.00014	mg/L	0.000117	0.00014	mg/L	0.000117	83.81%
Co 228.616†	-9.1	-0.00036	mg/L	0.000079	-0.00036	mg/L	0.000079	21.98%
Cr 267.716†	120.9	0.00125	mg/L	0.000107	0.00125	mg/L	0.000107	8.58%
Cu 327.393†	-350.8	-0.00033	mg/L	0.000097	-0.00033	mg/L	0.000097	29.73%
Fe 239.562†	1141.5	0.0737	mg/L	0.00058	0.0737	mg/L	0.00058	0.79%
Mg 279.077†	128014.9	36.1	mg/L	0.36	36.1	mg/L	0.36	0.98%
Mn 257.610†	2320122.2	2.79	mg/L	0.026	2.79	mg/L	0.026	0.94%
Mo 202.031†	38.8	0.00178	mg/L	0.000254	0.00178	mg/L	0.000254	14.27%
Ni 231.604†	55.3	-0.00180	mg/L	0.000074	-0.00180	mg/L	0.000074	4.10%
Pb 220.353†	27.2	-0.00057	mg/L	0.000545	-0.00057	mg/L	0.000545	95.04%
Sb 206.836†	-7.1	0.00286	mg/L	0.000854	0.00286	mg/L	0.000854	29.88%
Se 196.026†	2.5	0.00175	mg/L	0.001626	0.00175	mg/L	0.001626	93.11%
Si 251.611†	168913.4	3.06	mg/L	0.013	3.06	mg/L	0.013	0.41%
Sn 189.927†	-280.4	-0.0214	mg/L	0.00038	-0.0214	mg/L	0.00038	1.78%
Ti 334.940†	-12828.6	-0.00147	mg/L	0.000475	-0.00147	mg/L	0.000475	32.29%
Tl 190.801†	-11.7	-0.00810	mg/L	0.000873	-0.00810	mg/L	0.000873	10.78%
V 290.880†	1292.8	0.00451	mg/L	0.002353	0.00451	mg/L	0.002353	52.12%
Zn 206.200†	-88.9	-0.00074	mg/L	0.000179	-0.00074	mg/L	0.000179	24.24%
K 766.490†	22207.4	6.85	mg/L	0.028	6.85	mg/L	0.028	0.41%
Na 589.592†	725509.2	33.2	mg/L	1.00	33.2	mg/L	1.00	3.00%
Sr 407.771†	2897296.1	1.03	mg/L	0.033	1.03	mg/L	0.033	3.24%
Li 670.784†	1967.6	0.00872	mg/L	0.000273	0.00872	mg/L	0.000273	3.14%

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Sequence No.: 27 **Autosampler Location: 58**
Sample ID: L1207023510PS WG403584-01 **Date Collected: 7/17/2012 4:39:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 18, 2012

Kym H. Rhoden

Nebulizer Parameters: L1207023510PS WG403584-01

Analyte	Back Pressure	Flow
All	289.0 kPa	0.50 L/min

Mean Data: L1207023510PS WG403584-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2307374.2						10650.33	0.46%
YRADIAL	315679.8						3214.36	1.02%
Ga 417.206	1367736.6						38483.09	2.81%
GaRADIAL	89238.9						947.27	1.06%
Ag 328.068†	62900.2	0.195	mg/L	0.0055	0.195	mg/L	0.0055	2.83%
Al 396.153†	35389.0	4.97	mg/L	0.021	4.97	mg/L	0.021	0.43%
As 188.979†	724.2	0.183	mg/L	0.0065	0.183	mg/L	0.0065	3.54%
Ba 233.527†	100223.3	0.588	mg/L	0.0014	0.588	mg/L	0.0014	0.23%
Be 234.861†	29718.1	0.0234	mg/L	0.00069	0.0234	mg/L	0.00069	2.96%
B 249.677†	115284.3	0.966	mg/L	0.0284	0.966	mg/L	0.0284	2.94%
Ca 227.546†	30625.7	61.5	mg/L	2.04	61.5	mg/L	2.04	3.31%
Cd 228.802†	1366.0	0.0223	mg/L	0.00120	0.0223	mg/L	0.00120	5.38%
Co 228.616†	4481.2	0.0955	mg/L	0.00032	0.0955	mg/L	0.00032	0.34%
Cr 267.716†	32067.0	0.248	mg/L	0.0017	0.248	mg/L	0.0017	0.70%
Cu 327.393†	64430.0	0.239	mg/L	0.0064	0.239	mg/L	0.0064	2.69%
Fe 239.562†	31134.7	1.92	mg/L	0.009	1.92	mg/L	0.009	0.47%
Mg 279.077†	129159.0	36.4	mg/L	0.22	36.4	mg/L	0.22	0.62%
Mn 257.610†	2257351.2	2.72	mg/L	0.005	2.72	mg/L	0.005	0.19%
Mo 202.031†	19568.8	0.503	mg/L	0.0002	0.503	mg/L	0.0002	0.04%
Ni 231.604†	18021.3	0.248	mg/L	0.0009	0.248	mg/L	0.0009	0.35%
Pb 220.353†	3603.6	0.247	mg/L	0.0016	0.247	mg/L	0.0016	0.65%
Sb 206.836†	2961.7	0.568	mg/L	0.0179	0.568	mg/L	0.0179	3.14%
Se 196.026†	457.2	0.196	mg/L	0.0104	0.196	mg/L	0.0104	5.34%
Si 251.611†	293215.1	5.30	mg/L	0.128	5.30	mg/L	0.128	2.42%
Sn 189.927†	-280.6	-0.0214	mg/L	0.00043	-0.0214	mg/L	0.00043	1.99%
Ti 334.940†	533568.8	0.496	mg/L	0.0013	0.496	mg/L	0.0013	0.25%
Tl 190.801†	1028.1	0.252	mg/L	0.0043	0.252	mg/L	0.0043	1.72%
V 290.880†	134352.1	0.513	mg/L	0.0056	0.513	mg/L	0.0056	1.09%
Zn 206.200†	28977.8	0.470	mg/L	0.0023	0.470	mg/L	0.0023	0.48%
K 766.490†	97599.4	30.6	mg/L	0.16	30.6	mg/L	0.16	0.52%
Na 589.592†	1204801.8	55.1	mg/L	0.59	55.1	mg/L	0.59	1.07%
Sr 407.771†	3823619.6	1.36	mg/L	0.013	1.36	mg/L	0.013	0.99%
Li 670.784†	85367.9	0.540	mg/L	0.0005	0.540	mg/L	0.0005	0.09%

Sequence No.: 28 **Autosampler Location: 59**
Sample ID: L1207023510DL WG403584-02 **Date Collected: 7/17/2012 4:45:47 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023510DL WG403584-02

Analyte	Back Pressure	Flow
All	289.0 kPa	0.50 L/min

Mean Data: L1207023510DL WG403584-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2414811.4						24735.06	1.02%
YRADIAL	312818.5						4565.86	1.46%
Ga 417.206	1416711.9						22196.64	1.57%
GaRADIAL	90012.9						1382.76	1.54%
Ag 328.068†	45.3	0.00097	mg/L	0.000116	0.00097	mg/L	0.000116	12.00%
Al 396.153†	13.0	-0.0206	mg/L	0.00084	-0.0206	mg/L	0.00084	4.09%
As 188.979†	-5.1	-0.00050	mg/L	0.001320	-0.00050	mg/L	0.001320	265.22%
Ba 233.527†	4064.5	0.0233	mg/L	0.00012	0.0233	mg/L	0.00012	0.54%
Be 234.861†	46.0	0.00023	mg/L	0.000013	0.00023	mg/L	0.000013	5.90%
B 249.677†	868.0	0.0103	mg/L	0.00029	0.0103	mg/L	0.00029	2.81%
Ca 227.546†	6084.1	12.3	mg/L	0.21	12.3	mg/L	0.21	1.73%
Cd 228.802†	-5.4	0.00009	mg/L	0.000171	0.00009	mg/L	0.000171	184.89%
Co 228.616†	1.6	-0.00012	mg/L	0.000240	-0.00012	mg/L	0.000240	199.88%

Approved: July 18, 2012

Kym H. Rhoden

Cr 267.716†	3.9	0.00035 mg/L	0.000073	0.00035 mg/L	0.000073	21.13%
Cu 327.393†	-137.1	0.00047 mg/L	0.000066	0.00047 mg/L	0.000066	14.09%
Fe 239.562†	248.6	0.0193 mg/L	0.00035	0.0193 mg/L	0.00035	1.81%
Mg 279.077†	25209.5	7.11 mg/L	0.120	7.11 mg/L	0.120	1.69%
Mn 257.610†	473064.0	0.569 mg/L	0.0076	0.569 mg/L	0.0076	1.34%
Mo 202.031†	20.0	0.00083 mg/L	0.000458	0.00083 mg/L	0.000458	55.22%
Ni 231.604†	17.9	-0.00233 mg/L	0.000155	-0.00233 mg/L	0.000155	6.67%
Pb 220.353†	8.7	-0.00090 mg/L	0.001244	-0.00090 mg/L	0.001244	138.39%
Sb 206.836†	-3.5	0.00355 mg/L	0.001204	0.00355 mg/L	0.001204	33.88%
Se 196.026†	1.6	0.00204 mg/L	0.003117	0.00204 mg/L	0.003117	152.84%
Si 251.611†	34250.5	0.630 mg/L	0.0113	0.630 mg/L	0.0113	1.79%
Sn 189.927†	-129.7	-0.00973 mg/L	0.000115	-0.00973 mg/L	0.000115	1.18%
Ti 334.940†	-2517.6	0.00073 mg/L	0.000128	0.00073 mg/L	0.000128	17.54%
Tl 190.801†	-5.8	-0.00433 mg/L	0.000811	-0.00433 mg/L	0.000811	18.72%
V 290.880†	863.9	0.00364 mg/L	0.001581	0.00364 mg/L	0.001581	43.45%
Zn 206.200†	-7.5	0.00057 mg/L	0.000288	0.00057 mg/L	0.000288	50.61%
K 766.490†	4321.7	1.28 mg/L	0.016	1.28 mg/L	0.016	1.22%
Na 589.592†	144538.3	6.60 mg/L	0.133	6.60 mg/L	0.133	2.02%
Sr 407.771†	559658.7	0.200 mg/L	0.0092	0.200 mg/L	0.0092	4.62%
Li 670.784†	449.6	-0.00095 mg/L	0.000154	-0.00095 mg/L	0.000154	16.15%

Sequence No.: 29 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 4:52:45 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	289.0 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	2370334.2						7155.47	0.30%
YRADIAL	313329.8						4257.93	1.36%
Ga 417.206	1298910.1						18893.08	1.45%
GaRADIAL	88214.1						755.26	0.86%
Ag 328.068†	130587.7	0.404	mg/L	0.0029	0.404	mg/L	0.0029	0.73%
QC value within limits for Ag 328.068 Recovery = 100.99%								
Al 396.153†	71105.3	10.00	mg/L	0.035	10.00	mg/L	0.035	0.35%
QC value within limits for Al 396.153 Recovery = 99.99%								
As 188.979†	1608.4	0.406	mg/L	0.0117	0.406	mg/L	0.0117	2.87%
QC value within limits for As 188.979 Recovery = 101.43%								
Ba 233.527†	172981.4	1.02	mg/L	0.005	1.02	mg/L	0.005	0.54%
QC value within limits for Ba 233.527 Recovery = 101.52%								
Be 234.861†	64833.0	0.0504	mg/L	0.00079	0.0504	mg/L	0.00079	1.57%
QC value within limits for Be 234.861 Recovery = 100.77%								
B 249.677†	60122.0	0.502	mg/L	0.0071	0.502	mg/L	0.0071	1.42%
QC value within limits for B 249.677 Recovery = 100.50%								
Ca 227.546†	4917.5	10.4	mg/L	0.07	10.4	mg/L	0.07	0.64%
QC value within limits for Ca 227.546 Recovery = 103.99%								
Cd 228.802†	3014.3	0.0489	mg/L	0.00070	0.0489	mg/L	0.00070	1.44%
QC value within limits for Cd 228.802 Recovery = 97.87%								
Co 228.616†	9486.5	0.202	mg/L	0.0038	0.202	mg/L	0.0038	1.88%
QC value within limits for Co 228.616 Recovery = 101.20%								
Cr 267.716†	65430.0	0.506	mg/L	0.0039	0.506	mg/L	0.0039	0.77%
QC value within limits for Cr 267.716 Recovery = 101.28%								
Cu 327.393†	136505.4	0.506	mg/L	0.0049	0.506	mg/L	0.0049	0.97%
QC value within limits for Cu 327.393 Recovery = 101.24%								
Fe 239.562†	64423.1	3.97	mg/L	0.019	3.97	mg/L	0.019	0.47%
QC value within limits for Fe 239.562 Recovery = 99.33%								
Mg 279.077†	35030.6	9.90	mg/L	0.032	9.90	mg/L	0.032	0.33%
QC value within limits for Mg 279.077 Recovery = 98.97%								
Mn 257.610†	421301.6	0.507	mg/L	0.0056	0.507	mg/L	0.0056	1.10%
QC value within limits for Mn 257.610 Recovery = 101.48%								
Mo 202.031†	39933.0	1.03	mg/L	0.005	1.03	mg/L	0.005	0.47%
QC value within limits for Mo 202.031 Recovery = 102.61%								
Ni 231.604†	37880.6	0.525	mg/L	0.0100	0.525	mg/L	0.0100	1.91%

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   QC value within limits for Ni 231.604  Recovery = 104.93%
Pb 220.353†            7450.4       0.514 mg/L        0.0085       0.514 mg/L        0.0085   1.65%
   QC value within limits for Pb 220.353  Recovery = 102.89%
Sb 206.836†            6350.3        1.21 mg/L         0.018        1.21 mg/L         0.018   1.47%
   QC value within limits for Sb 206.836  Recovery = 101.17%
Se 196.026†             966.9       0.414 mg/L        0.0085       0.414 mg/L        0.0085   2.06%
   QC value within limits for Se 196.026  Recovery = 103.39%
Si 251.611†          282578.0        5.10 mg/L         0.052        5.10 mg/L         0.052   1.01%
   QC value within limits for Si 251.611  Recovery = 102.02%
Sn 189.927†           13450.8        1.04 mg/L         0.022        1.04 mg/L         0.022   2.09%
   QC value within limits for Sn 189.927  Recovery = 104.04%
Ti 334.940†         1109098.1        1.01 mg/L         0.003        1.01 mg/L         0.003   0.29%
   QC value within limits for Ti 334.940  Recovery = 101.30%
Tl 190.801†            2166.3       0.538 mg/L        0.0023       0.538 mg/L        0.0023   0.42%
   QC value within limits for Tl 190.801  Recovery = 107.68%
V 290.880†           265668.8        1.01 mg/L         0.005        1.01 mg/L         0.005   0.51%
   QC value within limits for V 290.880  Recovery = 101.49%
Zn 206.200†           63374.2        1.03 mg/L         0.027        1.03 mg/L         0.027   2.60%
   QC value within limits for Zn 206.200  Recovery = 102.77%
K 766.490†           155427.2        49.0 mg/L          0.09        49.0 mg/L          0.09   0.18%
   QC value within limits for K 766.490  Recovery = 98.03%
Na 589.592†         1087033.6        49.8 mg/L          0.92        49.8 mg/L          0.92   1.84%
   QC value within limits for Na 589.592  Recovery = 99.51%
Sr 407.771†         2777833.8       0.988 mg/L        0.0223       0.988 mg/L        0.0223   2.26%
   QC value within limits for Sr 407.771  Recovery = 98.77%
Li 670.784†          162366.3        1.03 mg/L         0.003        1.03 mg/L         0.003   0.34%
   QC value within limits for Li 670.784  Recovery = 103.09%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 30                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 4:58:48 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                    289.0 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            2465788.6                                                    17956.89   0.73%
YRADIAL               314728.8                                                     3405.42   1.08%
Ga 417.206           1320139.9                                                    15863.21   1.20%
GaRADIAL               87178.4                                                     1746.35   2.00%
Ag 328.068†              -93.1     0.00065 mg/L      0.000396     0.00065 mg/L      0.000396  60.75%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               11.8     -0.0208 mg/L       0.00136     -0.0208 mg/L       0.00136   6.55%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -6.8    -0.00092 mg/L      0.001879    -0.00092 mg/L      0.001879 204.95%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               39.3    -0.00034 mg/L      0.000043    -0.00034 mg/L      0.000043  12.81%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              -74.6     0.00008 mg/L      0.000025     0.00008 mg/L      0.000025  32.45%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              3606.6      0.0333 mg/L       0.00234      0.0333 mg/L       0.00234   7.02%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -12.8      0.0663 mg/L       0.01036      0.0663 mg/L       0.01036  15.62%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                5.9     0.00028 mg/L      0.000107     0.00028 mg/L      0.000107  37.72%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               11.2     0.00009 mg/L      0.000274     0.00009 mg/L      0.000274 311.12%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -47.7    -0.00005 mg/L      0.000113    -0.00005 mg/L      0.000113 214.20%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -185.8     0.00029 mg/L      0.000360     0.00029 mg/L      0.000360 122.99%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               97.2      0.0101 mg/L       0.00047      0.0101 mg/L       0.00047   4.66%
```

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QC value within limits for Fe 239.562 Recovery = Not calculated

Mg 279.077†	34.6	0.0230 mg/L	0.00435	0.0230 mg/L	0.00435	18.91%

QC value within limits for Mg 279.077 Recovery = Not calculated

Mn 257.610†	-1029.0	-0.00105 mg/L	0.000021	-0.00105 mg/L	0.000021	2.02%

QC value within limits for Mn 257.610 Recovery = Not calculated

Mo 202.031†	18.2	0.00066 mg/L	0.000072	0.00066 mg/L	0.000072	10.85%

QC value within limits for Mo 202.031 Recovery = Not calculated

Ni 231.604†	15.1	-0.00236 mg/L	0.000072	-0.00236 mg/L	0.000072	3.03%

QC value within limits for Ni 231.604 Recovery = Not calculated

Pb 220.353†	3.0	-0.00104 mg/L	0.000673	-0.00104 mg/L	0.000673	64.43%

QC value within limits for Pb 220.353 Recovery = Not calculated

Sb 206.836†	-3.4	0.00358 mg/L	0.000431	0.00358 mg/L	0.000431	12.04%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026†	3.7	0.00310 mg/L	0.004743	0.00310 mg/L	0.004743	153.20%

QC value within limits for Se 196.026 Recovery = Not calculated

Si 251.611†	338.2	0.0179 mg/L	0.00077	0.0179 mg/L	0.00077	4.30%

QC value within limits for Si 251.611 Recovery = Not calculated

Sn 189.927†	6.5	0.00080 mg/L	0.000814	0.00080 mg/L	0.000814	102.13%

QC value within limits for Sn 189.927 Recovery = Not calculated

Ti 334.940†	194.1	0.00137 mg/L	0.000103	0.00137 mg/L	0.000103	7.52%

QC value within limits for Ti 334.940 Recovery = Not calculated

Tl 190.801†	-5.2	-0.00359 mg/L	0.001453	-0.00359 mg/L	0.001453	40.49%

QC value within limits for Tl 190.801 Recovery = Not calculated

V 290.880†	869.3	0.00385 mg/L	0.000092	0.00385 mg/L	0.000092	2.39%

QC value within limits for V 290.880 Recovery = Not calculated

Zn 206.200†	-173.5	-0.00211 mg/L	0.000075	-0.00211 mg/L	0.000075	3.57%

QC value within limits for Zn 206.200 Recovery = Not calculated

K 766.490†	36.7	-0.0485 mg/L	0.01290	-0.0485 mg/L	0.01290	26.59%

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	-231.9	-0.0289 mg/L	0.00584	-0.0289 mg/L	0.00584	20.21%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	540.4	0.00156 mg/L	0.000020	0.00156 mg/L	0.000020	1.25%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	61.6	-0.00343 mg/L	0.000212	-0.00343 mg/L	0.000212	6.19%

QC value within limits for Li 670.784 Recovery = Not calculated

All analyte(s) passed QC.

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Sequence No.: 31 **Autosampler Location: 60**
Sample ID: L1207023512 WG403092-02 **Date Collected: 7/17/2012 5:05:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023512 WG403092-02

Analyte	Back Pressure	Flow
All	294.0 kPa	0.50 L/min

Mean Data: L1207023512 WG403092-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2380566.2						7745.60	0.33%
YRADIAL	307380.8						3352.04	1.09%
Ga 417.206	1382562.9						24923.01	1.80%
GaRADIAL	89459.8						2754.45	3.08%
Ag 328.068†	-16.7	0.00088	mg/L	0.000156	0.00088	mg/L	0.000156	17.61%
Al 396.153†	369.2	0.0294	mg/L	0.00086	0.0294	mg/L	0.00086	2.94%
As 188.979†	64.8	0.0173	mg/L	0.00107	0.0173	mg/L	0.00107	6.18%
Ba 233.527†	5398.1	0.0311	mg/L	0.00031	0.0311	mg/L	0.00031	1.00%
Be 234.861†	35.7	0.00017	mg/L	0.000011	0.00017	mg/L	0.000011	6.79%
B 249.677†	14429.2	0.124	mg/L	0.0028	0.124	mg/L	0.0028	2.22%
Ca 227.546†	1067.4	2.22	mg/L	0.029	2.22	mg/L	0.029	1.29%
Cd 228.802†	-1.1	0.00007	mg/L	0.000099	0.00007	mg/L	0.000099	134.98%
Co 228.616†	1.4	-0.00012	mg/L	0.000286	-0.00012	mg/L	0.000286	240.23%
Cr 267.716†	-6.4	0.00027	mg/L	0.000113	0.00027	mg/L	0.000113	41.62%
Cu 327.393†	-29.5	0.00087	mg/L	0.000071	0.00087	mg/L	0.000071	8.18%
Fe 239.562†	98.2	0.0101	mg/L	0.00009	0.0101	mg/L	0.00009	0.91%
Mg 279.077†	2206.3	0.635	mg/L	0.0076	0.635	mg/L	0.0076	1.20%
Mn 257.610†	-1158.3	-0.00120	mg/L	0.000021	-0.00120	mg/L	0.000021	1.77%
Mo 202.031†	304.9	0.00803	mg/L	0.000038	0.00803	mg/L	0.000038	0.47%

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Ni 231.604†	0.0	-0.00257	mg/L	0.000329	-0.00257	mg/L	0.000329 12.77%
Pb 220.353†	-2.3	-0.00138	mg/L	0.001987	-0.00138	mg/L	0.001987 144.31%
Sb 206.836†	-4.8	0.00334	mg/L	0.000368	0.00334	mg/L	0.000368 11.00%
Se 196.026†	-0.6	0.00128	mg/L	0.000621	0.00128	mg/L	0.000621 48.44%
Si 251.611†	286079.3	5.18	mg/L	0.068	5.18	mg/L	0.068 1.32%
Sn 189.927†	-20.3	-0.00127	mg/L	0.000476	-0.00127	mg/L	0.000476 37.43%
Ti 334.940†	-145.6	0.00139	mg/L	0.000075	0.00139	mg/L	0.000075 5.44%
Tl 190.801†	-2.3	-0.00286	mg/L	0.002835	-0.00286	mg/L	0.002835 99.24%
V 290.880†	3438.7	0.0136	mg/L	0.00197	0.0136	mg/L	0.00197 14.46%
Zn 206.200†	-60.0	-0.00028	mg/L	0.000028	-0.00028	mg/L	0.000028 10.21%
K 766.490†	2099.1	0.423	mg/L	0.0077	0.423	mg/L	0.0077 1.82%
Na 589.592†	3760816.7	172	mg/L	7.5	172	mg/L	7.5 4.34%
Sr 407.771†	301534.7	0.108	mg/L	0.0046	0.108	mg/L	0.0046 4.24%
Li 670.784†	1110.3	0.00326	mg/L	0.000169	0.00326	mg/L	0.000169 5.18%

Sequence No.: 32 **Autosampler Location: 61**
Sample ID: L1207023512DU WG403092-07 **Date Collected: 7/17/2012 5:12:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023512DU WG403092-07

Analyte	Back Pressure	Flow
All	294.0 kPa	0.50 L/min

Mean Data: L1207023512DU WG403092-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2396676.3						8949.30	0.37%
YRADIAL	311243.6						3566.29	1.15%
Ga 417.206	1410526.4						11929.11	0.85%
GaRADIAL	91268.6						2763.86	3.03%
Ag 328.068†	-207.1	0.00030	mg/L	0.000262	0.00030	mg/L	0.000262	86.54%
Al 396.153†	360.7	0.0283	mg/L	0.00077	0.0283	mg/L	0.00077	2.72%
As 188.979†	60.6	0.0162	mg/L	0.00032	0.0162	mg/L	0.00032	2.00%
Ba 233.527†	5420.1	0.0313	mg/L	0.00008	0.0313	mg/L	0.00008	0.26%
Be 234.861†	70.4	0.00019	mg/L	0.000015	0.00019	mg/L	0.000015	7.72%
B 249.677†	13703.4	0.118	mg/L	0.0024	0.118	mg/L	0.0024	2.03%
Ca 227.546†	1050.0	2.19	mg/L	0.030	2.19	mg/L	0.030	1.38%
Cd 228.802†	-2.1	0.00006	mg/L	0.000068	0.00006	mg/L	0.000068	111.83%
Co 228.616†	-0.8	-0.00017	mg/L	0.000090	-0.00017	mg/L	0.000090	54.19%
Cr 267.716†	-17.1	0.00019	mg/L	0.000054	0.00019	mg/L	0.000054	28.78%
Cu 327.393†	102.7	0.00136	mg/L	0.000107	0.00136	mg/L	0.000107	7.88%
Fe 239.562†	98.5	0.0101	mg/L	0.00034	0.0101	mg/L	0.00034	3.31%
Mg 279.077†	2197.5	0.632	mg/L	0.0067	0.632	mg/L	0.0067	1.07%
Mn 257.610†	-1170.2	-0.00122	mg/L	0.000017	-0.00122	mg/L	0.000017	1.39%
Mo 202.031†	299.4	0.00789	mg/L	0.000044	0.00789	mg/L	0.000044	0.56%
Ni 231.604†	-4.2	-0.00263	mg/L	0.000182	-0.00263	mg/L	0.000182	6.90%
Pb 220.353†	1.8	-0.00110	mg/L	0.000651	-0.00110	mg/L	0.000651	59.21%
Sb 206.836†	-5.4	0.00323	mg/L	0.000917	0.00323	mg/L	0.000917	28.37%
Se 196.026†	-7.9	-0.00184	mg/L	0.002069	-0.00184	mg/L	0.002069	112.31%
Si 251.611†	283509.9	5.13	mg/L	0.030	5.13	mg/L	0.030	0.58%
Sn 189.927†	-25.3	-0.00166	mg/L	0.000512	-0.00166	mg/L	0.000512	30.80%
Ti 334.940†	-238.8	0.00130	mg/L	0.000033	0.00130	mg/L	0.000033	2.53%
Tl 190.801†	4.5	-0.00119	mg/L	0.002157	-0.00119	mg/L	0.002157	180.67%
V 290.880†	3612.1	0.0143	mg/L	0.00146	0.0143	mg/L	0.00146	10.18%
Zn 206.200†	-40.0	0.00005	mg/L	0.000211	0.00005	mg/L	0.000211	467.17%
K 766.490†	2159.2	0.443	mg/L	0.0368	0.443	mg/L	0.0368	8.31%
Na 589.592†	3749098.4	171	mg/L	4.1	171	mg/L	4.1	2.40%
Sr 407.771†	306223.0	0.110	mg/L	0.0041	0.110	mg/L	0.0041	3.68%
Li 670.784†	1186.4	0.00374	mg/L	0.000372	0.00374	mg/L	0.000372	9.93%

Sequence No.: 33 **Autosampler Location: 62**
Sample ID: L1207023514 **Date Collected: 7/17/2012 5:19:40 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Approved: July 18, 2012
Kym H. Rhoden

Nebulizer Parameters: L1207023514

Analyte	Back Pressure	Flow
All	291.0 kPa	0.50 L/min

Mean Data: L1207023514

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2440724.3						12954.01	0.53%
YRADIAL	315133.6						7474.62	2.37%
Ga 417.206	1447172.0						6141.76	0.42%
GaRADIAL	92140.3						564.28	0.61%
Ag 328.068†	654.2	0.00286	mg/L	0.000390	0.00286	mg/L	0.000390	13.65%
Al 396.153†	-23.4	-0.0258	mg/L	0.00180	-0.0258	mg/L	0.00180	6.96%
As 188.979†	-13.6	-0.00267	mg/L	0.000618	-0.00267	mg/L	0.000618	23.11%
Ba 233.527†	10226.4	0.0595	mg/L	0.00043	0.0595	mg/L	0.00043	0.72%
Be 234.861†	104.7	0.00022	mg/L	0.000011	0.00022	mg/L	0.000011	5.21%
B 249.677†	7510.4	0.0659	mg/L	0.00127	0.0659	mg/L	0.00127	1.92%
Ca 227.546†	46498.6	93.0	mg/L	0.32	93.0	mg/L	0.32	0.34%
Cd 228.802†	2.5	0.00023	mg/L	0.000097	0.00023	mg/L	0.000097	41.29%
Co 228.616†	2.5	-0.00008	mg/L	0.000159	-0.00008	mg/L	0.000159	199.05%
Cr 267.716†	54.8	0.00074	mg/L	0.000118	0.00074	mg/L	0.000118	15.99%
Cu 327.393†	-110.4	0.00055	mg/L	0.000445	0.00055	mg/L	0.000445	80.41%
Fe 239.562†	72.5	0.00833	mg/L	0.000123	0.00833	mg/L	0.000123	1.48%
Mg 279.077†	38945.2	11.0	mg/L	0.18	11.0	mg/L	0.18	1.67%
Mn 257.610†	4015.9	0.00502	mg/L	0.000051	0.00502	mg/L	0.000051	1.02%
Mo 202.031†	50.2	0.00149	mg/L	0.000279	0.00149	mg/L	0.000279	18.77%
Ni 231.604†	26.8	-0.00220	mg/L	0.000003	-0.00220	mg/L	0.000003	0.12%
Pb 220.353†	33.4	0.00179	mg/L	0.000643	0.00179	mg/L	0.000643	35.87%
Sb 206.836†	-9.9	0.00232	mg/L	0.000962	0.00232	mg/L	0.000962	41.44%
Se 196.026†	2.2	0.00246	mg/L	0.002232	0.00246	mg/L	0.002232	90.81%
Si 251.611†	237260.3	4.29	mg/L	0.014	4.29	mg/L	0.014	0.33%
Sn 189.927†	-320.9	-0.0245	mg/L	0.00090	-0.0245	mg/L	0.00090	3.68%
Ti 334.940†	-18635.6	-0.00184	mg/L	0.000413	-0.00184	mg/L	0.000413	22.46%
Tl 190.801†	-16.9	-0.00663	mg/L	0.001968	-0.00663	mg/L	0.001968	29.68%
V 290.880†	1016.0	0.00412	mg/L	0.000938	0.00412	mg/L	0.000938	22.76%
Zn 206.200†	1.3	0.00071	mg/L	0.000069	0.00071	mg/L	0.000069	9.66%
K 766.490†	7866.4	2.39	mg/L	0.022	2.39	mg/L	0.022	0.90%
Na 589.592†	245680.2	11.2	mg/L	0.28	11.2	mg/L	0.28	2.51%
Sr 407.771†	1109764.2	0.393	mg/L	0.0172	0.393	mg/L	0.0172	4.38%
Li 670.784†	351.0	-0.00158	mg/L	0.000425	-0.00158	mg/L	0.000425	26.82%

Sequence No.: 34
Sample ID: L1207023516
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 7/17/2012 5:26:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207023516

Analyte	Back Pressure	Flow
All	290.0 kPa	0.50 L/min

Mean Data: L1207023516

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2448132.5						5106.33	0.21%
YRADIAL	316665.8						5932.40	1.87%
Ga 417.206	1475949.9						15765.15	1.07%
GaRADIAL	92530.4						1035.46	1.12%
Ag 328.068†	453.7	0.00212	mg/L	0.000348	0.00212	mg/L	0.000348	16.40%
Al 396.153†	-25.3	-0.0261	mg/L	0.00117	-0.0261	mg/L	0.00117	4.48%
As 188.979†	-10.0	-0.00175	mg/L	0.001387	-0.00175	mg/L	0.001387	79.30%
Ba 233.527†	46768.8	0.274	mg/L	0.0028	0.274	mg/L	0.0028	1.00%
Be 234.861†	165.7	0.00027	mg/L	0.000003	0.00027	mg/L	0.000003	0.93%
B 249.677†	3269.6	0.0305	mg/L	0.00027	0.0305	mg/L	0.00027	0.88%
Ca 227.546†	29330.0	58.7	mg/L	0.70	58.7	mg/L	0.70	1.19%
Cd 228.802†	-3.6	0.00013	mg/L	0.000089	0.00013	mg/L	0.000089	69.51%
Co 228.616†	-8.4	-0.00040	mg/L	0.000177	-0.00040	mg/L	0.000177	44.34%

Approved: July 18, 2012

Cr 267.716†	43.4	0.00065	mg/L	0.000052	0.00065	mg/L	0.000052	7.96%
Cu 327.393†	-182.9	0.00029	mg/L	0.000213	0.00029	mg/L	0.000213	73.90%
Fe 239.562†	274.1	0.0207	mg/L	0.00045	0.0207	mg/L	0.00045	2.16%
Mg 279.077†	46187.5	13.0	mg/L	0.15	13.0	mg/L	0.15	1.15%
Mn 257.610†	57346.5	0.0692	mg/L	0.00028	0.0692	mg/L	0.00028	0.41%
Mo 202.031†	59.4	0.00174	mg/L	0.000199	0.00174	mg/L	0.000199	11.47%
Ni 231.604†	26.1	-0.00221	mg/L	0.000199	-0.00221	mg/L	0.000199	8.99%
Pb 220.353†	32.9	0.00144	mg/L	0.000306	0.00144	mg/L	0.000306	21.19%
Sb 206.836†	-8.0	0.00269	mg/L	0.000802	0.00269	mg/L	0.000802	29.87%
Se 196.026†	-1.6	0.00082	mg/L	0.000489	0.00082	mg/L	0.000489	59.84%
Si 251.611†	223786.6	4.05	mg/L	0.054	4.05	mg/L	0.054	1.34%
Sn 189.927†	-283.2	-0.0216	mg/L	0.00012	-0.0216	mg/L	0.00012	0.56%
Ti 334.940†	-12189.7	-0.00111	mg/L	0.000329	-0.00111	mg/L	0.000329	29.55%
Tl 190.801†	-21.5	-0.00774	mg/L	0.000483	-0.00774	mg/L	0.000483	6.23%
V 290.880†	711.8	0.00289	mg/L	0.001324	0.00289	mg/L	0.001324	45.76%
Zn 206.200†	-22.7	0.00033	mg/L	0.000107	0.00033	mg/L	0.000107	32.74%
K 766.490†	7353.7	2.21	mg/L	0.030	2.21	mg/L	0.030	1.37%
Na 589.592†	510695.0	23.4	mg/L	0.48	23.4	mg/L	0.48	2.06%
Sr 407.771†	2780555.0	0.988	mg/L	0.0384	0.988	mg/L	0.0384	3.89%
Li 670.784†	3839.0	0.0206	mg/L	0.00089	0.0206	mg/L	0.00089	4.31%

Sequence No.: 35
Sample ID: L1207023518
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 7/17/2012 5:33:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207023518

Analyte	Back Pressure	Flow
All	290.0 kPa	0.50 L/min

Mean Data: L1207023518

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2437749.8						5083.34	0.21%
YRADIAL	315592.2						2355.95	0.75%
Ga 417.206	1438360.9						17880.69	1.24%
GaRADIAL	91732.8						2745.61	2.99%
Ag 328.068†	537.6	0.00238	mg/L	0.000280	0.00238	mg/L	0.000280	11.75%
Al 396.153†	-22.0	-0.0256	mg/L	0.00093	-0.0256	mg/L	0.00093	3.61%
As 188.979†	-13.6	-0.00266	mg/L	0.001421	-0.00266	mg/L	0.001421	53.49%
Ba 233.527†	46400.3	0.272	mg/L	0.0015	0.272	mg/L	0.0015	0.57%
Be 234.861†	116.5	0.00023	mg/L	0.000019	0.00023	mg/L	0.000019	8.42%
B 249.677†	3238.9	0.0302	mg/L	0.00056	0.0302	mg/L	0.00056	1.85%
Ca 227.546†	29488.5	59.0	mg/L	1.54	59.0	mg/L	1.54	2.60%
Cd 228.802†	2.5	0.00023	mg/L	0.000089	0.00023	mg/L	0.000089	38.13%
Co 228.616†	-12.3	-0.00048	mg/L	0.000216	-0.00048	mg/L	0.000216	44.96%
Cr 267.716†	43.2	0.00065	mg/L	0.000066	0.00065	mg/L	0.000066	10.25%
Cu 327.393†	-77.8	0.00068	mg/L	0.000197	0.00068	mg/L	0.000197	29.06%
Fe 239.562†	338.5	0.0247	mg/L	0.00046	0.0247	mg/L	0.00046	1.87%
Mg 279.077†	45511.9	12.8	mg/L	0.04	12.8	mg/L	0.04	0.34%
Mn 257.610†	53618.7	0.0647	mg/L	0.00029	0.0647	mg/L	0.00029	0.44%
Mo 202.031†	65.3	0.00189	mg/L	0.000154	0.00189	mg/L	0.000154	8.14%
Ni 231.604†	24.0	-0.00224	mg/L	0.000226	-0.00224	mg/L	0.000226	10.08%
Pb 220.353†	41.2	0.00202	mg/L	0.000457	0.00202	mg/L	0.000457	22.59%
Sb 206.836†	-5.2	0.00323	mg/L	0.001193	0.00323	mg/L	0.001193	36.92%
Se 196.026†	-0.3	0.00139	mg/L	0.003076	0.00139	mg/L	0.003076	221.64%
Si 251.611†	224573.2	4.07	mg/L	0.056	4.07	mg/L	0.056	1.38%
Sn 189.927†	-292.5	-0.0223	mg/L	0.00058	-0.0223	mg/L	0.00058	2.58%
Ti 334.940†	-11868.7	-0.00077	mg/L	0.000517	-0.00077	mg/L	0.000517	66.93%
Tl 190.801†	-29.2	-0.00962	mg/L	0.000104	-0.00962	mg/L	0.000104	1.09%
V 290.880†	759.1	0.00308	mg/L	0.001982	0.00308	mg/L	0.001982	64.36%
Zn 206.200†	-19.7	0.00037	mg/L	0.000064	0.00037	mg/L	0.000064	17.03%
K 766.490†	7247.3	2.18	mg/L	0.029	2.18	mg/L	0.029	1.31%
Na 589.592†	503275.6	23.0	mg/L	1.17	23.0	mg/L	1.17	5.06%
Sr 407.771†	2759281.5	0.980	mg/L	0.0097	0.980	mg/L	0.0097	0.99%
Li 670.784†	3868.4	0.0208	mg/L	0.00104	0.0208	mg/L	0.00104	4.99%

Approved: July 18, 2012

Kym H. Rhoden

Sequence No.: 36 **Autosampler Location: 65**
Sample ID: L1207023520 **Date Collected: 7/17/2012 5:40:36 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207023520

Analyte	Back Pressure	Flow
All	291.0 kPa	0.50 L/min

Mean Data: L1207023520

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2617754.1						27018.80	1.03%
YRADIAL	322084.3						7704.17	2.39%
Ga 417.206	1452947.1						17882.74	1.23%
GaRADIAL	91680.2						2524.39	2.75%
Ag 328.068†	-116.9	0.00057	mg/L	0.000453	0.00057	mg/L	0.000453	79.54%
Al 396.153†	38.2	-0.0170	mg/L	0.00053	-0.0170	mg/L	0.00053	3.13%
As 188.979†	-6.7	-0.00091	mg/L	0.002237	-0.00091	mg/L	0.002237	246.64%
Ba 233.527†	75.9	-0.00012	mg/L	0.000080	-0.00012	mg/L	0.000080	65.84%
Be 234.861†	92.3	0.00021	mg/L	0.000014	0.00021	mg/L	0.000014	6.84%
B 249.677†	173.7	0.00454	mg/L	0.000149	0.00454	mg/L	0.000149	3.29%
Ca 227.546†	15.7	0.123	mg/L	0.0151	0.123	mg/L	0.0151	12.25%
Cd 228.802†	-2.3	0.00015	mg/L	0.000143	0.00015	mg/L	0.000143	97.57%
Co 228.616†	7.7	0.00001	mg/L	0.000094	0.00001	mg/L	0.000094	723.80%
Cr 267.716†	-28.9	0.00009	mg/L	0.000107	0.00009	mg/L	0.000107	117.30%
Cu 327.393†	175.0	0.00162	mg/L	0.000428	0.00162	mg/L	0.000428	26.37%
Fe 239.562†	59.9	0.00777	mg/L	0.000457	0.00777	mg/L	0.000457	5.88%
Mg 279.077†	27.3	0.0210	mg/L	0.00131	0.0210	mg/L	0.00131	6.27%
Mn 257.610†	-1238.7	-0.00131	mg/L	0.000015	-0.00131	mg/L	0.000015	1.18%
Mo 202.031†	7.7	0.00039	mg/L	0.000035	0.00039	mg/L	0.000035	8.94%
Ni 231.604†	22.9	-0.00226	mg/L	0.000047	-0.00226	mg/L	0.000047	2.06%
Pb 220.353†	3.7	-0.00100	mg/L	0.000492	-0.00100	mg/L	0.000492	49.18%
Sb 206.836†	-7.1	0.00286	mg/L	0.000610	0.00286	mg/L	0.000610	21.30%
Se 196.026†	2.0	0.00238	mg/L	0.001612	0.00238	mg/L	0.001612	67.63%
Si 251.611†	2165.7	0.0509	mg/L	0.00254	0.0509	mg/L	0.00254	4.99%
Sn 189.927†	2.4	0.00048	mg/L	0.000350	0.00048	mg/L	0.000350	72.55%
Ti 334.940†	-143.1	0.00108	mg/L	0.000088	0.00108	mg/L	0.000088	8.20%
Tl 190.801†	0.2	-0.00228	mg/L	0.002730	-0.00228	mg/L	0.002730	119.62%
V 290.880†	-221.4	-0.00032	mg/L	0.000185	-0.00032	mg/L	0.000185	57.38%
Zn 206.200†	12.1	0.00088	mg/L	0.000039	0.00088	mg/L	0.000039	4.36%
K 766.490†	8.4	-0.0577	mg/L	0.02535	-0.0577	mg/L	0.02535	43.96%
Na 589.592†	6758.0	0.291	mg/L	0.0093	0.291	mg/L	0.0093	3.18%
Sr 407.771†	278.9	0.00147	mg/L	0.000005	0.00147	mg/L	0.000005	0.34%
Li 670.784†	-13.8	-0.00391	mg/L	0.000328	-0.00391	mg/L	0.000328	8.40%

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Sequence No.: 37 **Autosampler Location: 66**
Sample ID: L1207029502 **Date Collected: 7/17/2012 5:47:31 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207029502

Analyte	Back Pressure	Flow
All	294.0 kPa	0.50 L/min

Mean Data: L1207029502

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2378580.3						6245.01	0.26%
YRADIAL	314601.2						4717.04	1.50%
Ga 417.206	1440189.8						30719.87	2.13%
GaRADIAL	90209.7						1678.23	1.86%
Ag 328.068†	1164.2	0.00448	mg/L	0.000675	0.00448	mg/L	0.000675	15.06%
Al 396.153†	54.7	-0.0162	mg/L	0.00413	-0.0162	mg/L	0.00413	25.50%
As 188.979†	-6.2	-0.00083	mg/L	0.001345	-0.00083	mg/L	0.001345	161.57%

Approved: July 18, 2012
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Ba 233.527†	19281.7	0.113 mg/L	0.0013	0.113 mg/L	0.0013	1.11%
Be 234.861†	301.4	0.00032 mg/L	0.000018	0.00032 mg/L	0.000018	5.47%
B 249.677†	46762.3	0.394 mg/L	0.0088	0.394 mg/L	0.0088	2.24%
Ca 227.546†	70741.9	141 mg/L	3.3	141 mg/L	3.3	2.31%
Cd 228.802†	10.7	0.00036 mg/L	0.000114	0.00036 mg/L	0.000114	31.40%
Co 228.616†	27.4	0.00048 mg/L	0.000142	0.00048 mg/L	0.000142	29.57%
Cr 267.716†	500.3	0.00417 mg/L	0.000089	0.00417 mg/L	0.000089	2.14%
Cu 327.393†	671.5	0.00345 mg/L	0.000263	0.00345 mg/L	0.000263	7.65%
Fe 239.562†	4517.8	0.281 mg/L	0.0042	0.281 mg/L	0.0042	1.48%
Mg 279.077†	209987.2	59.2 mg/L	0.46	59.2 mg/L	0.46	0.77%
Mn 257.610†	27636.7	0.0334 mg/L	0.00034	0.0334 mg/L	0.00034	1.00%
Mo 202.031†	885.9	0.0230 mg/L	0.00059	0.0230 mg/L	0.00059	2.56%
Ni 231.604†	403.3	0.00304 mg/L	0.000243	0.00304 mg/L	0.000243	7.98%
Pb 220.353†	5.9	0.00025 mg/L	0.001456	0.00025 mg/L	0.001456	579.09%
Sb 206.836†	-8.8	0.00256 mg/L	0.000992	0.00256 mg/L	0.000992	38.79%
Se 196.026†	2.6	0.00264 mg/L	0.001927	0.00264 mg/L	0.001927	73.02%
Si 251.611†	379685.7	6.86 mg/L	0.105	6.86 mg/L	0.105	1.53%
Sn 189.927†	-350.5	-0.0268 mg/L	0.00036	-0.0268 mg/L	0.00036	1.32%
Ti 334.940†	-24606.9	-0.00001 mg/L	0.001719	-0.00001 mg/L	0.001719	>999.9%
Tl 190.801†	-20.5	-0.00760 mg/L	0.000904	-0.00760 mg/L	0.000904	11.90%
V 290.880†	2246.7	0.00753 mg/L	0.001303	0.00753 mg/L	0.001303	17.31%
Zn 206.200†	65.5	0.00177 mg/L	0.000301	0.00177 mg/L	0.000301	16.96%
K 766.490†	42828.7	13.2 mg/L	0.03	13.2 mg/L	0.03	0.26%
Na 589.592†	3557265.7	163 mg/L	3.6	163 mg/L	3.6	2.21%
Sr 407.771†	1900644.9	0.673 mg/L	0.0118	0.673 mg/L	0.0118	1.76%
Li 670.784†	3730.0	0.0200 mg/L	0.00034	0.0200 mg/L	0.00034	1.71%

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Sequence No.: 38 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 5:53:35 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	303.0 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	2499794.9						16534.74	0.66%
YRADIAL	325563.3						2033.37	0.62%
Ga 417.206	1358335.0						25772.96	1.90%
GaRADIAL	89866.8						1314.75	1.46%
Ag 328.068†	131469.6	0.407	mg/L	0.0097	0.407	mg/L	0.0097	2.38%
QC value within limits for Ag 328.068 Recovery = 101.66%								
Al 396.153†	70691.0	9.94	mg/L	0.008	9.94	mg/L	0.008	0.08%
QC value within limits for Al 396.153 Recovery = 99.41%								
As 188.979†	1583.6	0.399	mg/L	0.0081	0.399	mg/L	0.0081	2.02%
QC value within limits for As 188.979 Recovery = 99.85%								
Ba 233.527†	172657.9	1.01	mg/L	0.006	1.01	mg/L	0.006	0.55%
QC value within limits for Ba 233.527 Recovery = 101.33%								
Be 234.861†	64697.7	0.0503	mg/L	0.00125	0.0503	mg/L	0.00125	2.48%
QC value within limits for Be 234.861 Recovery = 100.55%								
B 249.677†	60338.3	0.504	mg/L	0.0124	0.504	mg/L	0.0124	2.46%
QC value within limits for B 249.677 Recovery = 100.86%								
Ca 227.546†	4906.0	10.4	mg/L	0.25	10.4	mg/L	0.25	2.41%
QC value within limits for Ca 227.546 Recovery = 103.71%								
Cd 228.802†	3035.4	0.0493	mg/L	0.00192	0.0493	mg/L	0.00192	3.90%
QC value within limits for Cd 228.802 Recovery = 98.62%								
Co 228.616†	9362.6	0.200	mg/L	0.0024	0.200	mg/L	0.0024	1.18%
QC value within limits for Co 228.616 Recovery = 99.88%								
Cr 267.716†	65403.7	0.506	mg/L	0.0018	0.506	mg/L	0.0018	0.35%
QC value within limits for Cr 267.716 Recovery = 101.24%								
Cu 327.393†	136608.5	0.507	mg/L	0.0126	0.507	mg/L	0.0126	2.48%
QC value within limits for Cu 327.393 Recovery = 101.31%								
Fe 239.562†	64441.4	3.97	mg/L	0.013	3.97	mg/L	0.013	0.33%
QC value within limits for Fe 239.562 Recovery = 99.36%								
Mg 279.077†	34966.4	9.88	mg/L	0.091	9.88	mg/L	0.091	0.92%

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   QC value within limits for Mg 279.077  Recovery = 98.79%
Mn 257.610†          417346.8       0.503 mg/L        0.0033       0.503 mg/L        0.0033   0.66%
   QC value within limits for Mn 257.610  Recovery = 100.53%
Mo 202.031†           39726.0        1.02 mg/L         0.002        1.02 mg/L         0.002   0.22%
   QC value within limits for Mo 202.031  Recovery = 102.07%
Ni 231.604†           37334.6       0.517 mg/L        0.0050       0.517 mg/L        0.0050   0.97%
   QC value within limits for Ni 231.604  Recovery = 103.41%
Pb 220.353†            7346.7       0.507 mg/L        0.0040       0.507 mg/L        0.0040   0.79%
   QC value within limits for Pb 220.353  Recovery = 101.46%
Sb 206.836†            6290.9        1.20 mg/L         0.024        1.20 mg/L         0.024   1.99%
   QC value within limits for Sb 206.836  Recovery = 100.22%
Se 196.026†             949.5       0.406 mg/L        0.0079       0.406 mg/L        0.0079   1.93%
   QC value within limits for Se 196.026  Recovery = 101.54%
Si 251.611†          280128.2        5.06 mg/L         0.094        5.06 mg/L         0.094   1.87%
   QC value within limits for Si 251.611  Recovery = 101.14%
Sn 189.927†           13218.3        1.02 mg/L         0.010        1.02 mg/L         0.010   0.94%
   QC value within limits for Sn 189.927  Recovery = 102.25%
Ti 334.940†         1097265.2        1.00 mg/L         0.001        1.00 mg/L         0.001   0.10%
   QC value within limits for Ti 334.940  Recovery = 100.22%
Tl 190.801†            2141.7       0.532 mg/L        0.0026       0.532 mg/L        0.0026   0.49%
   QC value within limits for Tl 190.801  Recovery = 106.45%
V 290.880†           263863.4        1.01 mg/L         0.003        1.01 mg/L         0.003   0.34%
   QC value within limits for V 290.880  Recovery = 100.80%
Zn 206.200†           63148.1        1.02 mg/L         0.002        1.02 mg/L         0.002   0.19%
   QC value within limits for Zn 206.200  Recovery = 102.40%
K 766.490†           155125.4        48.9 mg/L          0.60        48.9 mg/L          0.60   1.22%
   QC value within limits for K 766.490  Recovery = 97.84%
Na 589.592†         1078761.5        49.4 mg/L          0.91        49.4 mg/L          0.91   1.84%
   QC value within limits for Na 589.592  Recovery = 98.75%
Sr 407.771†         2700183.3       0.960 mg/L        0.0073       0.960 mg/L        0.0073   0.76%
   QC value within limits for Sr 407.771  Recovery = 96.01%
Li 670.784†           159461.1        1.01 mg/L         0.007        1.01 mg/L         0.007   0.66%
   QC value within limits for Li 670.784  Recovery = 101.24%
All analyte(s) passed QC.
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Sequence No.: 39 **Autosampler Location: 1**
Sample ID: CCB **Date Collected: 7/17/2012 5:59:35 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	302.0 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	2565415.6						6774.46	0.26%
YRADIAL	323036.0						3049.29	0.94%
Ga 417.206	1401964.2						21314.42	1.52%
GaRADIAL	90471.5						2461.14	2.72%
Ag 328.068†	-110.5	0.00059	mg/L	0.000130	0.00059	mg/L	0.000130	22.05%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	19.7	-0.0196	mg/L	0.00210	-0.0196	mg/L	0.00210	10.68%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	1.0	0.00107	mg/L	0.002013	0.00107	mg/L	0.002013	187.64%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	52.9	-0.00026	mg/L	0.000014	-0.00026	mg/L	0.000014	5.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	55.9	0.00018	mg/L	0.000014	0.00018	mg/L	0.000014	8.03%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	223.7	0.00496	mg/L	0.000336	0.00496	mg/L	0.000336	6.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	0.5	0.0928	mg/L	0.01629	0.0928	mg/L	0.01629	17.55%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	2.1	0.00021	mg/L	0.000075	0.00021	mg/L	0.000075	35.78%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	12.8	0.00012	mg/L	0.000078	0.00012	mg/L	0.000078	64.04%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -39.0     0.00001 mg/L      0.000056     0.00001 mg/L      0.000056 435.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              -21.4     0.00090 mg/L      0.000357     0.00090 mg/L      0.000357  39.74%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               62.6     0.00793 mg/L      0.000358     0.00793 mg/L      0.000358   4.51%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               36.3      0.0235 mg/L       0.00350      0.0235 mg/L       0.00350  14.91%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1182.2    -0.00124 mg/L      0.000003    -0.00124 mg/L      0.000003   0.25%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               15.5     0.00059 mg/L      0.000179     0.00059 mg/L      0.000179  30.21%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               13.1    -0.00239 mg/L      0.000233    -0.00239 mg/L      0.000233   9.73%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†                8.2    -0.00069 mg/L      0.001520    -0.00069 mg/L      0.001520 220.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -3.3     0.00359 mg/L      0.000628     0.00359 mg/L      0.000628  17.50%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -7.8    -0.00181 mg/L      0.002616    -0.00181 mg/L      0.002616 144.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -38.4      0.0111 mg/L       0.00060      0.0111 mg/L       0.00060   5.44%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                8.8     0.00098 mg/L      0.000653     0.00098 mg/L      0.000653  66.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              206.8     0.00139 mg/L      0.000125     0.00139 mg/L      0.000125   8.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.3    -0.00154 mg/L      0.001444    -0.00154 mg/L      0.001444  93.63%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†                 6.8     0.00055 mg/L      0.000562     0.00055 mg/L      0.000562 102.34%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -152.1    -0.00177 mg/L      0.000183    -0.00177 mg/L      0.000183  10.38%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                61.0     -0.0409 mg/L       0.02222     -0.0409 mg/L       0.02222  54.30%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -23.3     -0.0194 mg/L       0.00106     -0.0194 mg/L       0.00106   5.48%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              835.9     0.00167 mg/L      0.000008     0.00167 mg/L      0.000008   0.51%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               19.2    -0.00370 mg/L      0.000124    -0.00370 mg/L      0.000124   3.36%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 40                                    Autosampler Location: 67
Sample ID: PBW 10 WG403431-03                       Date Collected: 7/17/2012 6:06:28 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: PBW 10 WG403431-03
Analyte                 Back Pressure    Flow
All                     302.0 kPa        0.50 L/min

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Mean Data: PBW 10 WG403431-03
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units     Std.Dev.     Conc. Units     Std.Dev.   RSD
Y 371.029            2586674.7                                                   8868.54   0.34%
YRADIAL               320163.7                                                   1865.33   0.58%
Ga 417.206           1444726.9                                                  24326.72   1.68%
GaRADIAL               91093.9                                                   2615.15   2.87%
Ag 328.068†              -84.9     0.00067 mg/L      0.000458     0.00067 mg/L      0.000458  68.32%
Al 396.153†              121.1    -0.00522 mg/L      0.000783    -0.00522 mg/L      0.000783  15.01%
As 188.979†                0.5     0.00092 mg/L      0.000381     0.00092 mg/L      0.000381  41.16%
Ba 233.527†               72.8    -0.00014 mg/L      0.000097    -0.00014 mg/L      0.000097  68.82%
Be 234.861†              116.9     0.00023 mg/L      0.000012     0.00023 mg/L      0.000012   5.46%
B 249.677†               330.4     0.00585 mg/L      0.000227     0.00585 mg/L      0.000227   3.88%
Ca 227.546†               34.6       0.161 mg/L        0.0098       0.161 mg/L        0.0098   6.11%
Cd 228.802†               -2.3     0.00014 mg/L      0.000197     0.00014 mg/L      0.000197 144.43%
Co 228.616†                6.9    -0.00001 mg/L      0.000219    -0.00001 mg/L      0.000219 >999.9%
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Cr 267.716†	-48.6	-0.00006	mg/L	0.000079	-0.00006	mg/L	0.000079	130.68%
Cu 327.393†	-190.9	0.00027	mg/L	0.000104	0.00027	mg/L	0.000104	37.94%
Fe 239.562†	40.7	0.00659	mg/L	0.000928	0.00659	mg/L	0.000928	14.09%
Mg 279.077†	27.6	0.0210	mg/L	0.00200	0.0210	mg/L	0.00200	9.51%
Mn 257.610†	-1246.4	-0.00131	mg/L	0.000027	-0.00131	mg/L	0.000027	2.04%
Mo 202.031†	-0.6	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.49%
Ni 231.604†	21.3	-0.00228	mg/L	0.000100	-0.00228	mg/L	0.000100	4.39%
Pb 220.353†	8.1	-0.00069	mg/L	0.000852	-0.00069	mg/L	0.000852	123.37%
Sb 206.836†	-1.2	0.00400	mg/L	0.001001	0.00400	mg/L	0.001001	25.06%
Se 196.026†	-8.1	-0.00192	mg/L	0.002484	-0.00192	mg/L	0.002484	129.67%
Si 251.611†	271.4	0.0167	mg/L	0.00396	0.0167	mg/L	0.00396	23.75%
Sn 189.927†	-8.7	-0.00037	mg/L	0.000349	-0.00037	mg/L	0.000349	93.10%
Ti 334.940†	157.6	0.00135	mg/L	0.000128	0.00135	mg/L	0.000128	9.47%
Tl 190.801†	7.6	-0.00050	mg/L	0.002254	-0.00050	mg/L	0.002254	455.16%
V 290.880†	145.0	0.00108	mg/L	0.000276	0.00108	mg/L	0.000276	25.60%
Zn 206.200†	-55.4	-0.00021	mg/L	0.000073	-0.00021	mg/L	0.000073	35.47%
K 766.490†	-17.3	-0.0654	mg/L	0.01107	-0.0654	mg/L	0.01107	16.94%
Na 589.592†	-395.4	-0.0364	mg/L	0.00205	-0.0364	mg/L	0.00205	5.63%
Sr 407.771†	1520.7	0.00191	mg/L	0.000017	0.00191	mg/L	0.000017	0.88%
Li 670.784†	-72.6	-0.00428	mg/L	0.000234	-0.00428	mg/L	0.000234	5.46%

Sequence No.: 41
Sample ID: LCSW 10 WG403431-04
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 7/17/2012 6:13:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSW 10 WG403431-04

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: LCSW 10 WG403431-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2506903.3						27685.34	1.10%
YRADIAL	318750.7						1458.69	0.46%
Ga 417.206	1396084.9						23699.95	1.70%
GaRADIAL	88893.4						996.96	1.12%
Ag 328.068†	63793.3	0.198	mg/L	0.0050	0.198	mg/L	0.0050	2.54%
Al 396.153†	34501.0	4.84	mg/L	0.017	4.84	mg/L	0.017	0.36%
As 188.979†	749.0	0.189	mg/L	0.0016	0.189	mg/L	0.0016	0.83%
Ba 233.527†	84492.5	0.496	mg/L	0.0063	0.496	mg/L	0.0063	1.27%
Be 234.861†	30582.4	0.0238	mg/L	0.00061	0.0238	mg/L	0.00061	2.57%
B 249.677†	115187.0	0.965	mg/L	0.0258	0.965	mg/L	0.0258	2.68%
Ca 227.546†	2367.2	5.05	mg/L	0.089	5.05	mg/L	0.089	1.77%
Cd 228.802†	1442.3	0.0235	mg/L	0.00082	0.0235	mg/L	0.00082	3.48%
Co 228.616†	4637.0	0.0989	mg/L	0.00169	0.0989	mg/L	0.00169	1.71%
Cr 267.716†	31693.4	0.245	mg/L	0.0029	0.245	mg/L	0.0029	1.20%
Cu 327.393†	65671.1	0.244	mg/L	0.0054	0.244	mg/L	0.0054	2.21%
Fe 239.562†	31255.4	1.93	mg/L	0.007	1.93	mg/L	0.007	0.34%
Mg 279.077†	17455.8	4.94	mg/L	0.007	4.94	mg/L	0.007	0.14%
Mn 257.610†	205566.3	0.248	mg/L	0.0032	0.248	mg/L	0.0032	1.28%
Mo 202.031†	19205.7	0.494	mg/L	0.0059	0.494	mg/L	0.0059	1.19%
Ni 231.604†	18028.8	0.248	mg/L	0.0035	0.248	mg/L	0.0035	1.39%
Pb 220.353†	3645.3	0.251	mg/L	0.0049	0.251	mg/L	0.0049	1.95%
Sb 206.836†	3032.8	0.582	mg/L	0.0107	0.582	mg/L	0.0107	1.85%
Se 196.026†	459.6	0.197	mg/L	0.0041	0.197	mg/L	0.0041	2.06%
Si 251.611†	137712.7	2.49	mg/L	0.039	2.49	mg/L	0.039	1.56%
Sn 189.927†	6776.1	0.524	mg/L	0.0076	0.524	mg/L	0.0076	1.45%
Ti 334.940†	531235.4	0.486	mg/L	0.0023	0.486	mg/L	0.0023	0.48%
Tl 190.801†	1085.5	0.268	mg/L	0.0023	0.268	mg/L	0.0023	0.86%
V 290.880†	129477.5	0.495	mg/L	0.0054	0.495	mg/L	0.0054	1.09%
Zn 206.200†	31150.6	0.505	mg/L	0.0096	0.505	mg/L	0.0096	1.91%
K 766.490†	75896.6	23.7	mg/L	0.02	23.7	mg/L	0.02	0.10%
Na 589.592†	551291.0	25.2	mg/L	0.09	25.2	mg/L	0.09	0.37%
Sr 407.771†	1358847.3	0.484	mg/L	0.0050	0.484	mg/L	0.0050	1.03%
Li 670.784†	79155.3	0.501	mg/L	0.0034	0.501	mg/L	0.0034	0.67%

Approved: July 18, 2012

Kym H. Rhoden

Sequence No.: 42 **Autosampler Location: 69**
Sample ID: L1207036101 WG403431-01 **Date Collected: 7/17/2012 6:19:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036101 WG403431-01

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036101 WG403431-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2493205.0						32024.48	1.28%
YRADIAL	321368.5						4652.03	1.45%
Ga 417.206	1456270.3						29444.78	2.02%
GaRADIAL	91953.2						1227.81	1.34%
Ag 328.068†	418.8	0.00225	mg/L	0.000613	0.00225	mg/L	0.000613	27.22%
Al 396.153†	1567.7	0.200	mg/L	0.0079	0.200	mg/L	0.0079	3.94%
As 188.979†	25.4	0.00730	mg/L	0.001241	0.00730	mg/L	0.001241	17.01%
Ba 233.527†	19522.6	0.114	mg/L	0.0014	0.114	mg/L	0.0014	1.20%
Be 234.861†	298.8	0.00033	mg/L	0.000009	0.00033	mg/L	0.000009	2.81%
B 249.677†	12611.8	0.109	mg/L	0.0038	0.109	mg/L	0.0038	3.49%
Ca 227.546†	23246.3	46.6	mg/L	1.16	46.6	mg/L	1.16	2.50%
Cd 228.802†	4.8	0.00022	mg/L	0.000130	0.00022	mg/L	0.000130	57.99%
Co 228.616†	18.9	0.00023	mg/L	0.000193	0.00023	mg/L	0.000193	84.90%
Cr 267.716†	58.9	0.00077	mg/L	0.000034	0.00077	mg/L	0.000034	4.48%
Cu 327.393†	114.8	0.00141	mg/L	0.000367	0.00141	mg/L	0.000367	26.06%
Fe 239.562†	3705.3	0.232	mg/L	0.0029	0.232	mg/L	0.0029	1.25%
Mg 279.077†	27430.4	7.74	mg/L	0.148	7.74	mg/L	0.148	1.91%
Mn 257.610†	33182.4	0.0401	mg/L	0.00085	0.0401	mg/L	0.00085	2.11%
Mo 202.031†	244.7	0.00650	mg/L	0.000520	0.00650	mg/L	0.000520	8.00%
Ni 231.604†	108.1	-0.00107	mg/L	0.000282	-0.00107	mg/L	0.000282	26.46%
Pb 220.353†	26.9	0.00097	mg/L	0.000616	0.00097	mg/L	0.000616	63.48%
Sb 206.836†	2.5	0.00472	mg/L	0.001171	0.00472	mg/L	0.001171	24.79%
Se 196.026†	-4.9	-0.00052	mg/L	0.004906	-0.00052	mg/L	0.004906	944.73%
Si 251.611†	224497.7	4.06	mg/L	0.056	4.06	mg/L	0.056	1.37%
Sn 189.927†	-250.4	-0.0191	mg/L	0.00038	-0.0191	mg/L	0.00038	2.00%
Ti 334.940†	-3758.0	0.00475	mg/L	0.000701	0.00475	mg/L	0.000701	14.78%
Tl 190.801†	-18.4	-0.00686	mg/L	0.001410	-0.00686	mg/L	0.001410	20.57%
V 290.880†	1729.4	0.00690	mg/L	0.000643	0.00690	mg/L	0.000643	9.32%
Zn 206.200†	0.8	0.00070	mg/L	0.000188	0.00070	mg/L	0.000188	26.79%
K 766.490†	8670.3	2.64	mg/L	0.013	2.64	mg/L	0.013	0.49%
Na 589.592†	231091.2	10.6	mg/L	0.08	10.6	mg/L	0.08	0.71%
Sr 407.771†	864541.1	0.307	mg/L	0.0050	0.307	mg/L	0.0050	1.63%
Li 670.784†	1816.0	0.00775	mg/L	0.000554	0.00775	mg/L	0.000554	7.14%

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Sequence No.: 43 **Autosampler Location: 70**
Sample ID: L1207036101DU WG403431-05 **Date Collected: 7/17/2012 6:25:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036101DU WG403431-05

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036101DU WG403431-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2512656.4						26282.23	1.05%
YRADIAL	319244.3						2732.68	0.86%
Ga 417.206	1445475.1						15111.55	1.05%
GaRADIAL	91543.6						1003.63	1.10%
Ag 328.068†	379.5	0.00213	mg/L	0.000224	0.00213	mg/L	0.000224	10.50%
Al 396.153†	1569.9	0.200	mg/L	0.0064	0.200	mg/L	0.0064	3.20%
As 188.979†	19.1	0.00568	mg/L	0.001401	0.00568	mg/L	0.001401	24.65%

Approved: July 18, 2012

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Ba 233.527†	19064.8	0.111 mg/L	0.0012	0.111 mg/L	0.0012	1.08%
Be 234.861†	300.3	0.00033 mg/L	0.000050	0.00033 mg/L	0.000050	15.33%
B 249.677†	12163.8	0.105 mg/L	0.0017	0.105 mg/L	0.0017	1.66%
Ca 227.546†	22752.8	45.6 mg/L	0.39	45.6 mg/L	0.39	0.85%
Cd 228.802†	5.5	0.00024 mg/L	0.000149	0.00024 mg/L	0.000149	60.79%
Co 228.616†	18.5	0.00022 mg/L	0.000098	0.00022 mg/L	0.000098	45.22%
Cr 267.716†	53.9	0.00073 mg/L	0.000063	0.00073 mg/L	0.000063	8.70%
Cu 327.393†	33.4	0.00111 mg/L	0.000043	0.00111 mg/L	0.000043	3.87%
Fe 239.562†	3848.2	0.241 mg/L	0.0082	0.241 mg/L	0.0082	3.38%
Mg 279.077†	26839.1	7.57 mg/L	0.119	7.57 mg/L	0.119	1.57%
Mn 257.610†	32345.7	0.0391 mg/L	0.00067	0.0391 mg/L	0.00067	1.73%
Mo 202.031†	233.7	0.00622 mg/L	0.000276	0.00622 mg/L	0.000276	4.44%
Ni 231.604†	112.1	-0.00101 mg/L	0.000298	-0.00101 mg/L	0.000298	29.44%
Pb 220.353†	12.0	-0.00007 mg/L	0.001109	-0.00007 mg/L	0.001109	>999.9%
Sb 206.836†	-6.5	0.00299 mg/L	0.000978	0.00299 mg/L	0.000978	32.71%
Se 196.026†	-3.6	0.00003 mg/L	0.005322	0.00003 mg/L	0.005322	>999.9%
Si 251.611†	221204.9	4.00 mg/L	0.034	4.00 mg/L	0.034	0.85%
Sn 189.927†	-260.5	-0.0198 mg/L	0.00049	-0.0198 mg/L	0.00049	2.46%
Ti 334.940†	-3648.7	0.00470 mg/L	0.000179	0.00470 mg/L	0.000179	3.81%
Tl 190.801†	-17.6	-0.00668 mg/L	0.001889	-0.00668 mg/L	0.001889	28.28%
V 290.880†	1268.9	0.00514 mg/L	0.001350	0.00514 mg/L	0.001350	26.28%
Zn 206.200†	-31.7	0.00018 mg/L	0.000139	0.00018 mg/L	0.000139	77.66%
K 766.490†	8428.7	2.56 mg/L	0.055	2.56 mg/L	0.055	2.15%
Na 589.592†	225763.8	10.3 mg/L	0.02	10.3 mg/L	0.02	0.15%
Sr 407.771†	846120.7	0.301 mg/L	0.0026	0.301 mg/L	0.0026	0.86%
Li 670.784†	1775.6	0.00750 mg/L	0.000090	0.00750 mg/L	0.000090	1.20%

Sequence No.: 44 **Autosampler Location: 71**
Sample ID: L1207036101MS WG403431-06 **Date Collected: 7/17/2012 6:31:23 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036101MS WG403431-06

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036101MS WG403431-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2445828.0						13367.02	0.55%
YRADIAL	320253.7						3517.52	1.10%
Ga 417.206	1418303.3						43680.41	3.08%
GaRADIAL	91077.1						1081.02	1.19%
Ag 328.068†	62594.7	0.194	mg/L	0.0085	0.194	mg/L	0.0085	4.37%
Al 396.153†	36858.5	5.17	mg/L	0.016	5.17	mg/L	0.016	0.32%
As 188.979†	776.2	0.196	mg/L	0.0057	0.196	mg/L	0.0057	2.91%
Ba 233.527†	103994.4	0.610	mg/L	0.0048	0.610	mg/L	0.0048	0.79%
Be 234.861†	30421.7	0.0237	mg/L	0.00113	0.0237	mg/L	0.00113	4.76%
B 249.677†	125273.3	1.05	mg/L	0.052	1.05	mg/L	0.052	4.97%
Ca 227.546†	26129.5	52.5	mg/L	2.55	52.5	mg/L	2.55	4.85%
Cd 228.802†	1402.0	0.0228	mg/L	0.00132	0.0228	mg/L	0.00132	5.80%
Co 228.616†	4580.6	0.0976	mg/L	0.00095	0.0976	mg/L	0.00095	0.97%
Cr 267.716†	32282.5	0.250	mg/L	0.0040	0.250	mg/L	0.0040	1.59%
Cu 327.393†	64198.0	0.239	mg/L	0.0110	0.239	mg/L	0.0110	4.60%
Fe 239.562†	35660.8	2.20	mg/L	0.005	2.20	mg/L	0.005	0.24%
Mg 279.077†	43903.8	12.4	mg/L	0.02	12.4	mg/L	0.02	0.19%
Mn 257.610†	242275.6	0.292	mg/L	0.0020	0.292	mg/L	0.0020	0.68%
Mo 202.031†	19859.5	0.510	mg/L	0.0051	0.510	mg/L	0.0051	0.99%
Ni 231.604†	17767.1	0.245	mg/L	0.0020	0.245	mg/L	0.0020	0.82%
Pb 220.353†	3657.6	0.252	mg/L	0.0024	0.252	mg/L	0.0024	0.93%
Sb 206.836†	2992.0	0.574	mg/L	0.0200	0.574	mg/L	0.0200	3.49%
Se 196.026†	455.1	0.196	mg/L	0.0054	0.196	mg/L	0.0054	2.75%
Si 251.611†	378028.1	6.83	mg/L	0.262	6.83	mg/L	0.262	3.83%
Sn 189.927†	6602.6	0.511	mg/L	0.0043	0.511	mg/L	0.0043	0.85%
Ti 334.940†	534189.6	0.496	mg/L	0.0013	0.496	mg/L	0.0013	0.26%
Tl 190.801†	1059.2	0.262	mg/L	0.0014	0.262	mg/L	0.0014	0.53%
V 290.880†	133719.2	0.511	mg/L	0.0059	0.511	mg/L	0.0059	1.16%
Zn 206.200†	30756.6	0.499	mg/L	0.0085	0.499	mg/L	0.0085	1.70%

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K 766.490†	85266.6	26.7	mg/L	0.12	26.7	mg/L	0.12	0.43%
Na 589.592†	771778.6	35.3	mg/L	0.15	35.3	mg/L	0.15	0.42%
Sr 407.771†	2220634.0	0.789	mg/L	0.0042	0.789	mg/L	0.0042	0.54%
Li 670.784†	80878.6	0.512	mg/L	0.0046	0.512	mg/L	0.0046	0.90%

Sequence No.: 45 **Autosampler Location: 72**
Sample ID: L1207036102 **Date Collected: 7/17/2012 6:37:22 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036102

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036102

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2588894.2						30885.21	1.19%
YRADIAL	328764.6						10753.40	3.27%
Ga 417.206	1468178.5						8657.63	0.59%
GaRADIAL	92784.1						1043.08	1.12%
Ag 328.068†	-161.1	0.00044	mg/L	0.000084	0.00044	mg/L	0.000084	19.23%
Al 396.153†	132.7	-0.00359	mg/L	0.000824	-0.00359	mg/L	0.000824	22.94%
As 188.979†	-6.8	-0.00094	mg/L	0.001743	-0.00094	mg/L	0.001743	186.38%
Ba 233.527†	74.5	-0.00013	mg/L	0.000226	-0.00013	mg/L	0.000226	172.73%
Be 234.861†	110.6	0.00022	mg/L	0.000021	0.00022	mg/L	0.000021	9.34%
B 249.677†	456.6	0.00691	mg/L	0.000485	0.00691	mg/L	0.000485	7.02%
Ca 227.546†	48.7	0.189	mg/L	0.0214	0.189	mg/L	0.0214	11.28%
Cd 228.802†	-9.4	0.00003	mg/L	0.000123	0.00003	mg/L	0.000123	441.23%
Co 228.616†	7.9	0.00002	mg/L	0.000097	0.00002	mg/L	0.000097	577.28%
Cr 267.716†	-26.2	0.00011	mg/L	0.000048	0.00011	mg/L	0.000048	42.94%
Cu 327.393†	4.4	0.00099	mg/L	0.000130	0.00099	mg/L	0.000130	13.12%
Fe 239.562†	53.5	0.00737	mg/L	0.000104	0.00737	mg/L	0.000104	1.41%
Mg 279.077†	33.8	0.0228	mg/L	0.00075	0.0228	mg/L	0.00075	3.31%
Mn 257.610†	-1129.1	-0.00117	mg/L	0.000031	-0.00117	mg/L	0.000031	2.63%
Mo 202.031†	13.5	0.00054	mg/L	0.000279	0.00054	mg/L	0.000279	51.42%
Ni 231.604†	28.2	-0.00218	mg/L	0.000118	-0.00218	mg/L	0.000118	5.39%
Pb 220.353†	14.7	-0.00024	mg/L	0.000996	-0.00024	mg/L	0.000996	420.32%
Sb 206.836†	-3.9	0.00347	mg/L	0.001347	0.00347	mg/L	0.001347	38.87%
Se 196.026†	-1.9	0.00073	mg/L	0.001827	0.00073	mg/L	0.001827	250.74%
Si 251.611†	2505.8	0.0570	mg/L	0.00179	0.0570	mg/L	0.00179	3.14%
Sn 189.927†	5.0	0.00069	mg/L	0.000855	0.00069	mg/L	0.000855	124.52%
Ti 334.940†	153.2	0.00136	mg/L	0.000101	0.00136	mg/L	0.000101	7.42%
Tl 190.801†	1.8	-0.00189	mg/L	0.000286	-0.00189	mg/L	0.000286	15.12%
V 290.880†	-5.0	0.00050	mg/L	0.000451	0.00050	mg/L	0.000451	89.51%
Zn 206.200†	-29.8	0.00021	mg/L	0.000193	0.00021	mg/L	0.000193	92.87%
K 766.490†	59.6	-0.0417	mg/L	0.01919	-0.0417	mg/L	0.01919	46.05%
Na 589.592†	6794.1	0.293	mg/L	0.0079	0.293	mg/L	0.0079	2.68%
Sr 407.771†	885.8	0.00168	mg/L	0.000030	0.00168	mg/L	0.000030	1.78%
Li 670.784†	46.4	-0.00352	mg/L	0.000308	-0.00352	mg/L	0.000308	8.75%

Sequence No.: 46 **Autosampler Location: 73**
Sample ID: L1207036403 **Date Collected: 7/17/2012 6:44:16 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036403

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036403

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2388251.5						40650.97	1.70%

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YRADIAL	312221.7						3454.73	1.11%
Ga 417.206	1436416.9						42615.53	2.97%
GaRADIAL	90324.7						206.18	0.23%
Ag 328.068†	1217.6	0.00507	mg/L	0.000764	0.00507	mg/L	0.000764	15.07%
Al 396.153†	303.2	0.0202	mg/L	0.00414	0.0202	mg/L	0.00414	20.50%
As 188.979†	-16.2	-0.00313	mg/L	0.001546	-0.00313	mg/L	0.001546	49.44%
Ba 233.527†	3213.3	0.0182	mg/L	0.00017	0.0182	mg/L	0.00017	0.91%
Be 234.861†	540.7	0.00034	mg/L	0.000084	0.00034	mg/L	0.000084	24.70%
B 249.677†	58613.8	0.493	mg/L	0.0182	0.493	mg/L	0.0182	3.69%
Ca 227.546†	86004.0	172	mg/L	5.7	172	mg/L	5.7	3.31%
Cd 228.802†	3.5	0.00026	mg/L	0.000110	0.00026	mg/L	0.000110	42.28%
Co 228.616†	48.3	0.00092	mg/L	0.000037	0.00092	mg/L	0.000037	4.05%
Cr 267.716†	73.8	0.00085	mg/L	0.000080	0.00085	mg/L	0.000080	9.46%
Cu 327.393†	4379.4	0.0172	mg/L	0.00055	0.0172	mg/L	0.00055	3.20%
Fe 239.562†	16967.1	1.05	mg/L	0.020	1.05	mg/L	0.020	1.92%
Mg 279.077†	14974.5	4.23	mg/L	0.074	4.23	mg/L	0.074	1.74%
Mn 257.610†	52129.9	0.0629	mg/L	0.00111	0.0629	mg/L	0.00111	1.76%
Mo 202.031†	301.5	0.00800	mg/L	0.000165	0.00800	mg/L	0.000165	2.07%
Ni 231.604†	565.4	0.00530	mg/L	0.000288	0.00530	mg/L	0.000288	5.43%
Pb 220.353†	0.9	0.00006	mg/L	0.000174	0.00006	mg/L	0.000174	314.26%
Sb 206.836†	-7.9	0.00276	mg/L	0.000240	0.00276	mg/L	0.000240	8.70%
Se 196.026†	-2.4	0.00063	mg/L	0.001557	0.00063	mg/L	0.001557	248.00%
Si 251.611†	272366.7	4.93	mg/L	0.123	4.93	mg/L	0.123	2.50%
Sn 189.927†	-306.7	-0.0234	mg/L	0.00079	-0.0234	mg/L	0.00079	3.39%
Ti 334.940†	-29931.8	-0.00029	mg/L	0.002669	-0.00029	mg/L	0.002669	933.37%
Tl 190.801†	-33.4	-0.0108	mg/L	0.00063	-0.0108	mg/L	0.00063	5.87%
V 290.880†	1619.6	0.00647	mg/L	0.000434	0.00647	mg/L	0.000434	6.72%
Zn 206.200†	1921.9	0.0317	mg/L	0.00053	0.0317	mg/L	0.00053	1.66%
K 766.490†	8258.2	2.48	mg/L	0.032	2.48	mg/L	0.032	1.28%
Na 589.592†	941735.3	43.1	mg/L	0.65	43.1	mg/L	0.65	1.52%
Sr 407.771†	358093.9	0.125	mg/L	0.0007	0.125	mg/L	0.0007	0.60%
Li 670.784†	930.7	0.00211	mg/L	0.000078	0.00211	mg/L	0.000078	3.69%

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Sequence No.: 47 **Autosampler Location: 74**
Sample ID: L1207036404 **Date Collected: 7/17/2012 6:50:14 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036404

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036404

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2487423.5						20619.09	0.83%
YRADIAL	319970.7						4518.08	1.41%
Ga 417.206	1455823.3						31634.90	2.17%
GaRADIAL	90501.2						565.55	0.62%
Ag 328.068†	-308.9	0.00174	mg/L	0.000393	0.00174	mg/L	0.000393	22.60%
Al 396.153†	6043.2	0.836	mg/L	0.0128	0.836	mg/L	0.0128	1.54%
As 188.979†	-12.7	-0.00148	mg/L	0.000692	-0.00148	mg/L	0.000692	46.71%
Ba 233.527†	2927.5	0.0164	mg/L	0.00007	0.0164	mg/L	0.00007	0.41%
Be 234.861†	1440.2	0.00035	mg/L	0.000100	0.00035	mg/L	0.000100	28.87%
B 249.677†	74050.4	0.621	mg/L	0.0153	0.621	mg/L	0.0153	2.46%
Ca 227.546†	16661.7	33.5	mg/L	1.09	33.5	mg/L	1.09	3.25%
Cd 228.802†	12.9	0.00042	mg/L	0.000271	0.00042	mg/L	0.000271	64.99%
Co 228.616†	35.0	0.00046	mg/L	0.000138	0.00046	mg/L	0.000138	29.89%
Cr 267.716†	1110.8	0.00876	mg/L	0.000154	0.00876	mg/L	0.000154	1.76%
Cu 327.393†	10079.7	0.0384	mg/L	0.00127	0.0384	mg/L	0.00127	3.31%
Fe 239.562†	68823.7	4.25	mg/L	0.037	4.25	mg/L	0.037	0.87%
Mg 279.077†	5890.0	1.67	mg/L	0.004	1.67	mg/L	0.004	0.22%
Mn 257.610†	32327.1	0.0391	mg/L	0.00056	0.0391	mg/L	0.00056	1.44%
Mo 202.031†	140.5	0.00402	mg/L	0.000318	0.00402	mg/L	0.000318	7.90%
Ni 231.604†	466.4	0.00392	mg/L	0.000288	0.00392	mg/L	0.000288	7.33%
Pb 220.353†	83.3	0.00448	mg/L	0.001340	0.00448	mg/L	0.001340	29.89%
Sb 206.836†	-6.9	0.00299	mg/L	0.000398	0.00299	mg/L	0.000398	13.31%
Se 196.026†	6.4	0.00495	mg/L	0.002938	0.00495	mg/L	0.002938	59.37%

Approved: July 18, 2012

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Si 251.611†	522261.4	9.44	mg/L	0.121	9.44	mg/L	0.121	1.28%
Sn 189.927†	9132.6	0.707	mg/L	0.0098	0.707	mg/L	0.0098	1.39%
Ti 334.940†	13441.2	0.0184	mg/L	0.00033	0.0184	mg/L	0.00033	1.77%
Tl 190.801†	-26.3	-0.00858	mg/L	0.002423	-0.00858	mg/L	0.002423	28.24%
V 290.880†	1777.0	0.00671	mg/L	0.001511	0.00671	mg/L	0.001511	22.52%
Zn 206.200†	13248.7	0.214	mg/L	0.0027	0.214	mg/L	0.0027	1.27%
K 766.490†	9984.7	3.01	mg/L	0.068	3.01	mg/L	0.068	2.26%
Na 589.592†	1142640.2	52.3	mg/L	0.17	52.3	mg/L	0.17	0.32%
Sr 407.771†	168221.0	0.0604	mg/L	0.00038	0.0604	mg/L	0.00038	0.62%
Li 670.784†	811.1	0.00135	mg/L	0.000373	0.00135	mg/L	0.000373	27.61%

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Sequence No.: 48 **Autosampler Location: 75**
Sample ID: L1207036404PS WG403585-01 **Date Collected: 7/17/2012 6:56:13 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036404PS WG403585-01

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Mean Data: L1207036404PS WG403585-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2432334.0						18566.36	0.76%
YRADIAL	321201.0						2695.46	0.84%
Ga 417.206	1404810.7						32575.93	2.32%
GaRADIAL	89011.8						982.85	1.10%
Ag 328.068†	62503.1	0.195	mg/L	0.0049	0.195	mg/L	0.0049	2.53%
Al 396.153†	41098.4	5.78	mg/L	0.028	5.78	mg/L	0.028	0.49%
As 188.979†	747.4	0.190	mg/L	0.0039	0.190	mg/L	0.0039	2.04%
Ba 233.527†	87501.1	0.513	mg/L	0.0028	0.513	mg/L	0.0028	0.55%
Be 234.861†	31403.6	0.0237	mg/L	0.00061	0.0237	mg/L	0.00061	2.57%
B 249.677†	183794.9	1.54	mg/L	0.042	1.54	mg/L	0.042	2.75%
Ca 227.546†	17860.3	36.1	mg/L	0.47	36.1	mg/L	0.47	1.31%
Cd 228.802†	1416.7	0.0231	mg/L	0.00109	0.0231	mg/L	0.00109	4.72%
Co 228.616†	4754.0	0.101	mg/L	0.0017	0.101	mg/L	0.0017	1.68%
Cr 267.716†	33174.9	0.257	mg/L	0.0024	0.257	mg/L	0.0024	0.95%
Cu 327.393†	76299.9	0.283	mg/L	0.0046	0.283	mg/L	0.0046	1.62%
Fe 239.562†	92854.9	5.73	mg/L	0.022	5.73	mg/L	0.022	0.38%
Mg 279.077†	22561.9	6.37	mg/L	0.061	6.37	mg/L	0.061	0.96%
Mn 257.610†	238622.6	0.287	mg/L	0.0036	0.287	mg/L	0.0036	1.26%
Mo 202.031†	19836.2	0.510	mg/L	0.0009	0.510	mg/L	0.0009	0.18%
Ni 231.604†	17917.7	0.247	mg/L	0.0027	0.247	mg/L	0.0027	1.10%
Pb 220.353†	3729.3	0.257	mg/L	0.0030	0.257	mg/L	0.0030	1.17%
Sb 206.836†	3002.5	0.576	mg/L	0.0142	0.576	mg/L	0.0142	2.47%
Se 196.026†	478.8	0.206	mg/L	0.0055	0.206	mg/L	0.0055	2.66%
Si 251.611†	636932.6	11.5	mg/L	0.22	11.5	mg/L	0.22	1.89%
Sn 189.927†	8207.6	0.635	mg/L	0.0086	0.635	mg/L	0.0086	1.36%
Ti 334.940†	561135.3	0.518	mg/L	0.0026	0.518	mg/L	0.0026	0.51%
Tl 190.801†	1045.0	0.259	mg/L	0.0006	0.259	mg/L	0.0006	0.25%
V 290.880†	134558.8	0.514	mg/L	0.0037	0.514	mg/L	0.0037	0.71%
Zn 206.200†	42521.8	0.689	mg/L	0.0078	0.689	mg/L	0.0078	1.14%
K 766.490†	87724.8	27.4	mg/L	0.19	27.4	mg/L	0.19	0.71%
Na 589.592†	1606514.0	73.5	mg/L	1.15	73.5	mg/L	1.15	1.56%
Sr 407.771†	1543332.9	0.549	mg/L	0.0064	0.549	mg/L	0.0064	1.17%
Li 670.784†	84295.8	0.533	mg/L	0.0058	0.533	mg/L	0.0058	1.09%

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Sequence No.: 49 **Autosampler Location: 76**
Sample ID: L1207036404DL WG403585-02 **Date Collected: 7/17/2012 7:02:12 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207036404DL WG403585-02

Analyte	Back Pressure	Flow
All	302.0 kPa	0.50 L/min

Approved: July 18, 2012
Kym H. Rhoden

Mean Data: L1207036404DL WG403585-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2587909.0						35565.56	1.37%
YRADIAL	322975.4						7339.67	2.27%
Ga 417.206	1566408.3						27882.28	1.78%
GaRADIAL	93471.1						2096.32	2.24%
Ag 328.068†	-204.9	0.00065	mg/L	0.000149	0.00065	mg/L	0.000149	22.96%
Al 396.153†	1203.4	0.148	mg/L	0.0008	0.148	mg/L	0.0008	0.52%
As 188.979†	-6.8	-0.00073	mg/L	0.000335	-0.00073	mg/L	0.000335	46.10%
Ba 233.527†	585.5	0.00282	mg/L	0.000070	0.00282	mg/L	0.000070	2.47%
Be 234.861†	521.9	0.00036	mg/L	0.000081	0.00036	mg/L	0.000081	22.19%
B 249.677†	13965.0	0.120	mg/L	0.0018	0.120	mg/L	0.0018	1.51%
Ca 227.546†	3073.3	6.26	mg/L	0.106	6.26	mg/L	0.106	1.69%
Cd 228.802†	-2.7	0.00014	mg/L	0.000098	0.00014	mg/L	0.000098	69.41%
Co 228.616†	8.2	0.00000	mg/L	0.000127	0.00000	mg/L	0.000127	>999.9%
Cr 267.716†	170.3	0.00160	mg/L	0.000108	0.00160	mg/L	0.000108	6.72%
Cu 327.393†	1924.7	0.00812	mg/L	0.000190	0.00812	mg/L	0.000190	2.34%
Fe 239.562†	13666.0	0.846	mg/L	0.0069	0.846	mg/L	0.0069	0.82%
Mg 279.077†	1195.1	0.349	mg/L	0.0041	0.349	mg/L	0.0041	1.19%
Mn 257.610†	5432.3	0.00672	mg/L	0.000196	0.00672	mg/L	0.000196	2.91%
Mo 202.031†	33.4	0.00110	mg/L	0.000240	0.00110	mg/L	0.000240	21.87%
Ni 231.604†	101.5	-0.00116	mg/L	0.000029	-0.00116	mg/L	0.000029	2.47%
Pb 220.353†	37.5	0.00133	mg/L	0.001264	0.00133	mg/L	0.001264	95.02%
Sb 206.836†	-7.0	0.00290	mg/L	0.001236	0.00290	mg/L	0.001236	42.62%
Se 196.026†	-1.2	0.00117	mg/L	0.002014	0.00117	mg/L	0.002014	171.86%
Si 251.611†	99482.2	1.81	mg/L	0.035	1.81	mg/L	0.035	1.92%
Sn 189.927†	1767.8	0.137	mg/L	0.0021	0.137	mg/L	0.0021	1.53%
Ti 334.940†	2474.4	0.00438	mg/L	0.000011	0.00438	mg/L	0.000011	0.26%
Tl 190.801†	-9.1	-0.00452	mg/L	0.003193	-0.00452	mg/L	0.003193	70.69%
V 290.880†	318.7	0.00162	mg/L	0.000188	0.00162	mg/L	0.000188	11.62%
Zn 206.200†	2579.2	0.0423	mg/L	0.00041	0.0423	mg/L	0.00041	0.97%
K 766.490†	2175.8	0.609	mg/L	0.0020	0.609	mg/L	0.0020	0.32%
Na 589.592†	222240.0	10.2	mg/L	0.23	10.2	mg/L	0.23	2.25%
Sr 407.771†	33716.0	0.0132	mg/L	0.00050	0.0132	mg/L	0.00050	3.80%
Li 670.784†	241.2	-0.00228	mg/L	0.000056	-0.00228	mg/L	0.000056	2.46%

Sequence No.: 50 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 7:09:07 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	302.0 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	2450597.4						34158.46	1.39%
YRADIAL	319044.5						1398.57	0.44%
Ga 417.206	1371421.9						25179.00	1.84%
GaRADIAL	88675.0						457.65	0.52%
Ag 328.068†	129256.5	0.400	mg/L	0.0081	0.400	mg/L	0.0081	2.03%
QC value within limits for Ag 328.068 Recovery = 99.98%								
Al 396.153†	71074.3	9.99	mg/L	0.030	9.99	mg/L	0.030	0.30%
QC value within limits for Al 396.153 Recovery = 99.95%								
As 188.979†	1567.1	0.395	mg/L	0.0066	0.395	mg/L	0.0066	1.68%
QC value within limits for As 188.979 Recovery = 98.79%								
Ba 233.527†	174993.7	1.03	mg/L	0.006	1.03	mg/L	0.006	0.55%
QC value within limits for Ba 233.527 Recovery = 102.71%								
Be 234.861†	63603.7	0.0494	mg/L	0.00112	0.0494	mg/L	0.00112	2.27%
QC value within limits for Be 234.861 Recovery = 98.83%								
B 249.677†	59211.9	0.495	mg/L	0.0109	0.495	mg/L	0.0109	2.20%
QC value within limits for B 249.677 Recovery = 98.97%								
Ca 227.546†	4860.0	10.3	mg/L	0.19	10.3	mg/L	0.19	1.81%

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   QC value within limits for Ca 227.546  Recovery = 102.88%
Cd 228.802†            2981.2      0.0484 mg/L       0.00179      0.0484 mg/L       0.00179   3.69%
   QC value within limits for Cd 228.802  Recovery = 96.89%
Co 228.616†            9567.5       0.204 mg/L        0.0033       0.204 mg/L        0.0033   1.61%
   QC value within limits for Co 228.616  Recovery = 102.07%
Cr 267.716†           65897.7       0.510 mg/L        0.0028       0.510 mg/L        0.0028   0.56%
   QC value within limits for Cr 267.716  Recovery = 102.01%
Cu 327.393†          133741.0       0.496 mg/L        0.0100       0.496 mg/L        0.0100   2.01%
   QC value within limits for Cu 327.393  Recovery = 99.20%
Fe 239.562†           65354.6        4.03 mg/L         0.006        4.03 mg/L         0.006   0.15%
   QC value within limits for Fe 239.562  Recovery = 100.77%
Mg 279.077†           35566.6        10.0 mg/L          0.03        10.0 mg/L          0.03   0.26%
   QC value within limits for Mg 279.077  Recovery = 100.48%
Mn 257.610†          423834.2       0.510 mg/L        0.0046       0.510 mg/L        0.0046   0.90%
   QC value within limits for Mn 257.610  Recovery = 102.09%
Mo 202.031†           40075.9        1.03 mg/L         0.005        1.03 mg/L         0.005   0.47%
   QC value within limits for Mo 202.031  Recovery = 102.97%
Ni 231.604†           38074.1       0.527 mg/L        0.0081       0.527 mg/L        0.0081   1.54%
   QC value within limits for Ni 231.604  Recovery = 105.47%
Pb 220.353†            7487.2       0.517 mg/L        0.0072       0.517 mg/L        0.0072   1.39%
   QC value within limits for Pb 220.353  Recovery = 103.40%
Sb 206.836†            6239.1        1.19 mg/L         0.025        1.19 mg/L         0.025   2.09%
   QC value within limits for Sb 206.836  Recovery = 99.40%
Se 196.026†             943.4       0.404 mg/L        0.0106       0.404 mg/L        0.0106   2.62%
   QC value within limits for Se 196.026  Recovery = 100.90%
Si 251.611†          277858.7        5.02 mg/L         0.067        5.02 mg/L         0.067   1.34%
   QC value within limits for Si 251.611  Recovery = 100.31%
Sn 189.927†           13629.5        1.05 mg/L         0.017        1.05 mg/L         0.017   1.57%
   QC value within limits for Sn 189.927  Recovery = 105.43%
Ti 334.940†         1108884.9        1.01 mg/L         0.004        1.01 mg/L         0.004   0.42%
   QC value within limits for Ti 334.940  Recovery = 101.28%
Tl 190.801†            2188.6       0.544 mg/L        0.0033       0.544 mg/L        0.0033   0.61%
   QC value within limits for Tl 190.801  Recovery = 108.76%
V 290.880†           265828.2        1.02 mg/L         0.007        1.02 mg/L         0.007   0.66%
   QC value within limits for V 290.880  Recovery = 101.55%
Zn 206.200†           63627.2        1.03 mg/L         0.010        1.03 mg/L         0.010   0.99%
   QC value within limits for Zn 206.200  Recovery = 103.18%
K 766.490†           156312.7        49.3 mg/L          0.34        49.3 mg/L          0.34   0.69%
   QC value within limits for K 766.490  Recovery = 98.60%
Na 589.592†         1087696.8        49.8 mg/L          0.72        49.8 mg/L          0.72   1.44%
   QC value within limits for Na 589.592  Recovery = 99.57%
Sr 407.771†         2760620.9       0.982 mg/L        0.0093       0.982 mg/L        0.0093   0.95%
   QC value within limits for Sr 407.771  Recovery = 98.16%
Li 670.784†          159110.2        1.01 mg/L         0.003        1.01 mg/L         0.003   0.29%
   QC value within limits for Li 670.784  Recovery = 101.01%
All analyte(s) passed QC.

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Sequence No.: 51                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 7:15:06 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                     302.0 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           2574476.0                                                      23080.14   0.90%
YRADIAL              316597.0                                                       3962.34   1.25%
Ga 417.206          1455795.8                                                      20672.28   1.42%
GaRADIAL              89559.3                                                       3279.93   3.66%
Ag 328.068†             -80.6     0.00068 mg/L      0.000139     0.00068 mg/L      0.000139  20.47%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              25.6     -0.0188 mg/L       0.00051     -0.0188 mg/L       0.00051   2.73%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -1.9     0.00032 mg/L      0.000765     0.00032 mg/L      0.000765 241.50%
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   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              64.9    -0.00019 mg/L      0.000014    -0.00019 mg/L      0.000014   7.22%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              99.0     0.00021 mg/L      0.000010     0.00021 mg/L      0.000010   4.88%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              274.9     0.00539 mg/L      0.000119     0.00539 mg/L      0.000119   2.21%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†               0.9      0.0937 mg/L       0.02388      0.0937 mg/L       0.02388  25.48%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -1.6     0.00015 mg/L      0.000071     0.00015 mg/L      0.000071  46.49%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               9.4     0.00005 mg/L      0.000099     0.00005 mg/L      0.000099 205.33%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -24.3     0.00013 mg/L      0.000141     0.00013 mg/L      0.000141 111.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†              12.8     0.00102 mg/L      0.000274     0.00102 mg/L      0.000274  26.82%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              49.7     0.00714 mg/L      0.000421     0.00714 mg/L      0.000421   5.90%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              41.9      0.0250 mg/L       0.00344      0.0250 mg/L       0.00344  13.72%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1207.8    -0.00127 mg/L      0.000008    -0.00127 mg/L      0.000008   0.59%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              18.1     0.00066 mg/L      0.000195     0.00066 mg/L      0.000195  29.61%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              13.0    -0.00239 mg/L      0.000075    -0.00239 mg/L      0.000075   3.12%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              10.7    -0.00051 mg/L      0.000376    -0.00051 mg/L      0.000376  73.24%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -2.7     0.00370 mg/L      0.000957     0.00370 mg/L      0.000957  25.90%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.2     0.00162 mg/L      0.001043     0.00162 mg/L      0.001043  64.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             260.8      0.0165 mg/L       0.00037      0.0165 mg/L       0.00037   2.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              10.2     0.00109 mg/L      0.000217     0.00109 mg/L      0.000217  19.93%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             159.0     0.00135 mg/L      0.000109     0.00135 mg/L      0.000109   8.13%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.3    -0.00007 mg/L      0.001249    -0.00007 mg/L      0.001249 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†             -183.2    -0.00018 mg/L      0.000578    -0.00018 mg/L      0.000578 326.36%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -159.5    -0.00188 mg/L      0.000076    -0.00188 mg/L      0.000076   4.01%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               26.4     -0.0517 mg/L       0.00905     -0.0517 mg/L       0.00905  17.49%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              -89.0     -0.0224 mg/L       0.00556     -0.0224 mg/L       0.00556  24.83%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†             817.6     0.00166 mg/L      0.000026     0.00166 mg/L      0.000026   1.54%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              77.8    -0.00332 mg/L      0.000596    -0.00332 mg/L      0.000596  17.94%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 52                                    Autosampler Location: 77
Sample ID: L1207036405                              Date Collected: 7/17/2012 7:21:59 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1207036405
Analyte                 Back Pressure    Flow
All                     302.0 kPa        0.50 L/min

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Mean Data: L1207036405
                   Mean Corrected        Calib.                          Sample
Analyte               Intensity     Conc. Units     Std.Dev.     Conc. Units     Std.Dev.   RSD
Y 371.029            2405377.0                                                  16776.66   0.70%
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YRADIAL	314672.8						3049.61	0.97%
Ga 417.206	1411936.7						23117.27	1.64%
GaRADIAL	89993.1						180.58	0.20%
Ag 328.068†	-1729.1	0.00208	mg/L	0.000637	0.00208	mg/L	0.000637	30.67%
Al 396.153†	11047.4	1.55	mg/L	0.013	1.55	mg/L	0.013	0.85%
As 188.979†	-21.2	-0.00099	mg/L	0.001084	-0.00099	mg/L	0.001084	109.91%
Ba 233.527†	3719.9	0.0204	mg/L	0.00032	0.0204	mg/L	0.00032	1.59%
Be 234.861†	4589.6	0.00037	mg/L	0.000053	0.00037	mg/L	0.000053	14.31%
B 249.677†	9525.9	0.0761	mg/L	0.00281	0.0761	mg/L	0.00281	3.69%
Ca 227.546†	34832.3	70.1	mg/L	1.72	70.1	mg/L	1.72	2.45%
Cd 228.802†	11.0	0.00042	mg/L	0.000130	0.00042	mg/L	0.000130	30.92%
Co 228.616†	77.4	0.00104	mg/L	0.000295	0.00104	mg/L	0.000295	28.29%
Cr 267.716†	3146.7	0.0241	mg/L	0.00022	0.0241	mg/L	0.00022	0.93%
Cu 327.393†	13801.5	0.0527	mg/L	0.00125	0.0527	mg/L	0.00125	2.37%
Fe 239.562†	251889.0	15.5	mg/L	0.08	15.5	mg/L	0.08	0.49%
Mg 279.077†	10355.7	2.92	mg/L	0.049	2.92	mg/L	0.049	1.66%
Mn 257.610†	85811.0	0.103	mg/L	0.0005	0.103	mg/L	0.0005	0.48%
Mo 202.031†	212.2	0.00643	mg/L	0.000433	0.00643	mg/L	0.000433	6.74%
Ni 231.604†	568.3	0.00534	mg/L	0.000243	0.00534	mg/L	0.000243	4.54%
Pb 220.353†	95.3	0.00470	mg/L	0.001664	0.00470	mg/L	0.001664	35.43%
Sb 206.836†	2.1	0.00500	mg/L	0.000831	0.00500	mg/L	0.000831	16.61%
Se 196.026†	5.5	0.00635	mg/L	0.001108	0.00635	mg/L	0.001108	17.45%
Si 251.611†	456402.4	8.25	mg/L	0.103	8.25	mg/L	0.103	1.25%
Sn 189.927†	37206.3	2.88	mg/L	0.022	2.88	mg/L	0.022	0.78%
Ti 334.940†	32522.7	0.0413	mg/L	0.00075	0.0413	mg/L	0.00075	1.81%
Tl 190.801†	-35.6	-0.0107	mg/L	0.00330	-0.0107	mg/L	0.00330	30.92%
V 290.880†	3269.6	0.0109	mg/L	0.00194	0.0109	mg/L	0.00194	17.79%
Zn 206.200†	12882.4	0.208	mg/L	0.0019	0.208	mg/L	0.0019	0.90%
K 766.490†	5877.1	1.68	mg/L	0.035	1.68	mg/L	0.035	2.11%
Na 589.592†	2060053.6	94.3	mg/L	0.33	94.3	mg/L	0.33	0.35%
Sr 407.771†	372814.1	0.132	mg/L	0.0015	0.132	mg/L	0.0015	1.10%
Li 670.784†	1381.5	0.00498	mg/L	0.000249	0.00498	mg/L	0.000249	5.00%

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Sequence No.: 53 **Autosampler Location: 78**
Sample ID: L1207038901 **Date Collected: 7/17/2012 7:27:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207038901

Analyte	**Back Pressure**	**Flow**
All	302.0 kPa	0.50 L/min

Mean Data: L1207038901

Analyte	**Mean Corrected Intensity**	**Calib. Conc.**	**Units**	**Std.Dev.**	**Sample Conc.**	**Units**	**Std.Dev.**	**RSD**
Y 371.029	2455693.7						15341.12	0.62%
YRADIAL	318442.2						4013.68	1.26%
Ga 417.206	1486458.1						33150.99	2.23%
GaRADIAL	92475.1						566.82	0.61%
Ag 328.068†	2741.2	0.00953	mg/L	0.000484	0.00953	mg/L	0.000484	5.08%
Al 396.153†	1098.5	0.133	mg/L	0.0015	0.133	mg/L	0.0015	1.14%
As 188.979†	-14.2	-0.00272	mg/L	0.001986	-0.00272	mg/L	0.001986	73.06%
Ba 233.527†	3329.1	0.0189	mg/L	0.00017	0.0189	mg/L	0.00017	0.92%
Be 234.861†	451.0	0.00037	mg/L	0.000020	0.00037	mg/L	0.000020	5.45%
B 249.677†	5530.2	0.0490	mg/L	0.00198	0.0490	mg/L	0.00198	4.05%
Ca 227.546†	22358.2	44.8	mg/L	0.94	44.8	mg/L	0.94	2.10%
Cd 228.802†	8.5	0.00034	mg/L	0.000067	0.00034	mg/L	0.000067	19.33%
Co 228.616†	99.9	0.00200	mg/L	0.000195	0.00200	mg/L	0.000195	9.76%
Cr 267.716†	6520.4	0.0507	mg/L	0.00032	0.0507	mg/L	0.00032	0.64%
Cu 327.393†	102567.9	0.379	mg/L	0.0085	0.379	mg/L	0.0085	2.24%
Fe 239.562†	9782.7	0.607	mg/L	0.0135	0.607	mg/L	0.0135	2.23%
Mg 279.077†	32925.2	9.29	mg/L	0.207	9.29	mg/L	0.207	2.23%
Mn 257.610†	26087.8	0.0316	mg/L	0.00050	0.0316	mg/L	0.00050	1.59%
Mo 202.031†	501.7	0.0131	mg/L	0.00039	0.0131	mg/L	0.00039	2.97%
Ni 231.604†	4676.1	0.0626	mg/L	0.00042	0.0626	mg/L	0.00042	0.68%
Pb 220.353†	75.8	0.00393	mg/L	0.001031	0.00393	mg/L	0.001031	26.22%
Sb 206.836†	619.7	0.122	mg/L	0.0040	0.122	mg/L	0.0040	3.24%
Se 196.026†	-2.0	0.00080	mg/L	0.000391	0.00080	mg/L	0.000391	49.20%

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Si 251.611†	136552.7	2.48	mg/L	0.030	2.48	mg/L	0.030	1.20%
Sn 189.927†	-229.0	-0.0174	mg/L	0.00103	-0.0174	mg/L	0.00103	5.92%
Ti 334.940†	-4495.5	0.00379	mg/L	0.000668	0.00379	mg/L	0.000668	17.61%
Tl 190.801†	-20.4	-0.00736	mg/L	0.000533	-0.00736	mg/L	0.000533	7.24%
V 290.880†	2309.8	0.00903	mg/L	0.001751	0.00903	mg/L	0.001751	19.40%
Zn 206.200†	7155.3	0.117	mg/L	0.0011	0.117	mg/L	0.0011	0.97%
K 766.490†	49566.0	15.4	mg/L	0.19	15.4	mg/L	0.19	1.21%
Na 589.592†	1712708.8	78.4	mg/L	0.40	78.4	mg/L	0.40	0.51%
Sr 407.771†	301839.8	0.108	mg/L	0.0017	0.108	mg/L	0.0017	1.58%
Li 670.784†	634.1	0.00022	mg/L	0.000434	0.00022	mg/L	0.000434	196.30%

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Sequence No.: 54 **Autosampler Location: 79**
Sample ID: L1207038902 **Date Collected: 7/17/2012 7:33:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207038902

Analyte	Back Pressure	Flow
All	303.0 kPa	0.50 L/min

Mean Data: L1207038902

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2406301.7						25310.07	1.05%
YRADIAL	315123.6						1731.89	0.55%
Ga 417.206	1490690.1						34091.92	2.29%
GaRADIAL	91976.4						587.85	0.64%
Ag 328.068†	773.2	0.00341	mg/L	0.000144	0.00341	mg/L	0.000144	4.21%
Al 396.153†	980.6	0.115	mg/L	0.0061	0.115	mg/L	0.0061	5.28%
As 188.979†	-7.2	-0.00110	mg/L	0.000914	-0.00110	mg/L	0.000914	83.24%
Ba 233.527†	3131.0	0.0178	mg/L	0.00005	0.0178	mg/L	0.00005	0.30%
Be 234.861†	338.1	0.00034	mg/L	0.000034	0.00034	mg/L	0.000034	9.90%
B 249.677†	8730.4	0.0760	mg/L	0.00218	0.0760	mg/L	0.00218	2.87%
Ca 227.546†	23247.4	46.6	mg/L	0.81	46.6	mg/L	0.81	1.73%
Cd 228.802†	11.2	0.00038	mg/L	0.000196	0.00038	mg/L	0.000196	50.96%
Co 228.616†	160.0	0.00332	mg/L	0.000055	0.00332	mg/L	0.000055	1.67%
Cr 267.716†	1641.9	0.0130	mg/L	0.00016	0.0130	mg/L	0.00016	1.25%
Cu 327.393†	58612.6	0.217	mg/L	0.0038	0.217	mg/L	0.0038	1.74%
Fe 239.562†	5837.4	0.364	mg/L	0.0045	0.364	mg/L	0.0045	1.24%
Mg 279.077†	36254.4	10.2	mg/L	0.06	10.2	mg/L	0.06	0.62%
Mn 257.610†	37844.9	0.0457	mg/L	0.00054	0.0457	mg/L	0.00054	1.19%
Mo 202.031†	1175.6	0.0304	mg/L	0.00032	0.0304	mg/L	0.00032	1.04%
Ni 231.604†	3789.3	0.0502	mg/L	0.00041	0.0502	mg/L	0.00041	0.83%
Pb 220.353†	43.8	0.00191	mg/L	0.000841	0.00191	mg/L	0.000841	43.94%
Sb 206.836†	48.6	0.0135	mg/L	0.00129	0.0135	mg/L	0.00129	9.62%
Se 196.026†	3.1	0.00293	mg/L	0.002275	0.00293	mg/L	0.002275	77.67%
Si 251.611†	119346.2	2.17	mg/L	0.037	2.17	mg/L	0.037	1.71%
Sn 189.927†	-247.1	-0.0188	mg/L	0.00050	-0.0188	mg/L	0.00050	2.66%
Ti 334.940†	-3392.8	0.00508	mg/L	0.001086	0.00508	mg/L	0.001086	21.39%
Tl 190.801†	-25.8	-0.00866	mg/L	0.002946	-0.00866	mg/L	0.002946	34.01%
V 290.880†	1942.4	0.00763	mg/L	0.001086	0.00763	mg/L	0.001086	14.23%
Zn 206.200†	8083.5	0.131	mg/L	0.0010	0.131	mg/L	0.0010	0.77%
K 766.490†	93794.6	29.3	mg/L	0.14	29.3	mg/L	0.14	0.49%
Na 589.592†	2406393.8	110	mg/L	0.2	110	mg/L	0.2	0.19%
Sr 407.771†	335417.6	0.119	mg/L	0.0004	0.119	mg/L	0.0004	0.30%
Li 670.784†	1558.7	0.00611	mg/L	0.000221	0.00611	mg/L	0.000221	3.62%

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Sequence No.: 55 **Autosampler Location: 80**
Sample ID: L1207039801 **Date Collected: 7/17/2012 7:39:59 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207039801

Analyte	Back Pressure	Flow
All	303.0 kPa	0.50 L/min

Approved: July 18, 2012

Kym H. Rhoden

Mean Data: L1207039801

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2379555.1						17500.81	0.74%
YRADIAL	319111.8						7271.97	2.28%
Ga 417.206	1412934.5						24565.51	1.74%
GaRADIAL	89202.2						2749.92	3.08%
Ag 328.068†	39917.7	0.144	mg/L	0.0052	0.144	mg/L	0.0052	3.62%
Al 396.153†	5089.6	0.701	mg/L	0.0143	0.701	mg/L	0.0143	2.04%
As 188.979†	4.2	0.00399	mg/L	0.001457	0.00399	mg/L	0.001457	36.50%
Ba 233.527†	754290.0	4.42	mg/L	0.029	4.42	mg/L	0.029	0.66%
Be 234.861†	3767.8	0.00046	mg/L	0.000143	0.00046	mg/L	0.000143	30.81%
B 249.677†	98037.7	0.818	mg/L	0.0215	0.818	mg/L	0.0215	2.62%
Ca 227.546†	8410.5	17.2	mg/L	0.46	17.2	mg/L	0.46	2.65%
Cd 228.802†	-2.6	-0.00042	mg/L	0.000103	-0.00042	mg/L	0.000103	24.46%
Co 228.616†	566.8	0.0102	mg/L	0.00028	0.0102	mg/L	0.00028	2.74%
Cr 267.716†	5181.1	0.0443	mg/L	0.00012	0.0443	mg/L	0.00012	0.27%
Cu 327.393†	39327.9	0.150	mg/L	0.0003	0.150	mg/L	0.0003	0.19%
Fe 239.562†	199189.5	12.3	mg/L	0.15	12.3	mg/L	0.15	1.20%
Mg 279.077†	2394.2	0.681	mg/L	0.0101	0.681	mg/L	0.0101	1.49%
Mn 257.610†	346942.1	0.419	mg/L	0.0037	0.419	mg/L	0.0037	0.87%
Mo 202.031†	379.6	0.0143	mg/L	0.00040	0.0143	mg/L	0.00040	2.77%
Ni 231.604†	1887.2	0.0237	mg/L	0.00016	0.0237	mg/L	0.00016	0.68%
Pb 220.353†	-37.5	-0.00332	mg/L	0.000316	-0.00332	mg/L	0.000316	9.51%
Sb 206.836†	-85.3	-0.00483	mg/L	0.000789	-0.00483	mg/L	0.000789	16.34%
Se 196.026†	-8.2	0.00065	mg/L	0.001524	0.00065	mg/L	0.001524	236.22%
Si 251.611†	229145.4	4.15	mg/L	0.073	4.15	mg/L	0.073	1.76%
Sn 189.927†	231.6	0.0182	mg/L	0.00133	0.0182	mg/L	0.00133	7.28%
Ti 334.940†	9069.7	0.0120	mg/L	0.00011	0.0120	mg/L	0.00011	0.95%
Tl 190.801†	-26.6	0.0122	mg/L	0.00753	0.0122	mg/L	0.00753	61.81%
V 290.880†	2017411.6	7.71	mg/L	0.050	7.71	mg/L	0.050	0.65%
Zn 206.200†	26226.4	0.425	mg/L	0.0063	0.425	mg/L	0.0063	1.49%
K 766.490†	6882.6	1.79	mg/L	0.064	1.79	mg/L	0.064	3.56%
Na 589.592†	6615161.8	302	mg/L	8.6	302	mg/L	8.6	2.86%
Sr 407.771†	226986.5	0.0816	mg/L	0.00098	0.0816	mg/L	0.00098	1.20%
Li 670.784†	502.6	-0.00062	mg/L	0.000381	-0.00062	mg/L	0.000381	61.69%

Sequence No.: 56
Sample ID: L1207039901
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 81
Date Collected: 7/17/2012 7:46:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207039901

Analyte	Back Pressure	Flow
All	305.0 kPa	0.50 L/min

Mean Data: L1207039901

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2263373.1						26885.27	1.19%
YRADIAL	315787.6						3675.92	1.16%
Ga 417.206	1301583.4						37957.27	2.92%
GaRADIAL	86424.4						677.94	0.78%
Ag 328.068†	-1383.8	0.00053	mg/L	0.000523	0.00053	mg/L	0.000523	98.04%
Al 396.153†	284038.1	40.3	mg/L	0.89	40.3	mg/L	0.89	2.20%
As 188.979†	-9.9	-0.00236	mg/L	0.000467	-0.00236	mg/L	0.000467	19.83%
Ba 233.527†	8617.9	0.0495	mg/L	0.00059	0.0495	mg/L	0.00059	1.19%
Be 234.861†	2888.4	0.00043	mg/L	0.000129	0.00043	mg/L	0.000129	30.19%
B 249.677†	64585.3	0.540	mg/L	0.0185	0.540	mg/L	0.0185	3.44%
Ca 227.546†	6645.6	13.6	mg/L	0.40	13.6	mg/L	0.40	2.94%
Cd 228.802†	111.1	0.00206	mg/L	0.000044	0.00206	mg/L	0.000044	2.13%
Co 228.616†	85.8	0.00132	mg/L	0.000036	0.00132	mg/L	0.000036	2.70%
Cr 267.716†	10784.2	0.0837	mg/L	0.00086	0.0837	mg/L	0.00086	1.03%
Cu 327.393†	23551.1	0.0884	mg/L	0.00214	0.0884	mg/L	0.00214	2.41%
Fe 239.562†	149773.8	9.23	mg/L	0.086	9.23	mg/L	0.086	0.93%
Mg 279.077†	10220.6	2.89	mg/L	0.039	2.89	mg/L	0.039	1.36%

Approved: July 18, 2012
Kym H. Rhoden

Mn 257.610†	200508.7	0.241	mg/L	0.0046	0.241	mg/L	0.0046	1.91%
Mo 202.031†	1091.1	0.0287	mg/L	0.00021	0.0287	mg/L	0.00021	0.73%
Ni 231.604†	1469.3	0.0179	mg/L	0.00005	0.0179	mg/L	0.00005	0.26%
Pb 220.353†	132.6	0.0138	mg/L	0.00187	0.0138	mg/L	0.00187	13.49%
Sb 206.836†	20.4	0.00780	mg/L	0.001753	0.00780	mg/L	0.001753	22.47%
Se 196.026†	-8.7	0.00070	mg/L	0.003385	0.00070	mg/L	0.003385	483.29%
Si 251.611†	273568.4	4.95	mg/L	0.127	4.95	mg/L	0.127	2.58%
Sn 189.927†	-92.9	-0.00688	mg/L	0.000648	-0.00688	mg/L	0.000648	9.41%
Ti 334.940†	86997.1	0.0824	mg/L	0.00077	0.0824	mg/L	0.00077	0.93%
Tl 190.801†	-19.0	-0.00510	mg/L	0.001221	-0.00510	mg/L	0.001221	23.93%
V 290.880†	5838.9	0.0215	mg/L	0.00115	0.0215	mg/L	0.00115	5.33%
Zn 206.200†	24284.5	0.393	mg/L	0.0062	0.393	mg/L	0.0062	1.57%
K 766.490†	5692.4	1.72	mg/L	0.013	1.72	mg/L	0.013	0.77%
Na 589.592†	Saturated2							
Sr 407.771†	106951.2	0.0391	mg/L	0.00015	0.0391	mg/L	0.00015	0.39%
Li 670.784†	388.8	-0.00134	mg/L	0.000401	-0.00134	mg/L	0.000401	29.89%

Sequence No.: 57 **Autosampler Location: 82**
Sample ID: L1207042301 WG403431-02 **Date Collected: 7/17/2012 7:52:03 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207042301 WG403431-02

Analyte	Back Pressure	Flow
All	306.0 kPa	0.50 L/min

Mean Data: L1207042301 WG403431-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2486188.7						5546.32	0.22%
YRADIAL	323226.5						1864.90	0.58%
Ga 417.206	1430827.5						46902.58	3.28%
GaRADIAL	90959.8						785.76	0.86%
Ag 328.068†	-20.4	0.00099	mg/L	0.000519	0.00099	mg/L	0.000519	52.57%
Al 396.153†	10128.9	1.42	mg/L	0.012	1.42	mg/L	0.012	0.88%
As 188.979†	2.4	0.00138	mg/L	0.001805	0.00138	mg/L	0.001805	130.46%
Ba 233.527†	10024.6	0.0583	mg/L	0.00086	0.0583	mg/L	0.00086	1.47%
Be 234.861†	392.0	0.00038	mg/L	0.000027	0.00038	mg/L	0.000027	7.09%
B 249.677†	5273.9	0.0471	mg/L	0.00328	0.0471	mg/L	0.00328	6.97%
Ca 227.546†	5205.7	10.5	mg/L	0.38	10.5	mg/L	0.38	3.58%
Cd 228.802†	15.7	0.00044	mg/L	0.000151	0.00044	mg/L	0.000151	34.47%
Co 228.616†	40.6	0.00062	mg/L	0.000163	0.00062	mg/L	0.000163	26.22%
Cr 267.716†	276.6	0.00246	mg/L	0.000121	0.00246	mg/L	0.000121	4.92%
Cu 327.393†	17464.2	0.0655	mg/L	0.00145	0.0655	mg/L	0.00145	2.22%
Fe 239.562†	5416.1	0.338	mg/L	0.0042	0.338	mg/L	0.0042	1.24%
Mg 279.077†	11779.4	3.33	mg/L	0.055	3.33	mg/L	0.055	1.65%
Mn 257.610†	59737.1	0.0720	mg/L	0.00107	0.0720	mg/L	0.00107	1.48%
Mo 202.031†	92.5	0.00261	mg/L	0.000118	0.00261	mg/L	0.000118	4.55%
Ni 231.604†	244.4	0.00083	mg/L	0.000316	0.00083	mg/L	0.000316	37.94%
Pb 220.353†	29.2	0.00095	mg/L	0.001484	0.00095	mg/L	0.001484	155.47%
Sb 206.836†	309.5	0.0633	mg/L	0.00191	0.0633	mg/L	0.00191	3.02%
Se 196.026†	-1.7	0.00089	mg/L	0.002002	0.00089	mg/L	0.002002	225.42%
Si 251.611†	33432.0	0.615	mg/L	0.0208	0.615	mg/L	0.0208	3.38%
Sn 189.927†	-102.5	-0.00763	mg/L	0.000585	-0.00763	mg/L	0.000585	7.67%
Ti 334.940†	35942.2	0.0355	mg/L	0.00010	0.0355	mg/L	0.00010	0.29%
Tl 190.801†	-9.3	-0.00421	mg/L	0.002931	-0.00421	mg/L	0.002931	69.54%
V 290.880†	1729.4	0.00700	mg/L	0.000911	0.00700	mg/L	0.000911	13.02%
Zn 206.200†	4752.1	0.0774	mg/L	0.00064	0.0774	mg/L	0.00064	0.83%
K 766.490†	56933.6	17.8	mg/L	0.15	17.8	mg/L	0.15	0.82%
Na 589.592†	490938.5	22.5	mg/L	0.07	22.5	mg/L	0.07	0.31%
Sr 407.771†	218812.7	0.0789	mg/L	0.00045	0.0789	mg/L	0.00045	0.57%
Li 670.784†	764.1	0.00105	mg/L	0.000186	0.00105	mg/L	0.000186	17.76%

Sequence No.: 58 **Autosampler Location: 83**
Sample ID: L1207042301MS WG403431-07 **Date Collected: 7/17/2012 7:58:02 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: July 18, 2012
Kym H. Rhoden

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207042301MS WG403431-07

Analyte	Back Pressure	Flow
All	306.0 kPa	0.50 L/min

Mean Data: L1207042301MS WG403431-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2422823.8						6493.87	0.27%
YRADIAL	326228.6						3342.90	1.02%
Ga 417.206	1407568.7						29551.86	2.10%
GaRADIAL	90108.8						863.08	0.96%
Ag 328.068†	61891.5	0.192	mg/L	0.0048	0.192	mg/L	0.0048	2.51%
Al 396.153†	45648.3	6.42	mg/L	0.029	6.42	mg/L	0.029	0.45%
As 188.979†	745.2	0.188	mg/L	0.0048	0.188	mg/L	0.0048	2.54%
Ba 233.527†	95395.6	0.560	mg/L	0.0053	0.560	mg/L	0.0053	0.94%
Be 234.861†	29920.7	0.0233	mg/L	0.00065	0.0233	mg/L	0.00065	2.78%
B 249.677†	115733.1	0.970	mg/L	0.0294	0.970	mg/L	0.0294	3.03%
Ca 227.546†	7739.5	15.8	mg/L	0.34	15.8	mg/L	0.34	2.13%
Cd 228.802†	1404.0	0.0229	mg/L	0.00094	0.0229	mg/L	0.00094	4.09%
Co 228.616†	4690.7	0.0999	mg/L	0.00106	0.0999	mg/L	0.00106	1.06%
Cr 267.716†	32677.6	0.253	mg/L	0.0020	0.253	mg/L	0.0020	0.80%
Cu 327.393†	82646.9	0.307	mg/L	0.0069	0.307	mg/L	0.0069	2.26%
Fe 239.562†	35969.7	2.22	mg/L	0.013	2.22	mg/L	0.013	0.58%
Mg 279.077†	28541.2	8.06	mg/L	0.056	8.06	mg/L	0.056	0.70%
Mn 257.610†	271207.2	0.327	mg/L	0.0040	0.327	mg/L	0.0040	1.23%
Mo 202.031†	19624.7	0.504	mg/L	0.0027	0.504	mg/L	0.0027	0.54%
Ni 231.604†	19084.7	0.263	mg/L	0.0019	0.263	mg/L	0.0019	0.74%
Pb 220.353†	3686.2	0.254	mg/L	0.0021	0.254	mg/L	0.0021	0.81%
Sb 206.836†	3228.9	0.619	mg/L	0.0143	0.619	mg/L	0.0143	2.31%
Se 196.026†	456.5	0.196	mg/L	0.0041	0.196	mg/L	0.0041	2.10%
Si 251.611†	174648.3	3.16	mg/L	0.047	3.16	mg/L	0.047	1.50%
Sn 189.927†	6840.9	0.529	mg/L	0.0042	0.529	mg/L	0.0042	0.79%
Ti 334.940†	569162.9	0.522	mg/L	0.0024	0.522	mg/L	0.0024	0.46%
Tl 190.801†	1061.0	0.263	mg/L	0.0013	0.263	mg/L	0.0013	0.50%
V 290.880†	133039.3	0.508	mg/L	0.0012	0.508	mg/L	0.0012	0.24%
Zn 206.200†	35827.7	0.581	mg/L	0.0111	0.581	mg/L	0.0111	1.91%
K 766.490†	135516.9	42.7	mg/L	0.21	42.7	mg/L	0.21	0.48%
Na 589.592†	1048796.8	48.0	mg/L	0.98	48.0	mg/L	0.98	2.05%
Sr 407.771†	1567391.7	0.558	mg/L	0.0128	0.558	mg/L	0.0128	2.30%
Li 670.784†	81064.5	0.513	mg/L	0.0059	0.513	mg/L	0.0059	1.15%

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Sequence No.: 59 **Autosampler Location: 84**
Sample ID: L1207042401 **Date Collected: 7/17/2012 8:04:01 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207042401

Analyte	Back Pressure	Flow
All	304.0 kPa	0.50 L/min

Mean Data: L1207042401

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2526022.5						36123.10	1.43%
YRADIAL	323757.3						4937.30	1.52%
Ga 417.206	1451138.0						26083.19	1.80%
GaRADIAL	92107.3						1612.74	1.75%
Ag 328.068†	99.6	0.00145	mg/L	0.000373	0.00145	mg/L	0.000373	25.72%
Al 396.153†	9231.2	1.29	mg/L	0.032	1.29	mg/L	0.032	2.49%
As 188.979†	-0.9	0.00059	mg/L	0.000932	0.00059	mg/L	0.000932	157.86%
Ba 233.527†	4482.2	0.0257	mg/L	0.00022	0.0257	mg/L	0.00022	0.86%
Be 234.861†	480.6	0.00040	mg/L	0.000021	0.00040	mg/L	0.000021	5.19%
B 249.677†	8779.8	0.0763	mg/L	0.00434	0.0763	mg/L	0.00434	5.68%
Ca 227.546†	6924.4	13.9	mg/L	0.42	13.9	mg/L	0.42	2.99%

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Cd 228.802†	11.1	0.00036 mg/L	0.000076	0.00036 mg/L	0.000076	20.82%
Co 228.616†	34.8	0.00056 mg/L	0.000293	0.00056 mg/L	0.000293	52.75%
Cr 267.716†	204.9	0.00189 mg/L	0.000116	0.00189 mg/L	0.000116	6.11%
Cu 327.393†	8032.9	0.0307 mg/L	0.00130	0.0307 mg/L	0.00130	4.25%
Fe 239.562†	9056.7	0.562 mg/L	0.0117	0.562 mg/L	0.0117	2.08%
Mg 279.077†	4142.2	1.18 mg/L	0.019	1.18 mg/L	0.019	1.65%
Mn 257.610†	60906.2	0.0734 mg/L	0.00072	0.0734 mg/L	0.00072	0.98%
Mo 202.031†	231.3	0.00618 mg/L	0.000229	0.00618 mg/L	0.000229	3.70%
Ni 231.604†	148.6	-0.00050 mg/L	0.000171	-0.00050 mg/L	0.000171	34.04%
Pb 220.353†	61.9	0.00323 mg/L	0.000258	0.00323 mg/L	0.000258	7.98%
Sb 206.836†	197.8	0.0420 mg/L	0.00060	0.0420 mg/L	0.00060	1.44%
Se 196.026†	0.6	0.00188 mg/L	0.001956	0.00188 mg/L	0.001956	104.16%
Si 251.611†	46703.4	0.855 mg/L	0.0337	0.855 mg/L	0.0337	3.95%
Sn 189.927†	-139.9	-0.0105 mg/L	0.00026	-0.0105 mg/L	0.00026	2.45%
Ti 334.940†	12842.6	0.0150 mg/L	0.00034	0.0150 mg/L	0.00034	2.29%
Tl 190.801†	-2.0	-0.00271 mg/L	0.001251	-0.00271 mg/L	0.001251	46.13%
V 290.880†	903.3	0.00387 mg/L	0.001327	0.00387 mg/L	0.001327	34.30%
Zn 206.200†	3291.0	0.0538 mg/L	0.00077	0.0538 mg/L	0.00077	1.44%
K 766.490†	38711.3	12.0 mg/L	0.24	12.0 mg/L	0.24	1.97%
Na 589.592†	386747.1	17.7 mg/L	0.01	17.7 mg/L	0.01	0.07%
Sr 407.771†	114554.8	0.0417 mg/L	0.00051	0.0417 mg/L	0.00051	1.21%
Li 670.784†	474.8	-0.00079 mg/L	0.000466	-0.00079 mg/L	0.000466	58.75%

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Sequence No.: 60 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/17/2012 8:09:59 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	304.0 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	2445925.0						10772.41	0.44%
YRADIAL	319432.3						5428.23	1.70%
Ga 417.206	1345366.4						19570.26	1.45%
GaRADIAL	89209.7						988.89	1.11%
Ag 328.068†	130499.8	0.404	mg/L	0.0070	0.404	mg/L	0.0070	1.74%
QC value within limits for Ag 328.068 Recovery = 100.93%								
Al 396.153†	70974.0	9.98	mg/L	0.020	9.98	mg/L	0.020	0.20%
QC value within limits for Al 396.153 Recovery = 99.81%								
As 188.979†	1595.6	0.402	mg/L	0.0056	0.402	mg/L	0.0056	1.40%
QC value within limits for As 188.979 Recovery = 100.61%								
Ba 233.527†	173732.6	1.02	mg/L	0.008	1.02	mg/L	0.008	0.75%
QC value within limits for Ba 233.527 Recovery = 101.96%								
Be 234.861†	64381.4	0.0500	mg/L	0.00069	0.0500	mg/L	0.00069	1.38%
QC value within limits for Be 234.861 Recovery = 100.04%								
B 249.677†	60030.3	0.502	mg/L	0.0079	0.502	mg/L	0.0079	1.58%
QC value within limits for B 249.677 Recovery = 100.34%								
Ca 227.546†	4906.3	10.4	mg/L	0.20	10.4	mg/L	0.20	1.95%
QC value within limits for Ca 227.546 Recovery = 103.79%								
Cd 228.802†	3015.5	0.0490	mg/L	0.00152	0.0490	mg/L	0.00152	3.10%
QC value within limits for Cd 228.802 Recovery = 97.95%								
Co 228.616†	9537.3	0.203	mg/L	0.0018	0.203	mg/L	0.0018	0.91%
QC value within limits for Co 228.616 Recovery = 101.74%								
Cr 267.716†	65379.9	0.506	mg/L	0.0012	0.506	mg/L	0.0012	0.23%
QC value within limits for Cr 267.716 Recovery = 101.21%								
Cu 327.393†	135246.8	0.502	mg/L	0.0096	0.502	mg/L	0.0096	1.90%
QC value within limits for Cu 327.393 Recovery = 100.31%								
Fe 239.562†	65253.9	4.02	mg/L	0.050	4.02	mg/L	0.050	1.25%
QC value within limits for Fe 239.562 Recovery = 100.61%								
Mg 279.077†	35566.7	10.0	mg/L	0.14	10.0	mg/L	0.14	1.40%
QC value within limits for Mg 279.077 Recovery = 100.48%								
Mn 257.610†	421964.4	0.508	mg/L	0.0056	0.508	mg/L	0.0056	1.11%
QC value within limits for Mn 257.610 Recovery = 101.64%								
Mo 202.031†	39820.7	1.02	mg/L	0.011	1.02	mg/L	0.011	1.03%

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   QC value within limits for Mo 202.031  Recovery = 102.32%
Ni 231.604†          37977.0       0.526 mg/L        0.0042       0.526 mg/L        0.0042   0.80%
   QC value within limits for Ni 231.604  Recovery = 105.20%
Pb 220.353†           7481.8       0.517 mg/L        0.0028       0.517 mg/L        0.0028   0.55%
   QC value within limits for Pb 220.353  Recovery = 103.32%
Sb 206.836†           6330.0        1.21 mg/L         0.023        1.21 mg/L         0.023   1.87%
   QC value within limits for Sb 206.836  Recovery = 100.85%
Se 196.026†            970.8       0.415 mg/L        0.0086       0.415 mg/L        0.0086   2.08%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†         279671.8        5.05 mg/L         0.037        5.05 mg/L         0.037   0.72%
   QC value within limits for Si 251.611  Recovery = 100.97%
Sn 189.927†          13553.5        1.05 mg/L         0.009        1.05 mg/L         0.009   0.81%
   QC value within limits for Sn 189.927  Recovery = 104.84%
Ti 334.940†        1105495.3        1.01 mg/L         0.004        1.01 mg/L         0.004   0.38%
   QC value within limits for Ti 334.940  Recovery = 100.97%
Tl 190.801†           2180.7       0.542 mg/L        0.0071       0.542 mg/L        0.0071   1.31%
   QC value within limits for Tl 190.801  Recovery = 108.37%
V 290.880†          265299.8        1.01 mg/L         0.002        1.01 mg/L         0.002   0.24%
   QC value within limits for V 290.880  Recovery = 101.35%
Zn 206.200†          63664.7        1.03 mg/L         0.010        1.03 mg/L         0.010   1.00%
   QC value within limits for Zn 206.200  Recovery = 103.24%
K 766.490†          155659.9        49.1 mg/L          0.22        49.1 mg/L          0.22   0.44%
   QC value within limits for K 766.490  Recovery = 98.18%
Na 589.592†        1086474.2        49.7 mg/L          0.71        49.7 mg/L          0.71   1.43%
   QC value within limits for Na 589.592  Recovery = 99.46%
Sr 407.771†        2759968.8       0.981 mg/L        0.0186       0.981 mg/L        0.0186   1.90%
   QC value within limits for Sr 407.771  Recovery = 98.14%
Li 670.784†         157693.8        1.00 mg/L         0.014        1.00 mg/L         0.014   1.38%
   QC value within limits for Li 670.784  Recovery = 100.11%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 61                                    Autosampler Location: 1
Sample ID: CCB                                      Date Collected: 7/17/2012 8:15:58 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                  Back Pressure    Flow
All                     304.0 kPa         0.50 L/min

------------------------------------------------------------------------------------------
Mean Data: CCB
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029           2577127.4                                                     17261.86   0.67%
YRADIAL              324165.4                                                     13074.14   4.03%
Ga 417.206          1403154.2                                                     30631.50   2.18%
GaRADIAL              91333.7                                                       482.36   0.53%
Ag 328.068†              -3.8     0.00092 mg/L      0.000255     0.00092 mg/L      0.000255  27.88%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              29.6     -0.0183 mg/L       0.00122     -0.0183 mg/L       0.00122   6.71%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               0.8     0.00102 mg/L      0.001527     0.00102 mg/L      0.001527 150.43%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              64.9    -0.00019 mg/L      0.000108    -0.00019 mg/L      0.000108  57.93%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              43.9     0.00017 mg/L      0.000028     0.00017 mg/L      0.000028  16.67%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              667.7     0.00868 mg/L      0.000275     0.00868 mg/L      0.000275   3.17%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -4.8      0.0824 mg/L       0.01925      0.0824 mg/L       0.01925  23.36%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -3.4     0.00012 mg/L      0.000125     0.00012 mg/L      0.000125 106.73%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               3.4    -0.00008 mg/L      0.000134    -0.00008 mg/L      0.000134 169.84%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -32.5     0.00006 mg/L      0.000153     0.00006 mg/L      0.000153 244.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -82.8     0.00067 mg/L      0.000204     0.00067 mg/L      0.000204  30.41%
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   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              62.2     0.00791 mg/L      0.000458     0.00791 mg/L      0.000458   5.79%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              35.7      0.0233 mg/L       0.00379      0.0233 mg/L       0.00379  16.27%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1128.1    -0.00117 mg/L      0.000014    -0.00117 mg/L      0.000014   1.23%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              24.3     0.00082 mg/L      0.000225     0.00082 mg/L      0.000225  27.50%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              24.6    -0.00223 mg/L      0.000174    -0.00223 mg/L      0.000174   7.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              11.9    -0.00043 mg/L      0.001055    -0.00043 mg/L      0.001055 243.68%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -3.9     0.00347 mg/L      0.000732     0.00347 mg/L      0.000732  21.09%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.2     0.00246 mg/L      0.000565     0.00246 mg/L      0.000565  22.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             157.7      0.0146 mg/L       0.00187      0.0146 mg/L       0.00187  12.77%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               6.5     0.00080 mg/L      0.000474     0.00080 mg/L      0.000474  59.40%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             312.3     0.00148 mg/L      0.000072     0.00148 mg/L      0.000072   4.85%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               4.2    -0.00132 mg/L      0.000324    -0.00132 mg/L      0.000324  24.55%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†             -200.3    -0.00024 mg/L      0.001392    -0.00024 mg/L      0.001392 573.29%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -153.2    -0.00178 mg/L      0.000151    -0.00178 mg/L      0.000151   8.44%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†                8.4     -0.0573 mg/L       0.02641     -0.0573 mg/L       0.02641  46.06%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†              19.2     -0.0174 mg/L       0.00920     -0.0174 mg/L       0.00920  52.83%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            1003.7     0.00173 mg/L      0.000021     0.00173 mg/L      0.000021   1.25%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             108.2    -0.00313 mg/L      0.000626    -0.00313 mg/L      0.000626  19.98%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==============================================================================================
Sequence No.: 62                                    Autosampler Location: 85
Sample ID: PBW 99 WG403246-03                       Date Collected: 7/17/2012 8:22:52 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: PBW 99 WG403246-03
Analyte                 Back Pressure    Flow
All                    304.0 kPa         0.50 L/min

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Mean Data: PBW 99 WG403246-03
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2575917.9                                                    19534.15   0.76%
YRADIAL               333576.1                                                     4427.86   1.33%
Ga 417.206           1457339.9                                                    33541.98   2.30%
GaRADIAL               94902.0                                                     1673.10   1.76%
Ag 328.068†             -116.6     0.00057 mg/L      0.000097     0.00057 mg/L      0.000097  16.87%
Al 396.153†                6.8     -0.0214 mg/L       0.00114     -0.0214 mg/L       0.00114   5.32%
As 188.979†                2.0     0.00131 mg/L      0.000464     0.00131 mg/L      0.000464  35.39%
Ba 233.527†               59.3    -0.00022 mg/L      0.000126    -0.00022 mg/L      0.000126  57.42%
Be 234.861†               94.9     0.00021 mg/L      0.000040     0.00021 mg/L      0.000040  18.86%
B 249.677†               441.1     0.00678 mg/L      0.000205     0.00678 mg/L      0.000205   3.02%
Ca 227.546†               -0.5      0.0907 mg/L       0.00525      0.0907 mg/L       0.00525   5.79%
Cd 228.802†               -5.2     0.00009 mg/L      0.000015     0.00009 mg/L      0.000015  17.34%
Co 228.616†                8.5     0.00003 mg/L      0.000228     0.00003 mg/L      0.000228 796.54%
Cr 267.716†              -56.2    -0.00012 mg/L      0.000144    -0.00012 mg/L      0.000144 120.85%
Cu 327.393†              -87.3     0.00065 mg/L      0.000341     0.00065 mg/L      0.000341  52.11%
Fe 239.562†               15.1     0.00501 mg/L      0.000598     0.00501 mg/L      0.000598  11.95%
Mg 279.077†               18.0      0.0183 mg/L       0.00263      0.0183 mg/L       0.00263  14.34%
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Mn 257.610†	-1104.9	-0.00114 mg/L	0.000016	-0.00114 mg/L	0.000016	1.39%
Mo 202.031†	-0.3	0.00019 mg/L	0.000190	0.00019 mg/L	0.000190	100.85%
Ni 231.604†	11.8	-0.00241 mg/L	0.000137	-0.00241 mg/L	0.000137	5.68%
Pb 220.353†	4.6	-0.00093 mg/L	0.000036	-0.00093 mg/L	0.000036	3.81%
Sb 206.836†	-9.6	0.00238 mg/L	0.001131	0.00238 mg/L	0.001131	47.50%
Se 196.026†	-8.3	-0.00198 mg/L	0.001515	-0.00198 mg/L	0.001515	76.47%
Si 251.611†	114.0	0.0138 mg/L	0.00163	0.0138 mg/L	0.00163	11.78%
Sn 189.927†	-9.5	-0.00044 mg/L	0.000327	-0.00044 mg/L	0.000327	74.74%
Ti 334.940†	27.3	0.00123 mg/L	0.000024	0.00123 mg/L	0.000024	1.99%
Tl 190.801†	5.0	-0.00112 mg/L	0.001029	-0.00112 mg/L	0.001029	91.99%
V 290.880†	102.6	0.00092 mg/L	0.001762	0.00092 mg/L	0.001762	192.47%
Zn 206.200†	-46.3	-0.00006 mg/L	0.000272	-0.00006 mg/L	0.000272	442.98%
K 766.490†	-1.0	-0.0603 mg/L	0.03536	-0.0603 mg/L	0.03536	58.67%
Na 589.592†	-396.1	-0.0364 mg/L	0.00536	-0.0364 mg/L	0.00536	14.71%
Sr 407.771†	200.6	0.00144 mg/L	0.000046	0.00144 mg/L	0.000046	3.21%
Li 670.784†	-23.5	-0.00397 mg/L	0.000098	-0.00397 mg/L	0.000098	2.48%

Sequence No.: 63 **Autosampler Location: 86**
Sample ID: LCSW 99 WG403246-04 **Date Collected: 7/17/2012 8:29:46 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: LCSW 99 WG403246-04

Analyte	Back Pressure	Flow
All	304.0 kPa	0.50 L/min

Mean Data: LCSW 99 WG403246-04

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2496380.0						2160.14	0.09%
YRADIAL	323550.3						1504.14	0.46%
Ga 417.206	1394567.4						16418.08	1.18%
GaRADIAL	90312.7						611.53	0.68%
Ag 328.068†	62748.4	0.195	mg/L	0.0037	0.195	mg/L	0.0037	1.88%
Al 396.153†	33669.6	4.72	mg/L	0.017	4.72	mg/L	0.017	0.35%
As 188.979†	742.5	0.188	mg/L	0.0024	0.188	mg/L	0.0024	1.27%
Ba 233.527†	83844.8	0.492	mg/L	0.0030	0.492	mg/L	0.0030	0.62%
Be 234.861†	29973.6	0.0234	mg/L	0.00056	0.0234	mg/L	0.00056	2.41%
B 249.677†	112215.9	0.941	mg/L	0.0220	0.941	mg/L	0.0220	2.34%
Ca 227.546†	2278.6	4.87	mg/L	0.072	4.87	mg/L	0.072	1.48%
Cd 228.802†	1404.0	0.0229	mg/L	0.00090	0.0229	mg/L	0.00090	3.94%
Co 228.616†	4583.5	0.0977	mg/L	0.00065	0.0977	mg/L	0.00065	0.66%
Cr 267.716†	31381.9	0.243	mg/L	0.0036	0.243	mg/L	0.0036	1.47%
Cu 327.393†	64683.4	0.240	mg/L	0.0038	0.240	mg/L	0.0038	1.58%
Fe 239.562†	30502.6	1.88	mg/L	0.004	1.88	mg/L	0.004	0.20%
Mg 279.077†	16902.6	4.78	mg/L	0.021	4.78	mg/L	0.021	0.44%
Mn 257.610†	203970.9	0.246	mg/L	0.0007	0.246	mg/L	0.0007	0.28%
Mo 202.031†	19027.8	0.489	mg/L	0.0078	0.489	mg/L	0.0078	1.60%
Ni 231.604†	17778.4	0.245	mg/L	0.0024	0.245	mg/L	0.0024	0.99%
Pb 220.353†	3593.3	0.247	mg/L	0.0021	0.247	mg/L	0.0021	0.85%
Sb 206.836†	2968.7	0.570	mg/L	0.0094	0.570	mg/L	0.0094	1.64%
Se 196.026†	454.4	0.195	mg/L	0.0035	0.195	mg/L	0.0035	1.78%
Si 251.611†	135817.4	2.46	mg/L	0.026	2.46	mg/L	0.026	1.05%
Sn 189.927†	6509.0	0.504	mg/L	0.0010	0.504	mg/L	0.0010	0.20%
Ti 334.940†	525549.0	0.481	mg/L	0.0006	0.481	mg/L	0.0006	0.12%
Tl 190.801†	1061.5	0.262	mg/L	0.0008	0.262	mg/L	0.0008	0.29%
V 290.880†	127823.5	0.489	mg/L	0.0049	0.489	mg/L	0.0049	1.01%
Zn 206.200†	30553.1	0.496	mg/L	0.0119	0.496	mg/L	0.0119	2.40%
K 766.490†	74852.8	23.4	mg/L	0.06	23.4	mg/L	0.06	0.26%
Na 589.592†	533993.0	24.4	mg/L	0.54	24.4	mg/L	0.54	2.20%
Sr 407.771†	1326305.2	0.472	mg/L	0.0119	0.472	mg/L	0.0119	2.52%
Li 670.784†	78144.8	0.494	mg/L	0.0011	0.494	mg/L	0.0011	0.21%

Sequence No.: 64 **Autosampler Location: 87**
Sample ID: L1207030902 **Date Collected: 7/17/2012 8:35:45 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**

Approved: July 18, 2012
Kym H. Rhoden

Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207030902

Analyte	Back Pressure	Flow
All	304.0 kPa	0.50 L/min

Mean Data: L1207030902

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2464619.1						20292.25	0.82%
YRADIAL	317847.0						6146.66	1.93%
Ga 417.206	1438334.5						41053.53	2.85%
GaRADIAL	91713.1						1395.63	1.52%
Ag 328.068†	530.0	0.00269	mg/L	0.000481	0.00269	mg/L	0.000481	17.86%
Al 396.153†	132.5	-0.00471	mg/L	0.004611	-0.00471	mg/L	0.004611	97.94%
As 188.979†	-13.5	-0.00262	mg/L	0.000909	-0.00262	mg/L	0.000909	34.69%
Ba 233.527†	7719.6	0.0447	mg/L	0.00037	0.0447	mg/L	0.00037	0.83%
Be 234.861†	303.8	0.00030	mg/L	0.000033	0.00030	mg/L	0.000033	11.00%
B 249.677†	3377.9	0.0312	mg/L	0.00117	0.0312	mg/L	0.00117	3.74%
Ca 227.546†	31546.1	63.2	mg/L	2.23	63.2	mg/L	2.23	3.53%
Cd 228.802†	9.7	0.00036	mg/L	0.000090	0.00036	mg/L	0.000090	25.17%
Co 228.616†	20.3	0.00031	mg/L	0.000180	0.00031	mg/L	0.000180	58.31%
Cr 267.716†	527.5	0.00438	mg/L	0.000024	0.00438	mg/L	0.000024	0.55%
Cu 327.393†	6230.5	0.0240	mg/L	0.00108	0.0240	mg/L	0.00108	4.51%
Fe 239.562†	6431.4	0.400	mg/L	0.0050	0.400	mg/L	0.0050	1.24%
Mg 279.077†	34862.5	9.83	mg/L	0.126	9.83	mg/L	0.126	1.28%
Mn 257.610†	12458.5	0.0152	mg/L	0.00022	0.0152	mg/L	0.00022	1.44%
Mo 202.031†	650.6	0.0169	mg/L	0.00012	0.0169	mg/L	0.00012	0.70%
Ni 231.604†	274.4	0.00125	mg/L	0.000228	0.00125	mg/L	0.000228	18.29%
Pb 220.353†	24.1	0.00086	mg/L	0.000692	0.00086	mg/L	0.000692	80.40%
Sb 206.836†	-9.9	0.00234	mg/L	0.000678	0.00234	mg/L	0.000678	28.96%
Se 196.026†	-2.9	0.00035	mg/L	0.001446	0.00035	mg/L	0.001446	416.11%
Si 251.611†	425610.8	7.69	mg/L	0.202	7.69	mg/L	0.202	2.63%
Sn 189.927†	-277.8	-0.0212	mg/L	0.00060	-0.0212	mg/L	0.00060	2.85%
Ti 334.940†	-11226.4	0.00043	mg/L	0.000914	0.00043	mg/L	0.000914	213.14%
Tl 190.801†	-17.6	-0.00673	mg/L	0.001828	-0.00673	mg/L	0.001828	27.16%
V 290.880†	1126.1	0.00452	mg/L	0.000993	0.00452	mg/L	0.000993	21.99%
Zn 206.200†	2036.9	0.0336	mg/L	0.00032	0.0336	mg/L	0.00032	0.96%
K 766.490†	4305.2	1.27	mg/L	0.030	1.27	mg/L	0.030	2.36%
Na 589.592†	211703.3	9.68	mg/L	0.066	9.68	mg/L	0.066	0.68%
Sr 407.771†	388424.3	0.138	mg/L	0.0004	0.138	mg/L	0.0004	0.30%
Li 670.784†	995.5	0.00252	mg/L	0.000392	0.00252	mg/L	0.000392	15.51%

Sequence No.: 65 **Autosampler Location: 88**
Sample ID: L1207030904 **Date Collected: 7/17/2012 8:41:43 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207030904

Analyte	Back Pressure	Flow
All	305.0 kPa	0.50 L/min

Mean Data: L1207030904

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2428995.2						18472.66	0.76%
YRADIAL	314310.0						3640.96	1.16%
Ga 417.206	1450088.2						14946.18	1.03%
GaRADIAL	92016.7						957.18	1.04%
Ag 328.068†	1084.1	0.00438	mg/L	0.000231	0.00438	mg/L	0.000231	5.28%
Al 396.153†	1209.3	0.148	mg/L	0.0106	0.148	mg/L	0.0106	7.13%
As 188.979†	-3.9	-0.00016	mg/L	0.000753	-0.00016	mg/L	0.000753	461.07%
Ba 233.527†	8471.5	0.0491	mg/L	0.00035	0.0491	mg/L	0.00035	0.72%
Be 234.861†	365.8	0.00033	mg/L	0.000036	0.00033	mg/L	0.000036	10.92%
B 249.677†	5635.2	0.0501	mg/L	0.00098	0.0501	mg/L	0.00098	1.96%
Ca 227.546†	67524.6	135	mg/L	1.2	135	mg/L	1.2	0.86%

Approved: July 18, 2012

Kym H. Rhoden

Cd 228.802†	4.3	0.00025	mg/L	0.000047	0.00025	mg/L	0.000047	18.41%
Co 228.616†	15.7	0.00023	mg/L	0.000432	0.00023	mg/L	0.000432	191.89%
Cr 267.716†	254.1	0.00227	mg/L	0.000125	0.00227	mg/L	0.000125	5.54%
Cu 327.393†	1135.8	0.00517	mg/L	0.000137	0.00517	mg/L	0.000137	2.66%
Fe 239.562†	7530.6	0.468	mg/L	0.0043	0.468	mg/L	0.0043	0.93%
Mg 279.077†	79123.7	22.3	mg/L	0.21	22.3	mg/L	0.21	0.94%
Mn 257.610†	37472.5	0.0453	mg/L	0.00084	0.0453	mg/L	0.00084	1.85%
Mo 202.031†	511.7	0.0134	mg/L	0.00030	0.0134	mg/L	0.00030	2.24%
Ni 231.604†	249.3	0.00090	mg/L	0.000235	0.00090	mg/L	0.000235	26.14%
Pb 220.353†	8.6	0.00039	mg/L	0.000660	0.00039	mg/L	0.000660	170.13%
Sb 206.836†	-6.9	0.00293	mg/L	0.000968	0.00293	mg/L	0.000968	32.97%
Se 196.026†	-3.3	0.00018	mg/L	0.002087	0.00018	mg/L	0.002087	>999.9%
Si 251.611†	783819.0	14.2	mg/L	0.08	14.2	mg/L	0.08	0.57%
Sn 189.927†	-341.9	-0.0261	mg/L	0.00069	-0.0261	mg/L	0.00069	2.63%
Ti 334.940†	-23237.2	0.00027	mg/L	0.001730	0.00027	mg/L	0.001730	634.11%
Tl 190.801†	-31.3	-0.0102	mg/L	0.00118	-0.0102	mg/L	0.00118	11.56%
V 290.880†	1614.6	0.00605	mg/L	0.001349	0.00605	mg/L	0.001349	22.30%
Zn 206.200†	2638.1	0.0433	mg/L	0.00029	0.0433	mg/L	0.00029	0.68%
K 766.490†	23997.7	7.40	mg/L	0.123	7.40	mg/L	0.123	1.66%
Na 589.592†	969789.3	44.4	mg/L	0.32	44.4	mg/L	0.32	0.72%
Sr 407.771†	896531.7	0.317	mg/L	0.0019	0.317	mg/L	0.0019	0.61%
Li 670.784†	7903.3	0.0465	mg/L	0.00136	0.0465	mg/L	0.00136	2.92%

Sequence No.: 66
Sample ID: L1207031002
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 89
Date Collected: 7/17/2012 8:47:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207031002

Analyte	Back Pressure	Flow
All	308.0 kPa	0.50 L/min

Mean Data: L1207031002

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2411958.7						24296.95	1.01%
YRADIAL	313143.0						5168.87	1.65%
Ga 417.206	1447753.8						49990.39	3.45%
GaRADIAL	91416.3						1159.05	1.27%
Ag 328.068†	1050.4	0.00425	mg/L	0.000356	0.00425	mg/L	0.000356	8.37%
Al 396.153†	1029.7	0.123	mg/L	0.0081	0.123	mg/L	0.0081	6.59%
As 188.979†	-4.9	-0.00042	mg/L	0.001262	-0.00042	mg/L	0.001262	301.69%
Ba 233.527†	8284.2	0.0481	mg/L	0.00045	0.0481	mg/L	0.00045	0.93%
Be 234.861†	355.1	0.00034	mg/L	0.000007	0.00034	mg/L	0.000007	2.19%
B 249.677†	5507.3	0.0490	mg/L	0.00145	0.0490	mg/L	0.00145	2.95%
Ca 227.546†	68106.1	136	mg/L	3.9	136	mg/L	3.9	2.90%
Cd 228.802†	3.7	0.00024	mg/L	0.000177	0.00024	mg/L	0.000177	72.37%
Co 228.616†	19.3	0.00031	mg/L	0.000169	0.00031	mg/L	0.000169	55.02%
Cr 267.716†	204.6	0.00189	mg/L	0.000151	0.00189	mg/L	0.000151	7.99%
Cu 327.393†	934.9	0.00442	mg/L	0.000105	0.00442	mg/L	0.000105	2.37%
Fe 239.562†	6354.7	0.395	mg/L	0.0131	0.395	mg/L	0.0131	3.30%
Mg 279.077†	79990.1	22.5	mg/L	0.48	22.5	mg/L	0.48	2.15%
Mn 257.610†	30427.2	0.0368	mg/L	0.00029	0.0368	mg/L	0.00029	0.79%
Mo 202.031†	523.7	0.0137	mg/L	0.00067	0.0137	mg/L	0.00067	4.92%
Ni 231.604†	248.4	0.00089	mg/L	0.000416	0.00089	mg/L	0.000416	46.82%
Pb 220.353†	10.3	0.00052	mg/L	0.001117	0.00052	mg/L	0.001117	215.54%
Sb 206.836†	-7.9	0.00274	mg/L	0.000808	0.00274	mg/L	0.000808	29.49%
Se 196.026†	2.8	0.00277	mg/L	0.001131	0.00277	mg/L	0.001131	40.89%
Si 251.611†	778718.7	14.1	mg/L	0.38	14.1	mg/L	0.38	2.67%
Sn 189.927†	-336.2	-0.0257	mg/L	0.00063	-0.0257	mg/L	0.00063	2.46%
Ti 334.940†	-23916.9	-0.00017	mg/L	0.001855	-0.00017	mg/L	0.001855	>999.9%
Tl 190.801†	-25.6	-0.00884	mg/L	0.002666	-0.00884	mg/L	0.002666	30.18%
V 290.880†	1839.7	0.00691	mg/L	0.000627	0.00691	mg/L	0.000627	9.07%
Zn 206.200†	2202.2	0.0362	mg/L	0.00027	0.0362	mg/L	0.00027	0.74%
K 766.490†	24311.2	7.50	mg/L	0.124	7.50	mg/L	0.124	1.66%
Na 589.592†	971149.0	44.4	mg/L	0.16	44.4	mg/L	0.16	0.37%
Sr 407.771†	893363.3	0.316	mg/L	0.0041	0.316	mg/L	0.0041	1.31%
Li 670.784†	8053.6	0.0475	mg/L	0.00065	0.0475	mg/L	0.00065	1.38%

Approved: July 18, 2012

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Sequence No.: 67 **Autosampler Location: 90**
Sample ID: L1207031701 WG403246-01 **Date Collected: 7/17/2012 8:53:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031701 WG403246-01

Analyte	Back Pressure	Flow
All	311.0 kPa	0.50 L/min

Mean Data: L1207031701 WG403246-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2421571.6						11614.40	0.48%
YRADIAL	310493.2						4983.91	1.61%
Ga 417.206	1459210.4						24362.72	1.67%
GaRADIAL	91303.8						1152.79	1.26%
Ag 328.068†	688.0	0.00295	mg/L	0.000436	0.00295	mg/L	0.000436	14.74%
Al 396.153†	91.3	-0.0112	mg/L	0.00166	-0.0112	mg/L	0.00166	14.76%
As 188.979†	-3.9	-0.00031	mg/L	0.000241	-0.00031	mg/L	0.000241	77.49%
Ba 233.527†	24526.1	0.143	mg/L	0.0018	0.143	mg/L	0.0018	1.27%
Be 234.861†	147.0	0.00024	mg/L	0.000022	0.00024	mg/L	0.000022	8.85%
B 249.677†	7916.0	0.0693	mg/L	0.00071	0.0693	mg/L	0.00071	1.03%
Ca 227.546†	45507.0	91.0	mg/L	2.27	91.0	mg/L	2.27	2.50%
Cd 228.802†	3.7	0.00024	mg/L	0.000091	0.00024	mg/L	0.000091	37.73%
Co 228.616†	-9.6	-0.00032	mg/L	0.000423	-0.00032	mg/L	0.000423	130.55%
Cr 267.716†	151.6	0.00148	mg/L	0.000071	0.00148	mg/L	0.000071	4.77%
Cu 327.393†	486.5	0.00276	mg/L	0.000312	0.00276	mg/L	0.000312	11.30%
Fe 239.562†	1307.2	0.0843	mg/L	0.00069	0.0843	mg/L	0.00069	0.82%
Mg 279.077†	61427.5	17.3	mg/L	0.17	17.3	mg/L	0.17	0.99%
Mn 257.610†	7238.5	0.00890	mg/L	0.000072	0.00890	mg/L	0.000072	0.81%
Mo 202.031†	1004.9	0.0260	mg/L	0.00018	0.0260	mg/L	0.00018	0.70%
Ni 231.604†	109.8	-0.00104	mg/L	0.000228	-0.00104	mg/L	0.000228	21.93%
Pb 220.353†	30.8	0.00160	mg/L	0.000628	0.00160	mg/L	0.000628	39.21%
Sb 206.836†	-7.8	0.00276	mg/L	0.000645	0.00276	mg/L	0.000645	23.42%
Se 196.026†	-1.6	0.00086	mg/L	0.003290	0.00086	mg/L	0.003290	383.08%
Si 251.611†	207601.2	3.76	mg/L	0.085	3.76	mg/L	0.085	2.26%
Sn 189.927†	-328.2	-0.0251	mg/L	0.00103	-0.0251	mg/L	0.00103	4.11%
Ti 334.940†	-18640.9	-0.00214	mg/L	0.000628	-0.00214	mg/L	0.000628	29.34%
Tl 190.801†	-27.1	-0.00912	mg/L	0.001544	-0.00912	mg/L	0.001544	16.93%
V 290.880†	747.6	0.00291	mg/L	0.000517	0.00291	mg/L	0.000517	17.76%
Zn 206.200†	1175.3	0.0197	mg/L	0.00016	0.0197	mg/L	0.00016	0.81%
K 766.490†	29683.5	9.17	mg/L	0.093	9.17	mg/L	0.093	1.02%
Na 589.592†	1193691.1	54.6	mg/L	0.52	54.6	mg/L	0.52	0.96%
Sr 407.771†	1635680.5	0.580	mg/L	0.0273	0.580	mg/L	0.0273	4.70%
Li 670.784†	2704.7	0.0134	mg/L	0.00029	0.0134	mg/L	0.00029	2.15%

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Sequence No.: 68 **Autosampler Location: 91**
Sample ID: L1207031701DU WG403246-05 **Date Collected: 7/17/2012 9:00:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031701DU WG403246-05

Analyte	Back Pressure	Flow
All	311.0 kPa	0.50 L/min

Mean Data: L1207031701DU WG403246-05

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2428434.4						9653.78	0.40%
YRADIAL	315231.6						3021.54	0.96%
Ga 417.206	1451455.5						25852.98	1.78%
GaRADIAL	93055.9						2582.88	2.78%
Ag 328.068†	752.2	0.00316	mg/L	0.000200	0.00316	mg/L	0.000200	6.32%

Approved: July 18, 2012

Kym H. Rhoden

Al 396.153†	103.4	-0.00948	mg/L	0.000675	-0.00948	mg/L	0.000675	7.12%
As 188.979†	-8.5	-0.00148	mg/L	0.001669	-0.00148	mg/L	0.001669	112.79%
Ba 233.527†	23985.7	0.140	mg/L	0.0015	0.140	mg/L	0.0015	1.10%
Be 234.861†	126.9	0.00023	mg/L	0.000015	0.00023	mg/L	0.000015	6.77%
B 249.677†	7748.0	0.0679	mg/L	0.00055	0.0679	mg/L	0.00055	0.81%
Ca 227.546†	44763.5	89.6	mg/L	2.18	89.6	mg/L	2.18	2.44%
Cd 228.802†	4.4	0.00026	mg/L	0.000070	0.00026	mg/L	0.000070	27.30%
Co 228.616†	-1.9	-0.00016	mg/L	0.000044	-0.00016	mg/L	0.000044	26.95%
Cr 267.716†	282.3	0.00249	mg/L	0.000165	0.00249	mg/L	0.000165	6.62%
Cu 327.393†	566.8	0.00306	mg/L	0.000207	0.00306	mg/L	0.000207	6.78%
Fe 239.562†	1445.7	0.0928	mg/L	0.00058	0.0928	mg/L	0.00058	0.62%
Mg 279.077†	60116.6	16.9	mg/L	0.09	16.9	mg/L	0.09	0.56%
Mn 257.610†	7126.9	0.00876	mg/L	0.000040	0.00876	mg/L	0.000040	0.45%
Mo 202.031†	996.2	0.0258	mg/L	0.00026	0.0258	mg/L	0.00026	1.01%
Ni 231.604†	148.0	-0.00051	mg/L	0.000147	-0.00051	mg/L	0.000147	28.83%
Pb 220.353†	43.8	0.00249	mg/L	0.000750	0.00249	mg/L	0.000750	30.14%
Sb 206.836†	-7.8	0.00276	mg/L	0.000189	0.00276	mg/L	0.000189	6.85%
Se 196.026†	3.3	0.00295	mg/L	0.002391	0.00295	mg/L	0.002391	81.15%
Si 251.611†	204324.3	3.70	mg/L	0.060	3.70	mg/L	0.060	1.63%
Sn 189.927†	-322.1	-0.0246	mg/L	0.00026	-0.0246	mg/L	0.00026	1.07%
Ti 334.940†	-18116.4	-0.00189	mg/L	0.000622	-0.00189	mg/L	0.000622	32.97%
Tl 190.801†	-29.7	-0.00974	mg/L	0.001565	-0.00974	mg/L	0.001565	16.06%
V 290.880†	802.2	0.00313	mg/L	0.001217	0.00313	mg/L	0.001217	38.90%
Zn 206.200†	1236.6	0.0207	mg/L	0.00017	0.0207	mg/L	0.00017	0.83%
K 766.490†	29248.8	9.04	mg/L	0.033	9.04	mg/L	0.033	0.37%
Na 589.592†	1150535.4	52.7	mg/L	1.54	52.7	mg/L	1.54	2.93%
Sr 407.771†	1586196.1	0.563	mg/L	0.0162	0.563	mg/L	0.0162	2.88%
Li 670.784†	2611.6	0.0128	mg/L	0.00049	0.0128	mg/L	0.00049	3.81%

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Sequence No.: 69
Sample ID: L1207031701MS WG403246-06
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 92
Date Collected: 7/17/2012 9:07:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207031701MS WG403246-06

Analyte	Back Pressure	Flow
All	311.0 kPa	0.50 L/min

Mean Data: L1207031701MS WG403246-06

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2389121.8						8897.58	0.37%
YRADIAL	312912.0						3634.44	1.16%
Ga 417.206	1376659.5						27877.38	2.03%
GaRADIAL	89463.5						206.47	0.23%
Ag 328.068†	63863.6	0.198	mg/L	0.0040	0.198	mg/L	0.0040	2.02%
Al 396.153†	34694.7	4.87	mg/L	0.012	4.87	mg/L	0.012	0.25%
As 188.979†	757.5	0.191	mg/L	0.0033	0.191	mg/L	0.0033	1.73%
Ba 233.527†	108521.3	0.637	mg/L	0.0071	0.637	mg/L	0.0071	1.12%
Be 234.861†	30804.7	0.0240	mg/L	0.00048	0.0240	mg/L	0.00048	2.01%
B 249.677†	122059.1	1.02	mg/L	0.023	1.02	mg/L	0.023	2.22%
Ca 227.546†	51363.0	103	mg/L	2.3	103	mg/L	2.3	2.24%
Cd 228.802†	1404.3	0.0229	mg/L	0.00097	0.0229	mg/L	0.00097	4.23%
Co 228.616†	4554.5	0.0971	mg/L	0.00098	0.0971	mg/L	0.00098	1.01%
Cr 267.716†	32189.0	0.249	mg/L	0.0021	0.249	mg/L	0.0021	0.84%
Cu 327.393†	65149.5	0.242	mg/L	0.0056	0.242	mg/L	0.0056	2.31%
Fe 239.562†	32368.5	2.00	mg/L	0.022	2.00	mg/L	0.022	1.10%
Mg 279.077†	79063.0	22.3	mg/L	0.22	22.3	mg/L	0.22	1.00%
Mn 257.610†	214611.7	0.259	mg/L	0.0031	0.259	mg/L	0.0031	1.19%
Mo 202.031†	20622.5	0.530	mg/L	0.0060	0.530	mg/L	0.0060	1.14%
Ni 231.604†	17584.1	0.242	mg/L	0.0025	0.242	mg/L	0.0025	1.02%
Pb 220.353†	3604.5	0.249	mg/L	0.0018	0.249	mg/L	0.0018	0.72%
Sb 206.836†	3027.7	0.581	mg/L	0.0142	0.581	mg/L	0.0142	2.45%
Se 196.026†	463.7	0.199	mg/L	0.0065	0.199	mg/L	0.0065	3.28%
Si 251.611†	360220.6	6.51	mg/L	0.092	6.51	mg/L	0.092	1.42%
Sn 189.927†	6394.2	0.495	mg/L	0.0032	0.495	mg/L	0.0032	0.64%
Ti 334.940†	520446.4	0.491	mg/L	0.0036	0.491	mg/L	0.0036	0.73%
Tl 190.801†	1013.9	0.251	mg/L	0.0033	0.251	mg/L	0.0033	1.32%

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V 290.880†	133458.8	0.510	mg/L	0.0030	0.510	mg/L	0.0030	0.58%
Zn 206.200†	31396.6	0.509	mg/L	0.0060	0.509	mg/L	0.0060	1.18%
K 766.490†	107221.5	33.6	mg/L	0.25	33.6	mg/L	0.25	0.74%
Na 589.592†	1766279.5	80.8	mg/L	0.77	80.8	mg/L	0.77	0.95%
Sr 407.771†	2972342.5	1.05	mg/L	0.030	1.05	mg/L	0.030	2.84%
Li 670.784†	81673.4	0.517	mg/L	0.0064	0.517	mg/L	0.0064	1.24%

Sequence No.: 70 **Autosampler Location: 93**
Sample ID: L1207031701PS WG403586-01 **Date Collected: 7/17/2012 9:13:41 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031701PS WG403586-01

Analyte	Back Pressure	Flow
All	311.0 kPa	0.50 L/min

Mean Data: L1207031701PS WG403586-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2443608.6						6813.62	0.28%
YRADIAL	318706.0						7158.70	2.25%
Ga 417.206	1375550.7						31851.01	2.32%
GaRADIAL	89720.4						2381.88	2.65%
Ag 328.068†	64964.0	0.201	mg/L	0.0047	0.201	mg/L	0.0047	2.33%
Al 396.153†	35203.3	4.94	mg/L	0.012	4.94	mg/L	0.012	0.25%
As 188.979†	773.5	0.195	mg/L	0.0063	0.195	mg/L	0.0063	3.24%
Ba 233.527†	106007.1	0.622	mg/L	0.0037	0.622	mg/L	0.0037	0.60%
Be 234.861†	31448.2	0.0245	mg/L	0.00069	0.0245	mg/L	0.00069	2.81%
B 249.677†	123423.3	1.03	mg/L	0.025	1.03	mg/L	0.025	2.39%
Ca 227.546†	45772.0	91.8	mg/L	2.10	91.8	mg/L	2.10	2.29%
Cd 228.802†	1442.6	0.0235	mg/L	0.00119	0.0235	mg/L	0.00119	5.07%
Co 228.616†	4572.1	0.0975	mg/L	0.00060	0.0975	mg/L	0.00060	0.61%
Cr 267.716†	32283.5	0.250	mg/L	0.0021	0.250	mg/L	0.0021	0.83%
Cu 327.393†	65965.0	0.245	mg/L	0.0029	0.245	mg/L	0.0029	1.20%
Fe 239.562†	32372.8	2.00	mg/L	0.007	2.00	mg/L	0.007	0.33%
Mg 279.077†	71471.6	20.2	mg/L	0.23	20.2	mg/L	0.23	1.13%
Mn 257.610†	214435.7	0.258	mg/L	0.0011	0.258	mg/L	0.0011	0.42%
Mo 202.031†	20653.1	0.531	mg/L	0.0037	0.531	mg/L	0.0037	0.69%
Ni 231.604†	17607.6	0.242	mg/L	0.0024	0.242	mg/L	0.0024	1.01%
Pb 220.353†	3648.3	0.252	mg/L	0.0003	0.252	mg/L	0.0003	0.13%
Sb 206.836†	3130.8	0.601	mg/L	0.0171	0.601	mg/L	0.0171	2.84%
Se 196.026†	476.1	0.204	mg/L	0.0072	0.204	mg/L	0.0072	3.51%
Si 251.611†	339947.1	6.14	mg/L	0.099	6.14	mg/L	0.099	1.61%
Sn 189.927†	-308.2	-0.0235	mg/L	0.00034	-0.0235	mg/L	0.00034	1.44%
Ti 334.940†	528407.2	0.496	mg/L	0.0021	0.496	mg/L	0.0021	0.43%
Tl 190.801†	1027.9	0.254	mg/L	0.0044	0.254	mg/L	0.0044	1.73%
V 290.880†	133224.1	0.509	mg/L	0.0053	0.509	mg/L	0.0053	1.05%
Zn 206.200†	31593.2	0.513	mg/L	0.0100	0.513	mg/L	0.0100	1.94%
K 766.490†	104451.2	32.7	mg/L	0.18	32.7	mg/L	0.18	0.55%
Na 589.592†	1645736.3	75.3	mg/L	2.21	75.3	mg/L	2.21	2.94%
Sr 407.771†	2766783.5	0.982	mg/L	0.0307	0.982	mg/L	0.0307	3.13%
Li 670.784†	82625.7	0.523	mg/L	0.0046	0.523	mg/L	0.0046	0.87%

Sequence No.: 71 **Autosampler Location: 94**
Sample ID: L1207031701DL WG403586-02 **Date Collected: 7/17/2012 9:19:42 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207031701DL WG403586-02

Analyte	Back Pressure	Flow
All	312.0 kPa	0.50 L/min

Mean Data: L1207031701DL WG403586-02

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

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Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2519293.5						25229.92	1.00%
YRADIAL	315351.2						1702.98	0.54%
Ga 417.206	1427020.2						26498.77	1.86%
GaRADIAL	91521.5						1721.74	1.88%
Ag 328.068†	49.6	0.00106	mg/L	0.000094	0.00106	mg/L	0.000094	8.82%
Al 396.153†	22.4	-0.0196	mg/L	0.00133	-0.0196	mg/L	0.00133	6.76%
As 188.979†	-0.7	0.00061	mg/L	0.000937	0.00061	mg/L	0.000937	154.11%
Ba 233.527†	5092.4	0.0293	mg/L	0.00017	0.0293	mg/L	0.00017	0.57%
Be 234.861†	80.3	0.00020	mg/L	0.000008	0.00020	mg/L	0.000008	3.95%
B 249.677†	2196.0	0.0215	mg/L	0.00029	0.0215	mg/L	0.00029	1.36%
Ca 227.546†	9037.6	18.2	mg/L	0.31	18.2	mg/L	0.31	1.72%
Cd 228.802†	-1.2	0.00016	mg/L	0.000145	0.00016	mg/L	0.000145	93.28%
Co 228.616†	5.3	-0.00003	mg/L	0.000146	-0.00003	mg/L	0.000146	449.54%
Cr 267.716†	13.5	0.00042	mg/L	0.000071	0.00042	mg/L	0.000071	16.94%
Cu 327.393†	13.4	0.00102	mg/L	0.000552	0.00102	mg/L	0.000552	53.93%
Fe 239.562†	281.2	0.0213	mg/L	0.00041	0.0213	mg/L	0.00041	1.93%
Mg 279.077†	12696.2	3.59	mg/L	0.017	3.59	mg/L	0.017	0.47%
Mn 257.610†	542.4	0.00084	mg/L	0.000062	0.00084	mg/L	0.000062	7.44%
Mo 202.031†	220.8	0.00586	mg/L	0.000276	0.00586	mg/L	0.000276	4.70%
Ni 231.604†	50.9	-0.00187	mg/L	0.000149	-0.00187	mg/L	0.000149	8.00%
Pb 220.353†	20.0	0.00027	mg/L	0.000551	0.00027	mg/L	0.000551	202.16%
Sb 206.836†	-1.5	0.00393	mg/L	0.001393	0.00393	mg/L	0.001393	35.40%
Se 196.026†	3.3	0.00293	mg/L	0.001023	0.00293	mg/L	0.001023	34.96%
Si 251.611†	42615.8	0.781	mg/L	0.0067	0.781	mg/L	0.0067	0.85%
Sn 189.927†	-180.9	-0.0137	mg/L	0.00049	-0.0137	mg/L	0.00049	3.61%
Ti 334.940†	-3602.6	0.00063	mg/L	0.000069	0.00063	mg/L	0.000069	11.04%
Tl 190.801†	4.4	-0.00130	mg/L	0.002691	-0.00130	mg/L	0.002691	207.68%
V 290.880†	158.5	0.00103	mg/L	0.001593	0.00103	mg/L	0.001593	154.35%
Zn 206.200†	461.0	0.00813	mg/L	0.000102	0.00813	mg/L	0.000102	1.26%
K 766.490†	6194.1	1.86	mg/L	0.010	1.86	mg/L	0.010	0.51%
Na 589.592†	236468.5	10.8	mg/L	0.26	10.8	mg/L	0.26	2.38%
Sr 407.771†	322092.7	0.115	mg/L	0.0017	0.115	mg/L	0.0017	1.51%
Li 670.784†	628.9	0.00019	mg/L	0.000250	0.00019	mg/L	0.000250	132.56%

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Sequence No.: 72 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/17/2012 9:26:39 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	312.0 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	2446997.6						13712.64	0.56%
YRADIAL	317683.9						1501.01	0.47%
Ga 417.206	1333868.0						16537.44	1.24%
GaRADIAL	88381.8						337.21	0.38%
Ag 328.068†	131536.1	0.407	mg/L	0.0038	0.407	mg/L	0.0038	0.92%
QC value within limits for Ag 328.068 Recovery = 101.72%								
Al 396.153†	70738.8	9.95	mg/L	0.045	9.95	mg/L	0.045	0.45%
QC value within limits for Al 396.153 Recovery = 99.47%								
As 188.979†	1618.1	0.408	mg/L	0.0047	0.408	mg/L	0.0047	1.15%
QC value within limits for As 188.979 Recovery = 102.05%								
Ba 233.527†	174292.5	1.02	mg/L	0.011	1.02	mg/L	0.011	1.05%
QC value within limits for Ba 233.527 Recovery = 102.29%								
Be 234.861†	64672.7	0.0502	mg/L	0.00065	0.0502	mg/L	0.00065	1.30%
QC value within limits for Be 234.861 Recovery = 100.49%								
B 249.677†	60030.7	0.502	mg/L	0.0032	0.502	mg/L	0.0032	0.64%
QC value within limits for B 249.677 Recovery = 100.33%								
Ca 227.546†	4954.0	10.5	mg/L	0.19	10.5	mg/L	0.19	1.83%
QC value within limits for Ca 227.546 Recovery = 104.75%								
Cd 228.802†	3056.2	0.0496	mg/L	0.00135	0.0496	mg/L	0.00135	2.71%
QC value within limits for Cd 228.802 Recovery = 99.25%								
Co 228.616†	9570.6	0.204	mg/L	0.0010	0.204	mg/L	0.0010	0.49%

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   QC value within limits for Co 228.616  Recovery = 102.10%
Cr 267.716†          65717.0       0.509 mg/L        0.0027       0.509 mg/L        0.0027   0.54%
   QC value within limits for Cr 267.716  Recovery = 101.73%
Cu 327.393†         136159.7       0.505 mg/L        0.0056       0.505 mg/L        0.0056   1.12%
   QC value within limits for Cu 327.393  Recovery = 100.98%
Fe 239.562†          65504.7        4.04 mg/L         0.020        4.04 mg/L         0.020   0.49%
   QC value within limits for Fe 239.562  Recovery = 101.00%
Mg 279.077†          35652.3        10.1 mg/L          0.04        10.1 mg/L          0.04   0.39%
   QC value within limits for Mg 279.077  Recovery = 100.72%
Mn 257.610†         422245.9       0.509 mg/L        0.0044       0.509 mg/L        0.0044   0.87%
   QC value within limits for Mn 257.610  Recovery = 101.71%
Mo 202.031†          39858.6        1.02 mg/L         0.012        1.02 mg/L         0.012   1.14%
   QC value within limits for Mo 202.031  Recovery = 102.42%
Ni 231.604†          38041.1       0.527 mg/L        0.0023       0.527 mg/L        0.0023   0.44%
   QC value within limits for Ni 231.604  Recovery = 105.38%
Pb 220.353†           7481.9       0.517 mg/L        0.0012       0.517 mg/L        0.0012   0.24%
   QC value within limits for Pb 220.353  Recovery = 103.32%
Sb 206.836†           6395.8        1.22 mg/L         0.020        1.22 mg/L         0.020   1.61%
   QC value within limits for Sb 206.836  Recovery = 101.89%
Se 196.026†            972.3       0.416 mg/L        0.0054       0.416 mg/L        0.0054   1.29%
   QC value within limits for Se 196.026  Recovery = 103.97%
Si 251.611†         281403.2        5.08 mg/L         0.045        5.08 mg/L         0.045   0.89%
   QC value within limits for Si 251.611  Recovery = 101.60%
Sn 189.927†          13561.1        1.05 mg/L         0.006        1.05 mg/L         0.006   0.56%
   QC value within limits for Sn 189.927  Recovery = 104.90%
Ti 334.940†        1104172.7        1.01 mg/L         0.004        1.01 mg/L         0.004   0.37%
   QC value within limits for Ti 334.940  Recovery = 100.85%
Tl 190.801†           2180.5       0.542 mg/L        0.0057       0.542 mg/L        0.0057   1.05%
   QC value within limits for Tl 190.801  Recovery = 108.35%
V 290.880†          265011.1        1.01 mg/L         0.006        1.01 mg/L         0.006   0.57%
   QC value within limits for V 290.880  Recovery = 101.24%
Zn 206.200†          63785.1        1.03 mg/L         0.015        1.03 mg/L         0.015   1.43%
   QC value within limits for Zn 206.200  Recovery = 103.43%
K 766.490†          156261.2        49.3 mg/L          0.23        49.3 mg/L          0.23   0.46%
   QC value within limits for K 766.490  Recovery = 98.56%
Na 589.592†        1096089.2        50.2 mg/L          0.32        50.2 mg/L          0.32   0.65%
   QC value within limits for Na 589.592  Recovery = 100.34%
Sr 407.771†        2776471.7       0.987 mg/L        0.0044       0.987 mg/L        0.0044   0.44%
   QC value within limits for Sr 407.771  Recovery = 98.72%
Li 670.784†         158159.0        1.00 mg/L         0.009        1.00 mg/L         0.009   0.91%
   QC value within limits for Li 670.784  Recovery = 100.41%
All analyte(s) passed QC.

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Sequence No.: 73                                    Autosampler Location: 8
Sample ID: CCB                                      Date Collected: 7/17/2012 9:32:39 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                     312.0 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            2608576.5                                                  13912.47   0.53%
YRADIAL               321752.2                                                   6613.68   2.06%
Ga 417.206           1402940.9                                                  13125.07   0.94%
GaRADIAL               90486.0                                                   1443.93   1.60%
Ag 328.068†              -97.0     0.00063 mg/L      0.000078     0.00063 mg/L      0.000078  12.47%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              -4.8     -0.0231 mg/L       0.00125     -0.0231 mg/L       0.00125   5.40%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -6.2    -0.00078 mg/L      0.001328    -0.00078 mg/L      0.001328 170.14%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              14.3    -0.00048 mg/L      0.000108    -0.00048 mg/L      0.000108  22.23%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†              21.1     0.00015 mg/L      0.000022     0.00015 mg/L      0.000022  14.69%
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   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†              613.3     0.00822 mg/L      0.000161     0.00822 mg/L      0.000161   1.96%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†             -14.9      0.0619 mg/L       0.01980      0.0619 mg/L       0.01980  31.99%
   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†              -5.7     0.00009 mg/L      0.000106     0.00009 mg/L      0.000106 120.48%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†               4.8    -0.00005 mg/L      0.000152    -0.00005 mg/L      0.000152 311.24%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -53.0    -0.00010 mg/L      0.000027    -0.00010 mg/L      0.000027  27.67%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -73.5     0.00070 mg/L      0.000581     0.00070 mg/L      0.000581  82.51%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†              20.4     0.00534 mg/L      0.000106     0.00534 mg/L      0.000106   1.98%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†              29.3      0.0215 mg/L       0.00224      0.0215 mg/L       0.00224  10.40%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†           -1363.3    -0.00146 mg/L      0.000023    -0.00146 mg/L      0.000023   1.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.9     0.00037 mg/L      0.000183     0.00037 mg/L      0.000183  49.33%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†              -2.6    -0.00261 mg/L      0.000157    -0.00261 mg/L      0.000157   6.01%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†              15.9    -0.00016 mg/L      0.000305    -0.00016 mg/L      0.000305 192.77%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†              -5.3     0.00321 mg/L      0.001216     0.00321 mg/L      0.001216  37.87%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.1     0.00104 mg/L      0.000873     0.00104 mg/L      0.000873  83.91%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -53.5      0.0108 mg/L       0.00112      0.0108 mg/L       0.00112  10.36%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.7     0.00043 mg/L      0.000105     0.00043 mg/L      0.000105  24.50%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              50.4     0.00124 mg/L      0.000081     0.00124 mg/L      0.000081   6.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               4.4    -0.00126 mg/L      0.002328    -0.00126 mg/L      0.002328 184.47%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†             -456.4    -0.00122 mg/L      0.001489    -0.00122 mg/L      0.001489 121.93%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -180.0    -0.00222 mg/L      0.000228    -0.00222 mg/L      0.000228  10.26%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†              -55.4     -0.0772 mg/L       0.01735     -0.0772 mg/L       0.01735  22.46%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†            -496.7     -0.0410 mg/L       0.00124     -0.0410 mg/L       0.00124   3.02%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              33.1     0.00138 mg/L      0.000019     0.00138 mg/L      0.000019   1.36%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†              46.4    -0.00352 mg/L      0.000142    -0.00352 mg/L      0.000142   4.02%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 74                                    Autosampler Location: 95
Sample ID: L1207031801                              Date Collected: 7/17/2012 9:39:36 PM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: L1207031801
Analyte                  Back Pressure     Flow
All                     315.0 kPa         0.50 L/min

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Mean Data: L1207031801
                    Mean Corrected          Calib.                          Sample
Analyte                Intensity      Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2220456.9                                                       21230.15   0.96%
YRADIAL               300375.0                                                        5072.00   1.69%
Ga 417.206           1349017.2                                                       22227.32   1.65%
GaRADIAL               89736.7                                                        2103.85   2.34%
Ag 328.068†             2649.9     0.00879 mg/L      0.000537     0.00879 mg/L      0.000537   6.11%
```

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Al 396.153†	69.4	-0.0167	mg/L	0.00683	-0.0167	mg/L	0.00683	41.01%
As 188.979†	15.2	0.00441	mg/L	0.003150	0.00441	mg/L	0.003150	71.49%
Ba 233.527†	29999.3	0.176	mg/L	0.0012	0.176	mg/L	0.0012	0.68%
Be 234.861†	209.3	0.00028	mg/L	0.000034	0.00028	mg/L	0.000034	11.99%
B 249.677†	143229.6	1.20	mg/L	0.030	1.20	mg/L	0.030	2.46%
Ca 227.546†	179970.6	360	mg/L	6.1	360	mg/L	6.1	1.69%
Cd 228.802†	4.3	0.00023	mg/L	0.000125	0.00023	mg/L	0.000125	54.13%
Co 228.616†	79.5	0.00172	mg/L	0.000066	0.00172	mg/L	0.000066	3.85%
Cr 267.716†	490.1	0.00410	mg/L	0.000191	0.00410	mg/L	0.000191	4.67%
Cu 327.393†	2815.1	0.0113	mg/L	0.00099	0.0113	mg/L	0.00099	8.79%
Fe 239.562†	3314.0	0.205	mg/L	0.0023	0.205	mg/L	0.0023	1.14%
Mg 279.077†	562114.8	158	mg/L	2.0	158	mg/L	2.0	1.24%
Mn 257.610†	7581.5	0.00932	mg/L	0.000123	0.00932	mg/L	0.000123	1.32%
Mo 202.031†	2334.3	0.0601	mg/L	0.00033	0.0601	mg/L	0.00033	0.56%
Ni 231.604†	1049.7	0.0120	mg/L	0.00027	0.0120	mg/L	0.00027	2.25%
Pb 220.353†	-14.8	0.00061	mg/L	0.001814	0.00061	mg/L	0.001814	297.69%
Sb 206.836†	-2.0	0.00394	mg/L	0.000416	0.00394	mg/L	0.000416	10.58%
Se 196.026†	1.4	0.00213	mg/L	0.002055	0.00213	mg/L	0.002055	96.42%
Si 251.611†	344492.8	6.23	mg/L	0.112	6.23	mg/L	0.112	1.80%
Sn 189.927†	-447.7	-0.0343	mg/L	0.00137	-0.0343	mg/L	0.00137	3.99%
Ti 334.940†	-62932.9	-0.00218	mg/L	0.004714	-0.00218	mg/L	0.004714	215.96%
Tl 190.801†	-31.5	-0.0106	mg/L	0.00222	-0.0106	mg/L	0.00222	20.88%
V 290.880†	6139.8	0.0198	mg/L	0.00141	0.0198	mg/L	0.00141	7.11%
Zn 206.200†	133.3	0.00287	mg/L	0.000354	0.00287	mg/L	0.000354	12.32%
K 766.490†	142391.7	44.9	mg/L	0.21	44.9	mg/L	0.21	0.46%
Na 589.592†	Saturated2							
Sr 407.771†	5368398.9	1.90	mg/L	0.031	1.90	mg/L	0.031	1.62%
Li 670.784†	12356.3	0.0749	mg/L	0.00130	0.0749	mg/L	0.00130	1.74%

Sequence No.: 75
Sample ID: L1207034101
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 96
Date Collected: 7/17/2012 9:45:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207034101

Analyte	Back Pressure	Flow
All	327.0 kPa	0.50 L/min

Mean Data: L1207034101

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2241766.8						13332.39	0.59%
YRADIAL	308027.8						6802.81	2.21%
Ga 417.206	1346658.2						19008.27	1.41%
GaRADIAL	89125.4						2124.49	2.38%
Ag 328.068†	38387.1	0.118	mg/L	0.0016	0.118	mg/L	0.0016	1.38%
Al 396.153†	314.8	0.0222	mg/L	0.00252	0.0222	mg/L	0.00252	11.34%
As 188.979†	22.4	0.00655	mg/L	0.000775	0.00655	mg/L	0.000775	11.83%
Ba 233.527†	3519.7	0.0201	mg/L	0.00023	0.0201	mg/L	0.00023	1.16%
Be 234.861†	891.8	0.00082	mg/L	0.000012	0.00082	mg/L	0.000012	1.50%
B 249.677†	7352.8	0.0645	mg/L	0.00130	0.0645	mg/L	0.00130	2.02%
Ca 227.546†	9147.1	18.4	mg/L	0.38	18.4	mg/L	0.38	2.09%
Cd 228.802†	3.3	0.00020	mg/L	0.000119	0.00020	mg/L	0.000119	59.13%
Co 228.616†	4.4	-0.00006	mg/L	0.000042	-0.00006	mg/L	0.000042	69.87%
Cr 267.716†	5380.6	0.0419	mg/L	0.00039	0.0419	mg/L	0.00039	0.92%
Cu 327.393†	9507.4	0.0361	mg/L	0.00072	0.0361	mg/L	0.00072	2.01%
Fe 239.562†	1011.9	0.0664	mg/L	0.00110	0.0664	mg/L	0.00110	1.66%
Mg 279.077†	6703.9	1.90	mg/L	0.035	1.90	mg/L	0.035	1.85%
Mn 257.610†	6708.2	0.00826	mg/L	0.000050	0.00826	mg/L	0.000050	0.60%
Mo 202.031†	46.2	0.00139	mg/L	0.000431	0.00139	mg/L	0.000431	31.00%
Ni 231.604†	194.3	0.00013	mg/L	0.000249	0.00013	mg/L	0.000249	185.72%
Pb 220.353†	14.6	-0.00014	mg/L	0.000290	-0.00014	mg/L	0.000290	207.93%
Sb 206.836†	1.9	0.00425	mg/L	0.000079	0.00425	mg/L	0.000079	1.86%
Se 196.026†	0.6	0.00181	mg/L	0.000111	0.00181	mg/L	0.000111	6.17%
Si 251.611†	1093414.4	19.7	mg/L	0.23	19.7	mg/L	0.23	1.16%
Sn 189.927†	-172.1	-0.0130	mg/L	0.00074	-0.0130	mg/L	0.00074	5.68%
Ti 334.940†	1388.3	0.00520	mg/L	0.000194	0.00520	mg/L	0.000194	3.74%
Tl 190.801†	-20.9	-0.00737	mg/L	0.001995	-0.00737	mg/L	0.001995	27.08%

Approved: July 18, 2012

Kim H. Rhoden

V 290.880†	2848.6	0.0114 mg/L	0.00184	0.0114 mg/L	0.00184	16.20%
Zn 206.200†	1913.0	0.0319 mg/L	0.00026	0.0319 mg/L	0.00026	0.82%
K 766.490†	7940.8	2.42 mg/L	0.035	2.42 mg/L	0.035	1.44%
Na 589.592†	Saturated2					
Sr 407.771†	98248.5	0.0359 mg/L	0.00106	0.0359 mg/L	0.00106	2.96%
Li 670.784†	4712.0	0.0262 mg/L	0.00076	0.0262 mg/L	0.00076	2.90%

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Sequence No.: 76 **Autosampler Location: 97**
Sample ID: L1207034301 **Date Collected: 7/17/2012 9:52:35 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207034301

Analyte	Back Pressure	Flow
All	323.0 kPa	0.50 L/min

Mean Data: L1207034301

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2406567.0						19550.89	0.81%
YRADIAL	324076.5						519.60	0.16%
Ga 417.206	1423132.3						31415.80	2.21%
GaRADIAL	91491.2						537.26	0.59%
Ag 328.068†	559.8	0.00324	mg/L	0.000503	0.00324	mg/L	0.000503	15.51%
Al 396.153†	4032.5	0.550	mg/L	0.0071	0.550	mg/L	0.0071	1.28%
As 188.979†	7.3	0.00301	mg/L	0.001335	0.00301	mg/L	0.001335	44.31%
Ba 233.527†	18143.3	0.106	mg/L	0.0011	0.106	mg/L	0.0011	1.03%
Be 234.861†	721.0	0.00037	mg/L	0.000079	0.00037	mg/L	0.000079	21.18%
B 249.677†	11775.2	0.101	mg/L	0.0037	0.101	mg/L	0.0037	3.69%
Ca 227.546†	46384.0	92.8	mg/L	3.37	92.8	mg/L	3.37	3.63%
Cd 228.802†	10.2	0.00034	mg/L	0.000149	0.00034	mg/L	0.000149	43.74%
Co 228.616†	35.2	0.00055	mg/L	0.000434	0.00055	mg/L	0.000434	79.65%
Cr 267.716†	366.8	0.00310	mg/L	0.000051	0.00310	mg/L	0.000051	1.65%
Cu 327.393†	364.2	0.00240	mg/L	0.000633	0.00240	mg/L	0.000633	26.42%
Fe 239.562†	27093.2	1.67	mg/L	0.006	1.67	mg/L	0.006	0.36%
Mg 279.077†	66218.5	18.7	mg/L	0.06	18.7	mg/L	0.06	0.33%
Mn 257.610†	285125.3	0.343	mg/L	0.0043	0.343	mg/L	0.0043	1.26%
Mo 202.031†	222.4	0.00606	mg/L	0.000096	0.00606	mg/L	0.000096	1.59%
Ni 231.604†	307.5	0.00171	mg/L	0.000422	0.00171	mg/L	0.000422	24.70%
Pb 220.353†	64.5	0.00369	mg/L	0.000996	0.00369	mg/L	0.000996	27.01%
Sb 206.836†	-9.0	0.00255	mg/L	0.000992	0.00255	mg/L	0.000992	38.85%
Se 196.026†	-1.0	0.00128	mg/L	0.001485	0.00128	mg/L	0.001485	116.19%
Si 251.611†	282091.9	5.10	mg/L	0.117	5.10	mg/L	0.117	2.29%
Sn 189.927†	-318.7	-0.0243	mg/L	0.00063	-0.0243	mg/L	0.00063	2.58%
Ti 334.940†	-6622.1	0.00907	mg/L	0.000884	0.00907	mg/L	0.000884	9.74%
Tl 190.801†	-24.5	-0.00866	mg/L	0.001928	-0.00866	mg/L	0.001928	22.27%
V 290.880†	1861.8	0.00693	mg/L	0.000085	0.00693	mg/L	0.000085	1.22%
Zn 206.200†	834.4	0.0141	mg/L	0.00010	0.0141	mg/L	0.00010	0.71%
K 766.490†	13292.6	3.98	mg/L	0.033	3.98	mg/L	0.033	0.82%
Na 589.592†	2442085.7	112	mg/L	0.3	112	mg/L	0.3	0.24%
Sr 407.771†	872104.1	0.309	mg/L	0.0019	0.309	mg/L	0.0019	0.61%
Li 670.784†	1687.4	0.00693	mg/L	0.000333	0.00693	mg/L	0.000333	4.80%

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Sequence No.: 77 **Autosampler Location: 98**
Sample ID: L1207034601 **Date Collected: 7/17/2012 9:58:34 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207034601

Analyte	Back Pressure	Flow
All	323.0 kPa	0.50 L/min

Mean Data: L1207034601

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

Approved: July 18, 2012

Kym H. Rhoden

Analyte	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	RSD
Y 371.029	2474527.5						22873.30	0.92%
YRADIAL	326685.4						3889.99	1.19%
Ga 417.206	1459030.0						23282.19	1.60%
GaRADIAL	93735.1						956.31	1.02%
Ag 328.068†	854.2	0.00358	mg/L	0.000069	0.00358	mg/L	0.000069	1.92%
Al 396.153†	4228.8	0.578	mg/L	0.0139	0.578	mg/L	0.0139	2.41%
As 188.979†	-10.8	-0.00195	mg/L	0.001671	-0.00195	mg/L	0.001671	85.52%
Ba 233.527†	32080.7	0.188	mg/L	0.0028	0.188	mg/L	0.0028	1.47%
Be 234.861†	289.5	0.00033	mg/L	0.000038	0.00033	mg/L	0.000038	11.64%
B 249.677†	33096.7	0.280	mg/L	0.0071	0.280	mg/L	0.0071	2.55%
Ca 227.546†	51814.9	104	mg/L	2.0	104	mg/L	2.0	1.90%
Cd 228.802†	66.3	0.00130	mg/L	0.000211	0.00130	mg/L	0.000211	16.28%
Co 228.616†	25.2	0.00035	mg/L	0.000179	0.00035	mg/L	0.000179	51.26%
Cr 267.716†	71.4	0.00090	mg/L	0.000134	0.00090	mg/L	0.000134	14.90%
Cu 327.393†	59643.8	0.221	mg/L	0.0035	0.221	mg/L	0.0035	1.57%
Fe 239.562†	3090.7	0.194	mg/L	0.0020	0.194	mg/L	0.0020	1.02%
Mg 279.077†	29716.8	8.38	mg/L	0.092	8.38	mg/L	0.092	1.09%
Mn 257.610†	20319.2	0.0247	mg/L	0.00019	0.0247	mg/L	0.00019	0.77%
Mo 202.031†	67.0	0.00193	mg/L	0.000176	0.00193	mg/L	0.000176	9.13%
Ni 231.604†	1945.3	0.0245	mg/L	0.00013	0.0245	mg/L	0.00013	0.53%
Pb 220.353†	142.5	0.00927	mg/L	0.001689	0.00927	mg/L	0.001689	18.22%
Sb 206.836†	-5.3	0.00324	mg/L	0.000896	0.00324	mg/L	0.000896	27.70%
Se 196.026†	-2.9	0.00036	mg/L	0.001819	0.00036	mg/L	0.001819	506.21%
Si 251.611†	502180.2	9.08	mg/L	0.103	9.08	mg/L	0.103	1.13%
Sn 189.927†	702.9	0.0547	mg/L	0.00086	0.0547	mg/L	0.00086	1.57%
Ti 334.940†	-15120.1	0.00296	mg/L	0.001308	0.00296	mg/L	0.001308	44.21%
Tl 190.801†	-17.2	-0.00668	mg/L	0.001345	-0.00668	mg/L	0.001345	20.13%
V 290.880†	1083.3	0.00441	mg/L	0.000919	0.00441	mg/L	0.000919	20.81%
Zn 206.200†	45932.2	0.742	mg/L	0.0178	0.742	mg/L	0.0178	2.40%
K 766.490†	7994.9	2.41	mg/L	0.048	2.41	mg/L	0.048	2.01%
Na 589.592†	537722.6	24.6	mg/L	0.10	24.6	mg/L	0.10	0.41%
Sr 407.771†	491121.8	0.174	mg/L	0.0002	0.174	mg/L	0.0002	0.11%
Li 670.784†	1570.1	0.00619	mg/L	0.000175	0.00619	mg/L	0.000175	2.82%

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Sequence No.: 78 **Autosampler Location: 99**
Sample ID: L1207034901 **Date Collected: 7/17/2012 10:04:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207034901

Analyte	Back Pressure	Flow
All	326.0 kPa	0.50 L/min

Mean Data: L1207034901

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2346577.6						13169.64	0.56%
YRADIAL	324058.8						1897.19	0.59%
Ga 417.206	1399370.9						37042.95	2.65%
GaRADIAL	91278.3						270.35	0.30%
Ag 328.068†	382.2	0.00190	mg/L	0.000297	0.00190	mg/L	0.000297	15.65%
Al 396.153†	9627.3	1.34	mg/L	0.003	1.34	mg/L	0.003	0.24%
As 188.979†	49.1	0.0133	mg/L	0.00039	0.0133	mg/L	0.00039	2.94%
Ba 233.527†	36304.1	0.213	mg/L	0.0035	0.213	mg/L	0.0035	1.67%
Be 234.861†	842.8	0.00086	mg/L	0.000027	0.00086	mg/L	0.000027	3.18%
B 249.677†	64186.2	0.540	mg/L	0.0228	0.540	mg/L	0.0228	4.23%
Ca 227.546†	19898.1	39.9	mg/L	1.69	39.9	mg/L	1.69	4.23%
Cd 228.802†	53.3	0.00101	mg/L	0.000251	0.00101	mg/L	0.000251	24.98%
Co 228.616†	95.4	0.00188	mg/L	0.000275	0.00188	mg/L	0.000275	14.63%
Cr 267.716†	955.7	0.00766	mg/L	0.000026	0.00766	mg/L	0.000026	0.34%
Cu 327.393†	4230.2	0.0166	mg/L	0.00112	0.0166	mg/L	0.00112	6.75%
Fe 239.562†	23881.8	1.48	mg/L	0.012	1.48	mg/L	0.012	0.81%
Mg 279.077†	36557.4	10.3	mg/L	0.06	10.3	mg/L	0.06	0.58%
Mn 257.610†	3014279.0	3.63	mg/L	0.030	3.63	mg/L	0.030	0.83%
Mo 202.031†	2392.3	0.0624	mg/L	0.00041	0.0624	mg/L	0.00041	0.65%
Ni 231.604†	576.6	0.00546	mg/L	0.000269	0.00546	mg/L	0.000269	4.93%
Pb 220.353†	141.1	0.00675	mg/L	0.000603	0.00675	mg/L	0.000603	8.93%

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Sb 206.836†	4.1	0.00511 mg/L	0.000826	0.00511 mg/L	0.000826	16.16%
Se 196.026†	-4.5	-0.00119 mg/L	0.001762	-0.00119 mg/L	0.001762	148.49%
Si 251.611†	297948.2	5.39 mg/L	0.130	5.39 mg/L	0.130	2.41%
Sn 189.927†	-177.3	-0.0134 mg/L	0.00115	-0.0134 mg/L	0.00115	8.59%
Ti 334.940†	6420.3	0.0130 mg/L	0.00064	0.0130 mg/L	0.00064	4.89%
Tl 190.801†	-14.4	-0.00930 mg/L	0.002802	-0.00930 mg/L	0.002802	30.13%
V 290.880†	3297.2	0.0126 mg/L	0.00210	0.0126 mg/L	0.00210	16.63%
Zn 206.200†	4028.8	0.0657 mg/L	0.00006	0.0657 mg/L	0.00006	0.09%
K 766.490†	223462.0	71.0 mg/L	0.43	71.0 mg/L	0.43	0.61%
Na 589.592†	Saturated2					
Sr 407.771†	5104885.7	1.81 mg/L	0.024	1.81 mg/L	0.024	1.35%
Li 670.784†	91821.8	0.581 mg/L	0.0036	0.581 mg/L	0.0036	0.61%

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Sequence No.: 79 **Autosampler Location: 100**
Sample ID: L1207035102 **Date Collected: 7/17/2012 10:10:33 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035102

Analyte	Back Pressure	Flow
All	330.0 kPa	0.50 L/min

Mean Data: L1207035102

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2495037.7						21930.24	0.88%
YRADIAL	325424.2						6651.92	2.04%
Ga 417.206	1502215.9						11352.42	0.76%
GaRADIAL	94434.1						1686.69	1.79%
Ag 328.068†	-93.0	0.00065	mg/L	0.000272	0.00065	mg/L	0.000272	41.61%
Al 396.153†	3339.6	0.451	mg/L	0.0045	0.451	mg/L	0.0045	0.99%
As 188.979†	2.7	0.00146	mg/L	0.001489	0.00146	mg/L	0.001489	101.74%
Ba 233.527†	114.1	0.00010	mg/L	0.000053	0.00010	mg/L	0.000053	52.90%
Be 234.861†	181.8	0.00027	mg/L	0.000011	0.00027	mg/L	0.000011	4.09%
B 249.677†	12359.4	0.107	mg/L	0.0023	0.107	mg/L	0.0023	2.12%
Ca 227.546†	2735.1	5.56	mg/L	0.040	5.56	mg/L	0.040	0.72%
Cd 228.802†	-2.4	0.00013	mg/L	0.000110	0.00013	mg/L	0.000110	82.64%
Co 228.616†	9.7	0.00006	mg/L	0.000248	0.00006	mg/L	0.000248	398.89%
Cr 267.716†	105.4	0.00113	mg/L	0.000110	0.00113	mg/L	0.000110	9.75%
Cu 327.393†	1182.0	0.00516	mg/L	0.000333	0.00516	mg/L	0.000333	6.44%
Fe 239.562†	475.5	0.0332	mg/L	0.00067	0.0332	mg/L	0.00067	2.02%
Mg 279.077†	26380.8	7.44	mg/L	0.118	7.44	mg/L	0.118	1.59%
Mn 257.610†	405.0	0.00067	mg/L	0.000097	0.00067	mg/L	0.000097	14.45%
Mo 202.031†	109.3	0.00300	mg/L	0.000385	0.00300	mg/L	0.000385	12.82%
Ni 231.604†	204.2	0.00027	mg/L	0.000099	0.00027	mg/L	0.000099	36.71%
Pb 220.353†	10.0	-0.00044	mg/L	0.000415	-0.00044	mg/L	0.000415	93.86%
Sb 206.836†	-6.2	0.00303	mg/L	0.000426	0.00303	mg/L	0.000426	14.04%
Se 196.026†	0.4	0.00173	mg/L	0.002537	0.00173	mg/L	0.002537	146.55%
Si 251.611†	213065.0	3.86	mg/L	0.048	3.86	mg/L	0.048	1.24%
Sn 189.927†	-71.6	-0.00524	mg/L	0.000996	-0.00524	mg/L	0.000996	19.00%
Ti 334.940†	-1298.9	0.00084	mg/L	0.000028	0.00084	mg/L	0.000028	3.36%
Tl 190.801†	-4.3	-0.00337	mg/L	0.001235	-0.00337	mg/L	0.001235	36.69%
V 290.880†	656.5	0.00284	mg/L	0.001174	0.00284	mg/L	0.001174	41.40%
Zn 206.200†	142.2	0.00299	mg/L	0.000112	0.00299	mg/L	0.000112	3.73%
K 766.490†	11796.1	3.49	mg/L	0.057	3.49	mg/L	0.057	1.62%
Na 589.592†	2913082.0	133	mg/L	2.5	133	mg/L	2.5	1.86%
Sr 407.771†	73361.4	0.0273	mg/L	0.00107	0.0273	mg/L	0.00107	3.92%
Li 670.784†	177680.2	1.13	mg/L	0.023	1.13	mg/L	0.023	2.06%

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Sequence No.: 80 **Autosampler Location: 101**
Sample ID: L1207035104 **Date Collected: 7/17/2012 10:17:32 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035104

Approved: July 18, 2012

Kym H. Rhoden

Analyte	Back Pressure	Flow
All	330.0 kPa	0.50 L/min

Mean Data: L1207035104

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2472275.8						18667.59	0.76%
YRADIAL	324923.9						4564.37	1.40%
Ga 417.206	1504798.3						15667.24	1.04%
GaRADIAL	94656.9						2453.33	2.59%
Ag 328.068†	-9.1	0.00095	mg/L	0.000200	0.00095	mg/L	0.000200	21.01%
Al 396.153†	2403.3	0.318	mg/L	0.0029	0.318	mg/L	0.0029	0.92%
As 188.979†	-4.4	-0.00031	mg/L	0.000980	-0.00031	mg/L	0.000980	312.59%
Ba 233.527†	996.5	0.00528	mg/L	0.000145	0.00528	mg/L	0.000145	2.74%
Be 234.861†	216.1	0.00028	mg/L	0.000036	0.00028	mg/L	0.000036	12.93%
B 249.677†	11471.0	0.0990	mg/L	0.00185	0.0990	mg/L	0.00185	1.87%
Ca 227.546†	5198.2	10.5	mg/L	0.07	10.5	mg/L	0.07	0.71%
Cd 228.802†	1.5	0.00021	mg/L	0.000164	0.00021	mg/L	0.000164	79.90%
Co 228.616†	7.8	0.00002	mg/L	0.000023	0.00002	mg/L	0.000023	114.14%
Cr 267.716†	197.1	0.00184	mg/L	0.000139	0.00184	mg/L	0.000139	7.57%
Cu 327.393†	6996.9	0.0266	mg/L	0.00066	0.0266	mg/L	0.00066	2.47%
Fe 239.562†	2124.9	0.135	mg/L	0.0017	0.135	mg/L	0.0017	1.25%
Mg 279.077†	30979.4	8.74	mg/L	0.135	8.74	mg/L	0.135	1.54%
Mn 257.610†	5829.2	0.00720	mg/L	0.000152	0.00720	mg/L	0.000152	2.10%
Mo 202.031†	128.3	0.00350	mg/L	0.000118	0.00350	mg/L	0.000118	3.37%
Ni 231.604†	263.5	0.00110	mg/L	0.000287	0.00110	mg/L	0.000287	26.21%
Pb 220.353†	22.9	0.00043	mg/L	0.000404	0.00043	mg/L	0.000404	93.90%
Sb 206.836†	-4.1	0.00343	mg/L	0.000828	0.00343	mg/L	0.000828	24.17%
Se 196.026†	-6.3	-0.00113	mg/L	0.002500	-0.00113	mg/L	0.002500	221.47%
Si 251.611†	218328.0	3.95	mg/L	0.045	3.95	mg/L	0.045	1.13%
Sn 189.927†	-108.6	-0.00810	mg/L	0.000195	-0.00810	mg/L	0.000195	2.40%
Ti 334.940†	-2078.8	0.00086	mg/L	0.000037	0.00086	mg/L	0.000037	4.25%
Tl 190.801†	-9.3	-0.00460	mg/L	0.000780	-0.00460	mg/L	0.000780	16.93%
V 290.880†	1322.4	0.00533	mg/L	0.000718	0.00533	mg/L	0.000718	13.47%
Zn 206.200†	3400.4	0.0556	mg/L	0.00023	0.0556	mg/L	0.00023	0.41%
K 766.490†	47005.1	14.5	mg/L	0.18	14.5	mg/L	0.18	1.21%
Na 589.592†	2591028.6	119	mg/L	2.9	119	mg/L	2.9	2.42%
Sr 407.771†	144707.9	0.0525	mg/L	0.00203	0.0525	mg/L	0.00203	3.87%
Li 670.784†	163520.9	1.04	mg/L	0.019	1.04	mg/L	0.019	1.84%

Sequence No.: 81
Sample ID: L1207035301
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 7/17/2012 10:24:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207035301

Analyte	Back Pressure	Flow
All	331.0 kPa	0.50 L/min

Mean Data: L1207035301

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	2501113.2						6236.00	0.25%
YRADIAL	317096.8						5535.88	1.75%
Ga 417.206	1507163.2						8563.42	0.57%
GaRADIAL	93792.1						2561.64	2.73%
Ag 328.068†	378.5	0.00201	mg/L	0.000222	0.00201	mg/L	0.000222	11.03%
Al 396.153†	396.5	0.0335	mg/L	0.00200	0.0335	mg/L	0.00200	5.99%
As 188.979†	47.3	0.0128	mg/L	0.00131	0.0128	mg/L	0.00131	10.22%
Ba 233.527†	33261.6	0.195	mg/L	0.0023	0.195	mg/L	0.0023	1.20%
Be 234.861†	157.3	0.00028	mg/L	0.000022	0.00028	mg/L	0.000022	7.87%
B 249.677†	12137.4	0.105	mg/L	0.0011	0.105	mg/L	0.0011	1.05%
Ca 227.546†	22393.9	44.8	mg/L	0.65	44.8	mg/L	0.65	1.44%
Cd 228.802†	1.2	0.00014	mg/L	0.000069	0.00014	mg/L	0.000069	50.09%
Co 228.616†	34.8	0.00056	mg/L	0.000217	0.00056	mg/L	0.000217	39.02%
Cr 267.716†	-1.8	0.00030	mg/L	0.000155	0.00030	mg/L	0.000155	51.38%
Cu 327.393†	-50.8	0.00078	mg/L	0.000146	0.00078	mg/L	0.000146	18.68%

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Fe 239.562†	583.7	0.0399	mg/L	0.00038	0.0399	mg/L	0.00038	0.95%
Mg 279.077†	26937.9	7.60	mg/L	0.122	7.60	mg/L	0.122	1.60%
Mn 257.610†	220849.7	0.266	mg/L	0.0034	0.266	mg/L	0.0034	1.27%
Mo 202.031†	239.7	0.00641	mg/L	0.000241	0.00641	mg/L	0.000241	3.75%
Ni 231.604†	131.6	-0.00074	mg/L	0.000228	-0.00074	mg/L	0.000228	30.86%
Pb 220.353†	20.8	0.00039	mg/L	0.001096	0.00039	mg/L	0.001096	281.67%
Sb 206.836†	-6.8	0.00294	mg/L	0.001059	0.00294	mg/L	0.001059	36.03%
Se 196.026†	1.4	0.00206	mg/L	0.001158	0.00206	mg/L	0.001158	56.29%
Si 251.611†	208964.0	3.78	mg/L	0.025	3.78	mg/L	0.025	0.67%
Sn 189.927†	-272.4	-0.0208	mg/L	0.00053	-0.0208	mg/L	0.00053	2.53%
Ti 334.940†	-9390.9	-0.00064	mg/L	0.000432	-0.00064	mg/L	0.000432	67.40%
Tl 190.801†	-23.4	-0.00837	mg/L	0.000664	-0.00837	mg/L	0.000664	7.93%
V 290.880†	1155.5	0.00473	mg/L	0.002123	0.00473	mg/L	0.002123	44.92%
Zn 206.200†	-51.4	-0.00014	mg/L	0.000071	-0.00014	mg/L	0.000071	50.78%
K 766.490†	7927.3	2.41	mg/L	0.042	2.41	mg/L	0.042	1.77%
Na 589.592†	225285.0	10.3	mg/L	0.18	10.3	mg/L	0.18	1.79%
Sr 407.771†	928652.3	0.330	mg/L	0.0123	0.330	mg/L	0.0123	3.72%
Li 670.784†	1760.4	0.00740	mg/L	0.000303	0.00740	mg/L	0.000303	4.10%

Sequence No.: 82 **Autosampler Location: 103**
Sample ID: L1207035502 WG403246-02 **Date Collected: 7/17/2012 10:31:28 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035502 WG403246-02

Analyte	Back Pressure	Flow
All	328.0 kPa	0.50 L/min

Mean Data: L1207035502 WG403246-02

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2505632.2						9291.52	0.37%
YRADIAL	326079.0						3751.88	1.15%
Ga 417.206	1495470.8						9014.57	0.60%
GaRADIAL	94514.3						1551.35	1.64%
Ag 328.068†	200.3	0.00148	mg/L	0.000382	0.00148	mg/L	0.000382	25.91%
Al 396.153†	21.0	-0.0195	mg/L	0.00201	-0.0195	mg/L	0.00201	10.29%
As 188.979†	-9.3	-0.00158	mg/L	0.000846	-0.00158	mg/L	0.000846	53.71%
Ba 233.527†	15099.0	0.0881	mg/L	0.00101	0.0881	mg/L	0.00101	1.15%
Be 234.861†	158.8	0.00026	mg/L	0.000011	0.00026	mg/L	0.000011	4.19%
B 249.677†	4848.4	0.0437	mg/L	0.00107	0.0437	mg/L	0.00107	2.44%
Ca 227.546†	11409.5	22.9	mg/L	0.24	22.9	mg/L	0.24	1.03%
Cd 228.802†	-2.8	0.00014	mg/L	0.000120	0.00014	mg/L	0.000120	85.40%
Co 228.616†	3.0	-0.00011	mg/L	0.000118	-0.00011	mg/L	0.000118	111.46%
Cr 267.716†	84.0	0.00096	mg/L	0.000104	0.00096	mg/L	0.000104	10.78%
Cu 327.393†	52.3	0.00117	mg/L	0.000295	0.00117	mg/L	0.000295	25.33%
Fe 239.562†	136.3	0.0123	mg/L	0.00046	0.0123	mg/L	0.00046	3.73%
Mg 279.077†	32177.4	9.08	mg/L	0.092	9.08	mg/L	0.092	1.01%
Mn 257.610†	1975.2	0.00256	mg/L	0.000028	0.00256	mg/L	0.000028	1.11%
Mo 202.031†	32.2	0.00102	mg/L	0.000214	0.00102	mg/L	0.000214	20.90%
Ni 231.604†	43.6	-0.00197	mg/L	0.000079	-0.00197	mg/L	0.000079	4.01%
Pb 220.353†	19.8	0.00029	mg/L	0.000442	0.00029	mg/L	0.000442	150.20%
Sb 206.836†	-9.5	0.00239	mg/L	0.000849	0.00239	mg/L	0.000849	35.51%
Se 196.026†	-1.3	0.00098	mg/L	0.001375	0.00098	mg/L	0.001375	139.67%
Si 251.611†	240524.6	4.35	mg/L	0.041	4.35	mg/L	0.041	0.94%
Sn 189.927†	-197.5	-0.0150	mg/L	0.00075	-0.0150	mg/L	0.00075	4.99%
Ti 334.940†	-4907.1	0.00015	mg/L	0.000135	0.00015	mg/L	0.000135	89.76%
Tl 190.801†	-9.7	-0.00475	mg/L	0.001964	-0.00475	mg/L	0.001964	41.36%
V 290.880†	449.2	0.00200	mg/L	0.001193	0.00200	mg/L	0.001193	59.63%
Zn 206.200†	-10.7	0.00052	mg/L	0.000070	0.00052	mg/L	0.000070	13.34%
K 766.490†	4075.5	1.19	mg/L	0.022	1.19	mg/L	0.022	1.88%
Na 589.592†	575720.2	26.3	mg/L	0.93	26.3	mg/L	0.93	3.52%
Sr 407.771†	1002984.5	0.357	mg/L	0.0048	0.357	mg/L	0.0048	1.35%
Li 670.784†	207.6	-0.00250	mg/L	0.000302	-0.00250	mg/L	0.000302	12.10%

Sequence No.: 83 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/17/2012 10:38:27 PM**

Approved: July 18, 2012
Kym H. Rhoden

Analyst:
Initial Sample Wt:
Dilution:

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	328.0 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	2471226.5						7262.63	0.29%
YRADIAL	325280.6						2888.75	0.89%
Ga 417.206	1358494.8						34225.43	2.52%
GaRADIAL	89620.4						1601.55	1.79%
Ag 328.068†	131471.9	0.407	mg/L	0.0095	0.407	mg/L	0.0095	2.33%
QC value within limits for Ag 328.068 Recovery = 101.68%								
Al 396.153†	71413.5	10.0	mg/L	0.00	10.0	mg/L	0.00	0.02%
QC value within limits for Al 396.153 Recovery = 100.42%								
As 188.979†	1622.2	0.409	mg/L	0.0101	0.409	mg/L	0.0101	2.48%
QC value within limits for As 188.979 Recovery = 102.29%								
Ba 233.527†	175327.6	1.03	mg/L	0.003	1.03	mg/L	0.003	0.29%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 234.861†	65082.4	0.0506	mg/L	0.00122	0.0506	mg/L	0.00122	2.41%
QC value within limits for Be 234.861 Recovery = 101.15%								
B 249.677†	60174.2	0.503	mg/L	0.0148	0.503	mg/L	0.0148	2.94%
QC value within limits for B 249.677 Recovery = 100.57%								
Ca 227.546†	4933.9	10.4	mg/L	0.34	10.4	mg/L	0.34	3.24%
QC value within limits for Ca 227.546 Recovery = 104.38%								
Cd 228.802†	3060.3	0.0497	mg/L	0.00215	0.0497	mg/L	0.00215	4.33%
QC value within limits for Cd 228.802 Recovery = 99.38%								
Co 228.616†	9624.6	0.205	mg/L	0.0004	0.205	mg/L	0.0004	0.21%
QC value within limits for Co 228.616 Recovery = 102.68%								
Cr 267.716†	66220.0	0.513	mg/L	0.0050	0.513	mg/L	0.0050	0.98%
QC value within limits for Cr 267.716 Recovery = 102.50%								
Cu 327.393†	136715.3	0.507	mg/L	0.0110	0.507	mg/L	0.0110	2.18%
QC value within limits for Cu 327.393 Recovery = 101.40%								
Fe 239.562†	65101.9	4.02	mg/L	0.012	4.02	mg/L	0.012	0.29%
QC value within limits for Fe 239.562 Recovery = 100.38%								
Mg 279.077†	35561.8	10.0	mg/L	0.03	10.0	mg/L	0.03	0.32%
QC value within limits for Mg 279.077 Recovery = 100.47%								
Mn 257.610†	425565.1	0.513	mg/L	0.0010	0.513	mg/L	0.0010	0.19%
QC value within limits for Mn 257.610 Recovery = 102.51%								
Mo 202.031†	40463.7	1.04	mg/L	0.004	1.04	mg/L	0.004	0.34%
QC value within limits for Mo 202.031 Recovery = 103.97%								
Ni 231.604†	38354.2	0.531	mg/L	0.0014	0.531	mg/L	0.0014	0.26%
QC value within limits for Ni 231.604 Recovery = 106.25%								
Pb 220.353†	7519.1	0.519	mg/L	0.0005	0.519	mg/L	0.0005	0.09%
QC value within limits for Pb 220.353 Recovery = 103.84%								
Sb 206.836†	6379.9	1.22	mg/L	0.036	1.22	mg/L	0.036	2.96%
QC value within limits for Sb 206.836 Recovery = 101.64%								
Se 196.026†	975.4	0.417	mg/L	0.0115	0.417	mg/L	0.0115	2.75%
QC value within limits for Se 196.026 Recovery = 104.29%								
Si 251.611†	282963.2	5.11	mg/L	0.103	5.11	mg/L	0.103	2.02%
QC value within limits for Si 251.611 Recovery = 102.16%								
Sn 189.927†	13726.8	1.06	mg/L	0.002	1.06	mg/L	0.002	0.21%
QC value within limits for Sn 189.927 Recovery = 106.18%								
Ti 334.940†	1114370.9	1.02	mg/L	0.003	1.02	mg/L	0.003	0.31%
QC value within limits for Ti 334.940 Recovery = 101.78%								
Tl 190.801†	2189.3	0.544	mg/L	0.0091	0.544	mg/L	0.0091	1.67%
QC value within limits for Tl 190.801 Recovery = 108.81%								
V 290.880†	267577.3	1.02	mg/L	0.010	1.02	mg/L	0.010	0.95%
QC value within limits for V 290.880 Recovery = 102.22%								
Zn 206.200†	64309.1	1.04	mg/L	0.007	1.04	mg/L	0.007	0.70%
QC value within limits for Zn 206.200 Recovery = 104.28%								
K 766.490†	156341.3	49.3	mg/L	0.33	49.3	mg/L	0.33	0.67%
QC value within limits for K 766.490 Recovery = 98.61%								
Na 589.592†	1089055.3	49.8	mg/L	1.25	49.8	mg/L	1.25	2.51%
QC value within limits for Na 589.592 Recovery = 99.69%								
Sr 407.771†	2716669.5	0.966	mg/L	0.0114	0.966	mg/L	0.0114	1.18%

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QC value within limits for Sr 407.771 Recovery = 96.60%
Li 670.784† 160023.7 1.02 mg/L 0.004 1.02 mg/L 0.004 0.35%
QC value within limits for Li 670.784 Recovery = 101.59%
All analyte(s) passed QC.

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Sequence No.: 84 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/17/2012 10:44:32 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	329.0 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	2610209.9						26147.48	1.00%
YRADIAL	327947.7						3393.83	1.03%
Ga 417.206	1425759.6						18876.69	1.32%
GaRADIAL	92891.8						2205.71	2.37%
Ag 328.068†	-57.6	0.00075	mg/L	0.000248	0.00075	mg/L	0.000248	33.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153†	-8.4	-0.0236	mg/L	0.00081	-0.0236	mg/L	0.00081	3.44%
QC value within limits for Al 396.153 Recovery = Not calculated								
As 188.979†	-5.1	-0.00049	mg/L	0.000961	-0.00049	mg/L	0.000961	194.34%
QC value within limits for As 188.979 Recovery = Not calculated								
Ba 233.527†	22.2	-0.00044	mg/L	0.000075	-0.00044	mg/L	0.000075	17.13%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 234.861†	63.0	0.00019	mg/L	0.000010	0.00019	mg/L	0.000010	5.24%
QC value within limits for Be 234.861 Recovery = Not calculated								
B 249.677†	459.1	0.00693	mg/L	0.000199	0.00693	mg/L	0.000199	2.87%
QC value within limits for B 249.677 Recovery = Not calculated								
Ca 227.546†	-6.1	0.0796	mg/L	0.00957	0.0796	mg/L	0.00957	12.02%
QC value within limits for Ca 227.546 Recovery = Not calculated								
Cd 228.802†	-4.4	0.00011	mg/L	0.000078	0.00011	mg/L	0.000078	71.56%
QC value within limits for Cd 228.802 Recovery = Not calculated								
Co 228.616†	15.9	0.00019	mg/L	0.000171	0.00019	mg/L	0.000171	90.97%
QC value within limits for Co 228.616 Recovery = Not calculated								
Cr 267.716†	-64.8	-0.00019	mg/L	0.000092	-0.00019	mg/L	0.000092	49.35%
QC value within limits for Cr 267.716 Recovery = Not calculated								
Cu 327.393†	-197.1	0.00025	mg/L	0.000114	0.00025	mg/L	0.000114	45.77%
QC value within limits for Cu 327.393 Recovery = Not calculated								
Fe 239.562†	12.6	0.00485	mg/L	0.000623	0.00485	mg/L	0.000623	12.84%
QC value within limits for Fe 239.562 Recovery = Not calculated								
Mg 279.077†	22.3	0.0195	mg/L	0.00203	0.0195	mg/L	0.00203	10.38%
QC value within limits for Mg 279.077 Recovery = Not calculated								
Mn 257.610†	-1328.6	-0.00141	mg/L	0.000012	-0.00141	mg/L	0.000012	0.88%
QC value within limits for Mn 257.610 Recovery = Not calculated								
Mo 202.031†	6.5	0.00036	mg/L	0.000185	0.00036	mg/L	0.000185	50.96%
QC value within limits for Mo 202.031 Recovery = Not calculated								
Ni 231.604†	5.0	-0.00251	mg/L	0.000048	-0.00251	mg/L	0.000048	1.90%
QC value within limits for Ni 231.604 Recovery = Not calculated								
Pb 220.353†	12.9	-0.00036	mg/L	0.000360	-0.00036	mg/L	0.000360	99.75%
QC value within limits for Pb 220.353 Recovery = Not calculated								
Sb 206.836†	-2.2	0.00379	mg/L	0.000345	0.00379	mg/L	0.000345	9.11%
QC value within limits for Sb 206.836 Recovery = Not calculated								
Se 196.026†	1.5	0.00218	mg/L	0.001210	0.00218	mg/L	0.001210	55.51%
QC value within limits for Se 196.026 Recovery = Not calculated								
Si 251.611†	26.9	0.0122	mg/L	0.00105	0.0122	mg/L	0.00105	8.57%
QC value within limits for Si 251.611 Recovery = Not calculated								
Sn 189.927†	4.7	0.00066	mg/L	0.000158	0.00066	mg/L	0.000158	23.83%
QC value within limits for Sn 189.927 Recovery = Not calculated								
Ti 334.940†	-97.6	0.00111	mg/L	0.000087	0.00111	mg/L	0.000087	7.85%
QC value within limits for Ti 334.940 Recovery = Not calculated								
Tl 190.801†	7.8	-0.00043	mg/L	0.001517	-0.00043	mg/L	0.001517	350.00%
QC value within limits for Tl 190.801 Recovery = Not calculated								
V 290.880†	-216.1	-0.00030	mg/L	0.001223	-0.00030	mg/L	0.001223	404.89%

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QC value within limits for V 290.880 Recovery = Not calculated

Zn 206.200†	-177.8	-0.00218 mg/L	0.000042	-0.00218 mg/L	0.000042	1.91%

QC value within limits for Zn 206.200 Recovery = Not calculated

K 766.490†	34.5	-0.0492 mg/L	0.00844	-0.0492 mg/L	0.00844	17.16%

QC value within limits for K 766.490 Recovery = Not calculated

Na 589.592†	-222.8	-0.0285 mg/L	0.00276	-0.0285 mg/L	0.00276	9.68%

QC value within limits for Na 589.592 Recovery = Not calculated

Sr 407.771†	185.1	0.00144 mg/L	0.000007	0.00144 mg/L	0.000007	0.48%

QC value within limits for Sr 407.771 Recovery = Not calculated

Li 670.784†	56.3	-0.00346 mg/L	0.000427	-0.00346 mg/L	0.000427	12.35%

QC value within limits for Li 670.784 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 85 **Autosampler Location: 104**
Sample ID: L1207035502MS WG403246-07 **Date Collected: 7/17/2012 10:51:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035502MS WG403246-07

Analyte	Back Pressure	Flow
All	328.0 kPa	0.50 L/min

Mean Data: L1207035502MS WG403246-07

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2468808.4						23170.82	0.94%
YRADIAL	323126.4						834.13	0.26%
Ga 417.206	1404887.2						21357.80	1.52%
GaRADIAL	90364.7						912.45	1.01%
Ag 328.068†	63429.2	0.197	mg/L	0.0043	0.197	mg/L	0.0043	2.17%
Al 396.153†	34381.8	4.82	mg/L	0.022	4.82	mg/L	0.022	0.45%
As 188.979†	756.9	0.191	mg/L	0.0027	0.191	mg/L	0.0027	1.41%
Ba 233.527†	100605.7	0.590	mg/L	0.0092	0.590	mg/L	0.0092	1.56%
Be 234.861†	30736.4	0.0240	mg/L	0.00038	0.0240	mg/L	0.00038	1.58%
B 249.677†	119331.8	1.00	mg/L	0.026	1.00	mg/L	0.026	2.63%
Ca 227.546†	14328.0	29.0	mg/L	0.56	29.0	mg/L	0.56	1.95%
Cd 228.802†	1422.3	0.0232	mg/L	0.00076	0.0232	mg/L	0.00076	3.29%
Co 228.616†	4630.0	0.0987	mg/L	0.00161	0.0987	mg/L	0.00161	1.63%
Cr 267.716†	32437.0	0.251	mg/L	0.0017	0.251	mg/L	0.0017	0.68%
Cu 327.393†	65502.0	0.243	mg/L	0.0061	0.243	mg/L	0.0061	2.50%
Fe 239.562†	31471.3	1.94	mg/L	0.005	1.94	mg/L	0.005	0.25%
Mg 279.077†	49240.1	13.9	mg/L	0.01	13.9	mg/L	0.01	0.10%
Mn 257.610†	212337.5	0.256	mg/L	0.0042	0.256	mg/L	0.0042	1.64%
Mo 202.031†	19737.1	0.507	mg/L	0.0039	0.507	mg/L	0.0039	0.78%
Ni 231.604†	17968.7	0.248	mg/L	0.0043	0.248	mg/L	0.0043	1.74%
Pb 220.353†	3659.9	0.252	mg/L	0.0031	0.252	mg/L	0.0031	1.23%
Sb 206.836†	3042.2	0.584	mg/L	0.0127	0.584	mg/L	0.0127	2.17%
Se 196.026†	463.4	0.199	mg/L	0.0053	0.199	mg/L	0.0053	2.67%
Si 251.611†	391725.2	7.08	mg/L	0.083	7.08	mg/L	0.083	1.18%
Sn 189.927†	6748.8	0.522	mg/L	0.0073	0.522	mg/L	0.0073	1.40%
Ti 334.940†	535001.4	0.493	mg/L	0.0032	0.493	mg/L	0.0032	0.64%
Tl 190.801†	1064.5	0.263	mg/L	0.0014	0.263	mg/L	0.0014	0.51%
V 290.880†	133687.0	0.511	mg/L	0.0039	0.511	mg/L	0.0039	0.76%
Zn 206.200†	30972.7	0.503	mg/L	0.0064	0.503	mg/L	0.0064	1.28%
K 766.490†	79715.1	24.9	mg/L	0.24	24.9	mg/L	0.24	0.96%
Na 589.592†	1130426.6	51.7	mg/L	1.21	51.7	mg/L	1.21	2.34%
Sr 407.771†	2297857.3	0.817	mg/L	0.0132	0.817	mg/L	0.0132	1.62%
Li 670.784†	78680.2	0.498	mg/L	0.0020	0.498	mg/L	0.0020	0.39%

Sequence No.: 86 **Autosampler Location: 105**
Sample ID: L1207035504 **Date Collected: 7/17/2012 10:57:29 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035504

Approved: July 18, 2012
Kym H. Rhoden

Analyte	Back Pressure	Flow
All	352.0 kPa	0.50 L/min

Mean Data: L1207035504

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2066122.8						13960.26	0.68%
YRADIAL	292884.5						5837.78	1.99%
Ga 417.206	1198716.7						34955.84	2.92%
GaRADIAL	79427.5						628.57	0.79%
Ag 328.068†	437.8	0.00258	mg/L	0.000366	0.00258	mg/L	0.000366	14.18%
Al 396.153†	-11.5	-0.0252	mg/L	0.00678	-0.0252	mg/L	0.00678	26.96%
As 188.979†	0.7	0.00108	mg/L	0.001725	0.00108	mg/L	0.001725	160.41%
Ba 233.527†	349817.5	2.05	mg/L	0.007	2.05	mg/L	0.007	0.35%
Be 234.861†	339.1	0.00027	mg/L	0.000093	0.00027	mg/L	0.000093	34.52%
B 249.677†	25036.0	0.212	mg/L	0.0097	0.212	mg/L	0.0097	4.59%
Ca 227.546†	33223.5	66.5	mg/L	2.02	66.5	mg/L	2.02	3.03%
Cd 228.802†	8.8	0.00031	mg/L	0.000058	0.00031	mg/L	0.000058	18.70%
Co 228.616†	-106.2	-0.00308	mg/L	0.000095	-0.00308	mg/L	0.000095	3.10%
Cr 267.716†	89.8	0.00099	mg/L	0.000111	0.00099	mg/L	0.000111	11.27%
Cu 327.393†	-313.0	-0.00016	mg/L	0.000850	-0.00016	mg/L	0.000850	537.32%
Fe 239.562†	11735.5	0.727	mg/L	0.0212	0.727	mg/L	0.0212	2.92%
Mg 279.077†	52006.1	14.7	mg/L	0.30	14.7	mg/L	0.30	2.03%
Mn 257.610†	141576.3	0.170	mg/L	0.0008	0.170	mg/L	0.0008	0.46%
Mo 202.031†	680.9	0.0178	mg/L	0.00011	0.0178	mg/L	0.00011	0.64%
Ni 231.604†	81.2	-0.00144	mg/L	0.000651	-0.00144	mg/L	0.000651	45.27%
Pb 220.353†	10.8	-0.00013	mg/L	0.001894	-0.00013	mg/L	0.001894	>999.9%
Sb 206.836†	-12.3	0.00194	mg/L	0.001143	0.00194	mg/L	0.001143	59.02%
Se 196.026†	7.2	0.00465	mg/L	0.002042	0.00465	mg/L	0.002042	43.87%
Si 251.611†	143155.2	2.60	mg/L	0.066	2.60	mg/L	0.066	2.53%
Sn 189.927†	-294.9	-0.0225	mg/L	0.00069	-0.0225	mg/L	0.00069	3.06%
Ti 334.940†	-11737.1	0.00047	mg/L	0.000911	0.00047	mg/L	0.000911	194.78%
Tl 190.801†	-33.5	-0.0107	mg/L	0.00256	-0.0107	mg/L	0.00256	23.90%
V 290.880†	4035.8	0.0154	mg/L	0.00142	0.0154	mg/L	0.00142	9.22%
Zn 206.200†	-29.9	0.00020	mg/L	0.000160	0.00020	mg/L	0.000160	79.92%
K 766.490†	15022.5	4.64	mg/L	0.008	4.64	mg/L	0.008	0.17%
Na 589.592†	Saturated3							
Sr 407.771†	Saturated2							
Li 670.784†	12701.9	0.0771	mg/L	0.00057	0.0771	mg/L	0.00057	0.73%

Sequence No.: 87
Sample ID: L1207035506
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 7/17/2012 11:03:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207035506

Analyte	Back Pressure	Flow
All	341.0 kPa	0.50 L/min

Mean Data: L1207035506

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2421455.9						11787.66	0.49%
YRADIAL	321088.9						5674.94	1.77%
Ga 417.206	1409706.6						16906.36	1.20%
GaRADIAL	93021.1						1583.65	1.70%
Ag 328.068†	-160.2	0.00042	mg/L	0.000111	0.00042	mg/L	0.000111	26.52%
Al 396.153†	42.5	-0.0172	mg/L	0.00095	-0.0172	mg/L	0.00095	5.52%
As 188.979†	10.8	0.00349	mg/L	0.001345	0.00349	mg/L	0.001345	38.49%
Ba 233.527†	8476.8	0.0492	mg/L	0.00096	0.0492	mg/L	0.00096	1.96%
Be 234.861†	67.6	0.00019	mg/L	0.000013	0.00019	mg/L	0.000013	6.67%
B 249.677†	28915.5	0.245	mg/L	0.0036	0.245	mg/L	0.0036	1.45%
Ca 227.546†	1233.8	2.56	mg/L	0.029	2.56	mg/L	0.029	1.14%
Cd 228.802†	-2.0	0.00013	mg/L	0.000052	0.00013	mg/L	0.000052	40.79%
Co 228.616†	4.5	-0.00005	mg/L	0.000203	-0.00005	mg/L	0.000203	408.74%
Cr 267.716†	-28.2	0.00010	mg/L	0.000113	0.00010	mg/L	0.000113	115.39%
Cu 327.393†	-17.4	0.00091	mg/L	0.000531	0.00091	mg/L	0.000531	58.09%

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Fe 239.562†	81.0	0.00906	mg/L	0.000352	0.00906	mg/L	0.000352	3.89%
Mg 279.077†	1844.4	0.533	mg/L	0.0109	0.533	mg/L	0.0109	2.04%
Mn 257.610†	1090.2	0.00150	mg/L	0.000046	0.00150	mg/L	0.000046	3.04%
Mo 202.031†	471.0	0.0123	mg/L	0.00021	0.0123	mg/L	0.00021	1.75%
Ni 231.604†	9.8	-0.00244	mg/L	0.000160	-0.00244	mg/L	0.000160	6.58%
Pb 220.353†	10.4	-0.00051	mg/L	0.000956	-0.00051	mg/L	0.000956	187.70%
Sb 206.836†	-6.0	0.00310	mg/L	0.001476	0.00310	mg/L	0.001476	47.65%
Se 196.026†	1.8	0.00231	mg/L	0.002045	0.00231	mg/L	0.002045	88.66%
Si 251.611†	163009.6	2.95	mg/L	0.018	2.95	mg/L	0.018	0.62%
Sn 189.927†	-33.5	-0.00229	mg/L	0.000344	-0.00229	mg/L	0.000344	14.99%
Ti 334.940†	-436.4	0.00117	mg/L	0.000090	0.00117	mg/L	0.000090	7.71%
Tl 190.801†	-7.8	-0.00423	mg/L	0.000834	-0.00423	mg/L	0.000834	19.70%
V 290.880†	1188.4	0.00505	mg/L	0.000315	0.00505	mg/L	0.000315	6.25%
Zn 206.200†	66.4	0.00176	mg/L	0.001528	0.00176	mg/L	0.001528	86.90%
K 766.490†	2191.3	0.384	mg/L	0.0085	0.384	mg/L	0.0085	2.22%
Na 589.592†	5249847.2	240	mg/L	5.8	240	mg/L	5.8	2.43%
Sr 407.771†	434868.4	0.156	mg/L	0.0051	0.156	mg/L	0.0051	3.25%
Li 670.784†	1644.6	0.00666	mg/L	0.000200	0.00666	mg/L	0.000200	3.01%

Sequence No.: 88 **Autosampler Location: 107**
Sample ID: L1207035508 **Date Collected: 7/17/2012 11:10:30 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207035508

Analyte	Back Pressure	Flow
All	347.0 kPa	0.50 L/min

Mean Data: L1207035508

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2590399.4						5675.01	0.22%
YRADIAL	326601.9						1522.07	0.47%
Ga 417.206	1452630.7						5278.95	0.36%
GaRADIAL	93070.1						2646.83	2.84%
Ag 328.068†	-51.3	0.00077	mg/L	0.000306	0.00077	mg/L	0.000306	39.53%
Al 396.153†	25.0	-0.0189	mg/L	0.00122	-0.0189	mg/L	0.00122	6.45%
As 188.979†	-2.4	0.00020	mg/L	0.001324	0.00020	mg/L	0.001324	649.94%
Ba 233.527†	60.2	-0.00022	mg/L	0.000146	-0.00022	mg/L	0.000146	67.68%
Be 234.861†	71.2	0.00019	mg/L	0.000013	0.00019	mg/L	0.000013	6.98%
B 249.677†	536.0	0.00757	mg/L	0.000190	0.00757	mg/L	0.000190	2.51%
Ca 227.546†	12.3	0.117	mg/L	0.0162	0.117	mg/L	0.0162	13.92%
Cd 228.802†	-2.4	0.00014	mg/L	0.000092	0.00014	mg/L	0.000092	66.16%
Co 228.616†	1.4	-0.00012	mg/L	0.000058	-0.00012	mg/L	0.000058	47.32%
Cr 267.716†	-30.8	0.00008	mg/L	0.000090	0.00008	mg/L	0.000090	116.82%
Cu 327.393†	-9.5	0.00094	mg/L	0.000248	0.00094	mg/L	0.000248	26.35%
Fe 239.562†	101.3	0.0103	mg/L	0.00033	0.0103	mg/L	0.00033	3.21%
Mg 279.077†	31.4	0.0221	mg/L	0.00366	0.0221	mg/L	0.00366	16.58%
Mn 257.610†	-1243.1	-0.00131	mg/L	0.000013	-0.00131	mg/L	0.000013	1.02%
Mo 202.031†	7.6	0.00039	mg/L	0.000093	0.00039	mg/L	0.000093	23.75%
Ni 231.604†	14.6	-0.00237	mg/L	0.000043	-0.00237	mg/L	0.000043	1.83%
Pb 220.353†	-10.7	-0.00199	mg/L	0.000354	-0.00199	mg/L	0.000354	17.77%
Sb 206.836†	-3.6	0.00352	mg/L	0.001399	0.00352	mg/L	0.001399	39.69%
Se 196.026†	-3.4	0.00006	mg/L	0.002884	0.00006	mg/L	0.002884	>999.9%
Si 251.611†	2599.2	0.0587	mg/L	0.00098	0.0587	mg/L	0.00098	1.67%
Sn 189.927†	-4.2	-0.00003	mg/L	0.000155	-0.00003	mg/L	0.000155	532.28%
Ti 334.940†	195.3	0.00138	mg/L	0.000088	0.00138	mg/L	0.000088	6.34%
Tl 190.801†	-3.9	-0.00327	mg/L	0.000952	-0.00327	mg/L	0.000952	29.13%
V 290.880†	141.3	0.00106	mg/L	0.001320	0.00106	mg/L	0.001320	124.20%
Zn 206.200†	-66.5	-0.00038	mg/L	0.000031	-0.00038	mg/L	0.000031	8.08%
K 766.490†	26.7	-0.0520	mg/L	0.03755	-0.0520	mg/L	0.03755	72.21%
Na 589.592†	7979.5	0.347	mg/L	0.0117	0.347	mg/L	0.0117	3.37%
Sr 407.771†	222.5	0.00145	mg/L	0.000008	0.00145	mg/L	0.000008	0.54%
Li 670.784†	17.8	-0.00371	mg/L	0.000640	-0.00371	mg/L	0.000640	17.28%

Sequence No.: 89 **Autosampler Location: 108**
Sample ID: L1207007502 0.01 **Date Collected: 7/17/2012 11:17:25 PM**

Approved: July 18, 2012
Kym H. Rhoden

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

Nebulizer Parameters: L1207007502 0.01

Analyte	Back Pressure	Flow
All	333.0 kPa	0.50 L/min

Mean Data: L1207007502 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2602158.9						8012.78	0.31%
YRADIAL	322531.5						3685.16	1.14%
Ga 417.206	1471908.0						35927.44	2.44%
GaRADIAL	92497.4						1975.53	2.14%
Ag 328.068†	123.0	0.00130	mg/L	0.000085	0.00130	mg/L	0.000085	6.56%
Al 396.153†	-23.5	-0.0258	mg/L	0.00076	-0.0258	mg/L	0.00076	2.96%
As 188.979†	0.5	0.00092	mg/L	0.001301	0.00092	mg/L	0.001301	141.12%
Ba 233.527†	151.5	0.00032	mg/L	0.000061	0.00032	mg/L	0.000061	18.89%
Be 234.861†	204.8	0.00030	mg/L	0.000017	0.00030	mg/L	0.000017	5.70%
B 249.677†	368.9	0.00618	mg/L	0.000113	0.00618	mg/L	0.000113	1.83%
Ca 227.546†	2317.9	4.73	mg/L	0.095	4.73	mg/L	0.095	2.02%
Cd 228.802†	-9.3	0.00002	mg/L	0.000092	0.00002	mg/L	0.000092	461.65%
Co 228.616†	-0.3	-0.00016	mg/L	0.000122	-0.00016	mg/L	0.000122	78.38%
Cr 267.716†	-55.7	-0.00012	mg/L	0.000097	-0.00012	mg/L	0.000097	83.13%
Cu 327.393†	-245.1	0.00007	mg/L	0.000304	0.00007	mg/L	0.000304	431.74%
Fe 239.562†	19.7	0.00527	mg/L	0.000517	0.00527	mg/L	0.000517	9.82%
Mg 279.077†	4650.3	1.32	mg/L	0.011	1.32	mg/L	0.011	0.86%
Mn 257.610†	-252.4	-0.00012	mg/L	0.000015	-0.00012	mg/L	0.000015	12.42%
Mo 202.031†	17.5	0.00064	mg/L	0.000232	0.00064	mg/L	0.000232	36.06%
Ni 231.604†	209.3	0.00034	mg/L	0.000211	0.00034	mg/L	0.000211	62.00%
Pb 220.353†	23.0	0.00037	mg/L	0.000239	0.00037	mg/L	0.000239	64.04%
Sb 206.836†	-6.9	0.00291	mg/L	0.000325	0.00291	mg/L	0.000325	11.17%
Se 196.026†	-1.6	0.00086	mg/L	0.000352	0.00086	mg/L	0.000352	40.74%
Si 251.611†	5851.9	0.117	mg/L	0.0026	0.117	mg/L	0.0026	2.20%
Sn 189.927†	-70.7	-0.00517	mg/L	0.000096	-0.00517	mg/L	0.000096	1.86%
Ti 334.940†	-1025.4	0.00096	mg/L	0.000028	0.00096	mg/L	0.000028	2.87%
Tl 190.801†	15.4	0.00140	mg/L	0.001565	0.00140	mg/L	0.001565	112.13%
V 290.880†	-124.4	0.00001	mg/L	0.001666	0.00001	mg/L	0.001666	>999.9%
Zn 206.200†	-101.9	-0.00096	mg/L	0.000066	-0.00096	mg/L	0.000066	6.85%
K 766.490†	85.3	-0.0336	mg/L	0.01242	-0.0336	mg/L	0.01242	37.00%
Na 589.592†	4721.6	0.198	mg/L	0.0434	0.198	mg/L	0.0434	21.92%
Sr 407.771†	39330.8	0.0152	mg/L	0.00051	0.0152	mg/L	0.00051	3.32%
Li 670.784†	4.0	-0.00379	mg/L	0.000212	-0.00379	mg/L	0.000212	5.58%

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Sequence No.: 90 **Autosampler Location: 109**
Sample ID: L1207007504 0.01 **Date Collected: 7/17/2012 11:24:20 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207007504 0.01

Analyte	Back Pressure	Flow
All	332.0 kPa	0.50 L/min

Mean Data: L1207007504 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2607816.0						13239.02	0.51%
YRADIAL	323547.0						2561.20	0.79%
Ga 417.206	1458616.3						9963.70	0.68%
GaRADIAL	92333.1						2010.97	2.18%
Ag 328.068†	6.5	0.00094	mg/L	0.000168	0.00094	mg/L	0.000168	17.75%
Al 396.153†	8.9	-0.0211	mg/L	0.00633	-0.0211	mg/L	0.00633	29.95%
As 188.979†	4.0	0.00182	mg/L	0.000924	0.00182	mg/L	0.000924	50.73%
Ba 233.527†	121.2	0.00014	mg/L	0.000058	0.00014	mg/L	0.000058	40.39%
Be 234.861†	206.1	0.00030	mg/L	0.000018	0.00030	mg/L	0.000018	5.93%

Approved: July 18, 2012

Kym H. Rhoden

B 249.677†	330.8	0.00586	mg/L	0.000150	0.00586	mg/L	0.000150 2.56%
Ca 227.546†	2371.4	4.83	mg/L	0.046	4.83	mg/L	0.046 0.95%
Cd 228.802†	-8.2	0.00003	mg/L	0.000059	0.00003	mg/L	0.000059 169.67%
Co 228.616†	8.8	0.00004	mg/L	0.000098	0.00004	mg/L	0.000098 252.39%
Cr 267.716†	-61.1	-0.00016	mg/L	0.000109	-0.00016	mg/L	0.000109 69.36%
Cu 327.393†	14.6	0.00103	mg/L	0.000574	0.00103	mg/L	0.000574 55.78%
Fe 239.562†	20.5	0.00532	mg/L	0.000423	0.00532	mg/L	0.000423 7.96%
Mg 279.077†	4751.6	1.35	mg/L	0.006	1.35	mg/L	0.006 0.48%
Mn 257.610†	16.8	0.00020	mg/L	0.000011	0.00020	mg/L	0.000011 5.37%
Mo 202.031†	2.5	0.00026	mg/L	0.000106	0.00026	mg/L	0.000106 41.18%
Ni 231.604†	51.4	-0.00186	mg/L	0.000064	-0.00186	mg/L	0.000064 3.42%
Pb 220.353†	14.9	-0.00019	mg/L	0.000788	-0.00019	mg/L	0.000788 417.21%
Sb 206.836†	-6.4	0.00300	mg/L	0.000530	0.00300	mg/L	0.000530 17.66%
Se 196.026†	-6.4	-0.00118	mg/L	0.001245	-0.00118	mg/L	0.001245 105.16%
Si 251.611†	6254.2	0.125	mg/L	0.0028	0.125	mg/L	0.0028 2.26%
Sn 189.927†	-76.4	-0.00561	mg/L	0.000234	-0.00561	mg/L	0.000234 4.17%
Ti 334.940†	-1150.6	0.00086	mg/L	0.000088	0.00086	mg/L	0.000088 10.18%
Tl 190.801†	11.0	0.00031	mg/L	0.001598	0.00031	mg/L	0.001598 510.46%
V 290.880†	-36.7	0.00035	mg/L	0.000758	0.00035	mg/L	0.000758 217.66%
Zn 206.200†	-60.8	-0.00030	mg/L	0.000033	-0.00030	mg/L	0.000033 11.34%
K 766.490†	121.7	-0.0221	mg/L	0.02051	-0.0221	mg/L	0.02051 92.64%
Na 589.592†	3699.4	0.151	mg/L	0.0129	0.151	mg/L	0.0129 8.56%
Sr 407.771†	39950.8	0.0155	mg/L	0.00043	0.0155	mg/L	0.00043 2.77%
Li 670.784†	-36.8	-0.00405	mg/L	0.000460	-0.00405	mg/L	0.000460 11.34%

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Sequence No.: 91 **Autosampler Location: 110**
Sample ID: L1207007506 0.01 **Date Collected: 7/17/2012 11:31:15 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207007506 0.01

Analyte	Back Pressure	Flow
All	333.0 kPa	0.50 L/min

Mean Data: L1207007506 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2602694.3						19416.80	0.75%
YRADIAL	323965.3						2914.33	0.90%
Ga 417.206	1462683.5						34666.80	2.37%
GaRADIAL	92361.2						2715.88	2.94%
Ag 328.068†	-123.4	0.00055	mg/L	0.000423	0.00055	mg/L	0.000423	77.17%
Al 396.153†	-17.9	-0.0249	mg/L	0.00031	-0.0249	mg/L	0.00031	1.24%
As 188.979†	5.9	0.00232	mg/L	0.000510	0.00232	mg/L	0.000510	21.94%
Ba 233.527†	258.6	0.00095	mg/L	0.000130	0.00095	mg/L	0.000130	13.68%
Be 234.861†	207.2	0.00030	mg/L	0.000012	0.00030	mg/L	0.000012	3.93%
B 249.677†	266.0	0.00531	mg/L	0.000304	0.00531	mg/L	0.000304	5.72%
Ca 227.546†	2329.9	4.75	mg/L	0.090	4.75	mg/L	0.090	1.90%
Cd 228.802†	-1.1	0.00015	mg/L	0.000115	0.00015	mg/L	0.000115	76.05%
Co 228.616†	12.2	0.00011	mg/L	0.000036	0.00011	mg/L	0.000036	32.20%
Cr 267.716†	-66.4	-0.00020	mg/L	0.000110	-0.00020	mg/L	0.000110	55.15%
Cu 327.393†	-229.8	0.00013	mg/L	0.000230	0.00013	mg/L	0.000230	180.28%
Fe 239.562†	43.9	0.00675	mg/L	0.000227	0.00675	mg/L	0.000227	3.36%
Mg 279.077†	4685.0	1.33	mg/L	0.011	1.33	mg/L	0.011	0.86%
Mn 257.610†	-172.7	-0.00002	mg/L	0.000022	-0.00002	mg/L	0.000022	90.74%
Mo 202.031†	1.6	0.00023	mg/L	0.000226	0.00023	mg/L	0.000226	96.17%
Ni 231.604†	35.1	-0.00209	mg/L	0.000108	-0.00209	mg/L	0.000108	5.17%
Pb 220.353†	8.2	-0.00065	mg/L	0.000950	-0.00065	mg/L	0.000950	146.89%
Sb 206.836†	-2.4	0.00377	mg/L	0.000812	0.00377	mg/L	0.000812	21.54%
Se 196.026†	-5.5	-0.00081	mg/L	0.001019	-0.00081	mg/L	0.001019	125.46%
Si 251.611†	9287.7	0.179	mg/L	0.0082	0.179	mg/L	0.0082	4.56%
Sn 189.927†	-70.3	-0.00514	mg/L	0.000023	-0.00514	mg/L	0.000023	0.44%
Ti 334.940†	-996.2	0.00099	mg/L	0.000096	0.00099	mg/L	0.000096	9.68%
Tl 190.801†	11.0	0.00033	mg/L	0.000945	0.00033	mg/L	0.000945	287.68%
V 290.880†	-71.0	0.00022	mg/L	0.000843	0.00022	mg/L	0.000843	388.09%
Zn 206.200†	-136.5	-0.00152	mg/L	0.000249	-0.00152	mg/L	0.000249	16.43%
K 766.490†	45.1	-0.0461	mg/L	0.02052	-0.0461	mg/L	0.02052	44.56%
Na 589.592†	3366.5	0.136	mg/L	0.0082	0.136	mg/L	0.0082	6.05%

Approved: July 18, 2012

Kym H. Rhoden

Sr 407.771†	39062.9	0.0151 mg/L	0.00082	0.0151 mg/L	0.00082	5.38%
Li 670.784†	33.6	-0.00361 mg/L	0.000120	-0.00361 mg/L	0.000120	3.33%

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Sequence No.: 92 **Autosampler Location: 111**
Sample ID: L1207007510 0.01 **Date Collected: 7/17/2012 11:38:10 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207007510 0.01

Analyte	Back Pressure	Flow
All	331.0 kPa	0.50 L/min

Mean Data: L1207007510 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2587119.3						7879.76	0.30%
YRADIAL	318510.8						3652.53	1.15%
Ga 417.206	1462312.1						20161.27	1.38%
GaRADIAL	91498.4						1632.79	1.78%
Ag 328.068†	-39.6	0.00081	mg/L	0.000296	0.00081	mg/L	0.000296	36.83%
Al 396.153†	-14.2	-0.0244	mg/L	0.00032	-0.0244	mg/L	0.00032	1.29%
As 188.979†	0.6	0.00095	mg/L	0.001131	0.00095	mg/L	0.001131	118.75%
Ba 233.527†	201.1	0.00061	mg/L	0.000055	0.00061	mg/L	0.000055	9.07%
Be 234.861†	222.2	0.00031	mg/L	0.000007	0.00031	mg/L	0.000007	2.41%
B 249.677†	238.9	0.00509	mg/L	0.000183	0.00509	mg/L	0.000183	3.60%
Ca 227.546†	2354.7	4.80	mg/L	0.039	4.80	mg/L	0.039	0.81%
Cd 228.802†	-7.5	0.00005	mg/L	0.000063	0.00005	mg/L	0.000063	124.68%
Co 228.616†	5.8	-0.00003	mg/L	0.000194	-0.00003	mg/L	0.000194	730.95%
Cr 267.716†	-69.1	-0.00022	mg/L	0.000045	-0.00022	mg/L	0.000045	20.34%
Cu 327.393†	-307.3	-0.00016	mg/L	0.000224	-0.00016	mg/L	0.000224	141.70%
Fe 239.562†	26.4	0.00568	mg/L	0.000395	0.00568	mg/L	0.000395	6.95%
Mg 279.077†	4803.8	1.37	mg/L	0.009	1.37	mg/L	0.009	0.69%
Mn 257.610†	-109.4	0.00005	mg/L	0.000015	0.00005	mg/L	0.000015	27.91%
Mo 202.031†	1.4	0.00023	mg/L	0.000031	0.00023	mg/L	0.000031	13.37%
Ni 231.604†	39.9	-0.00202	mg/L	0.000188	-0.00202	mg/L	0.000188	9.30%
Pb 220.353†	17.1	-0.00003	mg/L	0.001048	-0.00003	mg/L	0.001048	>999.9%
Sb 206.836†	-9.1	0.00249	mg/L	0.001104	0.00249	mg/L	0.001104	44.26%
Se 196.026†	-4.2	-0.00024	mg/L	0.001544	-0.00024	mg/L	0.001544	635.24%
Si 251.611†	8853.0	0.172	mg/L	0.0027	0.172	mg/L	0.0027	1.60%
Sn 189.927†	-79.5	-0.00585	mg/L	0.000587	-0.00585	mg/L	0.000587	10.03%
Ti 334.940†	-1126.3	0.00088	mg/L	0.000061	0.00088	mg/L	0.000061	6.97%
Tl 190.801†	9.3	-0.00009	mg/L	0.001806	-0.00009	mg/L	0.001806	>999.9%
V 290.880†	109.4	0.00091	mg/L	0.000217	0.00091	mg/L	0.000217	23.95%
Zn 206.200†	-124.5	-0.00132	mg/L	0.000045	-0.00132	mg/L	0.000045	3.41%
K 766.490†	175.3	-0.00539	mg/L	0.013854	-0.00539	mg/L	0.013854	256.82%
Na 589.592†	3193.8	0.128	mg/L	0.0037	0.128	mg/L	0.0037	2.86%
Sr 407.771†	40382.9	0.0156	mg/L	0.00047	0.0156	mg/L	0.00047	3.01%
Li 670.784†	1.6	-0.00381	mg/L	0.000228	-0.00381	mg/L	0.000228	5.99%

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Sequence No.: 93 **Autosampler Location: 112**
Sample ID: L1207013502 0.01 **Date Collected: 7/17/2012 11:45:05 PM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207013502 0.01

Analyte	Back Pressure	Flow
All	332.0 kPa	0.50 L/min

Mean Data: L1207013502 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2603922.9						19822.28	0.76%
YRADIAL	326264.5						6290.59	1.93%
Ga 417.206	1439392.1						34441.22	2.39%

Approved: July 18, 2012

Kym H. Rhoden

GaRADIAL	92815.5				1105.02	1.19%
Ag 328.068†	-85.0	0.00066 mg/L	0.000537	0.00066 mg/L	0.000537	80.80%
Al 396.153†	-23.5	-0.0258 mg/L	0.00125	-0.0258 mg/L	0.00125	4.85%
As 188.979†	-2.3	0.00021 mg/L	0.000945	0.00021 mg/L	0.000945	441.22%
Ba 233.527†	38.6	-0.00034 mg/L	0.000058	-0.00034 mg/L	0.000058	17.05%
Be 234.861†	200.4	0.00029 mg/L	0.000011	0.00029 mg/L	0.000011	3.80%
B 249.677†	193.7	0.00471 mg/L	0.000246	0.00471 mg/L	0.000246	5.23%
Ca 227.546†	2659.5	5.41 mg/L	0.122	5.41 mg/L	0.122	2.26%
Cd 228.802†	-6.2	0.00008 mg/L	0.000102	0.00008 mg/L	0.000102	134.13%
Co 228.616†	7.2	0.00000 mg/L	0.000101	0.00000 mg/L	0.000101	>999.9%
Cr 267.716†	-56.4	-0.00012 mg/L	0.000207	-0.00012 mg/L	0.000207	171.34%
Cu 327.393†	-276.4	-0.00005 mg/L	0.000360	-0.00005 mg/L	0.000360	795.29%
Fe 239.562†	0.6	0.00409 mg/L	0.000393	0.00409 mg/L	0.000393	9.61%
Mg 279.077†	4336.5	1.23 mg/L	0.028	1.23 mg/L	0.028	2.23%
Mn 257.610†	-542.4	-0.00047 mg/L	0.000022	-0.00047 mg/L	0.000022	4.70%
Mo 202.031†	17.7	0.00065 mg/L	0.000104	0.00065 mg/L	0.000104	16.05%
Ni 231.604†	659.2	0.00661 mg/L	0.000282	0.00661 mg/L	0.000282	4.26%
Pb 220.353†	9.1	-0.00058 mg/L	0.000533	-0.00058 mg/L	0.000533	91.75%
Sb 206.836†	-6.9	0.00292 mg/L	0.000601	0.00292 mg/L	0.000601	20.61%
Se 196.026†	9.1	0.00539 mg/L	0.004305	0.00539 mg/L	0.004305	79.81%
Si 251.611†	3987.7	0.0837 mg/L	0.00396	0.0837 mg/L	0.00396	4.72%
Sn 189.927†	-76.3	-0.00560 mg/L	0.000515	-0.00560 mg/L	0.000515	9.20%
Ti 334.940†	-1221.5	0.00089 mg/L	0.000190	0.00089 mg/L	0.000190	21.44%
Tl 190.801†	11.1	0.00035 mg/L	0.000377	0.00035 mg/L	0.000377	108.31%
V 290.880†	-33.7	0.00036 mg/L	0.000395	0.00036 mg/L	0.000395	108.78%
Zn 206.200†	953.5	0.0161 mg/L	0.00033	0.0161 mg/L	0.00033	2.06%
K 766.490†	150.0	-0.0132 mg/L	0.01894	-0.0132 mg/L	0.01894	142.97%
Na 589.592†	2311.6	0.0876 mg/L	0.00235	0.0876 mg/L	0.00235	2.68%
Sr 407.771†	38911.6	0.0151 mg/L	0.00035	0.0151 mg/L	0.00035	2.33%
Li 670.784†	-44.7	-0.00410 mg/L	0.000375	-0.00410 mg/L	0.000375	9.14%

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Sequence No.: 94 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/17/2012 11:52:00 PM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	332.0 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	2480352.2						8460.53	0.34%
YRADIAL	316746.2						2253.24	0.71%
Ga 417.206	1335242.8						11783.95	0.88%
GaRADIAL	87942.0						376.57	0.43%
Ag 328.068†	132589.2	0.410	mg/L	0.0039	0.410	mg/L	0.0039	0.96%
QC value within limits for Ag 328.068 Recovery = 102.53%								
Al 396.153†	70651.6	9.93	mg/L	0.034	9.93	mg/L	0.034	0.34%
QC value within limits for Al 396.153 Recovery = 99.35%								
As 188.979†	1622.2	0.409	mg/L	0.0024	0.409	mg/L	0.0024	0.57%
QC value within limits for As 188.979 Recovery = 102.30%								
Ba 233.527†	175046.9	1.03	mg/L	0.011	1.03	mg/L	0.011	1.10%
QC value within limits for Ba 233.527 Recovery = 102.74%								
Be 234.861†	65734.8	0.0511	mg/L	0.00036	0.0511	mg/L	0.00036	0.71%
QC value within limits for Be 234.861 Recovery = 102.15%								
B 249.677†	59997.7	0.501	mg/L	0.0076	0.501	mg/L	0.0076	1.52%
QC value within limits for B 249.677 Recovery = 100.27%								
Ca 227.546†	4931.8	10.4	mg/L	0.14	10.4	mg/L	0.14	1.37%
QC value within limits for Ca 227.546 Recovery = 104.33%								
Cd 228.802†	3092.5	0.0502	mg/L	0.00131	0.0502	mg/L	0.00131	2.61%
QC value within limits for Cd 228.802 Recovery = 100.46%								
Co 228.616†	9597.6	0.205	mg/L	0.0008	0.205	mg/L	0.0008	0.39%
QC value within limits for Co 228.616 Recovery = 102.40%								
Cr 267.716†	65747.1	0.509	mg/L	0.0011	0.509	mg/L	0.0011	0.21%
QC value within limits for Cr 267.716 Recovery = 101.77%								
Cu 327.393†	135905.6	0.504	mg/L	0.0063	0.504	mg/L	0.0063	1.24%

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   QC value within limits for Cu 327.393  Recovery = 100.80%
Fe 239.562†          65375.8        4.03 mg/L        0.027        4.03 mg/L        0.027   0.66%
   QC value within limits for Fe 239.562  Recovery = 100.80%
Mg 279.077†          35823.9        10.1 mg/L         0.08        10.1 mg/L         0.08   0.83%
   QC value within limits for Mg 279.077  Recovery = 101.21%
Mn 257.610†         422785.8       0.509 mg/L       0.0053       0.509 mg/L       0.0053   1.04%
   QC value within limits for Mn 257.610  Recovery = 101.84%
Mo 202.031†          40019.5        1.03 mg/L        0.008        1.03 mg/L        0.008   0.80%
   QC value within limits for Mo 202.031  Recovery = 102.83%
Ni 231.604†          38209.9       0.529 mg/L       0.0018       0.529 mg/L       0.0018   0.33%
   QC value within limits for Ni 231.604  Recovery = 105.85%
Pb 220.353†           7498.7       0.518 mg/L       0.0023       0.518 mg/L       0.0023   0.44%
   QC value within limits for Pb 220.353  Recovery = 103.55%
Sb 206.836†           6429.5        1.23 mg/L        0.015        1.23 mg/L        0.015   1.22%
   QC value within limits for Sb 206.836  Recovery = 102.43%
Se 196.026†            976.2       0.418 mg/L       0.0069       0.418 mg/L       0.0069   1.66%
   QC value within limits for Se 196.026  Recovery = 104.39%
Si 251.611†         283928.9        5.13 mg/L        0.041        5.13 mg/L        0.041   0.80%
   QC value within limits for Si 251.611  Recovery = 102.51%
Sn 189.927†          13579.2        1.05 mg/L        0.003        1.05 mg/L        0.003   0.30%
   QC value within limits for Sn 189.927  Recovery = 105.04%
Ti 334.940†        1101462.0        1.01 mg/L        0.002        1.01 mg/L        0.002   0.15%
   QC value within limits for Ti 334.940  Recovery = 100.60%
Tl 190.801†           2174.7       0.540 mg/L       0.0080       0.540 mg/L       0.0080   1.47%
   QC value within limits for Tl 190.801  Recovery = 108.06%
V 290.880†          264337.2        1.01 mg/L        0.005        1.01 mg/L        0.005   0.48%
   QC value within limits for V 290.880  Recovery = 100.98%
Zn 206.200†          64531.6        1.05 mg/L        0.014        1.05 mg/L        0.014   1.35%
   QC value within limits for Zn 206.200  Recovery = 104.64%
K 766.490†          154786.1        48.8 mg/L         0.52        48.8 mg/L         0.52   1.07%
   QC value within limits for K 766.490  Recovery = 97.62%
Na 589.592†        1093513.7        50.1 mg/L         0.29        50.1 mg/L         0.29   0.58%
   QC value within limits for Na 589.592  Recovery = 100.10%
Sr 407.771†        2740669.2       0.975 mg/L       0.0103       0.975 mg/L       0.0103   1.06%
   QC value within limits for Sr 407.771  Recovery = 97.45%
Li 670.784†          155585.3       0.988 mg/L       0.0127       0.988 mg/L       0.0127   1.28%
   QC value within limits for Li 670.784  Recovery = 98.77%
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 95                                    Autosampler Location: 8
Sample ID: CCB                                      Date Collected: 7/17/2012 11:58:04 PM
Analyst:                                            Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

------------------------------------------------------------------------------------------
Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     332.0 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           2581569.8                                                     33234.71   1.29%
YRADIAL              322089.4                                                      1560.15   0.48%
Ga 417.206          1366738.2                                                     14912.74   1.09%
GaRADIAL              90018.2                                                      2879.49   3.20%
Ag 328.068†             -31.9     0.00083 mg/L      0.000324     0.00083 mg/L      0.000324  39.14%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†              -0.5     -0.0225 mg/L       0.00042     -0.0225 mg/L       0.00042   1.88%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†              -2.6     0.00013 mg/L      0.000948     0.00013 mg/L      0.000948 707.75%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†              34.3    -0.00037 mg/L      0.000022    -0.00037 mg/L      0.000022   5.97%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               9.7     0.00014 mg/L      0.000009     0.00014 mg/L      0.000009   5.97%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               382.1     0.00628 mg/L      0.000229     0.00628 mg/L      0.000229   3.64%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†              -11.9      0.0681 mg/L       0.02317      0.0681 mg/L       0.02317  34.01%
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   QC value within limits for Ca 227.546  Recovery = Not calculated
Cd 228.802†                0.3     0.00018 mg/L      0.000011     0.00018 mg/L      0.000011   5.98%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                5.0    -0.00004 mg/L      0.000275    -0.00004 mg/L      0.000275 624.78%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -36.6     0.00003 mg/L      0.000051     0.00003 mg/L      0.000051 165.06%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -272.5    -0.00003 mg/L      0.000381    -0.00003 mg/L      0.000381 >999.9%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               22.3     0.00545 mg/L      0.000056     0.00545 mg/L      0.000056   1.02%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               22.9      0.0197 mg/L       0.00116      0.0197 mg/L       0.00116   5.88%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1323.3    -0.00141 mg/L      0.000007    -0.00141 mg/L      0.000007   0.48%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               22.3     0.00077 mg/L      0.000133     0.00077 mg/L      0.000133  17.40%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               16.6    -0.00234 mg/L      0.000117    -0.00234 mg/L      0.000117   5.00%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               -1.9    -0.00139 mg/L      0.000933    -0.00139 mg/L      0.000933  67.27%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -2.9     0.00367 mg/L      0.001476     0.00367 mg/L      0.001476  40.22%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.4    -0.00035 mg/L      0.000456    -0.00035 mg/L      0.000456 129.65%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -54.0      0.0108 mg/L       0.00081      0.0108 mg/L       0.00081   7.50%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                8.6     0.00096 mg/L      0.000683     0.00096 mg/L      0.000683  71.16%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†              100.0     0.00129 mg/L      0.000123     0.00129 mg/L      0.000123   9.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -3.6    -0.00321 mg/L      0.001105    -0.00321 mg/L      0.001105  34.48%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†              -276.3    -0.00053 mg/L      0.001639    -0.00053 mg/L      0.001639 307.92%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†             -173.8    -0.00212 mg/L      0.000163    -0.00212 mg/L      0.000163   7.73%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               -56.1     -0.0775 mg/L       0.01951     -0.0775 mg/L       0.01951  25.19%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             -147.4     -0.0250 mg/L       0.00367     -0.0250 mg/L       0.00367  14.66%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†              318.9     0.00148 mg/L      0.000007     0.00148 mg/L      0.000007   0.49%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†               50.0    -0.00350 mg/L      0.000596    -0.00350 mg/L      0.000596  17.03%
   QC value within limits for Li 670.784  Recovery = Not calculated
All analyte(s) passed QC.

==========================================================================================
Sequence No.: 96                                    Autosampler Location: 113
Sample ID: L1207013504 0.01                         Date Collected: 7/18/2012 12:05:01 AM
Analyst: KHR                                        Data Type: Original
Initial Sample Wt:                                  Initial Sample Vol:
Dilution:                                           Sample Prep Vol:

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Nebulizer Parameters: L1207013504 0.01
Analyte                  Back Pressure    Flow
All                    331.0 kPa         0.50 L/min

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Mean Data: L1207013504 0.01
                   Mean Corrected         Calib.                          Sample
Analyte               Intensity     Conc. Units      Std.Dev.      Conc. Units      Std.Dev.   RSD
Y 371.029            2598298.0                                                     25050.01   0.96%
YRADIAL               321710.9                                                      3891.59   1.21%
Ga 417.206           1464367.0                                                      7897.63   0.54%
GaRADIAL               92024.3                                                      2639.17   2.87%
Ag 328.068†               96.8     0.00122 mg/L      0.000118     0.00122 mg/L      0.000118   9.67%
Al 396.153†               -7.7     -0.0235 mg/L       0.00139     -0.0235 mg/L       0.00139   5.89%
As 188.979†               -5.2    -0.00052 mg/L      0.000888    -0.00052 mg/L      0.000888 171.62%
Ba 233.527†              222.2     0.00074 mg/L      0.000044     0.00074 mg/L      0.000044   5.94%
Be 234.861†              236.1     0.00032 mg/L      0.000009     0.00032 mg/L      0.000009   2.94%
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B 249.677†	246.9	0.00515	mg/L	0.000284	0.00515	mg/L	0.000284	5.51%
Ca 227.546†	2356.4	4.80	mg/L	0.056	4.80	mg/L	0.056	1.16%
Cd 228.802†	-6.4	0.00008	mg/L	0.000075	0.00008	mg/L	0.000075	97.56%
Co 228.616†	11.4	0.00009	mg/L	0.000098	0.00009	mg/L	0.000098	104.22%
Cr 267.716†	-40.4	0.00000	mg/L	0.000037	0.00000	mg/L	0.000037	>999.9%
Cu 327.393†	-337.5	-0.00027	mg/L	0.000094	-0.00027	mg/L	0.000094	34.91%
Fe 239.562†	37.6	0.00637	mg/L	0.000359	0.00637	mg/L	0.000359	5.64%
Mg 279.077†	4706.8	1.34	mg/L	0.018	1.34	mg/L	0.018	1.33%
Mn 257.610†	-238.8	-0.00010	mg/L	0.000013	-0.00010	mg/L	0.000013	13.10%
Mo 202.031†	9.7	0.00044	mg/L	0.000240	0.00044	mg/L	0.000240	53.96%
Ni 231.604†	36.1	-0.00207	mg/L	0.000130	-0.00207	mg/L	0.000130	6.25%
Pb 220.353†	18.6	0.00007	mg/L	0.000103	0.00007	mg/L	0.000103	150.68%
Sb 206.836†	-9.0	0.00250	mg/L	0.000986	0.00250	mg/L	0.000986	39.48%
Se 196.026†	-3.4	0.00007	mg/L	0.002466	0.00007	mg/L	0.002466	>999.9%
Si 251.611†	12177.8	0.232	mg/L	0.0030	0.232	mg/L	0.0030	1.31%
Sn 189.927†	-71.2	-0.00521	mg/L	0.000137	-0.00521	mg/L	0.000137	2.63%
Ti 334.940†	-1047.5	0.00095	mg/L	0.000019	0.00095	mg/L	0.000019	1.95%
Tl 190.801†	7.0	-0.00065	mg/L	0.000546	-0.00065	mg/L	0.000546	84.10%
V 290.880†	221.5	0.00134	mg/L	0.000846	0.00134	mg/L	0.000846	63.31%
Zn 206.200†	-80.7	-0.00061	mg/L	0.000166	-0.00061	mg/L	0.000166	27.03%
K 766.490†	63.9	-0.0402	mg/L	0.01124	-0.0402	mg/L	0.01124	27.99%
Na 589.592†	3026.8	0.120	mg/L	0.0024	0.120	mg/L	0.0024	2.03%
Sr 407.771†	40527.8	0.0157	mg/L	0.00047	0.0157	mg/L	0.00047	2.98%
Li 670.784†	42.9	-0.00355	mg/L	0.000304	-0.00355	mg/L	0.000304	8.57%

Sequence No.: 97
Sample ID: L1207013506 0.01
Analyst: KHR
Initial Sample Wt:
Dilution:

Autosampler Location: 114
Date Collected: 7/18/2012 12:11:57 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: L1207013506 0.01

Analyte	Back Pressure	Flow
All	332.0 kPa	0.50 L/min

Mean Data: L1207013506 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2578536.3						11729.24	0.45%
YRADIAL	322627.6						992.81	0.31%
Ga 417.206	1451471.3						13705.32	0.94%
GaRADIAL	92121.4						3882.04	4.21%
Ag 328.068†	36.4	0.00104	mg/L	0.000173	0.00104	mg/L	0.000173	16.64%
Al 396.153†	-15.7	-0.0246	mg/L	0.00127	-0.0246	mg/L	0.00127	5.14%
As 188.979†	-4.1	-0.00023	mg/L	0.000742	-0.00023	mg/L	0.000742	328.32%
Ba 233.527†	247.1	0.00088	mg/L	0.000045	0.00088	mg/L	0.000045	5.07%
Be 234.861†	218.3	0.00031	mg/L	0.000015	0.00031	mg/L	0.000015	4.90%
B 249.677†	166.5	0.00448	mg/L	0.000141	0.00448	mg/L	0.000141	3.14%
Ca 227.546†	2430.9	4.95	mg/L	0.054	4.95	mg/L	0.054	1.08%
Cd 228.802†	-3.2	0.00013	mg/L	0.000043	0.00013	mg/L	0.000043	33.57%
Co 228.616†	7.1	0.00000	mg/L	0.000089	0.00000	mg/L	0.000089	>999.9%
Cr 267.716†	-57.5	-0.00013	mg/L	0.000060	-0.00013	mg/L	0.000060	46.68%
Cu 327.393†	-283.7	-0.00007	mg/L	0.000398	-0.00007	mg/L	0.000398	561.67%
Fe 239.562†	30.3	0.00592	mg/L	0.000475	0.00592	mg/L	0.000475	8.03%
Mg 279.077†	4879.1	1.39	mg/L	0.007	1.39	mg/L	0.007	0.49%
Mn 257.610†	-94.6	0.00007	mg/L	0.000030	0.00007	mg/L	0.000030	41.91%
Mo 202.031†	10.2	0.00046	mg/L	0.000197	0.00046	mg/L	0.000197	43.21%
Ni 231.604†	33.8	-0.00210	mg/L	0.000129	-0.00210	mg/L	0.000129	6.13%
Pb 220.353†	18.6	0.00007	mg/L	0.000955	0.00007	mg/L	0.000955	>999.9%
Sb 206.836†	-10.8	0.00215	mg/L	0.000551	0.00215	mg/L	0.000551	25.62%
Se 196.026†	-6.1	-0.00109	mg/L	0.000772	-0.00109	mg/L	0.000772	70.96%
Si 251.611†	9690.0	0.187	mg/L	0.0049	0.187	mg/L	0.0049	2.65%
Sn 189.927†	-80.0	-0.00589	mg/L	0.000289	-0.00589	mg/L	0.000289	4.90%
Ti 334.940†	-1115.3	0.00091	mg/L	0.000125	0.00091	mg/L	0.000125	13.73%
Tl 190.801†	-0.1	-0.00238	mg/L	0.000929	-0.00238	mg/L	0.000929	38.96%
V 290.880†	11.8	0.00053	mg/L	0.001728	0.00053	mg/L	0.001728	324.23%
Zn 206.200†	-34.1	0.00013	mg/L	0.000109	0.00013	mg/L	0.000109	80.96%
K 766.490†	92.9	-0.0311	mg/L	0.01893	-0.0311	mg/L	0.01893	60.83%
Na 589.592†	2934.7	0.116	mg/L	0.0058	0.116	mg/L	0.0058	5.03%

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Sr 407.771†	41172.8	0.0159 mg/L	0.00072	0.0159 mg/L	0.00072	4.54%
Li 670.784†	-8.2	-0.00387 mg/L	0.000574	-0.00387 mg/L	0.000574	14.83%

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Sequence No.: 98 **Autosampler Location: 115**
Sample ID: L1207013508 0.01 **Date Collected: 7/18/2012 12:18:52 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207013508 0.01

Analyte	Back Pressure	Flow
All	333.0 kPa	0.50 L/min

Mean Data: L1207013508 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2628700.0						18343.45	0.70%
YRADIAL	326317.9						7678.46	2.35%
Ga 417.206	1468991.3						30926.78	2.11%
GaRADIAL	93130.7						1547.84	1.66%
Ag 328.068†	18.8	0.00098	mg/L	0.000315	0.00098	mg/L	0.000315	32.11%
Al 396.153†	-12.4	-0.0242	mg/L	0.00073	-0.0242	mg/L	0.00073	3.04%
As 188.979†	2.4	0.00142	mg/L	0.000682	0.00142	mg/L	0.000682	48.14%
Ba 233.527†	125.8	0.00017	mg/L	0.000068	0.00017	mg/L	0.000068	39.68%
Be 234.861†	228.9	0.00032	mg/L	0.000017	0.00032	mg/L	0.000017	5.53%
B 249.677†	150.3	0.00435	mg/L	0.000069	0.00435	mg/L	0.000069	1.58%
Ca 227.546†	2393.9	4.88	mg/L	0.076	4.88	mg/L	0.076	1.57%
Cd 228.802†	-6.5	0.00007	mg/L	0.000064	0.00007	mg/L	0.000064	98.46%
Co 228.616†	2.3	-0.00010	mg/L	0.000288	-0.00010	mg/L	0.000288	286.80%
Cr 267.716†	-58.9	-0.00014	mg/L	0.000066	-0.00014	mg/L	0.000066	46.93%
Cu 327.393†	-265.1	0.00000	mg/L	0.000383	0.00000	mg/L	0.000383	>999.9%
Fe 239.562†	8.5	0.00458	mg/L	0.000269	0.00458	mg/L	0.000269	5.87%
Mg 279.077†	4733.6	1.35	mg/L	0.028	1.35	mg/L	0.028	2.05%
Mn 257.610†	167.4	0.00039	mg/L	0.000016	0.00039	mg/L	0.000016	4.06%
Mo 202.031†	3.8	0.00029	mg/L	0.000181	0.00029	mg/L	0.000181	61.67%
Ni 231.604†	38.8	-0.00203	mg/L	0.000158	-0.00203	mg/L	0.000158	7.78%
Pb 220.353†	12.1	-0.00038	mg/L	0.000986	-0.00038	mg/L	0.000986	261.62%
Sb 206.836†	-9.6	0.00238	mg/L	0.000353	0.00238	mg/L	0.000353	14.83%
Se 196.026†	-4.5	-0.00038	mg/L	0.001230	-0.00038	mg/L	0.001230	326.10%
Si 251.611†	6591.7	0.131	mg/L	0.0031	0.131	mg/L	0.0031	2.37%
Sn 189.927†	-71.7	-0.00525	mg/L	0.000373	-0.00525	mg/L	0.000373	7.11%
Ti 334.940†	-1101.6	0.00092	mg/L	0.000018	0.00092	mg/L	0.000018	1.99%
Tl 190.801†	11.2	0.00038	mg/L	0.001142	0.00038	mg/L	0.001142	304.18%
V 290.880†	6.8	0.00051	mg/L	0.000631	0.00051	mg/L	0.000631	122.56%
Zn 206.200†	-112.6	-0.00113	mg/L	0.000049	-0.00113	mg/L	0.000049	4.34%
K 766.490†	77.4	-0.0360	mg/L	0.01589	-0.0360	mg/L	0.01589	44.20%
Na 589.592†	2987.5	0.119	mg/L	0.0096	0.119	mg/L	0.0096	8.14%
Sr 407.771†	39918.8	0.0154	mg/L	0.00060	0.0154	mg/L	0.00060	3.91%
Li 670.784†	-16.2	-0.00392	mg/L	0.000132	-0.00392	mg/L	0.000132	3.37%

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Sequence No.: 99 **Autosampler Location: 116**
Sample ID: L1207013510 0.01 **Date Collected: 7/18/2012 12:25:47 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207013510 0.01

Analyte	Back Pressure	Flow
All	335.0 kPa	0.50 L/min

Mean Data: L1207013510 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2600359.7						13484.04	0.52%
YRADIAL	324632.2						5142.14	1.58%
Ga 417.206	1490718.0						3625.51	0.24%

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GaRADIAL	93249.6				2453.41	2.63%
Ag 328.068†	-101.8	0.00061 mg/L	0.000313	0.00061 mg/L	0.000313	51.03%
Al 396.153†	-14.7	-0.0245 mg/L	0.00117	-0.0245 mg/L	0.00117	4.76%
As 188.979†	7.8	0.00280 mg/L	0.000907	0.00280 mg/L	0.000907	32.44%
Ba 233.527†	198.3	0.00060 mg/L	0.000079	0.00060 mg/L	0.000079	13.22%
Be 234.861†	233.7	0.00032 mg/L	0.000003	0.00032 mg/L	0.000003	0.87%
B 249.677†	122.6	0.00412 mg/L	0.000063	0.00412 mg/L	0.000063	1.54%
Ca 227.546†	2353.7	4.80 mg/L	0.028	4.80 mg/L	0.028	0.59%
Cd 228.802†	-8.4	0.00003 mg/L	0.000067	0.00003 mg/L	0.000067	257.29%
Co 228.616†	4.4	-0.00006 mg/L	0.000005	-0.00006 mg/L	0.000005	8.15%
Cr 267.716†	-52.6	-0.00009 mg/L	0.000078	-0.00009 mg/L	0.000078	84.47%
Cu 327.393†	-369.3	-0.00039 mg/L	0.000619	-0.00039 mg/L	0.000619	160.07%
Fe 239.562†	3.8	0.00429 mg/L	0.000096	0.00429 mg/L	0.000096	2.25%
Mg 279.077†	4736.6	1.35 mg/L	0.018	1.35 mg/L	0.018	1.36%
Mn 257.610†	-50.4	0.00012 mg/L	0.000016	0.00012 mg/L	0.000016	12.98%
Mo 202.031†	4.0	0.00030 mg/L	0.000082	0.00030 mg/L	0.000082	27.52%
Ni 231.604†	25.6	-0.00222 mg/L	0.000124	-0.00222 mg/L	0.000124	5.58%
Pb 220.353†	15.4	-0.00015 mg/L	0.000224	-0.00015 mg/L	0.000224	150.27%
Sb 206.836†	-9.8	0.00236 mg/L	0.000429	0.00236 mg/L	0.000429	18.21%
Se 196.026†	-7.8	-0.00181 mg/L	0.001340	-0.00181 mg/L	0.001340	74.04%
Si 251.611†	9361.1	0.181 mg/L	0.0190	0.181 mg/L	0.0190	10.53%
Sn 189.927†	-75.8	-0.00556 mg/L	0.000370	-0.00556 mg/L	0.000370	6.66%
Ti 334.940†	-1094.7	0.00091 mg/L	0.000037	0.00091 mg/L	0.000037	4.12%
Tl 190.801†	11.3	0.00040 mg/L	0.001419	0.00040 mg/L	0.001419	354.56%
V 290.880†	53.0	0.00069 mg/L	0.000838	0.00069 mg/L	0.000838	121.17%
Zn 206.200†	-127.6	-0.00137 mg/L	0.000053	-0.00137 mg/L	0.000053	3.87%
K 766.490†	128.3	-0.0201 mg/L	0.02451	-0.0201 mg/L	0.02451	122.18%
Na 589.592†	2855.7	0.112 mg/L	0.0047	0.112 mg/L	0.0047	4.22%
Sr 407.771†	40429.9	0.0156 mg/L	0.00051	0.0156 mg/L	0.00051	3.26%
Li 670.784†	-22.8	-0.00396 mg/L	0.000132	-0.00396 mg/L	0.000132	3.32%

Sequence No.: 100 **Autosampler Location: 117**
Sample ID: L1207013512 0.01 **Date Collected: 7/18/2012 12:32:43 AM**
Analyst: KHR **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: L1207013512 0.01

Analyte	Back Pressure	Flow
All	335.0 kPa	0.50 L/min

Mean Data: L1207013512 0.01

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	2593507.2						9414.51	0.36%
YRADIAL	322807.7						1940.94	0.60%
Ga 417.206	1476986.9						16344.36	1.11%
GaRADIAL	92635.6						2834.61	3.06%
Ag 328.068†	16.0	0.00097	mg/L	0.000346	0.00097	mg/L	0.000346	35.54%
Al 396.153†	-12.3	-0.0242	mg/L	0.00016	-0.0242	mg/L	0.00016	0.66%
As 188.979†	2.4	0.00142	mg/L	0.000359	0.00142	mg/L	0.000359	25.21%
Ba 233.527†	187.3	0.00053	mg/L	0.000057	0.00053	mg/L	0.000057	10.80%
Be 234.861†	224.6	0.00031	mg/L	0.000003	0.00031	mg/L	0.000003	1.10%
B 249.677†	111.7	0.00402	mg/L	0.000042	0.00402	mg/L	0.000042	1.05%
Ca 227.546†	2321.3	4.73	mg/L	0.050	4.73	mg/L	0.050	1.06%
Cd 228.802†	-8.3	0.00004	mg/L	0.000134	0.00004	mg/L	0.000134	379.06%
Co 228.616†	15.3	0.00018	mg/L	0.000203	0.00018	mg/L	0.000203	114.25%
Cr 267.716†	-61.9	-0.00016	mg/L	0.000157	-0.00016	mg/L	0.000157	95.95%
Cu 327.393†	-344.9	-0.00030	mg/L	0.000158	-0.00030	mg/L	0.000158	53.27%
Fe 239.562†	11.6	0.00476	mg/L	0.000300	0.00476	mg/L	0.000300	6.30%
Mg 279.077†	4673.0	1.33	mg/L	0.006	1.33	mg/L	0.006	0.44%
Mn 257.610†	-99.2	0.00006	mg/L	0.000007	0.00006	mg/L	0.000007	10.42%
Mo 202.031†	-1.2	0.00017	mg/L	0.000084	0.00017	mg/L	0.000084	50.66%
Ni 231.604†	35.9	-0.00208	mg/L	0.000084	-0.00208	mg/L	0.000084	4.05%
Pb 220.353†	21.7	0.00029	mg/L	0.000774	0.00029	mg/L	0.000774	271.50%
Sb 206.836†	-9.6	0.00239	mg/L	0.000423	0.00239	mg/L	0.000423	17.69%
Se 196.026†	-4.6	-0.00043	mg/L	0.001704	-0.00043	mg/L	0.001704	394.01%
Si 251.611†	8628.0	0.168	mg/L	0.0027	0.168	mg/L	0.0027	1.61%
Sn 189.927†	-73.3	-0.00537	mg/L	0.000643	-0.00537	mg/L	0.000643	11.98%

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Ti 334.940†	-1115.4	0.00088 mg/L	0.000136	0.00088 mg/L	0.000136	15.48%
Tl 190.801†	10.6	0.00023 mg/L	0.000639	0.00023 mg/L	0.000639	279.55%
V 290.880†	-5.9	0.00047 mg/L	0.000820	0.00047 mg/L	0.000820	175.61%
Zn 206.200†	-120.5	-0.00126 mg/L	0.000136	-0.00126 mg/L	0.000136	10.83%
K 766.490†	153.6	-0.0122 mg/L	0.00633	-0.0122 mg/L	0.00633	52.07%
Na 589.592†	2745.0	0.107 mg/L	0.0033	0.107 mg/L	0.0033	3.07%
Sr 407.771†	39803.6	0.0154 mg/L	0.00058	0.0154 mg/L	0.00058	3.74%
Li 670.784†	10.6	-0.00375 mg/L	0.000325	-0.00375 mg/L	0.000325	8.66%

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Sequence No.: 101 **Autosampler Location: 6**
Sample ID: CCV **Date Collected: 7/18/2012 12:39:40 AM**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	335.0 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	2492244.3						14717.53	0.59%
YRADIAL	319396.0						2612.55	0.82%
Ga 417.206	1338974.4						27382.15	2.05%
GaRADIAL	88217.1						507.49	0.58%
Ag 328.068†	132807.6	0.411	mg/L	0.0090	0.411	mg/L	0.0090	2.20%
QC value within limits for Ag 328.068 Recovery = 102.70%								
Al 396.153†	70685.6	9.94	mg/L	0.004	9.94	mg/L	0.004	0.04%
QC value within limits for Al 396.153 Recovery = 99.40%								
As 188.979†	1632.5	0.412	mg/L	0.0079	0.412	mg/L	0.0079	1.91%
QC value within limits for As 188.979 Recovery = 102.97%								
Ba 233.527†	175927.7	1.03	mg/L	0.007	1.03	mg/L	0.007	0.71%
QC value within limits for Ba 233.527 Recovery = 103.25%								
Be 234.861†	65882.5	0.0512	mg/L	0.00109	0.0512	mg/L	0.00109	2.13%
QC value within limits for Be 234.861 Recovery = 102.37%								
B 249.677†	60313.2	0.504	mg/L	0.0110	0.504	mg/L	0.0110	2.18%
QC value within limits for B 249.677 Recovery = 100.80%								
Ca 227.546†	4940.8	10.5	mg/L	0.26	10.5	mg/L	0.26	2.51%
QC value within limits for Ca 227.546 Recovery = 104.52%								
Cd 228.802†	3108.6	0.0505	mg/L	0.00200	0.0505	mg/L	0.00200	3.95%
QC value within limits for Cd 228.802 Recovery = 100.96%								
Co 228.616†	9588.4	0.205	mg/L	0.0016	0.205	mg/L	0.0016	0.78%
QC value within limits for Co 228.616 Recovery = 102.29%								
Cr 267.716†	66067.7	0.511	mg/L	0.0040	0.511	mg/L	0.0040	0.79%
QC value within limits for Cr 267.716 Recovery = 102.27%								
Cu 327.393†	136168.3	0.505	mg/L	0.0098	0.505	mg/L	0.0098	1.93%
QC value within limits for Cu 327.393 Recovery = 100.99%								
Fe 239.562†	65741.6	4.05	mg/L	0.021	4.05	mg/L	0.021	0.52%
QC value within limits for Fe 239.562 Recovery = 101.36%								
Mg 279.077†	35892.4	10.1	mg/L	0.03	10.1	mg/L	0.03	0.26%
QC value within limits for Mg 279.077 Recovery = 101.40%								
Mn 257.610†	424204.5	0.511	mg/L	0.0055	0.511	mg/L	0.0055	1.07%
QC value within limits for Mn 257.610 Recovery = 102.18%								
Mo 202.031†	39909.8	1.03	mg/L	0.006	1.03	mg/L	0.006	0.56%
QC value within limits for Mo 202.031 Recovery = 102.55%								
Ni 231.604†	38228.0	0.529	mg/L	0.0029	0.529	mg/L	0.0029	0.55%
QC value within limits for Ni 231.604 Recovery = 105.90%								
Pb 220.353†	7493.9	0.517	mg/L	0.0035	0.517	mg/L	0.0035	0.69%
QC value within limits for Pb 220.353 Recovery = 103.49%								
Sb 206.836†	6451.3	1.23	mg/L	0.030	1.23	mg/L	0.030	2.42%
QC value within limits for Sb 206.836 Recovery = 102.77%								
Se 196.026†	976.0	0.417	mg/L	0.0122	0.417	mg/L	0.0122	2.92%
QC value within limits for Se 196.026 Recovery = 104.36%								
Si 251.611†	285381.5	5.15	mg/L	0.089	5.15	mg/L	0.089	1.73%
QC value within limits for Si 251.611 Recovery = 103.03%								
Sn 189.927†	13591.2	1.05	mg/L	0.005	1.05	mg/L	0.005	0.48%
QC value within limits for Sn 189.927 Recovery = 105.13%								
Ti 334.940†	1104934.1	1.01	mg/L	0.005	1.01	mg/L	0.005	0.47%

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   QC value within limits for Ti 334.940  Recovery = 100.92%
Tl 190.801†            2186.7       0.543 mg/L        0.0027       0.543 mg/L        0.0027   0.49%
   QC value within limits for Tl 190.801  Recovery = 108.66%
V 290.880†           265890.5        1.02 mg/L         0.006        1.02 mg/L         0.006   0.59%
   QC value within limits for V 290.880  Recovery = 101.57%
Zn 206.200†           64895.7        1.05 mg/L         0.014        1.05 mg/L         0.014   1.34%
   QC value within limits for Zn 206.200  Recovery = 105.23%
K 766.490†           156152.7        49.2 mg/L          0.29        49.2 mg/L          0.29   0.58%
   QC value within limits for K 766.490  Recovery = 98.49%
Na 589.592†         1088321.8        49.8 mg/L          1.35        49.8 mg/L          1.35   2.71%
   QC value within limits for Na 589.592  Recovery = 99.63%
Sr 407.771†         2730418.3       0.971 mg/L        0.0378       0.971 mg/L        0.0378   3.90%
   QC value within limits for Sr 407.771  Recovery = 97.09%
Li 670.784†          155583.2       0.988 mg/L        0.0082       0.988 mg/L        0.0082   0.83%
   QC value within limits for Li 670.784  Recovery = 98.76%
All analyte(s) passed QC.

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Sequence No.: 102                                  Autosampler Location: 1
Sample ID: CCB                                     Date Collected: 7/18/2012 12:45:39 AM
Analyst:                                           Data Type: Original
Initial Sample Wt:                                 Initial Sample Vol:
Dilution:                                          Sample Prep Vol:

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Nebulizer Parameters: CCB
Analyte                 Back Pressure    Flow
All                     336.0 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            2562917.0                                                    11570.79   0.45%
YRADIAL               314329.6                                                     2280.27   0.73%
Ga 417.206           1363195.7                                                    28111.75   2.06%
GaRADIAL               88159.6                                                     3344.52   3.79%
Ag 328.068†               32.5     0.00103 mg/L      0.000272     0.00103 mg/L      0.000272  26.42%
   QC value within limits for Ag 328.068  Recovery = Not calculated
Al 396.153†               31.0     -0.0180 mg/L       0.00068     -0.0180 mg/L       0.00068   3.78%
   QC value within limits for Al 396.153  Recovery = Not calculated
As 188.979†               -4.5    -0.00035 mg/L      0.002172    -0.00035 mg/L      0.002172 629.03%
   QC value within limits for As 188.979  Recovery = Not calculated
Ba 233.527†               77.8    -0.00011 mg/L      0.000032    -0.00011 mg/L      0.000032  28.54%
   QC value within limits for Ba 233.527  Recovery = Not calculated
Be 234.861†               20.8     0.00015 mg/L      0.000021     0.00015 mg/L      0.000021  13.96%
   QC value within limits for Be 234.861  Recovery = Not calculated
B 249.677†               315.3     0.00573 mg/L      0.000266     0.00573 mg/L      0.000266   4.65%
   QC value within limits for B 249.677  Recovery = Not calculated
Ca 227.546†                4.2       0.100 mg/L        0.0050       0.100 mg/L        0.0050   4.95%
   QC value greater than the upper limit for Ca 227.546  Recovery = Not calculated
Cd 228.802†               -3.1     0.00013 mg/L      0.000064     0.00013 mg/L      0.000064  48.93%
   QC value within limits for Cd 228.802  Recovery = Not calculated
Co 228.616†                8.7     0.00003 mg/L      0.000084     0.00003 mg/L      0.000084 253.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -21.7     0.00015 mg/L      0.000080     0.00015 mg/L      0.000080  54.80%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 327.393†             -262.6     0.00001 mg/L      0.000349     0.00001 mg/L      0.000349 >999.9%
   QC value within limits for Cu 327.393  Recovery = Not calculated
Fe 239.562†               47.8     0.00702 mg/L      0.000253     0.00702 mg/L      0.000253   3.61%
   QC value within limits for Fe 239.562  Recovery = Not calculated
Mg 279.077†               41.4      0.0249 mg/L       0.00175      0.0249 mg/L       0.00175   7.04%
   QC value within limits for Mg 279.077  Recovery = Not calculated
Mn 257.610†            -1197.6    -0.00126 mg/L      0.000018    -0.00126 mg/L      0.000018   1.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               21.8     0.00075 mg/L      0.000191     0.00075 mg/L      0.000191  25.35%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Ni 231.604†               29.7    -0.00216 mg/L      0.000033    -0.00216 mg/L      0.000033   1.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
Pb 220.353†               21.2     0.00021 mg/L      0.000124     0.00021 mg/L      0.000124  58.80%
   QC value within limits for Pb 220.353  Recovery = Not calculated
Sb 206.836†               -0.1     0.00420 mg/L      0.000567     0.00420 mg/L      0.000567  13.49%
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   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.2     0.00146 mg/L      0.002602     0.00146 mg/L      0.002602 178.65%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -38.1      0.0111 mg/L       0.00030      0.0111 mg/L       0.00030   2.73%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               7.7     0.00089 mg/L      0.000338     0.00089 mg/L      0.000338  37.98%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Ti 334.940†             399.6     0.00157 mg/L      0.000012     0.00157 mg/L      0.000012   0.75%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               4.6    -0.00121 mg/L      0.001102    -0.00121 mg/L      0.001102  91.16%
   QC value within limits for Tl 190.801  Recovery = Not calculated
V 290.880†               14.5     0.00058 mg/L      0.000225     0.00058 mg/L      0.000225  38.95%
   QC value within limits for V 290.880  Recovery = Not calculated
Zn 206.200†            -145.0    -0.00165 mg/L      0.000096    -0.00165 mg/L      0.000096   5.83%
   QC value within limits for Zn 206.200  Recovery = Not calculated
K 766.490†               69.6     -0.0382 mg/L       0.01237     -0.0382 mg/L       0.01237  32.35%
   QC value within limits for K 766.490  Recovery = Not calculated
Na 589.592†             116.6     -0.0130 mg/L       0.00717     -0.0130 mg/L       0.00717  55.36%
   QC value within limits for Na 589.592  Recovery = Not calculated
Sr 407.771†            1093.1     0.00176 mg/L      0.000004     0.00176 mg/L      0.000004   0.21%
   QC value within limits for Sr 407.771  Recovery = Not calculated
Li 670.784†             128.3    -0.00300 mg/L      0.000579    -0.00300 mg/L      0.000579  19.29%
   QC value within limits for Li 670.784  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

Approved: July 18, 2012

Kym H. Rhoden

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Login Number: L12070328
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: WG403681 - Due to continuing calibration verification failure for silver on 18-July-2012 at 12:39, client samples 01, 04, 05(MS), and 06(MSD) were reanalyzed on a later calibration which was compliant for silver. Due to continuing calibration verification failure for silver and selenium on 18-July-2012 at 13:16, client samples 02 and 03 and the batch post spike and serial dilution were reanalyzed on a later calibration which was compliant for silver and selenium.

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: WG403681 - All acceptance criteria were met.

Matrix Spikes: WG403681 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50149
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL05-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:53
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	NI.071912.145314
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL05-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:24
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	NI.071812.122421
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00145		0.00100	0.000500
Barium, Total	7440-39-3	0.111		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00259		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	0.00131	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00239	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00480		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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL18-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 15:09
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	NI.071912.150908
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2	0.00209		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL18-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:45
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	NI.071812.124529
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00191		0.00100	0.000500
Barium, Total	7440-39-3	0.144		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00380		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	0.00207		0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL16-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:48
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	NI.071812.124838
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00190		0.00100	0.000500
Barium, Total	7440-39-3	0.0724		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00158	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		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL16-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 15:12
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	NI.071912.151219
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Total	7782-49-2	0.00750		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:43
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.144349
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4		U	0.00100	0.000500

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-1	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:10
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00181		0.00100	0.000500
Barium, Total	7440-39-3	0.0767		0.00300	0.00150
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Chromium, Total	7440-47-3	0.00171	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		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00577		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 #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MS	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:13
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121330
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0630		0.00100	0.000500
Arsenic, Total	7440-38-2	0.0666		0.00100	0.000500
Barium, Total	7440-39-3	0.146		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0628		0.000600	0.000300
Chromium, Total	7440-47-3	0.0671		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0671		0.00100	0.000500
Copper, Total	7440-50-8	0.0637		0.00200	0.00100
Lead, Total	7439-92-1	0.0651		0.00100	0.000500
Manganese, Total	7439-96-5	0.0677		0.00200	0.00100
Nickel, Total	7440-02-0	0.0653		0.00400	0.00200
Selenium, Total	7782-49-2	0.0708		0.00100	0.000500
Thallium, Total	7440-28-0	0.0646		0.000200	0.000100

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MS	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:46
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.144658
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	0.0700		0.00100	0.000500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/18/2012 11:14
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/18/2012 12:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071812.121758
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0631		0.00100	0.000500

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.0664		0.00100	0.000500
Barium, Total	7440-39-3	0.147		0.00300	0.00150
Cadmium, Total	7440-43-9	0.0632		0.000600	0.000300
Chromium, Total	7440-47-3	0.0666		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0671		0.00100	0.000500
Copper, Total	7440-50-8	0.0660		0.00200	0.00100
Lead, Total	7439-92-1	0.0661		0.00100	0.000500
Manganese, Total	7439-96-5	0.0693		0.00200	0.00100
Nickel, Total	7440-02-0	0.0658		0.00400	0.00200
Selenium, Total	7782-49-2	0.0701		0.00100	0.000500
Thallium, Total	7440-28-0	0.0656		0.000200	0.000100

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	MPL17-0712-MSD	**Prep Method:**	3015	**Prep Date:**	07/13/2012 07:29
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	07/19/2012 14:08
Workgroup #:	WG403681	**Analyst:**	JYH	**Run Date:**	07/19/2012 14:50
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	NI.071912.145007
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Silver, Total	7440-22-4	0.0720		0.00100	0.000500

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: WG403259
Analyst: VC
Spike Analyst: VC
Run Date: 07/13/2012 07:29
Method: 3015
Balance: BAL016
Instrument: MW-2

SOP: ME407 Revison 12
Spike Solution: STD52132
Spike Witness: REK
HNO3 Lot #: COA16256
Digestion Tubes Lot #: COA16262
MS WG# 401311 SYRINGE FI COA16241
ICP-MS Water MDL SOLUT STD52755

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG403259-03	BLANK	1	40 mL	100 mL	206.72 g	206.702 g		
2	WG403259-04	LCS	1	40 mL	100 mL	206.964 g	206.949 g	.25 mL	
3	L12070001-01	ML01	1	40 mL	100 mL	208.044 g	208.031 g	20 mL	07/30/12
4	L12070003-01	ML01	1	40 mL	100 mL	208.603 g	208.593 g	40 mL	07/30/12
5	L12070327-01	SAMP	1	40 mL	100 mL	207.577 g	207.557 g		07/23/12
6	L12070327-02	SAMP	1	40 mL	100 mL	206.85 g	206.843 g		07/23/12
7	L12070327-03	SAMP	1	40 mL	100 mL	209.458 g	209.455 g		07/23/12
8	L12070328-01	SAMP	1	40 mL	100 mL	207.302 g	207.282 g		07/23/12
9	L12070328-02	SAMP	1	40 mL	100 mL	206.402 g	206.376 g		07/23/12
10	L12070328-03	SAMP	1	40 mL	100 mL	207.707 g	207.678 g		07/23/12
11	WG403259-01	REF	1	40 mL	100 mL	208.087 g	208.076 g		
12	L12070328-04	RS01	1	40 mL	100 mL	208.087 g	208.076 g		07/23/12
13	WG403259-05	MS	1	40 mL	100 mL	207.34 g	207.33 g	.25 mL	
14	L12070328-05	MS01	1	40 mL	100 mL	207.34 g	207.33 g	.25 mL	07/23/12
15	WG403259-06	MSD	1	40 mL	100 mL	205.013 g	205.006 g	.25 mL	
16	L12070328-06	SD01	1	40 mL	100 mL	205.013 g	205.006 g	.25 mL	07/23/12
17	L12070355-02	SAMP	2	40 mL	100 mL	206.956 g	206.958 g		07/23/12
18	L12070355-04	SAMP	2	40 mL	100 mL	207.083 g	207.074 g		07/23/12
19	WG403259-02	REF	2	40 mL	100 mL	207.145 g	207.139 g		
20	L12070355-06	SAMP	2	40 mL	100 mL	207.145 g	207.139 g		07/23/12
21	L12070355-08	SAMP	2	40 mL	100 mL	206.633 g	206.594 g		07/23/12
22	WG403259-08	DUP	1	40 mL	100 mL	206.97 g	206.972 g		
23	WG403259-07	MS	1	40 mL	100 mL	206.251 g	206.255 g	.25 mL	

Analyst: Vicki Collins

Reviewer:

MW_DIG - Modified 09/30/2009
PDF ID: 2494875
Report generated: 07/13/2012 11:12

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 071812B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42525

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

Workgroups: 403681,403587

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.071812.110121	Blank	Blank		1		07/18/12 11:01
2	NI.071812.110432	WG403737-01	Calibration Point		1		07/18/12 11:04
3	NI.071812.110742	WG403737-02	Calibration Point		1		07/18/12 11:07
4	NI.071812.111053	WG403737-03	Calibration Point		1		07/18/12 11:10
5	NI.071812.111404	WG403737-04	Calibration Point		1		07/18/12 11:14
6	NI.071812.111716	WG403737-05	Initial Calibration Verification		1		07/18/12 11:17
7	NI.071812.112028	WG403737-06	Initial Calib Blank		1		07/18/12 11:20
8	NI.071812.112339	WG403737-07	Low Level Initial Calibration V		1		07/18/12 11:23
9	NI.071812.112649	WG403737-08	Interference Check		1		07/18/12 11:26
10	NI.071812.112958	WG403737-09	Interference Check		1		07/18/12 11:29
11	NI.071812.113528	WG403737-10	CCV		1		07/18/12 11:35
12	NI.071812.113839	WG403737-11	CCB		1		07/18/12 11:38
13	NI.071812.114151	WG403259-03	Method/Prep Blank	40/100	1		07/18/12 11:41
14	NI.071812.114500	WG403259-04	Laboratory Control S	40/100	1		07/18/12 11:45
15	NI.071812.114810	L12070001-01	MDL-1	40/100	1		07/18/12 11:48
16	NI.071812.115119	L12070003-01	LOQ-1	40/100	1		07/18/12 11:51
17	NI.071812.115432	WG403737-12	CCV		1		07/18/12 11:54
18	NI.071812.115742	WG403737-13	CCB		1		07/18/12 11:57
19	NI.071812.120055	L12070327-01	MPL10-0712-1	40/100	1		07/18/12 12:00
20	NI.071812.120404	L12070327-02	MPL13-0712-1	40/100	1		07/18/12 12:04
21	NI.071812.120713	L12070327-03	MPL13-0712-2	40/100	1		07/18/12 12:07
22	NI.071812.121020	WG403259-01	Reference Sample		1	L12070328-04	07/18/12 12:10
23	NI.071812.121330	WG403259-05	Matrix Spike	40/100	1	L12070328-04	07/18/12 12:13
24	NI.071812.121758	WG403259-06	Matrix Spike Duplica	40/100	1	L12070328-04	07/18/12 12:17
25	NI.071812.122421	L12070328-01	MPL05-0712-1	40/100	1		07/18/12 12:24
26	NI.071812.122731	WG403681-01	Post Digestion Spike		1	L12070328-01	07/18/12 12:27
27	NI.071812.123556	WG403681-02	Serial Dilution		5	L12070328-01	07/18/12 12:35
28	NI.071812.123907	WG403737-14	CCV		1		07/18/12 12:39
29	NI.071812.124217	WG403737-15	CCB		1		07/18/12 12:42
30	NI.071812.124529	L12070328-02	MPL18-0712-1	40/100	1		07/18/12 12:45
31	NI.071812.124838	L12070328-03	MPL16-0712-1	40/100	1		07/18/12 12:48
32	NI.071812.125147	L12070355-02	DRL-G-MW-6A-DIS	40/100	1		07/18/12 12:51
33	NI.071812.125519	L12070355-04	DRL-G-MW-14-DIS	40/100	1		07/18/12 12:55
34	NI.071812.130057	WG403259-02	Reference Sample		1	L12070355-06	07/18/12 13:00

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 071812B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42525

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

Workgroups: 403681,403587

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.071812.130407	WG403259-08	Duplicate	40/100	1	L12070355-06	07/18/12 13:04
36	NI.071812.130715	WG403259-07	Matrix Spike	40/100	1	L12070355-06	07/18/12 13:07
37	NI.071812.131026	L12070355-08	DRL-K-EQBLK-3-DIS	40/100	1		07/18/12 13:10
38	NI.071812.131336	L12070293-31	1109.139.C.032	.5/200	50		07/18/12 13:13
39	NI.071812.131647	WG403737-16	CCV		1		07/18/12 13:16
40	NI.071812.131957	WG403737-17	CCB		1		07/18/12 13:19
41	NI.071812.134714	WG403737-18	Low Level Continuing Calibra		1		07/18/12 13:47

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 071912B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42542

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

Workgroups: 403681,403332,403888,403596

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.071912.135550	Blank	Blank		1		07/19/12 13:55
2	NI.071912.135902	WG403934-01	Calibration Point		1		07/19/12 13:59
3	NI.071912.140213	WG403934-02	Calibration Point		1		07/19/12 14:02
4	NI.071912.140523	WG403934-03	Calibration Point		1		07/19/12 14:05
5	NI.071912.140834	WG403934-04	Calibration Point		1		07/19/12 14:08
6	NI.071912.141147	WG403934-05	Initial Calibration Verification		1		07/19/12 14:11
7	NI.071912.141459	WG403934-06	Initial Calib Blank		1		07/19/12 14:14
8	NI.071912.141812	WG403934-07	Low Level Initial Calibration V		1		07/19/12 14:18
9	NI.071912.142122	WG403934-08	Interference Check		1		07/19/12 14:21
10	NI.071912.142431	WG403934-09	Interference Check		1		07/19/12 14:24
11	NI.071912.142744	WG403934-10	CCV		1		07/19/12 14:27
12	NI.071912.143054	WG403934-11	CCB		1		07/19/12 14:30
13	NI.071912.143730	WG403259-03	Method/Prep Blank	40/100	1		07/19/12 14:37
14	NI.071912.144040	WG403259-04	Laboratory Control S	40/100	1		07/19/12 14:40
15	NI.071912.144349	WG403259-01	Reference Sample		1	L12070328-04	07/19/12 14:43
16	NI.071912.144658	WG403259-05	Matrix Spike	40/100	1	L12070328-04	07/19/12 14:46
17	NI.071912.145007	WG403259-06	Matrix Spike Duplica	40/100	1	L12070328-04	07/19/12 14:50
18	NI.071912.145314	L12070328-01	MPL05-0712-1	40/100	1		07/19/12 14:53
19	NI.071912.145624	WG403681-01	Post Digestion Spike		1	L12070328-01	07/19/12 14:56
20	NI.071912.145933	WG403681-02	Serial Dilution		5	L12070328-01	07/19/12 14:59
21	NI.071912.150246	WG403934-12	CCV		1		07/19/12 15:02
22	NI.071912.150556	WG403934-13	CCB		1		07/19/12 15:05
23	NI.071912.150908	L12070328-02	MPL18-0712-1	40/100	1		07/19/12 15:09
24	NI.071912.151219	L12070328-03	MPL16-0712-1	40/100	1		07/19/12 15:12
25	NI.071912.151528	L12070327-01	MPL10-0712-1	40/100	1		07/19/12 15:15
26	NI.071912.151838	L12070327-02	MPL13-0712-1	40/100	1		07/19/12 15:18
27	NI.071912.152147	L12070327-03	MPL13-0712-2	40/100	1		07/19/12 15:21
28	NI.071912.152458	WG403934-14	CCV		1		07/19/12 15:24
29	NI.071912.152808	WG403934-15	CCB		1		07/19/12 15:28
30	NI.071912.154759	WG403245-02	Method/Prep Blank	40/100	1		07/19/12 15:47
31	NI.071912.155107	WG403245-03	Laboratory Control S	40/100	1		07/19/12 15:51
32	NI.071912.155417	WG403245-01	Reference Sample		1	L12070353-01	07/19/12 15:54
33	NI.071912.155726	WG403245-04	Matrix Spike	40/100	1	L12070353-01	07/19/12 15:57
34	NI.071912.160035	WG403245-05	Matrix Spike Duplica	40/100	1	L12070353-01	07/19/12 16:00

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 071912B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42542

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

Workgroups: 403681,403332,403888,403596

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.071912.160345	L12070286-01	KA3037	40/100	1		07/19/12 16:03
36	NI.071912.160656	L12070286-02	KA3037	40/100	1		07/19/12 16:06
37	NI.071912.161005	L12070286-03	KA3038	40/100	1		07/19/12 16:10
38	NI.071912.161314	WG403332-03	Post Digestion Spike		1	L12070286-03	07/19/12 16:13
39	NI.071912.161624	WG403332-04	Serial Dilution		5	L12070286-03	07/19/12 16:16
40	NI.071912.161935	WG403934-16	CCV		1		07/19/12 16:19
41	NI.071912.162245	WG403934-17	CCB		1		07/19/12 16:22
42	NI.071912.162557	L12070286-04	KA3038	40/100	1		07/19/12 16:25
43	NI.071912.162907	L12070286-05	KA3039	40/100	1		07/19/12 16:29
44	NI.071912.163216	L12070286-06	KA3039	40/100	1		07/19/12 16:32
45	NI.071912.163526	L12070286-07	KA3044	40/100	1		07/19/12 16:35
46	NI.071912.163835	L12070286-08	KA3044	40/100	1		07/19/12 16:38
47	NI.071912.164143	L12070286-09	ER0107	40/100	1		07/19/12 16:41
48	NI.071912.164453	WG403934-18	Interference Check		1		07/19/12 16:44
49	NI.071912.164802	WG403934-19	Interference Check		1		07/19/12 16:48
50	NI.071912.165114	WG403934-20	CCV		1		07/19/12 16:51
51	NI.071912.165424	WG403934-21	CCB		1		07/19/12 16:54
52	NI.071912.165736	WG403934-22	Low Level Continuing Calibra		1		07/19/12 16:57
53	NI.071912.170750	WG403527-02	Method/Prep Blank	.5/200	1		07/19/12 17:07
54	NI.071912.171100	WG403527-03	Laboratory Control S	.5/200	1		07/19/12 17:11
55	NI.071912.171410	WG403527-01	Reference Sample		5	L12070434-13	07/19/12 17:14
56	NI.071912.171721	WG403527-04	Matrix Spike	.538/200	5	L12070434-13	07/19/12 17:17
57	NI.071912.172030	WG403527-05	Matrix Spike Duplica	.524/200	5	L12070434-13	07/19/12 17:20
58	NI.071912.172341	L12070434-01	CO-75	.5/200	5		07/19/12 17:23
59	NI.071912.172651	L12070434-03	CO-85	.5/200	5		07/19/12 17:26
60	NI.071912.173000	WG403596-01	Post Digestion Spike		5	L12070434-03	07/19/12 17:30
61	NI.071912.173309	WG403596-02	Serial Dilution		25	L12070434-03	07/19/12 17:33
62	NI.071912.173621	WG403934-23	CCV		1		07/19/12 17:36
63	NI.071912.173932	WG403934-24	CCB		1		07/19/12 17:39
64	NI.071912.174245	L12070434-05	CO-101	.533/200	5		07/19/12 17:42
65	NI.071912.174554	L12070434-07	CO-62	.511/200	5		07/19/12 17:45
66	NI.071912.174903	L12070434-09	CO-63	.523/200	5		07/19/12 17:49
67	NI.071912.175213	L12070434-11	CO-79	.532/200	5		07/19/12 17:52
68	NI.071912.175525	WG403934-25	CCV		1		07/19/12 17:55

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 071912B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700A Rev:
Maintenance Log ID: 42542

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

Workgroups: 403681,403332,403888,403596

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	NI.071912.175835	WG403934-26	CCB		1		07/19/12 17:58
70	NI.071912.180146	WG403646-01	Method/Prep Blank	10/200	1		07/19/12 18:01
71	NI.071912.180456	WG403646-02	Laboratory Control S	10/200	1		07/19/12 18:04
72	NI.071912.180806	WG403646-03	Laboratory Control S	10/200	5		07/19/12 18:08
73	NI.071912.181115	L12070434-02	CO-75	L0.028/200	5		07/19/12 18:11
74	NI.071912.181425	L12070434-04	CO-85	L0.026/200	5		07/19/12 18:14
75	NI.071912.181734	L12070434-06	CO-101	L0.391/200	5		07/19/12 18:17
76	NI.071912.182044	WG403888-01	Post Digestion Spike		5	L12070434-06	07/19/12 18:20
77	NI.071912.182353	WG403888-02	Serial Dilution		25	L12070434-06	07/19/12 18:23
78	NI.071912.182705	WG403934-27	CCV		1		07/19/12 18:27
79	NI.071912.183015	WG403934-28	CCB		1		07/19/12 18:30
80	NI.071912.183327	L12070434-08	CO-62	L0.003/200	5		07/19/12 18:33
81	NI.071912.183636	L12070434-10	CO-63	L0.326/200	5		07/19/12 18:36
82	NI.071912.183946	L12070434-12	CO-79	L0.182/200	5		07/19/12 18:39
83	NI.071912.184256	L12070434-14	CO-94	L0.107/200	5		07/19/12 18:42
84	NI.071912.184608	WG403934-29	CCV		1		07/19/12 18:46
85	NI.071912.184918	WG403934-30	CCB		1		07/19/12 18:49
86	NI.071912.185230	WG403934-31	Low Level Continuing Calibra		1		07/19/12 18:52

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Microbac Laboratories Inc.

Data Checklist

Date: 18-JUL-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ICP-MS2
Curve Workgroup: 403737
Runlog ID: 47908
Analytical Workgroups: 403681,403587

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	327,328
Client Forms	
Level X	
Level 3	
Level 4	327,328,293
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	SLP
Comments	

Primary Reviewer: Secondary Reviewer:
20-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-20-2012 12:00:08

Microbac Laboratories Inc.

Data Checklist

Date: 19-JUL-2012
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ICP-MS2
Curve Workgroup: 403934
Runlog ID: 47941
Analytical Workgroups: 403691,403332,403888,403596

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	286,434
Client Forms	
Level X	
Level 3	434
Level 4	327,328,286
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	SLP
Comments	

Primary Reviewer:

Secondary Reviewer:
20-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-20-2012 14:31:27

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 AAB#: WG403681

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/13/2012	1.9	180		07/18/12	7.1	180	
MPL05-0712-1	01	07/11/12					07/13/2012	1.9	180		07/19/12	8.2	180	
MPL18-0712-1	02	07/11/12					07/13/2012	1.9	180		07/19/12	8.2	180	
MPL18-0712-1	02	07/11/12					07/13/2012	1.9	180		07/18/12	7.1	180	
MPL16-0712-1	03	07/11/12					07/13/2012	1.8	180		07/19/12	8.1	180	
MPL16-0712-1	03	07/11/12					07/13/2012	1.8	180		07/18/12	7	180	
MPL17-0712-1	04	07/11/12					07/13/2012	1.7	180		07/19/12	8	180	
MPL17-0712-1	04	07/11/12					07/13/2012	1.7	180		07/18/12	6.9	180	
MPL17-0712-MS	05	07/11/12					07/13/2012	1.7	180		07/19/12	8	180	
MPL17-0712-MS	05	07/11/12					07/13/2012	1.7	180		07/18/12	6.9	180	
MPL17-0712-MSD	06	07/11/12					07/13/2012	1.7	180		07/19/12	8	180	
MPL17-0712-MSD	06	07/11/12					07/13/2012	1.7	180		07/18/12	6.9	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2502957
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: NI.071812.114151
Prep Date: 07/13/12 07:29
Analyzed Date: 07/18/12 11:41
Analyst: JYH

Work Group: WG403681
Blank Sample ID: WG403259-03
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	WG403259-04	NI.071812.114500	07/18/12 11:45	01
MPL17-0712-1	L12070328-04	NI.071812.121020	07/18/12 12:10	01
MPL17-0712-MS	L12070328-05	NI.071812.121330	07/18/12 12:13	01
MPL17-0712-MSD	L12070328-06	NI.071812.121758	07/18/12 12:17	01
MPL05-0712-1	L12070328-01	NI.071812.122421	07/18/12 12:24	01
MPL18-0712-1	L12070328-02	NI.071812.124529	07/18/12 12:45	01
MPL16-0712-1	L12070328-03	NI.071812.124838	07/18/12 12:48	01
DUP	WG403259-08	NI.071812.130407	07/18/12 13:04	01
LCS	WG403259-04	NI.071912.144040	07/19/12 14:40	02
MPL17-0712-1	L12070328-04	NI.071912.144349	07/19/12 14:43	02
MPL17-0712-MS	L12070328-05	NI.071912.144658	07/19/12 14:46	02
MPL17-0712-MSD	L12070328-06	NI.071912.145007	07/19/12 14:50	02
MPL05-0712-1	L12070328-01	NI.071912.145314	07/19/12 14:53	02
MPL18-0712-1	L12070328-02	NI.071912.150908	07/19/12 15:09	02
MPL16-0712-1	L12070328-03	NI.071912.151219	07/19/12 15:12	02

Report Name: BLANK_SUMMARY
PDF File ID: 2502958
Report generated 07/20/2012 09:33

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/13/12 07:29 Sample ID: WG403259-03
Instrument ID: ICP-MS2 Run Date: 07/18/12 11:41 Prep Method: 3015
File ID: NI.071812.114151 Analyst: JYH Method: 6020
Workgroup (AAB#): WG403681 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-18-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: 2502959
20-JUL-2012 09:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/18/2012 Sample ID: WG403259-04
Instrument ID: ICP-MS2 Run Time: 11:45 Prep Method: 3015
File ID: NI.071812.114500 Analyst: JYH Method: 6020
Workgroup (AAB#): WG403681 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52132 Cal ID: ICP-MS-18-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.0625	0.0608	97.2	80 - 120	
Arsenic, Total	0.0625	0.0602	96.4	80 - 120	
Barium, Total	0.0625	0.0631	101	80 - 120	
Cadmium, Total	0.0625	0.0620	99.2	80 - 120	
Chromium, Total	0.0625	0.0635	102	80 - 120	
Cobalt, Total	0.0625	0.0636	102	80 - 120	
Copper, Total	0.0625	0.0650	104	80 - 120	
Lead, Total	0.0625	0.0643	103	80 - 120	
Manganese, Total	0.0625	0.0637	102	80 - 120	
Nickel, Total	0.0625	0.0636	102	80 - 120	
Selenium, Total	0.0625	0.0588	94.1	80 - 120	
Silver, Total	0.0625	0.0660	106	80 - 120	
Thallium, Total	0.0625	0.0627	100	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2502960
Report generated: 07/20/2012 09:33

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: ICP-MS2- 18-JUL-12 Worknum: WG403681
Instrument ID: ICP-MS2 Contract #: Prep Method: 3015
Parent ID: L12070328-04 File ID: NI.071812.121020 Dil: 1 Method: 6020
Sample ID: L12070328-05 MS File ID: NI.071812.121330 Dil: 1 Matrix: Water
Sample ID: L12070328-06 MSD File ID: NI.071812.121758 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	U	0.0625	0.0630	101	0.0625	0.0631	101	0.153	80 - 120	20	
Arsenic, Total	0.00181	0.0625	0.0666	104	0.0625	0.0664	103	0.216	80 - 120	20	
Barium, Total	0.0767	0.0625	0.146	111	0.0625	0.147	112	0.194	80 - 120	20	
Cadmium, Total	U	0.0625	0.0628	100	0.0625	0.0632	101	0.690	80 - 120	20	
Chromium, Total	0.00171	0.0625	0.0671	105	0.0625	0.0666	104	0.709	80 - 120	20	
Cobalt, Total	U	0.0625	0.0671	107	0.0625	0.0671	107	0.0201	80 - 120	20	
Copper, Total	U	0.0625	0.0637	102	0.0625	0.0660	106	3.61	80 - 120	20	
Lead, Total	U	0.0625	0.0651	104	0.0625	0.0661	106	1.52	80 - 120	20	
Manganese, Total	U	0.0625	0.0677	108	0.0625	0.0693	111	2.30	80 - 120	20	
Nickel, Total	U	0.0625	0.0653	104	0.0625	0.0658	105	0.890	80 - 120	20	
Selenium, Total	0.00577	0.0625	0.0708	104	0.0625	0.0701	103	1.01	80 - 120	20	
Thallium, Total	U	0.0625	0.0646	103	0.0625	0.0656	105	1.47	80 - 120	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2502961
Report generated 07/20/2012 09:33

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: ICP-MS2- 19-JUL-12 Worknum: WG403681

Instrument ID: ICP-MS2 Contract #: Prep Method: 3015

Parent ID: L12070328-04 File ID: NI.071912.144349 Dil: 1 Method: 6020

Sample ID: L12070328-05 MS File ID: NI.071912.144658 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: NI.071912.145007 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Silver, Total	U	0.0625	0.0700	112	0.0625	0.0720	115	2.83	80 - 120	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2502961
Report generated 07/20/2012 09:33

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12070328 **Worknum:** WG403681
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG403681-02 **File ID:** NI.071812.123556 **Dil:** 5 **Units:** ug/L
Sample: L12070328-01 **File ID:** NI.071812.122421 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	0.582	X	ND	U		
Barium	44.5	X	46.2	X	3.71	
Cadmium	ND	U	ND	U		
Chromium	1.04	X	ND	U		
Cobalt	ND	U	ND	U		
Copper	ND	U	ND	U		
Lead	ND	U	ND	U		
Manganese	0.523	F	ND	U		
Nickel	0.954	F	ND	U		
Selenium	1.92	X	1.86	F	3.01	
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: 2502955
07/20/2012 09:32

Microbac Laboratories Inc.
Serial Dilution Report

Login: L12070328 **Worknum:** WG403681
Instrument: ICP-MS2 **Method:** 6020
Serial Dil: WG403681-02 **File ID:** NI.071912.145933 **Dil:** 5 **Units:** ug/L
Sample: L12070328-01 **File ID:** NI.071912.145314 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	ND	U	ND	U		
Arsenic	0.633	X	ND	U		
Barium	42.2	X	41.8	X	0.94	
Cadmium	ND	U	ND	U		
Chromium	0.949	X	ND	U		
Cobalt	ND	U	ND	U		
Copper	ND	U	ND	U		
Lead	ND	U	ND	U		
Manganese	1.61	X	6.19	X	284.00	
Nickel	0.929	F	ND	U		
Selenium	2.01	X	1.83	F	8.98	
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: 2502955
07/20/2012 09:32

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070328 **Worknum:** WG403681
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG403681-01 **File ID:** NI.071812.122731 **Dil:** 1 **Units:** ug/L
Sample ID: L12070328-01 **File ID:** NI.071812.122421 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	46.8		0	U	50	93.6	75 - 125	
ARSENIC	47.4		0.582		50	93.7	75 - 125	
BARIUM	94.4		44.5		50	99.7	75 - 125	
CADMIUM	46.2		0	U	50	92.4	75 - 125	
CHROMIUM	50.1		1.04		50	98.2	75 - 125	
COBALT	50.8		0	U	50	101.6	75 - 125	
COPPER	47.7		0	U	50	95.4	75 - 125	
LEAD	49.6		0	U	50	99.2	75 - 125	
MANGANESE	51.2		0.523	F	50	101.3	75 - 125	
NICKEL	48.0		0.954	F	50	94.1	75 - 125	
SELENIUM	49.1		1.92		50	94.4	75 - 125	
SILVER	48.0		0	U	50	96.1	75 - 125	
THALLIUM	49.6		0	U	50	99.3	75 - 125	

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

POST_SPIKE - Modified 03/06/2008
PDF File ID: 2502956
Report generated: 07/20/2012 09:32

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070328 **Worknum:** WG403681
Instrument ID: ICP-MS2 **Method:** 6020
Post Spike ID: WG403681-01 **File ID:** NI.071912.145624 **Dil:** 1 **Units:** ug/L
Sample ID: L12070328-01 **File ID:** NI.071912.145314 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	47.6		0	U	50	95.3	75 - 125	
ARSENIC	47.7		0.633		50	94.1	75 - 125	
BARIUM	87.8		42.2		50	91.2	75 - 125	
CADMIUM	48.6		0	U	50	97.2	75 - 125	
CHROMIUM	48.5		0.949		50	95.1	75 - 125	
COBALT	49.1		0	U	50	98.2	75 - 125	
COPPER	47.4		0	U	50	94.8	75 - 125	
LEAD	47.6		0	U	50	95.2	75 - 125	
MANGANESE	50.2		1.61		50	97.3	75 - 125	
NICKEL	47.9		0.929	F	50	94.0	75 - 125	
SELENIUM	49.5		2.01		50	94.9	75 - 125	
SILVER	53.8		0	U	50	107.7	75 - 125	
THALLIUM	47.7		0	U	50	95.5	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: 2502956
Report generated: 07/20/2012 09:32

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L12070328**	Workgroup (AAB#):	**WG403681**
Analytical Method:	**6020**	Instrument ID:	**ICP-MS2**
ICAL Worknum:	**WG403737**	Initial Calibration Date:	**18-JUL-2012 11:14**

	WG403737-01		WG403737-02		WG403737-03		WG403737-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	160	.4	464	50	371000	100	703000	1	
ARSENIC	0	-101	.4	-98.3	50	37300	100	72300	.999953	
BARIUM	0	20.3	.4	174	50	152000	100	289000	.999998	
CADMIUM	0	49.3	.4	171	50	136000	100	257000	.999997	
CHROMIUM	0	5980	.4	6470	50	310000	100	590000	.999901	
COBALT	0	69.3	.4	442	50	356000	100	687000	.999931	
COPPER	0	56.7	.4	134	50	77200	100	149000	.999952	
LEAD	0	1020	.4	2850	50	1840000	100	3440000	.999975	
MANGANESE	0	544	.4	1150	50	504000	100	960000	.999835	
NICKEL	0	40.3	.4	128	50	86400	100	168000	.999962	
SELENIUM	0	16.5	.4	13.5	50	3920	100	7470	.999853	
SILVER	0	62.3	.4	348	50	332000	100	601000	.999714	
THALLIUM	0	12.3	.4	600	50	592000	100	1140000	.999986	

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: 2502964
Report generated: 20-JUL-2012 09:18

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	L12070328	Workgroup (AAB#):	WG403681
Analytical Method:	6020	Instrument ID:	ICP-MS2
ICAL Worknum:	WG403934	Initial Calibration Date:	19-JUL-2012 14:08

	WG403934-01		WG403934-02		WG403934-03		WG403934-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	68.2	.4	448	50	434000	100	878000	.999956	
ARSENIC	0	-131	.4	-109	50	42800	100	85000	1	
BARIUM	0	31.3	.4	233	50	193000	100	383000	1	
CADMIUM	0	58.9	.4	229	50	164000	100	319000	.999966	
CHROMIUM	0	6780	.4	7050	50	343000	100	668000	.999999	
COBALT	0	82.0	.4	494	50	404000	100	810000	.999975	
COPPER	0	74.0	.4	172	50	89800	100	175000	.999985	
LEAD	0	1310	.4	3730	50	2260000	100	4450000	1	
MANGANESE	0	1030	.4	1650	50	596000	100	1180000	1	
NICKEL	0	46.7	.4	145	50	94900	100	188000	.999999	
SELENIUM	0	20.9	.4	20.2	50	4260	100	8490	.999985	
SILVER	0	72.0	.4	316	50	307000	100	611000	.999999	
THALLIUM	0	41.0	.4	782	50	745000	100	1460000	.999999	

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: 2502964
Report generated: 20-JUL-2012 09:18

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070328
Instrument ID: ICP-MS2
File ID: NI.071812.112028
Workgroup (AAB#): WG403681
Matrix: WATER

Run Date: 07/18/2012
Run Time: 11:20
Analyst: JYH
Cal ID: ICP-MS2 - 18-JUL-12

Sample ID: WG403737-06
Method: 6020
Units: ug/L

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
MANGANESE	.4	.8	.4	U
NICKEL	.8	1.6	.8	U
LEAD	.2	.4	.2	U
ANTIMONY	.2	.4	.2	U
SELENIUM	.2	.4	.2	U
THALLIUM	.04	.08	.04	U

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

ICB - Modified 07/14/2009
PDF File ID: 2502966
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070328
Instrument ID: ICP-MS2
File ID: NI.071912.141459
Workgroup (AAB#): WG403681
Matrix: WATER

Run Date: 07/19/2012
Run Time: 14:14
Analyst: JYH
Cal ID: ICP-MS2 - 19-JUL-12

Sample ID: WG403934-06
Method: 6020
Units: ug/L

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.4	.2	U
ARSENIC	.2	.4	.2	U
BARIUM	.6	1.2	.6	U
CADMIUM	.12	.24	.12	U
COBALT	.2	.4	.2	U
CHROMIUM	.4	.8	.4	U
COPPER	.4	.8	.4	U
MANGANESE	.4	.8	.4	U
NICKEL	.8	1.6	.8	U
LEAD	.2	.4	.2	U
ANTIMONY	.2	.4	.2	U
SELENIUM	.2	.4	.2	U
THALLIUM	.04	.08	.04	U

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

ICB - Modified 07/14/2009
PDF File ID: 2502966
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/18/2012
Sample ID: WG403737-11
Instrument ID: ICP-MS2
Run Time: 11:38
Method: 6020
File ID: NI.071812.113839
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 18-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: 2502971
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/18/2012
Sample ID: WG403737-13
Instrument ID: ICP-MS2
Run Time: 11:57
Method: 6020
File ID: NI.071812.115742
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 18-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: 2502971
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/18/2012
Sample ID: WG403737-15
Instrument ID: ICP-MS2
Run Time: 12:42
Method: 6020
File ID: NI.071812.124217
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 18-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: 2502971
Report generated 07/20/2012 09:18

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/18/2012
Sample ID: WG403737-17
Instrument ID: ICP-MS2
Run Time: 13:19
Method: 6020
File ID: NI.071812.131957
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 18-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.

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CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328 Run Date: 07/19/2012 Sample ID: WG403934-11
Instrument ID: ICP-MS2 Run Time: 14:30 Method: 6020
File ID: NI.071912.143054 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 19-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.

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Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/19/2012
Sample ID: WG403934-13
Instrument ID: ICP-MS2
Run Time: 15:05
Method: 6020
File ID: NI.071912.150556
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 19-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.

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Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/19/2012
Sample ID: WG403934-15
Instrument ID: ICP-MS2
Run Time: 15:28
Method: 6020
File ID: NI.071912.152808
Analyst: JYH
Units: ug/L
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 19-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.

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Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)

(Alternate Source)

Login Number: L12070328 Run Date: 07/18/2012 Sample ID: WG403737-05

Instrument ID: ICP-MS2 Run Time: 11:17 Method: 6020

File ID: NI.071812.111716 Analyst: JYH Units: ug/L

Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 18-JUL-12

QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	49.7	99.4	90 - 110	
Arsenic		50	49.8	99.6	90 - 110	
Barium		50	50.4	101	90 - 110	
Cadmium		50	49.3	98.6	90 - 110	
Chromium		50	49.2	98.5	90 - 110	
Cobalt		50	49.2	98.4	90 - 110	
Copper		50	50.1	100	90 - 110	
Lead		50	50.2	100	90 - 110	
Manganese		50	49.5	99.0	90 - 110	
Nickel		50	49.3	98.5	90 - 110	
Selenium		50	48.8	97.6	90 - 110	
Silver		50	48.1	96.2	90 - 110	
Thallium		50	49.7	99.3	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
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Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12070328 Run Date: 07/19/2012 Sample ID: WG403934-05
Instrument ID: ICP-MS2 Run Time: 14:11 Method: 6020
File ID: NI.071912.141147 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 19-JUL-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	49.9	99.8	90 - 110	
Arsenic		50	50.3	101	90 - 110	
Barium		50	49.8	99.6	90 - 110	
Cadmium		50	50.3	101	90 - 110	
Chromium		50	49.6	99.3	90 - 110	
Cobalt		50	50.0	99.9	90 - 110	
Copper		50	50.0	100	90 - 110	
Lead		50	49.7	99.5	90 - 110	
Manganese		50	50.6	101	90 - 110	
Nickel		50	50.2	100	90 - 110	
Selenium		50	50.1	100	90 - 110	
Silver		50	50.7	101	90 - 110	
Thallium		50	49.5	99.1	90 - 110	

* Exceeds LIMITS Limit

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328 Run Date: 07/18/2012 Sample ID: WG403737-10
Instrument ID: ICP-MS2 Run Time: 11:35 Method: 6020
File ID: NI.071812.113528 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 18-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	49.6	ug/L	99.2	90 - 110		
Arsenic		50.0	50.0	ug/L	100	90 - 110		
Barium		50.0	50.4	ug/L	101	90 - 110		
Cadmium		50.0	49.8	ug/L	99.6	90 - 110		
Chromium		50.0	50.0	ug/L	100	90 - 110		
Cobalt		50.0	50.1	ug/L	100	90 - 110		
Copper		50.0	49.7	ug/L	99.3	90 - 110		
Lead		50.0	51.0	ug/L	102	90 - 110		
Manganese		50.0	50.6	ug/L	101	90 - 110		
Nickel		50.0	50.0	ug/L	100	90 - 110		
Selenium		50.0	50.5	ug/L	101	90 - 110		
Silver		50.0	50.4	ug/L	101	90 - 110		
Thallium		50.0	50.5	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328 Run Date: 07/18/2012 Sample ID: WG403737-12
Instrument ID: ICP-MS2 Run Time: 11:54 Method: 6020
File ID: NI.071812.115432 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 18-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	49.8	ug/L	99.6	90 - 110		
Arsenic		50.0	49.6	ug/L	99.2	90 - 110		
Barium		50.0	51.5	ug/L	103	90 - 110		
Cadmium		50.0	50.1	ug/L	100	90 - 110		
Chromium		50.0	48.7	ug/L	97.5	90 - 110		
Cobalt		50.0	49.4	ug/L	98.9	90 - 110		
Copper		50.0	49.8	ug/L	99.6	90 - 110		
Lead		50.0	51.0	ug/L	102	90 - 110		
Manganese		50.0	49.9	ug/L	99.9	90 - 110		
Nickel		50.0	49.5	ug/L	99.0	90 - 110		
Selenium		50.0	49.2	ug/L	98.3	90 - 110		
Silver		50.0	49.9	ug/L	99.7	90 - 110		
Thallium		50.0	50.5	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/18/2012
Sample ID: WG403737-14
Instrument ID: ICP-MS2
Run Time: 12:39
Method: 6020
File ID: NI.071812.123907
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 18-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.7	ug/L	97.4	90 - 110		
Arsenic		50.0	49.1	ug/L	98.2	90 - 110		
Barium		50.0	53.1	ug/L	106	90 - 110		
Cadmium		50.0	49.3	ug/L	98.5	90 - 110		
Chromium		50.0	50.8	ug/L	102	90 - 110		
Cobalt		50.0	52.4	ug/L	105	90 - 110		
Copper		50.0	50.0	ug/L	100	90 - 110		
Lead		50.0	50.5	ug/L	101	90 - 110		
Manganese		50.0	52.9	ug/L	106	90 - 110		
Nickel		50.0	49.5	ug/L	98.9	90 - 110		
Selenium		50.0	49.5	ug/L	99.0	90 - 110		
Silver		50.0	44.8	ug/L	89.6	90 - 110		*
Thallium		50.0	50.3	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328 Run Date: 07/18/2012 Sample ID: WG403737-16
Instrument ID: ICP-MS2 Run Time: 13:16 Method: 6020
File ID: NI.071812.131647 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 18-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	47.5	ug/L	94.9	90 - 110		
Arsenic		50.0	47.8	ug/L	95.5	90 - 110		
Barium		50.0	53.3	ug/L	107	90 - 110		
Cadmium		50.0	47.6	ug/L	95.1	90 - 110		
Chromium		50.0	47.6	ug/L	95.2	90 - 110		
Cobalt		50.0	46.4	ug/L	92.7	90 - 110		
Copper		50.0	48.8	ug/L	97.5	90 - 110		
Lead		50.0	50.6	ug/L	101	90 - 110		
Manganese		50.0	47.3	ug/L	94.7	90 - 110		
Nickel		50.0	47.2	ug/L	94.5	90 - 110		
Selenium		50.0	43.6	ug/L	87.2	90 - 110		*
Silver		50.0	41.1	ug/L	82.2	90 - 110		*
Thallium		50.0	50.8	ug/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/19/2012
Sample ID: WG403934-10
Instrument ID: ICP-MS2
Run Time: 14:27
Method: 6020
File ID: NI.071912.142744
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 19-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.0	ug/L	100	90 - 110		
Arsenic		50.0	50.6	ug/L	101	90 - 110		
Barium		50.0	48.8	ug/L	97.5	90 - 110		
Cadmium		50.0	51.2	ug/L	102	90 - 110		
Chromium		50.0	50.1	ug/L	100	90 - 110		
Cobalt		50.0	50.5	ug/L	101	90 - 110		
Copper		50.0	50.4	ug/L	101	90 - 110		
Lead		50.0	49.6	ug/L	99.2	90 - 110		
Manganese		50.0	51.1	ug/L	102	90 - 110		
Nickel		50.0	50.0	ug/L	100	90 - 110		
Selenium		50.0	51.9	ug/L	104	90 - 110		
Silver		50.0	52.5	ug/L	105	90 - 110		
Thallium		50.0	49.8	ug/L	99.7	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328 Run Date: 07/19/2012 Sample ID: WG403934-12
Instrument ID: ICP-MS2 Run Time: 15:02 Method: 6020
File ID: NI.071912.150246 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG403681 Cal ID: ICP-MS - 19-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	50.0	ug/L	100	90 - 110		
Arsenic		50.0	50.1	ug/L	100	90 - 110		
Barium		50.0	48.4	ug/L	96.8	90 - 110		
Cadmium		50.0	51.9	ug/L	104	90 - 110		
Chromium		50.0	49.5	ug/L	98.9	90 - 110		
Cobalt		50.0	51.4	ug/L	103	90 - 110		
Copper		50.0	50.1	ug/L	100	90 - 110		
Lead		50.0	49.8	ug/L	99.6	90 - 110		
Manganese		50.0	52.0	ug/L	104	90 - 110		
Nickel		50.0	49.3	ug/L	98.5	90 - 110		
Selenium		50.0	51.2	ug/L	102	90 - 110		
Silver		50.0	53.6	ug/L	107	90 - 110		
Thallium		50.0	49.4	ug/L	98.9	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/19/2012
Sample ID: WG403934-14
Instrument ID: ICP-MS2
Run Time: 15:24
Method: 6020
File ID: NI.071912.152458
Analyst: JYH
QC Key: DOD4
Workgroup (AAB#): WG403681
Cal ID: ICP-MS - 19-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		50.0	48.9	ug/L	97.8	90 - 110		
Arsenic		50.0	49.3	ug/L	98.6	90 - 110		
Barium		50.0	47.4	ug/L	94.8	90 - 110		
Cadmium		50.0	51.1	ug/L	102	90 - 110		
Chromium		50.0	47.5	ug/L	94.9	90 - 110		
Cobalt		50.0	50.5	ug/L	101	90 - 110		
Copper		50.0	48.6	ug/L	97.2	90 - 110		
Lead		50.0	48.7	ug/L	97.4	90 - 110		
Manganese		50.0	51.0	ug/L	102	90 - 110		
Nickel		50.0	48.3	ug/L	96.5	90 - 110		
Selenium		50.0	51.0	ug/L	102	90 - 110		
Silver		50.0	54.6	ug/L	109	90 - 110		
Thallium		50.0	48.5	ug/L	97.1	90 - 110		

* Exceeds LIMITS Criteria

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070328 **Workgroup (AAB#):** WG403681
Instrument ID: ICP-MS2 **Method:** 6020
Sol. A : WG403737-08 **File ID:** NI.071812.112649 **Units:** ug/L
Sol. AB : WG403737-09 **File ID:** NI.071812.112958 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0356	NS	100	99.7	99.7	
Arsenic	NS	0.0371	NS	100	100	100	
Barium	NS	0.00980	NS	100	99.0	99.0	
Cadmium	NS	-0.0704	NS	100	99.2	99.2	
Chromium	NS	-0.0304	NS	100	97.2	97.2	
Cobalt	NS	0.0106	NS	100	98.3	98.3	
Copper	NS	0.104	NS	100	97.8	97.8	
Lead	NS	0.0165	NS	100	98.0	98.0	
Manganese	NS	0.0157	NS	100	97.5	97.5	
Nickel	NS	0.270	NS	100	97.0	97.0	
Selenium	NS	0.0733	NS	100	103	103	
Silver	NS	0.0204	NS	100	109	109	
Thallium	NS	0.00400	NS	100	97.1	97.1	

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

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L12070328 **Workgroup (AAB#):** WG403681
Instrument ID: ICP-MS2 **Method:** 6020
Sol. A : WG403934-08 **File ID:** NI.071912.142122 **Units:** ug/L
Sol. AB : WG403934-09 **File ID:** NI.071912.142431 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.0498	NS	100	101	101	
Arsenic	NS	0.00570	NS	100	102	102	
Barium	NS	0.00920	NS	100	95.6	95.6	
Cadmium	NS	-0.0219	NS	100	101	101	
Chromium	NS	-0.0456	NS	100	96.9	96.9	
Cobalt	NS	0.0206	NS	100	100	100	
Copper	NS	0.109	NS	100	97.9	97.9	
Lead	NS	0.0107	NS	100	99.2	99.2	
Manganese	NS	-0.0106	NS	100	99.7	99.7	
Nickel	NS	0.431	NS	100	98.3	98.3	
Selenium	NS	0.0214	NS	100	103	103	
Silver	NS	0.0240	NS	100	104	104	
Thallium	NS	0.00970	NS	100	97.5	97.5	

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.

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Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12070328 **Analytical Method:** 6020
Analytical Workgroup: WG403681 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 18-JUL-2012 11:04

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12070328-01	SAMP	18-JUL-2012 12:24	110.066	99.996	107.74	
L12070328-02	SAMP	18-JUL-2012 12:45	108.055	99.858	104.824	
L12070328-03	SAMP	18-JUL-2012 12:48	109.139	100.401	106.881	
L12070328-04	SAMP	18-JUL-2012 12:10	106.47	97.336	104.361	
L12070328-05	SAMP	18-JUL-2012 12:13	109.361	99.103	105.429	
L12070328-06	SAMP	18-JUL-2012 12:17	109.055	99.283	105.638	
WG403259-03	BLANK	18-JUL-2012 11:41	99.865	98.309	98.711	
WG403259-04	LCS	18-JUL-2012 11:45	107.183	109.114	109.279	
WG403259-08	DUP	18-JUL-2012 13:04	82.072	92.04	80.773	
WG403681-01	PSPK	18-JUL-2012 12:27	113.744	105.646	114.657	
WG403681-02	SERIAL	18-JUL-2012 12:35	100.168	87.857	91.431	
WG403737-05	ICV	18-JUL-2012 11:17	96.284	99.842	96.383	
WG403737-06	ICB	18-JUL-2012 11:20	96.216	98.777	94.939	
WG403737-07	LLICV	18-JUL-2012 11:23	97.679	99.108	98.122	
WG403737-08	ICS	18-JUL-2012 11:26	90.593	87.422	85.198	
WG403737-09	ICS	18-JUL-2012 11:29	102.013	100.294	101.122	
WG403737-10	CCV	18-JUL-2012 11:35	99.967	99.888	100.69	
WG403737-11	CCB	18-JUL-2012 11:38	100.725	98.22	97.662	
WG403737-12	CCV	18-JUL-2012 11:54	98.696	100.687	98.296	
WG403737-13	CCB	18-JUL-2012 11:57	99.411	98.744	98.667	
WG403737-14	CCV	18-JUL-2012 12:39	106.588	96.797	101.433	
WG403737-15	CCB	18-JUL-2012 12:42	107.055	95.693	100.819	
WG403737-16	CCV	18-JUL-2012 13:16	93.181	107.532	90.664	
WG403737-17	CCB	18-JUL-2012 13:19	94.882	106.794	91.196	
WG403737-18	LLCCV	18-JUL-2012 13:47	98.977	113.013	98.567	

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: 2502963
Report generated: 07/20/2012 09:33

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L12070328 **Analytical Method:** 6020
Analytical Workgroup: WG403681 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** JYH
ICAL Date: 19-JUL-2012 13:59

			BISMUTH	GERMANIUM	INDIUM	TERBIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec	% Rec
L12070328-01	SAMP	19-JUL-2012 14:53	101.534	103.449	107.229	
L12070328-02	SAMP	19-JUL-2012 15:09	102.435	106.034	110.36	
L12070328-03	SAMP	19-JUL-2012 15:12	101.94	104.131	108.663	
L12070328-04	SAMP	19-JUL-2012 14:43	101.158	105.43	107.805	
L12070328-05	SAMP	19-JUL-2012 14:46	100.671	104.598	107.036	
L12070328-06	SAMP	19-JUL-2012 14:50	102.075	105.257	107.828	
WG403259-03	BLANK	19-JUL-2012 14:37	102.3	101.614	102.647	
WG403259-04	LCS	19-JUL-2012 14:40	108.112	112.854	114.39	
WG403681-01	PSPK	19-JUL-2012 14:56	105.124	110.266	115.473	
WG403681-02	SERIAL	19-JUL-2012 14:59	104.065	105.343	108.563	
WG403934-05	ICV	19-JUL-2012 14:11	100.647	103.674	102.967	
WG403934-06	ICB	19-JUL-2012 14:14	99.488	99.205	98.682	
WG403934-07	LLICV	19-JUL-2012 14:18	100.501	101.789	101.316	
WG403934-08	ICS	19-JUL-2012 14:21	91.477	88.815	89.05	
WG403934-09	ICS	19-JUL-2012 14:24	101.669	103.088	104.933	
WG403934-10	CCV	19-JUL-2012 14:27	102.227	104.421	106.168	
WG403934-11	CCB	19-JUL-2012 14:30	102.219	102.698	105.387	
WG403934-12	CCV	19-JUL-2012 15:02	102.269	104.277	107.187	
WG403934-13	CCB	19-JUL-2012 15:05	102.635	101.057	104.958	
WG403934-14	CCV	19-JUL-2012 15:24	102.656	104.033	107.65	
WG403934-15	CCB	19-JUL-2012 15:28	102.104	100.908	106.919	
WG403934-16	CCV	19-JUL-2012 16:19	96.891	93.79	98.857	
WG403934-17	CCB	19-JUL-2012 16:22	98.545	94.727	99.14	
WG403934-18	ICS	19-JUL-2012 16:44	81.469	77.378	76.57	
WG403934-19	ICS	19-JUL-2012 16:48	91.783	90.669	91.182	
WG403934-20	CCV	19-JUL-2012 16:51	93.064	92.812	94.641	
WG403934-21	CCB	19-JUL-2012 16:54	94.646	92.2	93.927	
WG403934-22	LLCCV	19-JUL-2012 16:57	94.879	91.732	94.167	

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: 2502963
Report generated: 07/20/2012 09:33

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L12070328 **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: 2502962
Report generated: 07/20/2012 09:18

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: Wednesday, July 18, 2012 09:54:58

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	1324	2021	0.700
Mg	23.985	23.975	4714	2020	0.706
In	114.904	114.925	22871	2023	0.678
U	238.050	238.025	47469	2034	0.678

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	7.292
5.575	14.116
5.625	7.340
5.675	5.618
5.725	6.048
5.775	3.940
5.825	4.566
5.875	3.020
5.925	3.520
5.975	2.950
6.025	2.684
6.075	2.233
6.125	2.253
6.175	3.234
6.225	2.497
6.275	1.606
6.325	7.065
6.375	
6.425	223.607
6.475	69.722
6.525	28.709
6.575	12.737
6.625	5.301
6.675	4.818
6.725	2.027
6.775	2.793
6.825	3.021
6.875	1.230

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6.925	2.573
6.975	1.161
7.025	2.595
7.075	2.111
7.125	3.077
7.175	3.776
7.225	2.076
7.275	5.057
7.325	3.272
7.375	223.607
7.425	91.287
7.475	
7.525	223.607
7.575	223.607
7.625	136.931
7.675	223.607
7.725	
7.775	223.607
7.825	136.931
7.875	223.607
7.925	136.931
7.975	223.607
8.025	136.931
8.075	136.931
8.125	136.931
8.175	223.607
8.225	91.287
8.275	136.931
8.325	
8.375	223.607
8.425	104.583
8.475	136.931
22.525	8.177
22.575	2.227
22.625	0.691
22.675	1.915
22.725	0.969
22.775	1.510
22.825	1.354
22.875	0.526
22.925	0.985
22.975	0.804
23.025	1.547
23.075	0.790
23.125	1.106
23.175	2.174
23.225	1.105

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23.275	3.619
23.325	55.902
23.375	223.607
23.425	223.607
23.475	72.491
23.525	11.454
23.575	4.255
23.625	2.834
23.675	4.522
23.725	3.739
23.775	3.288
23.825	1.080
23.875	1.301
23.925	3.138
23.975	1.890
24.025	1.427
24.075	2.953
24.125	2.115
24.175	1.799
24.225	1.955
24.275	7.465
24.325	136.931
24.375	
24.425	136.931
24.475	108.327
24.525	22.555
24.575	15.410
24.625	8.365
24.675	6.370
24.725	4.451
24.775	4.868
24.825	8.291
24.875	2.826
24.925	6.696
24.975	4.881
25.025	6.468
25.075	4.871
25.125	3.896
25.175	4.351
25.225	12.552
25.275	30.492
25.325	136.931
25.375	136.931
25.425	223.607
25.475	70.833
113.525	20.844
113.575	9.384

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113.625	6.079
113.675	3.591
113.725	4.256
113.775	2.415
113.825	1.941
113.875	3.756
113.925	2.946
113.975	2.091
114.025	2.958
114.075	2.635
114.125	3.659
114.175	7.049
114.225	6.230
114.275	4.977
114.325	61.237
114.375	94.786
114.425	34.248
114.475	8.994
114.525	5.879
114.575	2.183
114.625	2.460
114.675	2.158
114.725	1.749
114.775	1.860
114.825	1.515
114.875	1.908
114.925	2.070
114.975	1.882
115.025	1.215
115.075	0.845
115.125	1.988
115.175	2.572
115.225	5.285
115.275	9.649
115.325	64.489
115.375	223.607
115.425	122.475
115.475	43.853
115.525	13.684
115.575	12.128
115.625	5.976
115.675	4.889
115.725	7.237
115.775	2.735
115.825	7.137
115.875	5.432
115.925	2.381

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115.975	5.408
116.025	6.203
116.075	2.953
116.125	5.959
116.175	9.089
116.225	14.287
116.275	37.908
116.325	223.607
116.375	
116.425	
116.475	136.931
236.525	
236.575	
236.625	
236.675	223.607
236.725	
236.775	
236.825	
236.875	
236.925	
236.975	223.607
237.025	223.607
237.075	
237.125	
237.175	
237.225	
237.275	
237.325	
237.375	149.071
237.425	136.931
237.475	46.481
237.525	31.599
237.575	21.763
237.625	8.471
237.675	5.300
237.725	3.944
237.775	3.680
237.825	2.014
237.875	1.228
237.925	0.945
237.975	1.328
238.025	1.165
238.075	1.839
238.125	0.593
238.175	0.682
238.225	2.083
238.275	3.210

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238.325	3.623
238.375	4.271
238.425	7.226
238.475	13.294
238.525	57.601
238.575	223.607
238.625	
238.675	
238.725	
238.775	
238.825	
238.875	223.607
238.925	
238.975	
239.025	
239.075	
239.125	
239.175	223.607
239.225	136.931
239.275	
239.325	223.607
239.375	
239.425	
239.475	

Approved: July 18, 2012

SmartTune Wizard - Summary

Optimization Summary

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

Start Time: 7/18/2012 9:53:48 AM
End Time: 7/18/2012 9:54:43 AM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.92 mm	-0.94 mm	54233.89

Report Date/Time: Wednesday, July 18, 2012 09:54:43
Page 1

Approved: July 18, 2012

SmartTune Wizard - Details

```
Optimization Details

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

Optimization Status

Start Time: 7/18/2012 9:53:48 AM

Torch Alignment
        Optimization Settings:
                Method: C:\NexIONData\Method\ESI Torch Alignment.mth.
                Intensity Criterion: In 114.904 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        0.92 mm     -0.94 mm       54233.89

End Time: 7/18/2012 9:54:43 AM
```


Approved: July 18, 2012

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Wednesday, July 18, 2012 09:59:00
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\071112\Daily Performance Check.621
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	2319.3	2319.311	46.131	2.0	Standard
	Mg	24.0	22142.6	22142.635	165.942	0.7	Standard
	In	114.9	52780.5	52780.507	309.118	0.6	Standard
	U	238.1	44105.4	44105.368	159.680	0.4	Standard
⌈	CeO	155.9	809.5	0.012	0.000	1.7	Standard
| >	Ce	139.9	65314.3	65314.280	471.938	0.7	Standard
⌊	Ce++	70.0	822.0	0.013	0.000	2.2	Standard
	Bkgd	220.0	0.6	0.633	0.183	28.8	Standard

Current Conditions File Data

Current Value	Description
0.96	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: Wednesday, July 18, 2012 10:01:18
Page 1

Approved: July 18, 2012

SmartTune Wizard - Summary

```
Optimization Summary

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

Start Time: 7/18/2012 9:58:59 AM
End Time: 7/18/2012 10:01:19 AM

Daily Performance Check - [Passed]  Optimum value(s): N/A
        Obtained Intensity (Be 9.0122): 2319.31
        Obtained Intensity (Mg 23.985): 22142.64
        Obtained Intensity (In 114.904): 52780.51
        Obtained Intensity (U 238.05): 44105.37
        Obtained Intensity (Bkgd 220): 0.63
        Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=809.49 / 65314.28)
        Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=821.96 / 65314.28)
```

Report Date/Time: Wednesday, July 18, 2012 10:01:19
Page 1

Approved: July 18, 2012

SmartTune Wizard - Details

```
Optimization Details

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

Optimization Status

Start Time: 7/18/2012 9:58:59 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): 2319.31
                Obtained Intensity (Mg 23.985): 22142.64
                Obtained Intensity (In 114.904): 52780.51
                Obtained Intensity (U 238.05): 44105.37
                Obtained Intensity (Bkgd 220): 0.63
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=809.49 / 65314.28)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.013 (=821.96 / 65314.28)
[Passed]  Optimum value(s): N/A

End Time: 7/18/2012 10:01:19 AM
```


Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 18, 2012 11:01:21
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	6509.7	1.0				ug/L		Standard
	Be	9	8.3	69.3				ug/L		Standard
	Al	27	4354.0	5.5				ug/L		Standard
>	**Sc**	45	243358.6	3.4				ug/L		Standard
	Ti	47	43.3	15.4				ug/L		Standard
	V	51	1886.7	0.8				ug/L		Standard
	Cr	52	5891.8	0.6				ug/L		Standard
	Cr	53	122.5	21.5				ug/L		Standard
	Mn	55	545.0	10.9				ug/L		Standard
	Co	59	73.0	16.8				ug/L		Standard
	Ni	60	42.3	13.8				ug/L		Standard
	Cu	65	48.0	8.3				ug/L		Standard
	Zn	66	64.7	7.9				ug/L		Standard
>	**Ge**	72	188156.1	0.6				ug/L		Standard
	As	75	-124.1	8.3				ug/L		Standard
	Se	82	15.9	30.2				ug/L		Standard
	Se-1	77	59.3	15.2				ug/L		Standard
>	**Ga**	71	355.0	8.5				mg/L		Standard
	Rb	85	16.7	34.6				ug/L		Standard
	Y	89	183245.1	2.2				ug/L		Standard
>	**Rh**	103	345.0	12.6				ug/L		Standard
	Mo	98	37.7	7.3				ug/L		Standard
	Ag	107	79.0	14.6				ug/L		Standard
	Cd	111	48.9	21.4				mg/L		Standard
	Cd	114	130.0	1.0				ug/L		Standard
>	**In**	115	515710.1	1.8				ug/L		Standard
	Sn	118	397.7	8.7				ug/L		Standard
	Sb	123	221.0	8.2				ug/L		Standard
	Ba	135	22.3	23.0				ug/L		Standard
	Ce	140	19.3	6.0				ug/L		Standard
>	**Tb**	159	695601.2	1.0				ug/L		Standard
	Ho	165	11.7	35.7				ug/L		Standard
	Tl	203	21.3	48.8				ug/L		Standard
	Tl	205	49.3	35.2				ug/L		Standard
	Pb	206	281.0	6.9				ug/L		Standard
	Pb	207	226.3	1.3				ug/L		Standard
	Pb	208	1051.0	1.8				ug/L		Standard
	U	238	13.3	56.3				ug/L		Standard
>	**Bi**	209	407760.8	1.1				ug/L		Standard

Sample ID: Blank
Report Date/Time: Wednesday, July 18, 2012 11:03:51
Page 1

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Na	23	186.7	8.6	mg/L	Standard
Mg	24	35.0	14.3	mg/L	Standard
K	39	83.3	44.2	mg/L	Standard
Ca	43	1.7	173.2	mg/L	Standard
Fe	54	354.9	21.9	mg/L	Standard
Fe	57	1985.1	5.7	mg/L	Standard
> **Sc-1**	45	243358.6	3.4	mg/L	Standard
Cl	35	3.0	57.7	ug/L	Standard
Kr	83	33.4	3.8	ug/L	Standard
Br	81	740.9	0.2	ug/L	Standard
P	31	222.5	11.4	ug/L	Standard
S	34	3153.7	1.8	ug/L	Standard
Sr	88	31.7	50.8	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			
Cd	111			
Cd	114			
> In	115			

Sample ID: Blank
Report Date/Time: Wednesday, July 18, 2012 11:03:51
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Approved: July 18, 2012

	Sn	118
	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: Wednesday, July 18, 2012 11:03:51
Page 3

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 18, 2012 11:04:32
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	6333.0	3.0				ug/L	6510	Standard
	Be	9	11.7	24.7				ug/L	8	Standard
	Al	27	4272.3	5.1				ug/L	4354	Standard
>	**Sc**	45	240060.3	1.3				ug/L	243359	Standard
	Ti	47	49.7	3.1				ug/L	43	Standard
	V	51	1908.3	2.2				ug/L	1887	Standard
	Cr	52	5984.5	0.4				ug/L	5892	Standard
	Cr	53	110.0	23.7				ug/L	123	Standard
	Mn	55	543.7	3.5				ug/L	545	Standard
	Co	59	69.3	10.2				ug/L	73	Standard
	Ni	60	40.3	11.2				ug/L	42	Standard
	Cu	65	56.7	5.7				ug/L	48	Standard
	Zn	66	67.0	14.9				ug/L	65	Standard
>	**Ge**	72	188939.1	0.8				ug/L	188156	Standard
	As	75	-100.7	15.2				ug/L	-124	Standard
	Se	82	16.5	28.4				ug/L	16	Standard
	Se-1	77	60.7	11.0				ug/L	59	Standard
>	**Ga**	71	376.7	3.3				mg/L	355	Standard
	Rb	85	13.3	57.3				ug/L	17	Standard
	Y	89	181543.1	2.1				ug/L	183245	Standard
>	**Rh**	103	300.0	24.6				ug/L	345	Standard
	Mo	98	24.4	13.1				ug/L	38	Standard
	Ag	107	62.3	7.4				ug/L	79	Standard
	Cd	111	49.3	17.2				mg/L	49	Standard
	Cd	114	121.8	4.5				ug/L	130	Standard
>	**In**	115	522897.1	0.8				ug/L	515710	Standard
	Sn	118	404.3	5.9				ug/L	398	Standard
	Sb	123	159.5	6.3				ug/L	221	Standard
	Ba	135	20.3	30.0				ug/L	22	Standard
	Ce	140	16.3	46.4				ug/L	19	Standard
>	**Tb**	159	700559.1	1.2				ug/L	695601	Standard
	Ho	165	6.7	8.7				ug/L	12	Standard
	Tl	203	12.3	9.4				ug/L	21	Standard
	Tl	205	25.0	18.3				ug/L	49	Standard
	Pb	206	262.3	2.1				ug/L	281	Standard
	Pb	207	217.7	3.5				ug/L	226	Standard
	Pb	208	1024.7	1.6				ug/L	1051	Standard
	U	238	12.7	9.1				ug/L	13	Standard
>	**Bi**	209	409635.0	0.4				ug/L	407761	Standard

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Na	23	193.3	8.3	mg/L	187	Standard
Mg	24	53.3	23.6	mg/L	35	Standard
K	39	88.3	3.3	mg/L	83	Standard
Ca	43	1.7	173.2	mg/L	2	Standard
Fe	54	383.0	18.0	mg/L	355	Standard
Fe	57	2031.8	4.2	mg/L	1985	Standard
> **Sc-1**	45	240060.3	1.3	mg/L	243359	Standard
Cl	35	4.0	75.0	ug/L	3	Standard
Kr	83	31.9	3.4	ug/L	33	Standard
Br	81	771.7	7.8	ug/L	741	Standard
P	31	181.7	6.5	ug/L	223	Standard
S	34	3203.7	0.5	ug/L	3154	Standard
Sr	88	41.7	38.6	ug/L	32	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			
Cd	111			
Cd	114			
> In	115			

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	Sn	118
	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

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Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 18, 2012 11:07:42
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	6393.0	2.8				ug/L	6510	Standard
	Be	9	66.7	55.3				ug/L	8	Standard
	Al	27	3878.8	5.7				ug/L	4354	Standard
>	**Sc**	45	239046.1	1.0				ug/L	243359	Standard
	Ti	47	127.3	7.9				ug/L	43	Standard
	V	51	2332.8	3.0				ug/L	1887	Standard
	Cr	52	6473.4	1.9				ug/L	5892	Standard
	Cr	53	154.2	8.3				ug/L	123	Standard
	Mn	55	1154.4	3.3				ug/L	545	Standard
	Co	59	441.7	5.8				ug/L	73	Standard
	Ni	60	128.0	9.8				ug/L	42	Standard
	Cu	65	133.7	0.9				ug/L	48	Standard
	Zn	66	115.3	20.9				ug/L	65	Standard
>	**Ge**	72	189522.0	1.1				ug/L	188156	Standard
	As	75	-98.3	23.0				ug/L	-124	Standard
	Se	82	13.5	51.4				ug/L	16	Standard
	Se-1	77	62.7	10.4				ug/L	59	Standard
>	**Ga**	71	345.0	7.7				mg/L	355	Standard
	Rb	85	8.3	34.6				ug/L	17	Standard
	Y	89	183138.8	2.1				ug/L	183245	Standard
>	**Rh**	103	336.7	0.9				ug/L	345	Standard
	Mo	98	319.1	4.4				ug/L	38	Standard
	Ag	107	348.0	4.5				ug/L	79	Standard
	Cd	111	171.2	7.2				mg/L	49	Standard
	Cd	114	512.6	1.8				ug/L	130	Standard
>	**In**	115	521795.3	0.8				ug/L	515710	Standard
	Sn	118	1345.7	2.7				ug/L	398	Standard
	Sb	123	463.6	13.0				ug/L	221	Standard
	Ba	135	174.3	9.3				ug/L	22	Standard
	Ce	140	16.7	36.2				ug/L	19	Standard
>	**Tb**	159	695273.2	0.5				ug/L	695601	Standard
	Ho	165	11.3	22.2				ug/L	12	Standard
	Tl	203	599.7	2.7				ug/L	21	Standard
	Tl	205	1433.7	5.2				ug/L	49	Standard
	Pb	206	715.0	6.0				ug/L	281	Standard
	Pb	207	639.0	3.0				ug/L	226	Standard
	Pb	208	2847.8	1.7				ug/L	1051	Standard
	U	238	562.3	2.7				ug/L	13	Standard
>	**Bi**	209	406785.3	0.9				ug/L	407761	Standard

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Na	23	508.3	5.7	mg/L	187	Standard
Mg	24	1988.5	6.2	mg/L	35	Standard
K	39	81.7	31.4	mg/L	83	Standard
Ca	43	0.0		mg/L	2	Standard
Fe	54	426.1	3.5	mg/L	355	Standard
Fe	57	2323.5	7.5	mg/L	1985	Standard
> **Sc-1**	45	239046.1	1.0	mg/L	243359	Standard
Cl	35	4.0	25.0	ug/L	3	Standard
Kr	83	36.0	13.1	ug/L	33	Standard
Br	81	760.0	5.4	ug/L	741	Standard
P	31	200.8	6.9	ug/L	223	Standard
S	34	3184.5	1.0	ug/L	3154	Standard
Sr	88	25.0	69.3	ug/L	32	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			
Cd	111			
Cd	114			
> In	115			

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	Sn	118
	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
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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Wednesday, July 18, 2012 11:10:53
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	6636.5	1.5	**50.0000**	125.306	250.6	ug/L	6510	Standard
	Be	9	67093.3	3.5	**50.0000**	1.364	2.7	ug/L	8	Standard
	Al	27	453136.1	2.8	**50.0000**	1.442	2.9	ug/L	4354	Standard
>	**Sc**	45	246219.1	3.2				ug/L	243359	Standard
	Ti	47	90799.6	1.1	**100.0000**	1.401	1.4	ug/L	43	Standard
	V	51	378474.7	0.6	**50.0000**	0.312	0.6	ug/L	1887	Standard
	Cr	52	310438.6	1.1	**50.0000**	0.088	0.2	ug/L	5892	Standard
	Cr	53	51519.1	2.6	**50.0000**	0.769	1.5	ug/L	123	Standard
	Mn	55	504140.5	1.0	**50.0000**	0.298	0.6	ug/L	545	Standard
	Co	59	355923.0	0.3	**50.0000**	0.446	0.9	ug/L	73	Standard
	Ni	60	86438.9	1.6	**50.0000**	0.271	0.5	ug/L	42	Standard
	Cu	65	77176.4	0.7	**50.0000**	0.282	0.6	ug/L	48	Standard
	Zn	66	35563.4	1.5	**50.0000**	0.650	1.3	ug/L	65	Standard
>	**Ge**	72	190210.9	1.2				ug/L	188156	Standard
	As	75	37264.4	0.4	**50.0000**	0.734	1.5	ug/L	-124	Standard
	Se	82	3919.4	0.2	**50.0000**	0.624	1.2	ug/L	16	Standard
	Se-1	77	2581.6	0.8	**50.0000**	0.321	0.6	ug/L	59	Standard
>	**Ga**	71	408.3	12.3				mg/L	355	Standard
	Rb	85	608.3	14.9				ug/L	17	Standard
	Y	89	181362.4	1.0				ug/L	183245	Standard
>	**Rh**	103	323.3	21.1				ug/L	345	Standard
	Mo	98	282599.4	0.3	**100.0000**	0.862	0.9	ug/L	38	Standard
	Ag	107	332014.7	0.6	**50.0000**	0.302	0.6	ug/L	79	Standard
	Cd	111	135951.4	0.7	**50.0000**	0.552	1.1	mg/L	49	Standard
	Cd	114	368947.9	0.3	**50.0000**	0.175	0.4	ug/L	130	Standard
>	**In**	115	526803.8	0.6				ug/L	515710	Standard
	Sn	118	913385.2	0.7	**50.0000**	0.518	1.0	ug/L	398	Standard
	Sb	123	370686.3	0.3	**50.0000**	0.204	0.4	ug/L	221	Standard
	Ba	135	151879.8	0.7	**50.0000**	0.657	1.3	ug/L	22	Standard
	Ce	140	605.3	1.8				ug/L	19	Standard
>	**Tb**	159	729353.5	0.9				ug/L	695601	Standard
	Ho	165	12.7	50.1				ug/L	12	Standard
	Tl	203	591921.4	0.9	**50.0000**	0.138	0.3	ug/L	21	Standard
	Tl	205	1373409.9	0.4	**50.0000**	0.333	0.7	ug/L	49	Standard
	Pb	206	465085.8	0.8	**50.0000**	0.154	0.3	ug/L	281	Standard
	Pb	207	398123.4	1.0	**50.0000**	0.156	0.3	ug/L	226	Standard
	Pb	208	1836727.3	0.8	**50.0000**	0.073	0.1	ug/L	1051	Standard
	U	238	558869.9	1.8	**50.0000**	0.595	1.2	ug/L	13	Standard
>	**Bi**	209	410705.8	0.7				ug/L	407761	Standard

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	Na	23	109981.1	1.3	**5.0000**	0.226	4.5	mg/L	187	Standard
	Mg	24	1534815.4	1.6	**5.0000**	0.107	2.1	mg/L	35	Standard
	K	39	3732.1	1.8	**5.0000**	0.075	1.5	mg/L	83	Standard
	Ca	43	20.0	0.0	**5.0000**	0.162	3.2	mg/L	2	Standard
	Fe	54	16499.8	0.9	**5.0000**	0.182	3.6	mg/L	355	Standard
	Fe	57	322203.9	1.8	**5.0000**	0.163	3.3	mg/L	1985	Standard
>	**Sc-1**	45	246219.1	3.2				mg/L	243359	Standard
	Cl	35	4.3	26.6				ug/L	3	Standard
	Kr	83	32.4	5.7				ug/L	33	Standard
	Br	81	762.5	2.5				ug/L	741	Standard
	P	31	256.7	17.2				ug/L	223	Standard
	S	34	3557.9	4.0				ug/L	3154	Standard
	Sr	88	33.3	34.6				ug/L	32	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			
	Cd	111			
	Cd	114			
>	In	115			

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	Sn	118
	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

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Method 6020 - Summary Report

Sample ID: Standard 4
Sample Date/Time: Wednesday, July 18, 2012 11:14:04
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	6806.5	2.1	**167.8221**	47.539	28.3	ug/L	6510	Standard
	Be	9	126381.9	3.0	**99.3922**	2.210	2.2	ug/L	8	Standard
	Al	27	875870.9	2.2	**100.8735**	1.518	1.5	ug/L	4354	Standard
>	**Sc**	45	234670.1	1.0				ug/L	243359	Standard
	Ti	47	174234.5	1.2	**197.1210**	3.443	1.7	ug/L	43	Standard
	V	51	739671.8	0.5	**99.5939**	0.834	0.8	ug/L	1887	Standard
	Cr	52	590451.2	1.1	**98.5959**	1.158	1.2	ug/L	5892	Standard
	Cr	53	98082.3	1.8	**98.2084**	1.210	1.2	ug/L	123	Standard
	Mn	55	959691.6	0.8	**98.1833**	1.077	1.1	ug/L	545	Standard
	Co	59	686722.6	1.7	**98.8294**	1.967	2.0	ug/L	73	Standard
	Ni	60	167754.6	1.2	**99.1309**	1.256	1.3	ug/L	42	Standard
	Cu	65	149431.7	1.1	**99.0206**	1.752	1.8	ug/L	48	Standard
	Zn	66	68343.8	1.5	**98.6797**	1.492	1.5	ug/L	65	Standard
>	**Ge**	72	187866.6	0.7				ug/L	188156	Standard
	As	75	72326.6	0.9	**99.0269**	0.999	1.0	ug/L	-124	Standard
	Se	82	7473.3	1.6	**98.2872**	1.131	1.2	ug/L	16	Standard
	Se-1	77	4860.8	2.3	**98.1748**	2.913	3.0	ug/L	59	Standard
>	**Ga**	71	401.7	4.4				mg/L	355	Standard
	Rb	85	4123.9	1.3				ug/L	17	Standard
	Y	89	173531.6	1.9				ug/L	183245	Standard
>	**Rh**	103	345.0	3.8				ug/L	345	Standard
	Mo	98	547865.4	1.9	**202.0782**	0.805	0.4	ug/L	38	Standard
	Ag	107	601069.4	2.8	**97.6109**	0.989	1.0	ug/L	79	Standard
	Cd	111	256939.7	2.0	**99.7691**	0.208	0.2	mg/L	49	Standard
	Cd	114	691996.2	1.0	**99.3987**	0.877	0.9	ug/L	130	Standard
>	**In**	115	500162.9	1.9				ug/L	515710	Standard
	Sn	118	874770.0	1.6	**67.0596**	0.183	0.3	ug/L	398	Standard
	Sb	123	703006.9	1.7	**99.9449**	0.379	0.4	ug/L	221	Standard
	Ba	135	289489.2	1.1	**100.1952**	0.859	0.9	ug/L	22	Standard
	Ce	140	212.7	13.1				ug/L	19	Standard
>	**Tb**	159	714387.9	1.8				ug/L	695601	Standard
	Ho	165	21.7	11.6				ug/L	12	Standard
	Tl	203	1136154.1	0.8	**100.5221**	0.717	0.7	ug/L	21	Standard
	Tl	205	2806596.8	0.7	**103.6502**	0.666	0.6	ug/L	49	Standard
	Pb	206	890378.5	0.9	**100.4037**	0.278	0.3	ug/L	281	Standard
	Pb	207	736346.3	0.7	**98.6825**	0.199	0.2	ug/L	226	Standard
	Pb	208	3439323.1	1.0	**99.2973**	0.369	0.4	ug/L	1051	Standard
	U	238	1066656.8	1.9	**100.2376**	1.237	1.2	ug/L	13	Standard
>	**Bi**	209	390079.4	0.7				ug/L	407761	Standard

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Na	23	134156.4	1.4	**7.8046**	0.136	1.7	mg/L	187	Standard
Mg	24	4164376.4	3.0	**11.7459**	0.430	3.7	mg/L	35	Standard
K	39	7491.9	3.5	**10.3136**	0.266	2.6	mg/L	83	Standard
Ca	43	18.3	95.8	**6.5012**	6.194	95.3	mg/L	2	Standard
Fe	54	31785.7	2.7	**10.1143**	0.173	1.7	mg/L	355	Standard
Fe	57	637750.7	2.9	**10.2020**	0.285	2.8	mg/L	1985	Standard
Sc-1	45	234670.1	1.0				mg/L	243359	Standard
Cl	35	6.0	57.7				ug/L	3	Standard
Kr	83	39.1	3.4				ug/L	33	Standard
Br	81	761.7	4.5				ug/L	741	Standard
P	31	275.0	12.8				ug/L	223	Standard
S	34	3283.7	3.1				ug/L	3154	Standard
Sr	88	26.7	28.6				ug/L	32	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			
Cd	111			
Cd	114			
In	115			

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	Sn	118
	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.	Sn	118	Correlation coefficient < 0.998
Corr. Coef.	Na	23	Correlation coefficient < 0.998
Corr. Coef.	Mg	24	Correlation coefficient < 0.998
Corr. Coef.	Ca	43	Correlation coefficient < 0.998

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 18, 2012 11:17:16
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	6089.6	0.5	**-40.5398**	17.859	44.1	ug/L	6510	Standard
	Be	9	62928.8	2.8	**49.9883**	1.928	3.9	ug/L	8	Standard
	Al	27	434334.2	0.7	**50.3226**	0.961	1.9	ug/L	4354	Standard
>	**Sc**	45	232421.0	1.4				ug/L	243359	Standard
	Ti	47	85281.0	1.0	**96.4636**	1.340	1.4	ug/L	43	Standard
	V	51	365680.2	0.3	**49.1064**	0.246	0.5	ug/L	1887	Standard
	Cr	52	297925.7	0.9	**49.2413**	0.730	1.5	ug/L	5892	Standard
	Cr	53	49612.8	0.4	**49.6319**	0.546	1.1	ug/L	123	Standard
	Mn	55	484126.6	0.5	**49.4980**	0.348	0.7	ug/L	545	Standard
	Co	59	341773.1	0.5	**49.1795**	0.122	0.2	ug/L	73	Standard
	Ni	60	83369.1	1.3	**49.2567**	0.879	1.8	ug/L	42	Standard
	Cu	65	75701.3	0.5	**50.1446**	0.446	0.9	ug/L	48	Standard
	Zn	66	34893.1	0.8	**50.3268**	0.402	0.8	ug/L	65	Standard
>	**Ge**	72	187858.5	0.7				ug/L	188156	Standard
	As	75	36321.2	0.5	**49.8229**	0.332	0.7	ug/L	-124	Standard
	Se	82	3715.8	1.0	**48.8102**	0.494	1.0	ug/L	16	Standard
	Se-1	77	2467.5	3.6	**49.2394**	2.043	4.1	ug/L	59	Standard
>	**Ga**	71	393.3	9.9				mg/L	355	Standard
	Rb	85	585.0	14.0				ug/L	17	Standard
	Y	89	173393.2	0.9				ug/L	183245	Standard
>	**Rh**	103	308.3	9.5				ug/L	345	Standard
	Mo	98	262953.2	0.7	**97.5877**	0.671	0.7	ug/L	38	Standard
	Ag	107	294189.0	0.5	**48.0769**	0.359	0.7	ug/L	79	Standard
	Cd	111	126142.1	0.6	**49.2806**	0.359	0.7	mg/L	49	Standard
	Cd	114	347465.9	0.4	**50.2062**	0.213	0.4	ug/L	130	Standard
>	**In**	115	497058.3	0.2				ug/L	515710	Standard
	Sn	118	855909.6	1.1	**66.0198**	0.574	0.9	ug/L	398	Standard
	Sb	123	347497.8	0.8	**49.7043**	0.473	1.0	ug/L	221	Standard
	Ba	135	144698.0	0.4	**50.3856**	0.299	0.6	ug/L	22	Standard
	Ce	140	599.0	2.5				ug/L	19	Standard
>	**Tb**	159	690244.1	0.4				ug/L	695601	Standard
	Ho	165	13.3	18.9				ug/L	12	Standard
	Tl	203	564851.9	0.1	**49.6532**	0.186	0.4	ug/L	21	Standard
	Tl	205	1320689.1	0.4	**48.4599**	0.398	0.8	ug/L	49	Standard
	Pb	206	443600.9	0.6	**49.6871**	0.201	0.4	ug/L	281	Standard
	Pb	207	380352.9	0.2	**50.6302**	0.263	0.5	ug/L	226	Standard
	Pb	208	1750888.2	0.2	**50.2114**	0.181	0.4	ug/L	1051	Standard
	U	238	523334.2	1.0	**48.8655**	0.557	1.1	ug/L	13	Standard
>	**Bi**	209	392608.0	0.4				ug/L	407761	Standard

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	Na	23	104756.0	2.5	**6.1492**	0.214	3.5	mg/L	187	Standard
	Mg	24	1694300.5	20.5	**4.8328**	1.058	21.9	mg/L	35	Standard
	K	39	3797.1	4.9	**5.2260**	0.225	4.3	mg/L	83	Standard
	Ca	43	11.7	65.5	**4.1957**	2.794	66.6	mg/L	2	Standard
	Fe	54	16031.8	2.6	**5.0891**	0.192	3.8	mg/L	355	Standard
	Fe	57	319660.9	3.3	**5.1474**	0.155	3.0	mg/L	1985	Standard
>	**Sc-1**	45	232421.0	1.4				mg/L	243359	Standard
	Cl	35	4.0	25.0				ug/L	3	Standard
	Kr	83	34.8	12.9				ug/L	33	Standard
	Br	81	695.8	6.2				ug/L	741	Standard
	P	31	226.7	14.0				ug/L	223	Standard
	S	34	3080.3	2.3				ug/L	3154	Standard
	Sr	88	13.3	21.7				ug/L	32	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9	99.977		
	Al	27	100.645		
>	Sc	45			
	Ti	47	96.464		
	V	51	98.213		
	Cr	52	98.483		
	Cr	53	99.264		
	Mn	55	98.996		
	Co	59	98.359		
	Ni	60	98.513		
	Cu	65	100.289		
	Zn	66	100.654		
>	Ge	72		99.842	
	As	75	99.646		
	Se	82	97.620		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	97.588		
	Ag	107	96.154		
	Cd	111	98.561		
	Cd	114			
>	In	115		96.383	

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Sn	118	132.040		
Sb	123	99.409		
Ba	135	100.771		
Ce	140			
Tb	159			
Ho	165			
Tl	203	99.306		
Tl	205			
Pb	206	99.374		
Pb	207	101.260		
Pb	208	100.423		
U	238	97.731		
Bi	209		96.284	
Na	23	122.984		
Mg	24	96.655		
K	39	104.521		
Ca	43	83.914		
Fe	54	101.783		
Fe	57	102.948		
Sc-1	45			
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	Sn	118	
QC Std 1	Na	23	
QC Std 1	Mg	24	
QC Std 1	Ca	43	

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 18, 2012 11:20:28
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	6323.0	3.8	**36.3730**	88.607	243.6	ug/L	6510	Standard
	Be	9	53.3	54.9	**0.0406**	0.023	55.6	ug/L	8	Standard
	Al	27	3875.5	6.9	**0.0621**	0.023	37.7	ug/L	4354	Standard
>	**Sc**	45	232226.8	2.4				ug/L	243359	Standard
	Ti	47	94.7	52.4	**0.0648**	0.055	85.1	ug/L	43	Standard
	V	51	1955.8	11.7	**0.0045**	0.027	606.0	ug/L	1887	Standard
	Cr	52	5532.3	5.5	**-0.0895**	0.035	38.9	ug/L	5892	Standard
	Cr	53	157.5	16.5	**0.0561**	0.024	43.4	ug/L	123	Standard
	Mn	55	779.7	5.9	**0.0135**	0.003	25.6	ug/L	545	Standard
	Co	59	271.3	55.8	**0.0262**	0.021	81.4	ug/L	73	Standard
	Ni	60	85.7	43.2	**0.0260**	0.021	81.5	ug/L	42	Standard
	Cu	65	97.3	30.1	**0.0272**	0.019	68.3	ug/L	48	Standard
	Zn	66	83.0	21.9	**0.0057**	0.025	443.2	ug/L	65	Standard
>	**Ge**	72	185854.5	1.9				ug/L	188156	Standard
	As	75	-89.0	10.8	**0.0603**	0.015	25.1	ug/L	-124	Standard
	Se	82	14.8	9.9	**0.0716**	0.023	32.3	ug/L	16	Standard
	Se-1	77	64.0	4.7	**0.1022**	0.050	48.7	ug/L	59	Standard
>	**Ga**	71	345.0	2.5				mg/L	355	Standard
	Rb	85	10.0	50.0				ug/L	17	Standard
	Y	89	169703.6	1.7				ug/L	183245	Standard
>	**Rh**	103	256.7	21.0				ug/L	345	Standard
	Mo	98	178.2	11.9	**0.0543**	0.008	15.1	ug/L	38	Standard
	Ag	107	329.3	11.5	**0.0504**	0.005	10.4	ug/L	79	Standard
	Cd	111	78.9	20.5	**0.0175**	0.006	35.4	mg/L	49	Standard
	Cd	114	221.6	28.3	**0.0119**	0.009	73.7	ug/L	130	Standard
>	**In**	115	489612.3	2.6				ug/L	515710	Standard
	Sn	118	821.4	3.2	**0.0154**	0.000	3.1	ug/L	398	Standard
	Sb	123	938.8	19.2	**0.1237**	0.029	23.6	ug/L	221	Standard
	Ba	135	52.0	13.9	**0.0105**	0.002	19.5	ug/L	22	Standard
	Ce	140	16.3	7.1				ug/L	19	Standard
>	**Tb**	159	666266.9	1.5				ug/L	695601	Standard
	Ho	165	10.0	10.0				ug/L	12	Standard
	Tl	203	140.7	31.3	**0.0115**	0.004	31.7	ug/L	21	Standard
	Tl	205	325.0	32.2	**0.0111**	0.004	32.2	ug/L	49	Standard
	Pb	206	365.3	7.7	**0.0136**	0.002	16.8	ug/L	281	Standard
	Pb	207	302.7	12.1	**0.0082**	0.004	49.8	ug/L	226	Standard
	Pb	208	1400.0	11.3	**0.0113**	0.004	32.8	ug/L	1051	Standard
	U	238	475.3	73.0	**0.0434**	0.032	73.1	ug/L	13	Standard
>	**Bi**	209	392330.1	2.2				ug/L	407761	Standard

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	Na	23	530.0	32.7	**0.0070**	0.010	138.4	mg/L	187	Standard
	Mg	24	1831.8	71.4	**0.0047**	0.004	78.5	mg/L	35	Standard
	K	39	96.7	39.2	**0.0287**	0.051	177.5	mg/L	83	Standard
	Ca	43	0.0		**0.0050**	0.000	0.0	mg/L	2	Standard
	Fe	54	394.7	19.7	**-0.0008**	0.028	3494.4	mg/L	355	Standard
	Fe	57	2245.2	19.6	**0.0047**	0.006	136.8	mg/L	1985	Standard
>	**Sc-1**	45	232226.8	2.4				mg/L	243359	Standard
	Cl	35	5.0	40.0				ug/L	3	Standard
	Kr	83	30.4	14.6				ug/L	33	Standard
	Br	81	680.0	8.9				ug/L	741	Standard
	P	31	220.0	6.9				ug/L	223	Standard
	S	34	3028.6	1.5				ug/L	3154	Standard
	Sr	88	25.0	20.0				ug/L	32	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		98.777	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			
	Cd	111			
	Cd	114			
>	In	115		94.939	

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Sn	118	
Sb	123	
Ba	135	
Ce	140	
Tb	159	
Ho	165	
Tl	203	
Tl	205	
Pb	206	
Pb	207	
Pb	208	
U	238	
Bi	209	96.216
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 2
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Method 6020 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 18, 2012 11:23:39
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	6474.7	4.6	**84.8089**	127.624	150.5	ug/L	6510	Standard
	Be	9	21.7	93.3	**0.0159**	0.016	102.6	ug/L	8	Standard
	Al	27	5679.6	48.2	**0.2748**	0.327	119.0	ug/L	4354	Standard
>	**Sc**	45	232317.9	1.9				ug/L	243359	Standard
	Ti	47	58.3	37.0	**0.0237**	0.025	104.2	ug/L	43	Standard
	V	51	4573.9	4.2	**0.3598**	0.023	6.4	ug/L	1887	Standard
	Cr	52	10042.3	1.6	**0.6743**	0.020	2.9	ug/L	5892	Standard
	Cr	53	875.9	4.0	**0.7811**	0.033	4.2	ug/L	123	Standard
	Mn	55	5345.3	2.2	**0.4842**	0.014	2.9	ug/L	545	Standard
	Co	59	2782.9	4.8	**0.3905**	0.019	4.9	ug/L	73	Standard
	Ni	60	2835.3	1.6	**1.6633**	0.022	1.3	ug/L	42	Standard
	Cu	65	1253.7	7.5	**0.7993**	0.061	7.7	ug/L	48	Standard
	Zn	66	5493.7	2.9	**7.8846**	0.204	2.6	ug/L	65	Standard
>	**Ge**	72	186477.9	0.6				ug/L	188156	Standard
	As	75	156.6	4.6	**0.3990**	0.009	2.2	ug/L	-124	Standard
	Se	82	42.9	10.7	**0.4429**	0.064	14.4	ug/L	16	Standard
	Se-1	77	78.0	7.1	**0.3869**	0.125	32.3	ug/L	59	Standard
>	**Ga**	71	355.0	9.8				mg/L	355	Standard
	Rb	85	20.0	43.3				ug/L	17	Standard
	Y	89	171746.4	1.4				ug/L	183245	Standard
>	**Rh**	103	266.7	12.5				ug/L	345	Standard
	Mo	98	147.1	92.1	**0.0406**	0.049	120.3	ug/L	38	Standard
	Ag	107	2453.9	11.6	**0.3895**	0.042	10.9	ug/L	79	Standard
	Cd	111	732.3	20.4	**0.2671**	0.055	20.8	mg/L	49	Standard
	Cd	114	1964.5	16.1	**0.2581**	0.043	16.5	ug/L	130	Standard
>	**In**	115	506026.9	1.2				ug/L	515710	Standard
	Sn	118	720.0	47.5	**0.0055**	0.025	461.6	ug/L	398	Standard
	Sb	123	3129.9	7.0	**0.4266**	0.028	6.6	ug/L	221	Standard
	Ba	135	2216.2	3.1	**0.7502**	0.017	2.3	ug/L	22	Standard
	Ce	140	21.0	26.5				ug/L	19	Standard
>	**Tb**	159	673059.9	1.1				ug/L	695601	Standard
	Ho	165	12.3	20.4				ug/L	12	Standard
	Tl	203	1123.4	30.9	**0.0965**	0.030	31.4	ug/L	21	Standard
	Tl	205	2587.2	27.1	**0.0929**	0.026	27.6	ug/L	49	Standard
	Pb	206	2192.8	10.9	**0.2149**	0.027	12.5	ug/L	281	Standard
	Pb	207	1802.8	7.1	**0.2046**	0.017	8.4	ug/L	226	Standard
	Pb	208	8432.6	9.1	**0.2097**	0.022	10.7	ug/L	1051	Standard
	U	238	4221.9	3.9	**0.3880**	0.017	4.4	ug/L	13	Standard
>	**Bi**	209	398295.8	1.0				ug/L	407761	Standard

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Na	23	328.3	28.1	**-0.0047**	0.006	117.4	mg/L	187	Standard
Mg	24	390.0	106.0	**0.0006**	0.001	193.6	mg/L	35	Standard
K	39	95.0	5.3	**0.0268**	0.009	34.1	mg/L	83	Standard
Ca	43	1.7	173.2	**0.6065**	1.042	171.8	mg/L	2	Standard
Fe	54	328.8	2.1	**-0.0227**	0.004	17.4	mg/L	355	Standard
Fe	57	1871.8	4.8	**-0.0013**	0.002	131.2	mg/L	1985	Standard
> **Sc-1**	45	232317.9	1.9				mg/L	243359	Standard
Cl	35	3.7	56.8				ug/L	3	Standard
Kr	83	33.9	8.2				ug/L	33	Standard
Br	81	636.7	6.1				ug/L	741	Standard
P	31	239.2	11.5				ug/L	223	Standard
S	34	2992.0	1.8				ug/L	3154	Standard
Sr	88	25.0	34.6				ug/L	32	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	89.962		
Cr	52	84.293		
Cr	53			
Mn	55	96.834		
Co	59	97.627		
Ni	60	103.957		
Cu	65	99.918		
Zn	66	126.154		
> Ge	72		99.108	
As	75	99.760		
Se	82	110.734		
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107	97.384		
Cd	111	111.312		
Cd	114			
> In	115		98.122	

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Sn	118		
Sb	123	106.656	
Ba	135	100.031	
Ce	140		
Tb	159		
Ho	165		
Tl	203	120.627	
Tl	205		
Pb	206		
Pb	207		
Pb	208	104.842	
U	238	96.994	
Bi	209		97.679
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 3
Report Date/Time: Wednesday, July 18, 2012 11:26:10
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Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 18, 2012 11:26:49
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	5200.9	6.3	**-77.7203**	120.613	155.2	ug/L	6510	Standard
	Be	9	11.7	24.7	**0.0092**	0.003	28.6	ug/L	8	Standard
	Al	27	35134921.3	1.5	**4710.9477**	72.369	1.5	ug/L	4354	Standard
>	**Sc**	45	202347.2	0.2				ug/L	243359	Standard
	Ti	47	73839.6	2.9	**95.3776**	1.739	1.8	ug/L	43	Standard
	V	51	1733.0	8.6	**0.0048**	0.018	370.5	ug/L	1887	Standard
	Cr	52	5200.6	1.7	**-0.0304**	0.007	22.6	ug/L	5892	Standard
	Cr	53	1005.0	13.0	**1.0463**	0.137	13.0	ug/L	123	Standard
	Mn	55	708.7	6.3	**0.0157**	0.004	23.6	ug/L	545	Standard
	Co	59	143.7	4.2	**0.0106**	0.001	12.7	ug/L	73	Standard
	Ni	60	437.3	5.3	**0.2704**	0.018	6.7	ug/L	42	Standard
	Cu	65	188.0	14.0	**0.1044**	0.018	17.5	ug/L	48	Standard
	Zn	66	648.3	3.3	**0.9555**	0.049	5.2	ug/L	65	Standard
>	**Ge**	72	164489.9	1.9				ug/L	188156	Standard
	As	75	-93.8	6.0	**0.0371**	0.007	18.0	ug/L	-124	Standard
	Se	82	13.3	54.1	**0.0733**	0.109	148.9	ug/L	16	Standard
	Se-1	77	112.3	6.8	**1.4055**	0.222	15.8	ug/L	59	Standard
>	**Ga**	71	366.7	1.6				mg/L	355	Standard
	Rb	85	1776.8	6.7				ug/L	17	Standard
	Y	89	156563.5	2.9				ug/L	183245	Standard
>	**Rh**	103	273.3	8.6				ug/L	345	Standard
	Mo	98	224306.5	2.3	**94.1738**	2.111	2.2	ug/L	38	Standard
	Ag	107	133.0	11.2	**0.0204**	0.003	13.8	ug/L	79	Standard
	Cd	111	-128.0	17.1	**-0.0704**	0.010	14.0	mg/L	49	Standard
	Cd	114	814.6	2.4	**0.1126**	0.004	3.1	ug/L	130	Standard
>	**In**	115	439372.5	0.3				ug/L	515710	Standard
	Sn	118	301.3	7.3	**-0.0226**	0.002	8.2	ug/L	398	Standard
	Sb	123	301.1	4.3	**0.0356**	0.002	5.9	ug/L	221	Standard
	Ba	135	44.7	3.4	**0.0098**	0.001	6.3	ug/L	22	Standard
	Ce	140	1059.7	4.5				ug/L	19	Standard
>	**Tb**	159	658766.9	2.0				ug/L	695601	Standard
	Ho	165	11.0	31.5				ug/L	12	Standard
	Tl	203	52.0	15.0	**0.0040**	0.001	18.6	ug/L	21	Standard
	Tl	205	140.0	4.0	**0.0047**	0.000	5.6	ug/L	49	Standard
	Pb	206	363.7	1.4	**0.0160**	0.000	2.7	ug/L	281	Standard
	Pb	207	332.3	9.6	**0.0149**	0.005	32.0	ug/L	226	Standard
	Pb	208	1487.4	2.2	**0.0165**	0.001	8.9	ug/L	1051	Standard
	U	238	9.0	19.2	**0.0002**	0.000	72.2	ug/L	13	Standard
>	**Bi**	209	369404.3	1.6				ug/L	407761	Standard

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Na	23	138254.7	1.4	**9.3317**	0.119	1.3	mg/L	187	Standard
Mg	24	1257105.5	0.9	**4.1110**	0.030	0.7	mg/L	35	Standard
K	39	3175.3	1.6	**5.0162**	0.083	1.7	mg/L	83	Standard
Ca	43	16.7	17.3	**6.8398**	1.182	17.3	mg/L	2	Standard
Fe	54	31235.9	1.5	**11.5464**	0.154	1.3	mg/L	355	Standard
Fe	57	604533.5	1.8	**11.2182**	0.191	1.7	mg/L	1985	Standard
Sc-1	45	202347.2	0.2				mg/L	243359	Standard
Cl	35	171.0	2.7				ug/L	3	Standard
Kr	83	34.6	2.8				ug/L	33	Standard
Br	81	654.2	7.9				ug/L	741	Standard
P	31	46218.7	0.5				ug/L	223	Standard
S	34	7305.9	1.9				ug/L	3154	Standard
Sr	88	35.0	14.3				ug/L	32	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	94.219		
Sc	45			
Ti	47	95.378		
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72		87.422	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	94.174		
Ag	107			

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	Cd	111		
	Cd	114		
>	In	115		85.198
	Sn	118		
	Sb	123		
	Ba	135		
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203		
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208		
	U	238		
>	Bi	209		90.593
	Na	23	74.654	
	Mg	24	82.221	
	K	39	100.324	
	Ca	43	45.599	
	Fe	54	92.371	
	Fe	57	89.746	
>	Sc-1	45		
	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	Na	23	
QC Std 4	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 18, 2012 11:29:58
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	6433.0	1.9	**-12.5620**	108.924	867.1	ug/L	6510	Standard
	Be	9	127334.6	2.1	**97.0625**	4.034	4.2	ug/L	8	Standard
	Al	27	36183963.4	1.8	**4052.7070**	91.663	2.3	ug/L	4354	Standard
>	**Sc**	45	242347.7	3.5				ug/L	243359	Standard
	Ti	47	77125.5	0.3	**86.8436**	1.038	1.2	ug/L	43	Standard
	V	51	716967.7	0.9	**96.1033**	1.584	1.6	ug/L	1887	Standard
	Cr	52	584923.5	0.4	**97.2287**	1.250	1.3	ug/L	5892	Standard
	Cr	53	99717.1	1.2	**99.4044**	0.603	0.6	ug/L	123	Standard
	Mn	55	957081.8	0.9	**97.4875**	1.825	1.9	ug/L	545	Standard
	Co	59	686434.3	0.3	**98.3490**	1.147	1.2	ug/L	73	Standard
	Ni	60	164871.5	0.8	**96.9960**	1.237	1.3	ug/L	42	Standard
	Cu	65	148219.8	0.5	**97.7789**	1.276	1.3	ug/L	48	Standard
	Zn	66	68110.7	0.4	**97.9061**	0.655	0.7	ug/L	65	Standard
>	**Ge**	72	188708.6	1.0				ug/L	188156	Standard
	As	75	73579.0	0.6	**100.2931**	1.030	1.0	ug/L	-124	Standard
	Se	82	7899.2	2.5	**103.4368**	2.495	2.4	ug/L	16	Standard
	Se-1	77	4929.1	0.8	**99.1152**	1.073	1.1	ug/L	59	Standard
>	**Ga**	71	536.7	9.3				mg/L	355	Standard
	Rb	85	1935.1	4.4				ug/L	17	Standard
	Y	89	192206.8	2.0				ug/L	183245	Standard
>	**Rh**	103	366.7	13.9				ug/L	345	Standard
	Mo	98	243507.9	2.3	**86.1341**	1.877	2.2	ug/L	38	Standard
	Ag	107	698917.6	3.3	**108.8680**	3.409	3.1	ug/L	79	Standard
	Cd	111	266438.4	0.7	**99.2265**	0.523	0.5	mg/L	49	Standard
	Cd	114	710120.1	1.4	**97.8176**	1.206	1.2	ug/L	130	Standard
>	**In**	115	521495.4	0.5				ug/L	515710	Standard
	Sn	118	775.4	1.7	**0.0081**	0.001	13.6	ug/L	398	Standard
	Sb	123	730839.1	1.9	**99.6526**	2.059	2.1	ug/L	221	Standard
	Ba	135	298288.5	1.2	**99.0108**	1.522	1.5	ug/L	22	Standard
	Ce	140	1124.4	6.0				ug/L	19	Standard
>	**Tb**	159	765155.3	2.4				ug/L	695601	Standard
	Ho	165	13.7	15.2				ug/L	12	Standard
	Tl	203	1169767.3	1.0	**97.0559**	0.649	0.7	ug/L	21	Standard
	Tl	205	2889677.1	0.8	**100.0802**	0.950	0.9	ug/L	49	Standard
	Pb	206	919937.2	1.4	**97.2788**	0.282	0.3	ug/L	281	Standard
	Pb	207	782602.2	1.1	**98.3538**	0.033	0.0	ug/L	226	Standard
	Pb	208	3619031.0	1.5	**97.9806**	0.373	0.4	ug/L	1051	Standard
	U	238	1126868.8	1.6	**99.3064**	0.548	0.6	ug/L	13	Standard
>	**Bi**	209	415969.2	1.2				ug/L	407761	Standard

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Na	23	143822.7	0.9	**8.1081**	0.255	3.1	mg/L	187	Standard
Mg	24	1249162.2	0.5	**3.4137**	0.126	3.7	mg/L	35	Standard
K	39	3070.3	8.0	**4.0251**	0.199	4.9	mg/L	83	Standard
Ca	43	15.0	33.3	**5.1454**	1.687	32.8	mg/L	2	Standard
Fe	54	33042.1	1.6	**10.1945**	0.500	4.9	mg/L	355	Standard
Fe	57	647099.1	1.2	**10.0332**	0.448	4.5	mg/L	1985	Standard
Sc-1	45	242347.7	3.5				mg/L	243359	Standard
Cl	35	151.7	10.2				ug/L	3	Standard
Kr	83	41.4	7.8				ug/L	33	Standard
Br	81	877.5	8.4				ug/L	741	Standard
P	31	39802.2	1.0				ug/L	223	Standard
S	34	7183.4	2.0				ug/L	3154	Standard
Sr	88	35.0	42.9				ug/L	32	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	81.054		
Sc	45			
Ti	47	86.844		
V	51	96.103		
Cr	52	97.229		
Cr	53			
Mn	55	97.488		
Co	59	98.349		
Ni	60	96.996		
Cu	65	97.779		
Zn	66	97.906		
Ge	72		100.294	
As	75	100.293		
Se	82	103.437		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	86.134		
Ag	107	108.868		

Sample ID: QC Std 5
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	Cd	111	99.227	
	Cd	114		
>	In	115		101.122
	Sn	118		
	Sb	123	99.653	
	Ba	135	99.011	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.056	
	Tl	205		
	Pb	206	97.279	
	Pb	207	98.354	
	Pb	208	97.981	
	U	238	99.306	
>	Bi	209		102.013
	Na	23	64.865	
	Mg	24	68.274	
	K	39	80.501	
	Ca	43	34.303	
	Fe	54	81.556	
	Fe	57	80.266	
>	Sc-1	45		
	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	Mg	24	
QC Std 5	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 18, 2012 11:35:28
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	6548.1	6.5	**23.0125**	164.782	716.1	ug/L	6510	Standard
	Be	9	66624.5	2.4	**50.7916**	2.095	4.1	ug/L	8	Standard
	Al	27	453165.9	1.1	**50.3839**	1.202	2.4	ug/L	4354	Standard
>	**Sc**	45	242231.4	2.0				ug/L	243359	Standard
	Ti	47	88102.4	1.0	**99.6076**	0.537	0.5	ug/L	43	Standard
	V	51	371987.3	0.6	**49.9372**	0.531	1.1	ug/L	1887	Standard
	Cr	52	302604.3	0.5	**50.0075**	0.453	0.9	ug/L	5892	Standard
	Cr	53	49792.5	1.2	**49.7866**	0.190	0.4	ug/L	123	Standard
	Mn	55	495303.0	0.5	**50.6201**	0.326	0.6	ug/L	545	Standard
	Co	59	348390.0	0.6	**50.1150**	0.886	1.8	ug/L	73	Standard
	Ni	60	84719.9	0.3	**50.0323**	0.464	0.9	ug/L	42	Standard
	Cu	65	75018.9	0.3	**49.6723**	0.623	1.3	ug/L	48	Standard
	Zn	66	34063.6	1.0	**49.1122**	1.047	2.1	ug/L	65	Standard
>	**Ge**	72	187945.3	1.2				ug/L	188156	Standard
	As	75	36452.2	1.1	**49.9816**	0.702	1.4	ug/L	-124	Standard
	Se	82	3849.3	0.4	**50.5481**	0.507	1.0	ug/L	16	Standard
	Se-1	77	2484.9	2.0	**49.5760**	1.609	3.2	ug/L	59	Standard
>	**Ga**	71	390.0	3.8				mg/L	355	Standard
	Rb	85	610.0	4.6				ug/L	17	Standard
	Y	89	179637.0	0.4				ug/L	183245	Standard
>	**Rh**	103	315.0	23.4				ug/L	345	Standard
	Mo	98	277583.6	1.3	**98.6170**	0.514	0.5	ug/L	38	Standard
	Ag	107	322126.6	2.8	**50.3868**	0.741	1.5	ug/L	79	Standard
	Cd	111	133126.3	1.3	**49.7880**	0.404	0.8	mg/L	49	Standard
	Cd	114	359840.6	1.6	**49.7749**	0.748	1.5	ug/L	130	Standard
>	**In**	115	519268.3	1.8				ug/L	515710	Standard
	Sn	118	893902.2	1.1	**66.0164**	1.398	2.1	ug/L	398	Standard
	Sb	123	362223.7	1.2	**49.5979**	0.368	0.7	ug/L	221	Standard
	Ba	135	151258.6	1.0	**50.4266**	0.944	1.9	ug/L	22	Standard
	Ce	140	617.3	1.2				ug/L	19	Standard
>	**Tb**	159	743269.1	0.6				ug/L	695601	Standard
	Ho	165	15.0	6.7				ug/L	12	Standard
	Tl	203	596537.7	0.4	**50.5063**	0.267	0.5	ug/L	21	Standard
	Tl	205	1380860.7	0.2	**48.8001**	0.117	0.2	ug/L	49	Standard
	Pb	206	469768.9	0.6	**50.6801**	0.291	0.6	ug/L	281	Standard
	Pb	207	399655.4	1.1	**51.2385**	0.431	0.8	ug/L	226	Standard
	Pb	208	1847912.1	0.2	**51.0415**	0.069	0.1	ug/L	1051	Standard
	U	238	556838.6	1.0	**50.0770**	0.354	0.7	ug/L	13	Standard
>	**Bi**	209	407627.6	0.4				ug/L	407761	Standard

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Na	23	110187.6	1.2	**6.2069**	0.179	2.9	mg/L	187	Standard
Mg	24	1527245.2	1.5	**4.1726**	0.048	1.2	mg/L	35	Standard
K	39	3753.8	2.0	**4.9543**	0.180	3.6	mg/L	83	Standard
Ca	43	6.7	114.6	**2.2716**	2.564	112.9	mg/L	2	Standard
Fe	54	15863.4	1.7	**4.8261**	0.184	3.8	mg/L	355	Standard
Fe	57	303881.0	1.7	**4.6946**	0.173	3.7	mg/L	1985	Standard
Sc-1	45	242231.4	2.0				mg/L	243359	Standard
Cl	35	5.0	52.9				ug/L	3	Standard
Kr	83	33.2	9.7				ug/L	33	Standard
Br	81	712.5	4.0				ug/L	741	Standard
P	31	244.2	5.8				ug/L	223	Standard
S	34	3410.4	5.8				ug/L	3154	Standard
Sr	88	30.0	44.1				ug/L	32	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	100.768		
Sc	45			
Ti	47	99.608		
V	51	99.874		
Cr	52	100.015		
Cr	53			
Mn	55	101.240		
Co	59	100.230		
Ni	60	100.065		
Cu	65	99.345		
Zn	66	98.224		
Ge	72		99.888	
As	75	99.963		
Se	82	101.096		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	98.617		
Ag	107	100.774		

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	Cd	111	99.576	
	Cd	114		
>	In	115		100.690
	Sn	118	132.033	
	Sb	123	99.196	
	Ba	135	100.853	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	101.013	
	Tl	205		
	Pb	206	101.360	
	Pb	207	102.477	
	Pb	208	102.083	
	U	238	100.154	
>	Bi	209		99.967
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
Report Date/Time: Wednesday, July 18, 2012 11:37:59
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 18, 2012 11:38:39
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	6363.0	3.0	**30.0945**	116.107	385.8	ug/L	6510	Standard
	Be	9	35.0	62.3	**0.0261**	0.017	65.7	ug/L	8	Standard
	Al	27	8409.5	59.3	**0.5781**	0.574	99.2	ug/L	4354	Standard
>	**Sc**	45	234637.8	3.7				ug/L	243359	Standard
	Ti	47	63.3	32.4	**0.0299**	0.023	77.7	ug/L	43	Standard
	V	51	1857.6	5.8	**-0.0073**	0.013	183.2	ug/L	1887	Standard
	Cr	52	5614.4	1.5	**-0.0697**	0.006	9.1	ug/L	5892	Standard
	Cr	53	126.7	17.9	**0.0257**	0.022	87.3	ug/L	123	Standard
	Mn	55	880.0	35.7	**0.0243**	0.032	132.4	ug/L	545	Standard
	Co	59	245.0	77.6	**0.0227**	0.028	121.4	ug/L	73	Standard
	Ni	60	85.7	21.2	**0.0265**	0.011	39.8	ug/L	42	Standard
	Cu	65	73.7	38.9	**0.0117**	0.019	162.2	ug/L	48	Standard
	Zn	66	75.7	20.5	**-0.0043**	0.022	511.5	ug/L	65	Standard
>	**Ge**	72	184806.3	0.9				ug/L	188156	Standard
	As	75	-84.7	16.3	**0.0659**	0.019	28.1	ug/L	-124	Standard
	Se	82	19.5	21.1	**0.1346**	0.057	42.5	ug/L	16	Standard
	Se-1	77	59.3	18.0	**0.0141**	0.233	1648.3	ug/L	59	Standard
>	**Ga**	71	353.3	0.8				mg/L	355	Standard
	Rb	85	13.3	57.3				ug/L	17	Standard
	Y	89	176499.0	1.9				ug/L	183245	Standard
>	**Rh**	103	278.3	6.3				ug/L	345	Standard
	Mo	98	173.1	36.1	**0.0508**	0.024	46.8	ug/L	38	Standard
	Ag	107	495.3	58.4	**0.0760**	0.048	62.9	ug/L	79	Standard
	Cd	111	189.6	112.8	**0.0600**	0.084	139.9	mg/L	49	Standard
	Cd	114	514.1	120.2	**0.0534**	0.090	167.8	ug/L	130	Standard
>	**In**	115	503651.9	1.7				ug/L	515710	Standard
	Sn	118	1264.4	78.7	**0.0479**	0.077	161.5	ug/L	398	Standard
	Sb	123	1472.2	60.2	**0.1958**	0.128	65.6	ug/L	221	Standard
	Ba	135	177.3	131.8	**0.0537**	0.082	151.9	ug/L	22	Standard
	Ce	140	17.3	27.3				ug/L	19	Standard
>	**Tb**	159	702686.5	1.3				ug/L	695601	Standard
	Ho	165	8.7	13.3				ug/L	12	Standard
	Tl	203	469.7	123.5	**0.0388**	0.049	126.8	ug/L	21	Standard
	Tl	205	1051.1	120.0	**0.0363**	0.045	123.1	ug/L	49	Standard
	Pb	206	598.3	65.6	**0.0369**	0.043	115.4	ug/L	281	Standard
	Pb	207	472.7	53.9	**0.0282**	0.033	116.8	ug/L	226	Standard
	Pb	208	2217.1	60.4	**0.0321**	0.037	116.0	ug/L	1051	Standard
	U	238	266.0	89.2	**0.0231**	0.021	92.5	ug/L	13	Standard
>	**Bi**	209	410716.5	0.8				ug/L	407761	Standard

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	Na	23	438.3	34.1	**0.0014**	0.009	604.2	mg/L	187	Standard
	Mg	24	936.7	94.4	**0.0021**	0.002	117.5	mg/L	35	Standard
	K	39	146.7	7.1	**0.0971**	0.008	8.0	mg/L	83	Standard
	Ca	43	0.0		**0.0050**	0.000	0.0	mg/L	2	Standard
	Fe	54	403.9	12.4	**0.0001**	0.011	9764.4	mg/L	355	Standard
	Fe	57	2016.8	4.5	**0.0008**	0.001	160.0	mg/L	1985	Standard
>	**Sc-1**	45	234637.8	3.7				mg/L	243359	Standard
	Cl	35	3.7	56.8				ug/L	3	Standard
	Kr	83	32.0	6.8				ug/L	33	Standard
	Br	81	675.8	4.3				ug/L	741	Standard
	P	31	223.3	8.1				ug/L	223	Standard
	S	34	3077.0	3.8				ug/L	3154	Standard
	Sr	88	35.0	14.3				ug/L	32	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		98.220	
	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	97.662
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	100.725
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 67 WG403259-03
Sample Date/Time: Wednesday, July 18, 2012 11:41:51
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	6511.4	2.0	**25.0350**	28.773	114.9	ug/L	6510	Standard
	Be	9	11.7	24.7	**0.0075**	0.002	27.7	ug/L	8	Standard
	Al	27	3937.2	8.8	**0.0536**	0.033	61.4	ug/L	4354	Standard
>	**Sc**	45	240405.8	1.4				ug/L	243359	Standard
	Ti	47	39.7	13.9	**0.0027**	0.006	220.8	ug/L	43	Standard
	V	51	1762.2	1.3	**-0.0205**	0.001	5.5	ug/L	1887	Standard
	Cr	52	5528.3	2.5	**-0.0852**	0.025	29.5	ug/L	5892	Standard
	Cr	53	125.0	17.8	**0.0239**	0.022	93.3	ug/L	123	Standard
	Mn	55	575.3	6.7	**-0.0074**	0.004	47.7	ug/L	545	Standard
	Co	59	68.3	20.9	**-0.0030**	0.002	66.9	ug/L	73	Standard
	Ni	60	125.3	10.4	**0.0503**	0.008	16.5	ug/L	42	Standard
	Cu	65	46.3	28.1	**-0.0066**	0.009	134.3	ug/L	48	Standard
	Zn	66	879.7	3.2	**1.1760**	0.033	2.8	ug/L	65	Standard
>	**Ge**	72	184974.0	0.8				ug/L	188156	Standard
	As	75	-111.9	5.3	**0.0282**	0.007	24.7	ug/L	-124	Standard
	Se	82	12.0	18.5	**0.0347**	0.031	88.6	ug/L	16	Standard
	Se-1	77	59.3	6.8	**0.0114**	0.075	654.7	ug/L	59	Standard
>	**Ga**	71	396.7	4.1				mg/L	355	Standard
	Rb	85	20.0	50.0				ug/L	17	Standard
	Y	89	174974.6	0.6				ug/L	183245	Standard
>	**Rh**	103	281.7	8.2				ug/L	345	Standard
	Mo	98	55.3	32.5	**0.0073**	0.007	94.1	ug/L	38	Standard
	Ag	107	100.3	1.5	**0.0118**	0.000	3.2	ug/L	79	Standard
	Cd	111	48.5	24.8	**0.0048**	0.005	99.8	mg/L	49	Standard
	Cd	114	131.0	18.0	**-0.0021**	0.003	166.0	ug/L	130	Standard
>	**In**	115	509062.4	1.6				ug/L	515710	Standard
	Sn	118	446.0	7.3	**-0.0153**	0.003	19.4	ug/L	398	Standard
	Sb	123	347.0	5.2	**0.0353**	0.003	7.3	ug/L	221	Standard
	Ba	135	22.7	40.0	**-0.0001**	0.003	4383.2	ug/L	22	Standard
	Ce	140	11.7	40.5				ug/L	19	Standard
>	**Tb**	159	698697.2	1.2				ug/L	695601	Standard
	Ho	165	9.0	38.5				ug/L	12	Standard
	Tl	203	36.0	67.6	**0.0022**	0.002	94.4	ug/L	21	Standard
	Tl	205	89.3	35.7	**0.0024**	0.001	46.7	ug/L	49	Standard
	Pb	206	252.7	13.9	**-0.0000**	0.004	7987.5	ug/L	281	Standard
	Pb	207	232.7	9.8	**-0.0023**	0.003	130.4	ug/L	226	Standard
	Pb	208	1047.0	7.6	**0.0001**	0.002	2302.6	ug/L	1051	Standard
	U	238	17.3	49.1	**0.0009**	0.001	85.9	ug/L	13	Standard
>	**Bi**	209	407210.0	0.7				ug/L	407761	Standard

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⌈	**Na**	23	233.3	18.0	**-0.0108**	0.002	21.8	mg/L	187	Standard
|	**Mg**	24	113.3	46.3	**-0.0002**	0.000	73.0	mg/L	35	Standard
|	**K**	39	111.7	6.8	**0.0450**	0.012	27.1	mg/L	83	Standard
|	**Ca**	43	3.3	173.2	**1.1617**	2.003	172.5	mg/L	2	Standard
|	**Fe**	54	383.4	9.1	**-0.0091**	0.012	126.9	mg/L	355	Standard
|	**Fe**	57	1835.1	4.5	**-0.0029**	0.001	36.8	mg/L	1985	Standard
⌊>	**Sc-1**	45	240405.8	1.4				mg/L	243359	Standard
	Cl	35	4.3	35.3				ug/L	3	Standard
	Kr	83	34.2	7.4				ug/L	33	Standard
	Br	81	673.3	10.3				ug/L	741	Standard
	P	31	230.0	5.6				ug/L	223	Standard
	S	34	3150.3	3.8				ug/L	3154	Standard
	Sr	88	21.7	48.0				ug/L	32	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		98.309	
|	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	98.711
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.865
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 67 WG403259-04
Sample Date/Time: Wednesday, July 18, 2012 11:45:00
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	7001.6	2.6	**-13.2997**	101.032	759.7	ug/L	6510	Standard
	Be	9	35768.9	2.3	**25.0515**	1.212	4.8	ug/L	8	Standard
	Al	27	262211.7	2.0	**26.5926**	0.672	2.5	ug/L	4354	Standard
>	**Sc**	45	263815.8	3.8				ug/L	243359	Standard
	Ti	47	89.7	27.0	**0.0498**	0.024	47.4	ug/L	43	Standard
	V	51	203569.2	2.8	**24.8852**	0.441	1.8	ug/L	1887	Standard
	Cr	52	171168.3	1.7	**25.4011**	0.528	2.1	ug/L	5892	Standard
	Cr	53	27790.5	1.6	**25.3914**	0.383	1.5	ug/L	123	Standard
	Mn	55	272615.3	2.9	**25.4691**	0.218	0.9	ug/L	545	Standard
	Co	59	193111.5	1.9	**25.4237**	0.416	1.6	ug/L	73	Standard
	Ni	60	47087.4	1.9	**25.4453**	0.322	1.3	ug/L	42	Standard
	Cu	65	42929.4	2.0	**26.0049**	0.466	1.8	ug/L	48	Standard
	Zn	66	20855.7	5.7	**27.5043**	2.211	8.0	ug/L	65	Standard
>	**Ge**	72	205304.7	2.3				ug/L	188156	Standard
	As	75	19108.0	0.6	**24.0886**	0.673	2.8	ug/L	-124	Standard
	Se	82	1961.9	1.4	**23.5189**	0.261	1.1	ug/L	16	Standard
	Se-1	77	1321.1	3.4	**23.4948**	0.581	2.5	ug/L	59	Standard
>	**Ga**	71	400.0	3.8				mg/L	355	Standard
	Rb	85	93.3	8.2				ug/L	17	Standard
	Y	89	193761.4	2.2				ug/L	183245	Standard
>	**Rh**	103	353.3	6.4				ug/L	345	Standard
	Mo	98	320.0	123.8	**0.0909**	0.128	140.4	ug/L	38	Standard
	Ag	107	183259.1	1.5	**26.4129**	0.273	1.0	ug/L	79	Standard
	Cd	111	71998.9	1.7	**24.8061**	0.615	2.5	mg/L	49	Standard
	Cd	114	192280.6	1.2	**24.4943**	0.099	0.4	ug/L	130	Standard
>	**In**	115	563563.8	1.4				ug/L	515710	Standard
	Sn	118	865.0	40.3	**0.0098**	0.023	234.2	ug/L	398	Standard
	Sb	123	192737.1	1.3	**24.3105**	0.432	1.8	ug/L	221	Standard
	Ba	135	82137.4	1.1	**25.2248**	0.428	1.7	ug/L	22	Standard
	Ce	140	90.0	6.2				ug/L	19	Standard
>	**Tb**	159	751710.2	0.5				ug/L	695601	Standard
	Ho	165	9.7	15.8				ug/L	12	Standard
	Tl	203	317846.5	1.6	**25.0989**	0.412	1.6	ug/L	21	Standard
	Tl	205	740323.3	1.7	**24.4020**	0.434	1.8	ug/L	49	Standard
	Pb	206	252087.6	0.9	**25.3516**	0.193	0.8	ug/L	281	Standard
	Pb	207	216301.7	0.6	**25.8496**	0.206	0.8	ug/L	226	Standard
	Pb	208	998968.2	1.0	**25.7212**	0.250	1.0	ug/L	1051	Standard
	U	238	291542.2	2.0	**24.4527**	0.376	1.5	ug/L	13	Standard
>	**Bi**	209	437050.7	0.8				ug/L	407761	Standard

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⌈	**Na**	23	915.0	14.3	**0.0233**	0.005	21.4	mg/L	187	Standard
|	**Mg**	24	1413.4	26.9	**0.0030**	0.001	28.4	mg/L	35	Standard
|	**K**	39	100.0	13.2	**0.0170**	0.016	92.3	mg/L	83	Standard
|	**Ca**	43	5.0	100.0	**1.5398**	1.512	98.2	mg/L	2	Standard
|	**Fe**	54	528.4	6.3	**0.0216**	0.004	17.0	mg/L	355	Standard
|	**Fe**	57	2246.8	9.1	**0.0004**	0.002	415.1	mg/L	1985	Standard
⌊>	**Sc-1**	45	263815.8	3.8				mg/L	243359	Standard
	Cl	35	4.7	32.7				ug/L	3	Standard
	Kr	83	30.8	5.6				ug/L	33	Standard
	Br	81	876.7	2.4				ug/L	741	Standard
	P	31	378.3	6.5				ug/L	223	Standard
	S	34	3240.3	0.7				ug/L	3154	Standard
	Sr	88	26.7	65.8				ug/L	32	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		109.114	
|	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	109.279
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	107.183
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207000101
Sample Date/Time: Wednesday, July 18, 2012 11:48:10
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	6974.9	5.4	**52.5924**	30.404	57.8	ug/L	6510	Standard
	Be	9	23.3	68.9	**0.0152**	0.011	73.4	ug/L	8	Standard
	Al	27	22693.7	3.6	**2.0365**	0.117	5.8	ug/L	4354	Standard
>	**Sc**	45	254020.0	4.9				ug/L	243359	Standard
	Ti	47	60.0	20.5	**0.0215**	0.013	60.2	ug/L	43	Standard
	V	51	3825.0	1.4	**0.2272**	0.010	4.2	ug/L	1887	Standard
	Cr	52	9251.8	0.6	**0.4465**	0.012	2.6	ug/L	5892	Standard
	Cr	53	641.7	7.9	**0.5061**	0.046	9.2	ug/L	123	Standard
	Mn	55	6898.2	0.7	**0.6020**	0.008	1.3	ug/L	545	Standard
	Co	59	1739.1	5.0	**0.2241**	0.011	4.9	ug/L	73	Standard
	Ni	60	1707.4	3.8	**0.9312**	0.032	3.5	ug/L	42	Standard
	Cu	65	893.7	2.4	**0.5235**	0.014	2.7	ug/L	48	Standard
	Zn	66	5035.8	2.2	**6.7818**	0.114	1.7	ug/L	65	Standard
>	**Ge**	72	198268.8	0.6				ug/L	188156	Standard
	As	75	41.2	39.3	**0.2368**	0.021	8.8	ug/L	-124	Standard
	Se	82	31.5	24.7	**0.2666**	0.099	37.0	ug/L	16	Standard
	Se-1	77	72.7	9.0	**0.1870**	0.119	63.5	ug/L	59	Standard
>	**Ga**	71	395.0	16.6				mg/L	355	Standard
	Rb	85	26.7	21.7				ug/L	17	Standard
	Y	89	192930.7	1.5				ug/L	183245	Standard
>	**Rh**	103	320.0	8.1				ug/L	345	Standard
	Mo	98	53.4	7.7	**0.0053**	0.002	30.5	ug/L	38	Standard
	Ag	107	1673.8	0.3	**0.2464**	0.004	1.5	ug/L	79	Standard
	Cd	111	435.5	6.9	**0.1421**	0.009	6.6	mg/L	49	Standard
	Cd	114	1148.8	2.0	**0.1316**	0.004	2.7	ug/L	130	Standard
>	**In**	115	542612.2	1.6				ug/L	515710	Standard
	Sn	118	616.7	1.7	**-0.0053**	0.001	22.2	ug/L	398	Standard
	Sb	123	2256.5	7.2	**0.2825**	0.019	6.8	ug/L	221	Standard
	Ba	135	2240.2	1.8	**0.7069**	0.007	1.0	ug/L	22	Standard
	Ce	140	60.7	5.3				ug/L	19	Standard
>	**Tb**	159	721931.3	3.2				ug/L	695601	Standard
	Ho	165	8.0	33.1				ug/L	12	Standard
	Tl	203	635.0	2.7	**0.0517**	0.002	3.4	ug/L	21	Standard
	Tl	205	1436.1	3.9	**0.0488**	0.001	1.5	ug/L	49	Standard
	Pb	206	2314.8	2.6	**0.2168**	0.008	3.8	ug/L	281	Standard
	Pb	207	2155.2	1.6	**0.2380**	0.007	3.0	ug/L	226	Standard
	Pb	208	9473.8	1.6	**0.2269**	0.003	1.5	ug/L	1051	Standard
	U	238	2407.9	1.0	**0.2109**	0.004	1.8	ug/L	13	Standard
>	**Bi**	209	417315.4	2.8				ug/L	407761	Standard

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Na	23	760.0	4.7	**0.0170**	0.003	20.4	mg/L	187	Standard
Mg	24	2860.3	2.9	**0.0070**	0.000	3.5	mg/L	35	Standard
K	39	98.3	14.7	**0.0204**	0.025	123.4	mg/L	83	Standard
Ca	43	1.7	173.2	**0.5436**	0.933	171.6	mg/L	2	Standard
Fe	54	577.3	10.4	**0.0427**	0.023	52.8	mg/L	355	Standard
Fe	57	2156.8	3.5	**0.0004**	0.002	507.3	mg/L	1985	Standard
Sc-1	45	254020.0	4.9				mg/L	243359	Standard
Cl	35	2.3	24.7				ug/L	3	Standard
Kr	83	32.6	12.0				ug/L	33	Standard
Br	81	832.5	1.6				ug/L	741	Standard
P	31	315.8	11.5				ug/L	223	Standard
S	34	3214.5	1.4				ug/L	3154	Standard
Sr	88	20.0	43.3				ug/L	32	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		105.375	
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	105.217
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.343
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207000301
Sample Date/Time: Wednesday, July 18, 2012 11:51:19
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	6788.2	1.1	**-37.4250**	37.276	99.6	ug/L	6510	Standard
	Be	9	51.7	89.4	**0.0360**	0.034	95.5	ug/L	8	Standard
	Al	27	47961.2	27.1	**4.6646**	1.513	32.4	ug/L	4354	Standard
>	**Sc**	45	258726.2	2.5				ug/L	243359	Standard
	Ti	47	131.3	31.2	**0.0961**	0.044	45.7	ug/L	43	Standard
	V	51	5642.9	11.2	**0.4497**	0.082	18.2	ug/L	1887	Standard
	Cr	52	12094.2	3.4	**0.8740**	0.067	7.7	ug/L	5892	Standard
	Cr	53	1049.2	1.9	**0.8794**	0.023	2.6	ug/L	123	Standard
	Mn	55	11384.3	8.0	**1.0219**	0.091	8.9	ug/L	545	Standard
	Co	59	3499.1	15.1	**0.4577**	0.073	15.9	ug/L	73	Standard
	Ni	60	3229.0	3.2	**1.7583**	0.061	3.5	ug/L	42	Standard
	Cu	65	1558.4	3.9	**0.9274**	0.042	4.5	ug/L	48	Standard
	Zn	66	8535.1	0.8	**11.4118**	0.052	0.5	ug/L	65	Standard
>	**Ge**	72	201075.1	0.5				ug/L	188156	Standard
	As	75	183.8	16.3	**0.4182**	0.039	9.3	ug/L	-124	Standard
	Se	82	45.9	9.5	**0.4384**	0.055	12.5	ug/L	16	Standard
	Se-1	77	78.7	3.9	**0.2826**	0.065	23.0	ug/L	59	Standard
>	**Ga**	71	418.3	5.6				mg/L	355	Standard
	Rb	85	63.3	24.1				ug/L	17	Standard
	Y	89	194218.6	0.7				ug/L	183245	Standard
>	**Rh**	103	298.3	12.6				ug/L	345	Standard
	Mo	98	42.9	70.7	**0.0015**	0.010	671.9	ug/L	38	Standard
	Ag	107	2901.3	3.0	**0.4251**	0.011	2.5	ug/L	79	Standard
	Cd	111	756.6	1.5	**0.2539**	0.005	2.1	mg/L	49	Standard
	Cd	114	2025.7	2.5	**0.2445**	0.005	2.2	ug/L	130	Standard
>	**In**	115	549035.3	1.6				ug/L	515710	Standard
	Sn	118	2625.6	3.2	**0.1345**	0.003	2.2	ug/L	398	Standard
	Sb	123	3329.2	2.1	**0.4181**	0.009	2.1	ug/L	221	Standard
	Ba	135	4037.9	2.4	**1.2653**	0.018	1.4	ug/L	22	Standard
	Ce	140	234.0	4.3				ug/L	19	Standard
>	**Tb**	159	740985.0	1.3				ug/L	695601	Standard
	Ho	165	10.3	31.1				ug/L	12	Standard
	Tl	203	1110.4	5.2	**0.0890**	0.004	4.6	ug/L	21	Standard
	Tl	205	2800.6	11.1	**0.0939**	0.010	10.6	ug/L	49	Standard
	Pb	206	4456.0	9.0	**0.4326**	0.039	9.0	ug/L	281	Standard
	Pb	207	4116.9	10.7	**0.4728**	0.051	10.8	ug/L	226	Standard
	Pb	208	18334.1	10.0	**0.4556**	0.046	10.0	ug/L	1051	Standard
	U	238	4941.5	10.9	**0.4242**	0.044	10.4	ug/L	13	Standard
>	**Bi**	209	426182.9	0.7				ug/L	407761	Standard

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	Na	23	510.0	44.6	**0.0031**	0.013	416.8	mg/L	187	Standard
	Mg	24	1470.1	107.2	**0.0033**	0.004	125.9	mg/L	35	Standard
	K	39	101.7	31.6	**0.0209**	0.038	181.2	mg/L	83	Standard
	Ca	43	1.7	173.2	**0.5328**	0.914	171.6	mg/L	2	Standard
	Fe	54	592.1	1.8	**0.0434**	0.007	16.8	mg/L	355	Standard
	Fe	57	2566.9	16.2	**0.0059**	0.007	120.7	mg/L	1985	Standard
>	**Sc-1**	45	258726.2	2.5				mg/L	243359	Standard
	Cl	35	3.3	17.3				ug/L	3	Standard
	Kr	83	32.8	5.2				ug/L	33	Standard
	Br	81	835.0	3.9				ug/L	741	Standard
	P	31	340.8	4.0				ug/L	223	Standard
	S	34	3264.5	2.6				ug/L	3154	Standard
	Sr	88	26.7	47.2				ug/L	32	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		106.866	
	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	106.462
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	104.518
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

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: Wednesday, July 18, 2012 11:54:32
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	6434.7	0.7	**32.9511**	18.424	55.9	ug/L	6510	Standard
	Be	9	62701.2	2.8	**48.9062**	1.503	3.1	ug/L	8	Standard
	Al	27	445765.2	2.6	**50.7326**	1.959	3.9	ug/L	4354	Standard
>	**Sc**	45	236657.4	1.2				ug/L	243359	Standard
	Ti	47	86432.8	0.1	**96.9418**	0.351	0.4	ug/L	43	Standard
	V	51	366224.6	0.6	**48.7644**	0.409	0.8	ug/L	1887	Standard
	Cr	52	297494.0	0.8	**48.7442**	0.384	0.8	ug/L	5892	Standard
	Cr	53	49066.8	1.0	**48.6707**	0.648	1.3	ug/L	123	Standard
	Mn	55	492472.3	1.0	**49.9297**	0.689	1.4	ug/L	545	Standard
	Co	59	346480.7	0.9	**49.4395**	0.618	1.3	ug/L	73	Standard
	Ni	60	84473.5	1.0	**49.4868**	0.419	0.8	ug/L	42	Standard
	Cu	65	75820.6	1.2	**49.8015**	0.740	1.5	ug/L	48	Standard
	Zn	66	34483.9	0.5	**49.3158**	0.139	0.3	ug/L	65	Standard
>	**Ge**	72	189449.4	0.4				ug/L	188156	Standard
	As	75	36481.0	0.2	**49.6219**	0.165	0.3	ug/L	-124	Standard
	Se	82	3774.8	0.9	**49.1707**	0.663	1.3	ug/L	16	Standard
	Se-1	77	2473.5	1.2	**48.9327**	0.789	1.6	ug/L	59	Standard
>	**Ga**	71	350.0	10.8				mg/L	355	Standard
	Rb	85	606.7	11.5				ug/L	17	Standard
	Y	89	176075.7	1.7				ug/L	183245	Standard
>	**Rh**	103	320.0	12.4				ug/L	345	Standard
	Mo	98	269843.1	0.6	**98.2014**	1.223	1.2	ug/L	38	Standard
	Ag	107	311193.7	1.3	**49.8679**	0.808	1.6	ug/L	79	Standard
	Cd	111	130667.3	0.2	**50.0563**	0.296	0.6	mg/L	49	Standard
	Cd	114	357327.3	1.0	**50.6270**	0.443	0.9	ug/L	130	Standard
>	**In**	115	506922.9	0.7				ug/L	515710	Standard
	Sn	118	872901.3	1.0	**66.0211**	0.459	0.7	ug/L	398	Standard
	Sb	123	354925.4	0.3	**49.7794**	0.275	0.6	ug/L	221	Standard
	Ba	135	150743.8	0.5	**51.4702**	0.310	0.6	ug/L	22	Standard
	Ce	140	618.3	4.9				ug/L	19	Standard
>	**Tb**	159	722236.6	0.2				ug/L	695601	Standard
	Ho	165	13.7	16.9				ug/L	12	Standard
	Tl	203	588965.6	1.1	**50.5076**	0.591	1.2	ug/L	21	Standard
	Tl	205	1364600.5	0.4	**48.8463**	0.108	0.2	ug/L	49	Standard
	Pb	206	465315.4	0.4	**50.8462**	0.102	0.2	ug/L	281	Standard
	Pb	207	393227.9	0.8	**51.0641**	0.280	0.5	ug/L	226	Standard
	Pb	208	1821809.1	0.4	**50.9684**	0.133	0.3	ug/L	1051	Standard
	U	238	545336.5	0.8	**49.6750**	0.389	0.8	ug/L	13	Standard
>	**Bi**	209	402443.0	0.2				ug/L	407761	Standard

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	Na	23	107105.6	1.5	**6.1735**	0.098	1.6	mg/L	187	Standard
	Mg	24	1512188.4	0.2	**4.2287**	0.054	1.3	mg/L	35	Standard
	K	39	3827.2	6.2	**5.1714**	0.288	5.6	mg/L	83	Standard
	Ca	43	13.3	43.3	**4.6941**	2.083	44.4	mg/L	2	Standard
	Fe	54	15957.5	0.4	**4.9711**	0.081	1.6	mg/L	355	Standard
	Fe	57	301971.0	5.8	**4.7727**	0.260	5.4	mg/L	1985	Standard
>	**Sc-1**	45	236657.4	1.2				mg/L	243359	Standard
	Cl	35	2.3	24.7				ug/L	3	Standard
	Kr	83	32.2	22.5				ug/L	33	Standard
	Br	81	711.7	5.9				ug/L	741	Standard
	P	31	258.3	11.2				ug/L	223	Standard
	S	34	3279.5	3.6				ug/L	3154	Standard
	Sr	88	23.3	32.7				ug/L	32	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	101.465		
>	Sc	45			
	Ti	47	96.942		
	V	51	97.529		
	Cr	52	97.488		
	Cr	53			
	Mn	55	99.859		
	Co	59	98.879		
	Ni	60	98.974		
	Cu	65	99.603		
	Zn	66	98.632		
>	Ge	72		100.687	
	As	75	99.244		
	Se	82	98.341		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	98.201		
	Ag	107	99.736		

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	Cd	111	100.113	
	Cd	114		
>	In	115		98.296
	Sn	118	132.042	
	Sb	123	99.559	
	Ba	135	102.940	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	101.015	
	Tl	205		
	Pb	206	101.692	
	Pb	207	102.128	
	Pb	208	101.937	
	U	238	99.350	
>	Bi	209		98.696
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 18, 2012 11:57:42
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	6137.9	3.6	**-2.8884**	106.277	3679.4	ug/L	6510	Standard
	Be	9	16.7	62.4	**0.0121**	0.009	71.7	ug/L	8	Standard
	Al	27	3578.8	2.3	**0.0322**	0.021	65.5	ug/L	4354	Standard
>	**Sc**	45	229995.3	3.1				ug/L	243359	Standard
	Ti	47	47.7	15.7	**0.0118**	0.009	78.9	ug/L	43	Standard
	V	51	1731.4	1.3	**-0.0257**	0.006	24.8	ug/L	1887	Standard
	Cr	52	5476.0	1.9	**-0.0982**	0.026	26.3	ug/L	5892	Standard
	Cr	53	132.5	16.1	**0.0309**	0.020	64.8	ug/L	123	Standard
	Mn	55	630.0	9.3	**-0.0019**	0.006	329.6	ug/L	545	Standard
	Co	59	86.0	23.2	**-0.0005**	0.003	617.4	ug/L	73	Standard
	Ni	60	61.7	16.6	**0.0119**	0.006	48.5	ug/L	42	Standard
	Cu	65	52.7	6.1	**-0.0025**	0.002	77.3	ug/L	48	Standard
	Zn	66	82.0	11.2	**0.0045**	0.014	313.4	ug/L	65	Standard
>	**Ge**	72	185792.0	1.4				ug/L	188156	Standard
	As	75	-111.1	10.9	**0.0301**	0.015	49.0	ug/L	-124	Standard
	Se	82	11.3	23.9	**0.0238**	0.034	143.7	ug/L	16	Standard
	Se-1	77	62.3	22.7	**0.0712**	0.308	432.5	ug/L	59	Standard
>	**Ga**	71	350.0	26.0				mg/L	355	Standard
	Rb	85	18.3	78.7				ug/L	17	Standard
	Y	89	170590.1	1.6				ug/L	183245	Standard
>	**Rh**	103	253.3	14.5				ug/L	345	Standard
	Mo	98	108.3	43.2	**0.0264**	0.017	63.4	ug/L	38	Standard
	Ag	107	253.7	2.8	**0.0363**	0.001	2.1	ug/L	79	Standard
	Cd	111	63.7	4.0	**0.0106**	0.001	7.4	mg/L	49	Standard
	Cd	114	147.4	10.2	**0.0002**	0.002	903.7	ug/L	130	Standard
>	**In**	115	508836.0	1.2				ug/L	515710	Standard
	Sn	118	695.0	8.7	**0.0034**	0.004	122.0	ug/L	398	Standard
	Sb	123	870.9	32.1	**0.1084**	0.038	35.2	ug/L	221	Standard
	Ba	135	30.3	19.9	**0.0025**	0.002	81.4	ug/L	22	Standard
	Ce	140	13.7	18.4				ug/L	19	Standard
>	**Tb**	159	693560.7	0.6				ug/L	695601	Standard
	Ho	165	9.7	46.6				ug/L	12	Standard
	Tl	203	49.7	66.2	**0.0034**	0.003	84.3	ug/L	21	Standard
	Tl	205	139.3	58.4	**0.0042**	0.003	69.9	ug/L	49	Standard
	Pb	206	275.7	9.1	**0.0026**	0.003	113.8	ug/L	281	Standard
	Pb	207	247.7	6.7	**-0.0002**	0.002	1339.8	ug/L	226	Standard
	Pb	208	1138.4	6.2	**0.0028**	0.002	80.3	ug/L	1051	Standard
	U	238	46.0	35.9	**0.0035**	0.002	43.7	ug/L	13	Standard
>	**Bi**	209	405358.0	0.8				ug/L	407761	Standard

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Na	23	235.0	8.5	**-0.0101**	0.001	14.1	mg/L	187	Standard
Mg	24	201.7	34.7	**0.0001**	0.000	269.0	mg/L	35	Standard
K	39	76.7	10.0	**0.0021**	0.010	492.2	mg/L	83	Standard
Ca	43	8.3	124.9	**3.0277**	3.739	123.5	mg/L	2	Standard
Fe	54	388.4	10.4	**-0.0022**	0.011	502.8	mg/L	355	Standard
Fe	57	1821.8	4.0	**-0.0018**	0.001	39.4	mg/L	1985	Standard
Sc-1	45	229995.3	3.1				mg/L	243359	Standard
Cl	35	1.3	43.3				ug/L	3	Standard
Kr	83	31.0	5.7				ug/L	33	Standard
Br	81	719.2	4.0				ug/L	741	Standard
P	31	217.5	16.1				ug/L	223	Standard
S	34	3133.7	3.6				ug/L	3154	Standard
Sr	88	23.3	53.9				ug/L	32	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		98.744	
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	98.667
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.411
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032701
Sample Date/Time: Wednesday, July 18, 2012 12:00:55
Number of Replicates: 3
Autosampler Position: 209
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	32504.9	3.3	**6815.1623**	298.147	4.4	ug/L	6510	Standard
	Be	9	18.3	41.7	**0.0108**	0.005	45.5	ug/L	8	Standard
	Al	27	40790.0	6.9	**3.6412**	0.250	6.9	ug/L	4354	Standard
>	**Sc**	45	274472.7	1.9				ug/L	243359	Standard
	Ti	47	811.0	9.0	**0.8687**	0.077	8.8	ug/L	43	Standard
	V	51	12475.4	2.4	**1.4112**	0.041	2.9	ug/L	1887	Standard
	Cr	52	11272.9	1.7	**0.8573**	0.035	4.1	ug/L	5892	Standard
	Cr	53	1707.6	12.8	**1.5980**	0.223	14.0	ug/L	123	Standard
	Mn	55	13352.9	1.4	**1.2911**	0.020	1.6	ug/L	545	Standard
	Co	59	390.7	7.5	**0.0429**	0.004	10.0	ug/L	73	Standard
	Ni	60	1581.4	7.4	**0.9037**	0.068	7.5	ug/L	42	Standard
	Cu	65	680.7	4.4	**0.4104**	0.017	4.1	ug/L	48	Standard
	Zn	66	3733.5	1.3	**5.2469**	0.072	1.4	ug/L	65	Standard
>	**Ge**	72	189081.2	0.7				ug/L	188156	Standard
	As	75	847.0	5.2	**1.3336**	0.061	4.6	ug/L	-124	Standard
	Se	82	459.5	2.4	**5.8864**	0.181	3.1	ug/L	16	Standard
	Se-1	77	120.3	1.7	**1.2244**	0.054	4.4	ug/L	59	Standard
>	**Ga**	71	396.7	6.9				mg/L	355	Standard
	Rb	85	4775.8	5.2				ug/L	17	Standard
	Y	89	185549.5	2.0				ug/L	183245	Standard
>	**Rh**	103	355.0	7.0				ug/L	345	Standard
	Mo	98	2938.0	2.5	**1.0194**	0.030	2.9	ug/L	38	Standard
	Ag	107	171.7	7.1	**0.0224**	0.002	10.1	ug/L	79	Standard
	Cd	111	89.3	13.6	**0.0193**	0.005	25.6	mg/L	49	Standard
	Cd	114	253.9	1.5	**0.0142**	0.001	6.4	ug/L	130	Standard
>	**In**	115	525158.1	1.5				ug/L	515710	Standard
	Sn	118	649.3	1.6	**-0.0015**	0.001	63.4	ug/L	398	Standard
	Sb	123	363.4	6.3	**0.0361**	0.004	10.4	ug/L	221	Standard
	Ba	135	149633.4	2.0	**49.3130**	0.288	0.6	ug/L	22	Standard
	Ce	140	322.3	6.6				ug/L	19	Standard
>	**Tb**	159	764581.6	1.8				ug/L	695601	Standard
	Ho	165	14.7	27.6				ug/L	12	Standard
	Tl	203	450.3	10.8	**0.0368**	0.004	10.9	ug/L	21	Standard
	Tl	205	1016.0	4.4	**0.0347**	0.001	1.5	ug/L	49	Standard
	Pb	206	575.3	1.1	**0.0340**	0.002	6.5	ug/L	281	Standard
	Pb	207	507.0	3.7	**0.0321**	0.001	3.0	ug/L	226	Standard
	Pb	208	2305.7	2.4	**0.0340**	0.001	3.2	ug/L	1051	Standard
	U	238	1796.1	1.6	**0.1588**	0.002	1.4	ug/L	13	Standard
>	**Bi**	209	412927.2	2.9				ug/L	407761	Standard

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Na	23	147492.8	1.2	**7.3351**	0.090	1.2	mg/L	187	Standard
Mg	24	1372445.1	1.6	**3.3091**	0.042	1.3	mg/L	35	Standard
K	39	868.4	7.5	**0.9270**	0.093	10.0	mg/L	83	Standard
Ca	43	43.3	26.6	**13.1411**	3.649	27.8	mg/L	2	Standard
Fe	54	578.0	12.2	**0.0295**	0.019	64.1	mg/L	355	Standard
Fe	57	8072.2	5.8	**0.0792**	0.008	10.5	mg/L	1985	Standard
Sc-1	45	274472.7	1.9				mg/L	243359	Standard
Cl	35	53.7	25.2				ug/L	3	Standard
Kr	83	35.9	14.7				ug/L	33	Standard
Br	81	49195.6	1.3				ug/L	741	Standard
P	31	220.8	8.5				ug/L	223	Standard
S	34	16565.7	3.7				ug/L	3154	Standard
Sr	88	300.0	10.1				ug/L	32	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		100.492	
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	101.832
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.267
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 18, 2012

Method 6020 - Summary Report

Sample ID: L1207032702
Sample Date/Time: Wednesday, July 18, 2012 12:04:04
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	31830.1	1.2	**7038.7708**	193.234	2.7	ug/L	6510	Standard
	Be	9	26.7	60.3	**0.0173**	0.011	64.2	ug/L	8	Standard
	Al	27	110557.0	1.8	**11.0540**	0.154	1.4	ug/L	4354	Standard
>	**Sc**	45	262109.5	0.9				ug/L	243359	Standard
	Ti	47	803.7	3.0	**0.8707**	0.050	5.8	ug/L	43	Standard
	V	51	15602.5	2.7	**1.8519**	0.022	1.2	ug/L	1887	Standard
	Cr	52	11350.6	1.0	**0.8902**	0.038	4.3	ug/L	5892	Standard
	Cr	53	1493.4	1.0	**1.4001**	0.055	3.9	ug/L	123	Standard
	Mn	55	4447.7	2.3	**0.3900**	0.016	4.0	ug/L	545	Standard
	Co	59	349.3	20.4	**0.0374**	0.009	25.1	ug/L	73	Standard
	Ni	60	793.7	2.4	**0.4460**	0.011	2.4	ug/L	42	Standard
	Cu	65	287.7	3.8	**0.1535**	0.004	2.8	ug/L	48	Standard
	Zn	66	2870.6	2.8	**4.0499**	0.088	2.2	ug/L	65	Standard
>	**Ge**	72	187179.3	2.6				ug/L	188156	Standard
	As	75	250.3	9.8	**0.5274**	0.042	7.9	ug/L	-124	Standard
	Se	82	153.3	8.4	**1.9009**	0.175	9.2	ug/L	16	Standard
	Se-1	77	97.3	9.7	**0.7771**	0.184	23.7	ug/L	59	Standard
>	**Ga**	71	381.7	20.9				mg/L	355	Standard
	Rb	85	11054.0	3.3				ug/L	17	Standard
	Y	89	187047.6	1.2				ug/L	183245	Standard
>	**Rh**	103	305.0	17.7				ug/L	345	Standard
	Mo	98	3457.8	2.4	**1.1851**	0.026	2.2	ug/L	38	Standard
	Ag	107	79.3	23.1	**0.0079**	0.003	37.6	ug/L	79	Standard
	Cd	111	72.4	16.7	**0.0127**	0.005	38.0	mg/L	49	Standard
	Cd	114	210.1	25.8	**0.0077**	0.007	90.8	ug/L	130	Standard
>	**In**	115	532561.1	1.6				ug/L	515710	Standard
	Sn	118	556.3	7.7	**-0.0089**	0.003	36.9	ug/L	398	Standard
	Sb	123	316.0	7.8	**0.0290**	0.003	11.1	ug/L	221	Standard
	Ba	135	120236.6	1.5	**39.0758**	0.323	0.8	ug/L	22	Standard
	Ce	140	1488.7	6.6				ug/L	19	Standard
>	**Tb**	159	786167.2	0.7				ug/L	695601	Standard
	Ho	165	33.3	25.9				ug/L	12	Standard
	Tl	203	551.7	33.9	**0.0438**	0.015	34.3	ug/L	21	Standard
	Tl	205	1255.1	33.7	**0.0417**	0.014	34.0	ug/L	49	Standard
	Pb	206	886.0	9.4	**0.0643**	0.008	13.0	ug/L	281	Standard
	Pb	207	725.4	12.4	**0.0570**	0.011	18.8	ug/L	226	Standard
	Pb	208	3334.8	12.5	**0.0594**	0.011	18.1	ug/L	1051	Standard
	U	238	1961.8	6.4	**0.1683**	0.010	6.1	ug/L	13	Standard
>	**Bi**	209	425481.8	0.3				ug/L	407761	Standard

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	Na	23	137129.5	0.9	**7.1399**	0.040	0.6	mg/L	187	Standard
	Mg	24	918887.5	1.1	**2.3199**	0.045	2.0	mg/L	35	Standard
	K	39	736.7	12.6	**0.8104**	0.111	13.7	mg/L	83	Standard
	Ca	43	33.3	52.7	**10.5453**	5.552	52.6	mg/L	2	Standard
	Fe	54	546.7	8.1	**0.0279**	0.011	40.4	mg/L	355	Standard
	Fe	57	5312.6	4.9	**0.0447**	0.003	7.4	mg/L	1985	Standard
>	**Sc-1**	45	262109.5	0.9				mg/L	243359	Standard
	Cl	35	29.0	3.4				ug/L	3	Standard
	Kr	83	38.6	16.3				ug/L	33	Standard
	Br	81	9719.8	3.3				ug/L	741	Standard
	P	31	213.3	11.1				ug/L	223	Standard
	S	34	11294.2	0.3				ug/L	3154	Standard
	Sr	88	211.7	9.8				ug/L	32	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		99.481	
	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	103.268
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	104.346
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: L1207032703
Sample Date/Time: Wednesday, July 18, 2012 12:07:13
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	30914.9	2.5	**6646.0465**	248.869	3.7	ug/L	6510	Standard
	Be	9	8.3	124.9	**0.0043**	0.007	166.3	ug/L	8	Standard
	Al	27	185818.8	4.2	**18.5511**	0.676	3.6	ug/L	4354	Standard
>	**Sc**	45	266138.8	0.6				ug/L	243359	Standard
	Ti	47	1085.4	18.2	**1.2084**	0.243	20.1	ug/L	43	Standard
	V	51	15799.3	1.8	**1.9078**	0.065	3.4	ug/L	1887	Standard
	Cr	52	12101.5	1.8	**1.0447**	0.062	5.9	ug/L	5892	Standard
	Cr	53	1800.1	0.4	**1.7323**	0.033	1.9	ug/L	123	Standard
	Mn	55	6007.5	1.5	**0.5584**	0.008	1.4	ug/L	545	Standard
	Co	59	271.0	5.1	**0.0267**	0.002	5.6	ug/L	73	Standard
	Ni	60	1059.4	1.6	**0.6121**	0.018	2.9	ug/L	42	Standard
	Cu	65	317.0	6.5	**0.1758**	0.011	6.3	ug/L	48	Standard
	Zn	66	6876.9	2.1	**9.9965**	0.221	2.2	ug/L	65	Standard
>	**Ge**	72	184701.4	1.4				ug/L	188156	Standard
	As	75	251.4	9.5	**0.5327**	0.029	5.5	ug/L	-124	Standard
	Se	82	155.6	4.0	**1.9590**	0.097	5.0	ug/L	16	Standard
	Se-1	77	119.7	12.7	**1.2714**	0.350	27.5	ug/L	59	Standard
>	**Ga**	71	423.3	11.6				mg/L	355	Standard
	Rb	85	11569.4	1.4				ug/L	17	Standard
	Y	89	183081.3	1.5				ug/L	183245	Standard
>	**Rh**	103	350.0	17.4				ug/L	345	Standard
	Mo	98	3543.8	1.7	**1.1925**	0.020	1.7	ug/L	38	Standard
	Ag	107	62.3	8.1	**0.0051**	0.001	14.1	ug/L	79	Standard
	Cd	111	56.2	22.7	**0.0063**	0.005	71.1	mg/L	49	Standard
	Cd	114	177.7	13.5	**0.0030**	0.003	108.3	ug/L	130	Standard
>	**In**	115	542405.0	0.4				ug/L	515710	Standard
	Sn	118	645.7	2.6	**-0.0033**	0.001	32.6	ug/L	398	Standard
	Sb	123	264.4	4.3	**0.0215**	0.001	6.3	ug/L	221	Standard
	Ba	135	122059.1	1.4	**38.9461**	0.396	1.0	ug/L	22	Standard
	Ce	140	1933.8	3.5				ug/L	19	Standard
>	**Tb**	159	812497.9	1.0				ug/L	695601	Standard
	Ho	165	39.7	23.4				ug/L	12	Standard
	Tl	203	315.0	4.3	**0.0241**	0.001	5.1	ug/L	21	Standard
	Tl	205	755.7	5.1	**0.0243**	0.001	5.7	ug/L	49	Standard
	Pb	206	1072.0	2.7	**0.0810**	0.002	2.7	ug/L	281	Standard
	Pb	207	877.0	2.5	**0.0732**	0.003	3.5	ug/L	226	Standard
	Pb	208	4096.5	0.4	**0.0772**	0.001	0.8	ug/L	1051	Standard
	U	238	1962.8	4.4	**0.1647**	0.008	5.1	ug/L	13	Standard
>	**Bi**	209	435295.9	0.7				ug/L	407761	Standard

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Na	23	139305.9	1.4	**7.1438**	0.135	1.9	mg/L	187	Standard
Mg	24	916277.7	0.4	**2.2781**	0.011	0.5	mg/L	35	Standard
K	39	818.4	8.9	**0.8968**	0.084	9.4	mg/L	83	Standard
Ca	43	30.0	0.0	**9.3593**	0.060	0.6	mg/L	2	Standard
Fe	54	512.5	6.1	**0.0159**	0.009	57.4	mg/L	355	Standard
Fe	57	5657.7	1.5	**0.0484**	0.001	1.7	mg/L	1985	Standard
Sc-1	45	266138.8	0.6				mg/L	243359	Standard
Cl	35	30.3	13.3				ug/L	3	Standard
Kr	83	35.2	4.5				ug/L	33	Standard
Br	81	10502.0	0.3				ug/L	741	Standard
P	31	210.8	8.9				ug/L	223	Standard
S	34	11526.0	1.0				ug/L	3154	Standard
Sr	88	201.7	27.9				ug/L	32	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		98.164	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207032703
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	Cd	111	
	Cd	114	
>	In	115	105.176
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	106.753
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: L1207032804 WG403259-01
Sample Date/Time: Wednesday, July 18, 2012 12:10:20
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	36171.5	0.6	**8141.2133**	146.654	1.8	ug/L	6510	Standard
	Be	9	5.0	0.0	**0.0020**	0.000	1.5	ug/L	8	Standard
	Al	27	83814.7	3.1	**8.1786**	0.313	3.8	ug/L	4354	Standard
>	**Sc**	45	265428.2	0.9				ug/L	243359	Standard
	Ti	47	1047.4	2.0	**1.1728**	0.009	0.7	ug/L	43	Standard
	V	51	16981.5	1.4	**2.0900**	0.063	3.0	ug/L	1887	Standard
	Cr	52	9906.6	0.9	**0.6821**	0.012	1.8	ug/L	5892	Standard
	Cr	53	1637.6	2.5	**1.5811**	0.066	4.1	ug/L	123	Standard
	Mn	55	3724.8	3.9	**0.3240**	0.014	4.2	ug/L	545	Standard
	Co	59	251.3	4.1	**0.0241**	0.002	8.3	ug/L	73	Standard
	Ni	60	860.0	7.9	**0.4964**	0.038	7.7	ug/L	42	Standard
	Cu	65	315.3	4.9	**0.1765**	0.008	4.5	ug/L	48	Standard
	Zn	66	7038.3	1.5	**10.3211**	0.060	0.6	ug/L	65	Standard
>	**Ge**	72	183143.7	1.4				ug/L	188156	Standard
	As	75	386.2	8.8	**0.7248**	0.047	6.5	ug/L	-124	Standard
	Se	82	180.0	6.7	**2.3074**	0.196	8.5	ug/L	16	Standard
	Se-1	77	117.0	21.6	**1.2368**	0.547	44.2	ug/L	59	Standard
>	**Ga**	71	376.7	23.6				mg/L	355	Standard
	Rb	85	18002.4	0.9				ug/L	17	Standard
	Y	89	188414.3	0.1				ug/L	183245	Standard
>	**Rh**	103	306.7	10.0				ug/L	345	Standard
	Mo	98	2385.9	2.7	**0.8051**	0.023	2.8	ug/L	38	Standard
	Ag	107	74.7	7.6	**0.0071**	0.001	11.5	ug/L	79	Standard
	Cd	111	54.6	15.7	**0.0059**	0.003	50.9	mg/L	49	Standard
	Cd	114	180.1	9.4	**0.0035**	0.002	63.1	ug/L	130	Standard
>	**In**	115	538200.5	0.4				ug/L	515710	Standard
	Sn	118	654.3	7.0	**-0.0023**	0.003	147.5	ug/L	398	Standard
	Sb	123	311.0	3.6	**0.0280**	0.002	5.6	ug/L	221	Standard
	Ba	135	95356.1	0.9	**30.6637**	0.411	1.3	ug/L	22	Standard
	Ce	140	459.3	5.3				ug/L	19	Standard
>	**Tb**	159	815698.0	0.6				ug/L	695601	Standard
	Ho	165	16.3	28.3				ug/L	12	Standard
	Tl	203	317.7	5.5	**0.0244**	0.001	5.3	ug/L	21	Standard
	Tl	205	804.7	0.3	**0.0259**	0.000	0.9	ug/L	49	Standard
	Pb	206	568.0	2.6	**0.0302**	0.002	6.0	ug/L	281	Standard
	Pb	207	481.3	4.9	**0.0258**	0.003	11.5	ug/L	226	Standard
	Pb	208	2253.7	3.6	**0.0296**	0.002	8.1	ug/L	1051	Standard
	U	238	2135.8	1.2	**0.1797**	0.003	1.8	ug/L	13	Standard
>	**Bi**	209	434142.5	0.7				ug/L	407761	Standard

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Na	23	144502.5	0.9	**7.4307**	0.015	0.2	mg/L	187	Standard
Mg	24	1088339.0	1.6	**2.7132**	0.043	1.6	mg/L	35	Standard
K	39	841.7	5.8	**0.9283**	0.056	6.0	mg/L	83	Standard
Ca	43	20.0	50.0	**6.2427**	3.071	49.2	mg/L	2	Standard
Fe	54	460.2	13.8	**0.0014**	0.019	1315.3	mg/L	355	Standard
Fe	57	4590.7	6.2	**0.0335**	0.004	13.4	mg/L	1985	Standard
Sc-1	45	265428.2	0.9				mg/L	243359	Standard
Cl	35	36.3	9.7				ug/L	3	Standard
Kr	83	33.7	11.7				ug/L	33	Standard
Br	81	11293.4	5.5				ug/L	741	Standard
P	31	211.7	6.9				ug/L	223	Standard
S	34	12066.5	0.4				ug/L	3154	Standard
Sr	88	190.0	7.0				ug/L	32	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		97.336	
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	104.361
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	106.470
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032805S WG403259-05
Sample Date/Time: Wednesday, July 18, 2012 12:13:30
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	35648.6	3.2	**7641.0711**	185.693	2.4	ug/L	6510	Standard
	Be	9	33978.1	1.4	**22.8017**	0.680	3.0	ug/L	8	Standard
	Al	27	279340.5	2.0	**27.1674**	0.901	3.3	ug/L	4354	Standard
>	**Sc**	45	275250.5	4.1				ug/L	243359	Standard
	Ti	47	811.4	1.1	**0.8822**	0.015	1.7	ug/L	43	Standard
	V	51	208823.6	2.2	**28.1380**	0.471	1.7	ug/L	1887	Standard
	Cr	52	164026.7	2.3	**26.8493**	0.468	1.7	ug/L	5892	Standard
	Cr	53	27280.4	2.9	**27.4453**	0.677	2.5	ug/L	123	Standard
	Mn	55	263202.4	2.2	**27.0786**	0.452	1.7	ug/L	545	Standard
	Co	59	185146.1	1.2	**26.8336**	0.165	0.6	ug/L	73	Standard
	Ni	60	43874.8	1.1	**26.1019**	0.173	0.7	ug/L	42	Standard
	Cu	65	38182.4	1.4	**25.4605**	0.203	0.8	ug/L	48	Standard
	Zn	66	19073.3	1.2	**27.6624**	0.235	0.9	ug/L	65	Standard
>	**Ge**	72	186467.4	0.6				ug/L	188156	Standard
	As	75	19207.7	0.5	**26.6296**	0.031	0.1	ug/L	-124	Standard
	Se	82	2144.3	0.9	**28.3253**	0.420	1.5	ug/L	16	Standard
	Se-1	77	1335.7	3.0	**26.2919**	0.671	2.6	ug/L	59	Standard
>	**Ga**	71	380.0	4.7				mg/L	355	Standard
	Rb	85	18508.0	2.1				ug/L	17	Standard
	Y	89	187317.5	0.4				ug/L	183245	Standard
>	**Rh**	103	363.3	8.1				ug/L	345	Standard
	Mo	98	2530.5	3.5	**0.8458**	0.028	3.3	ug/L	38	Standard
	Ag	107	177475.1	2.3	**26.5113**	0.389	1.5	ug/L	79	Standard
	Cd	111	70314.1	1.8	**25.1052**	0.153	0.6	mg/L	49	Standard
	Cd	114	191322.4	1.3	**25.2624**	0.077	0.3	ug/L	130	Standard
>	**In**	115	543709.4	1.3				ug/L	515710	Standard
	Sn	118	646.0	20.6	**-0.0034**	0.009	257.4	ug/L	398	Standard
	Sb	123	192731.4	1.5	**25.1973**	0.434	1.7	ug/L	221	Standard
	Ba	135	183784.0	1.3	**58.5099**	0.868	1.5	ug/L	22	Standard
	Ce	140	470.7	5.7				ug/L	19	Standard
>	**Tb**	159	830569.0	1.8				ug/L	695601	Standard
	Ho	165	15.7	13.3				ug/L	12	Standard
	Tl	203	333929.6	1.1	**25.8492**	0.447	1.7	ug/L	21	Standard
	Tl	205	778617.2	1.6	**25.1549**	0.162	0.6	ug/L	49	Standard
	Pb	206	261305.4	1.6	**25.7606**	0.474	1.8	ug/L	281	Standard
	Pb	207	222746.4	1.9	**26.0909**	0.186	0.7	ug/L	226	Standard
	Pb	208	1031702.6	1.9	**26.0367**	0.220	0.8	ug/L	1051	Standard
	U	238	308506.5	1.8	**25.3630**	0.152	0.6	ug/L	13	Standard
>	**Bi**	209	445932.2	2.3				ug/L	407761	Standard

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Na	23	144554.7	0.8	**7.1739**	0.245	3.4	mg/L	187	Standard
Mg	24	1120633.9	1.8	**2.6966**	0.108	4.0	mg/L	35	Standard
K	39	926.7	3.5	**0.9934**	0.054	5.5	mg/L	83	Standard
Ca	43	23.3	44.6	**7.1183**	3.399	47.8	mg/L	2	Standard
Fe	54	412.3	8.0	**-0.0166**	0.004	26.1	mg/L	355	Standard
Fe	57	4659.0	2.7	**0.0322**	0.004	13.3	mg/L	1985	Standard
Sc-1	45	275250.5	4.1				mg/L	243359	Standard
Cl	35	43.0	26.8				ug/L	3	Standard
Kr	83	33.7	15.9				ug/L	33	Standard
Br	81	10975.6	5.8				ug/L	741	Standard
P	31	212.5	17.3				ug/L	223	Standard
S	34	12506.0	2.9				ug/L	3154	Standard
Sr	88	245.0	10.6				ug/L	32	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		99.103	
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	105.429
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	109.361
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032805S WG403259-05
Report Date/Time: Wednesday, July 18, 2012 12:16:01
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Method 6020 - Summary Report

Sample ID: L1207032806SD WG403259-06
Sample Date/Time: Wednesday, July 18, 2012 12:17:58
Number of Replicates: 3
Autosampler Position: 214
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	35955.9	0.7	**7803.8461**	189.779	2.4	ug/L	6510	Standard
	Be	9	35063.9	4.4	**23.7049**	0.845	3.6	ug/L	8	Standard
	Al	27	434444.9	1.7	**42.7993**	0.886	2.1	ug/L	4354	Standard
>	**Sc**	45	272962.1	1.4				ug/L	243359	Standard
	Ti	47	1697.8	5.7	**1.8894**	0.118	6.2	ug/L	43	Standard
	V	51	208980.9	0.8	**28.1094**	0.197	0.7	ug/L	1887	Standard
	Cr	52	163196.9	0.8	**26.6595**	0.213	0.8	ug/L	5892	Standard
	Cr	53	27931.6	1.1	**28.0528**	0.222	0.8	ug/L	123	Standard
	Mn	55	269792.2	1.6	**27.7094**	0.464	1.7	ug/L	545	Standard
	Co	59	185514.3	1.3	**26.8390**	0.395	1.5	ug/L	73	Standard
	Ni	60	44346.8	0.9	**26.3352**	0.183	0.7	ug/L	42	Standard
	Cu	65	39653.8	0.8	**26.3956**	0.181	0.7	ug/L	48	Standard
	Zn	66	22082.4	2.0	**31.9867**	0.632	2.0	ug/L	65	Standard
>	**Ge**	72	186807.9	0.4				ug/L	188156	Standard
	As	75	19200.9	1.2	**26.5722**	0.336	1.3	ug/L	-124	Standard
	Se	82	2126.8	2.2	**28.0402**	0.664	2.4	ug/L	16	Standard
	Se-1	77	1336.7	2.8	**26.2652**	0.781	3.0	ug/L	59	Standard
>	**Ga**	71	380.0	20.7				mg/L	355	Standard
	Rb	85	18074.1	2.2				ug/L	17	Standard
	Y	89	188475.2	1.6				ug/L	183245	Standard
>	**Rh**	103	345.0	1.4				ug/L	345	Standard
	Mo	98	2558.3	1.6	**0.8535**	0.007	0.8	ug/L	38	Standard
	Ag	107	176688.5	2.1	**26.3412**	0.358	1.4	ug/L	79	Standard
	Cd	111	70944.3	2.3	**25.2791**	0.388	1.5	mg/L	49	Standard
	Cd	114	195209.5	0.3	**25.7258**	0.119	0.5	ug/L	130	Standard
>	**In**	115	544786.5	0.8				ug/L	515710	Standard
	Sn	118	867.7	5.1	**0.0122**	0.003	25.5	ug/L	398	Standard
	Sb	123	193439.7	2.7	**25.2358**	0.506	2.0	ug/L	221	Standard
	Ba	135	184530.9	2.2	**58.6233**	0.850	1.4	ug/L	22	Standard
	Ce	140	2333.5	5.4				ug/L	19	Standard
>	**Tb**	159	846798.3	1.1				ug/L	695601	Standard
	Ho	165	50.7	8.0				ug/L	12	Standard
	Tl	203	337990.5	2.5	**26.2319**	0.694	2.6	ug/L	21	Standard
	Tl	205	788506.8	1.7	**25.5434**	0.384	1.5	ug/L	49	Standard
	Pb	206	265682.1	1.4	**26.2610**	0.332	1.3	ug/L	281	Standard
	Pb	207	224888.1	0.8	**26.4149**	0.253	1.0	ug/L	226	Standard
	Pb	208	1044663.3	1.0	**26.4367**	0.241	0.9	ug/L	1051	Standard
	U	238	310841.6	2.3	**25.6250**	0.589	2.3	ug/L	13	Standard
>	**Bi**	209	444684.4	0.8				ug/L	407761	Standard

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Na	23	144887.9	1.2	**7.2444**	0.026	0.4	mg/L	187	Standard
Mg	24	1115704.1	2.4	**2.7043**	0.028	1.0	mg/L	35	Standard
K	39	981.7	1.8	**1.0674**	0.019	1.8	mg/L	83	Standard
Ca	43	36.7	15.7	**11.1386**	1.628	14.6	mg/L	2	Standard
Fe	54	523.8	3.1	**0.0153**	0.003	18.3	mg/L	355	Standard
Fe	57	6026.2	4.5	**0.0515**	0.003	6.4	mg/L	1985	Standard
Sc-1	45	272962.1	1.4				mg/L	243359	Standard
Cl	35	34.3	10.2				ug/L	3	Standard
Kr	83	34.0	5.9				ug/L	33	Standard
Br	81	8369.0	3.5				ug/L	741	Standard
P	31	267.5	4.3				ug/L	223	Standard
S	34	12655.3	2.3				ug/L	3154	Standard
Sr	88	241.7	17.2				ug/L	32	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		99.283	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207032806SD WG403259-06
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	Cd	111	
	Cd	114	
>	In	115	105.638
	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	109.055
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032806SD WG403259-06
Report Date/Time: Wednesday, July 18, 2012 12:20:29
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Method 6020 - Summary Report

Sample ID: L1207032801
Sample Date/Time: Wednesday, July 18, 2012 12:24:21
Number of Replicates: 3
Autosampler Position: 215
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	39971.0	3.8	**9076.3569**	319.761	3.5	ug/L	6510	Standard
	Be	9	15.0	66.7	**0.0090**	0.007	79.2	ug/L	8	Standard
	Al	27	76668.6	2.5	**7.3583**	0.155	2.1	ug/L	4354	Standard
>	**Sc**	45	268495.7	2.4				ug/L	243359	Standard
	Ti	47	791.0	5.9	**0.8517**	0.069	8.1	ug/L	43	Standard
	V	51	17479.8	0.8	**2.0946**	0.038	1.8	ug/L	1887	Standard
	Cr	52	12285.0	0.6	**1.0378**	0.051	4.9	ug/L	5892	Standard
	Cr	53	2196.0	1.7	**2.0952**	0.052	2.5	ug/L	123	Standard
	Mn	55	5769.4	0.5	**0.5228**	0.016	3.1	ug/L	545	Standard
	Co	59	250.3	3.6	**0.0230**	0.001	6.1	ug/L	73	Standard
	Ni	60	1658.8	2.4	**0.9541**	0.020	2.1	ug/L	42	Standard
	Cu	65	419.7	4.7	**0.2400**	0.015	6.1	ug/L	48	Standard
	Zn	66	2709.6	2.0	**3.7965**	0.095	2.5	ug/L	65	Standard
>	**Ge**	72	188148.4	2.4				ug/L	188156	Standard
	As	75	292.3	10.4	**0.5819**	0.033	5.6	ug/L	-124	Standard
	Se	82	155.6	3.6	**1.9198**	0.069	3.6	ug/L	16	Standard
	Se-1	77	125.3	8.8	**1.3399**	0.240	17.9	ug/L	59	Standard
>	**Ga**	71	390.0	4.4				mg/L	355	Standard
	Rb	85	14825.6	2.3				ug/L	17	Standard
	Y	89	187085.4	3.2				ug/L	183245	Standard
>	**Rh**	103	341.7	8.3				ug/L	345	Standard
	Mo	98	2824.5	2.0	**0.9250**	0.010	1.1	ug/L	38	Standard
	Ag	107	257.0	9.8	**0.0334**	0.003	9.8	ug/L	79	Standard
	Cd	111	65.2	1.4	**0.0090**	0.000	0.5	mg/L	49	Standard
	Cd	114	205.4	2.2	**0.0060**	0.001	11.2	ug/L	130	Standard
>	**In**	115	555626.6	1.4				ug/L	515710	Standard
	Sn	118	694.0	2.2	**-0.0010**	0.001	62.2	ug/L	398	Standard
	Sb	123	251.8	9.6	**0.0191**	0.003	15.3	ug/L	221	Standard
	Ba	135	142989.3	1.4	**44.5410**	0.067	0.2	ug/L	22	Standard
	Ce	140	425.0	3.7				ug/L	19	Standard
>	**Tb**	159	847816.7	2.4				ug/L	695601	Standard
	Ho	165	13.3	28.4				ug/L	12	Standard
	Tl	203	388.0	6.6	**0.0290**	0.002	5.5	ug/L	21	Standard
	Tl	205	899.0	5.8	**0.0281**	0.001	5.0	ug/L	49	Standard
	Pb	206	500.3	1.5	**0.0217**	0.001	2.4	ug/L	281	Standard
	Pb	207	421.3	7.3	**0.0170**	0.004	22.8	ug/L	226	Standard
	Pb	208	1912.0	4.1	**0.0191**	0.002	11.9	ug/L	1051	Standard
	U	238	4185.9	0.7	**0.3414**	0.007	2.1	ug/L	13	Standard
>	**Bi**	209	448804.7	2.5				ug/L	407761	Standard

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Na	23	139967.0	1.9	**7.1185**	0.284	4.0	mg/L	187	Standard
Mg	24	1172779.2	2.1	**2.8911**	0.078	2.7	mg/L	35	Standard
K	39	935.0	8.2	**1.0310**	0.106	10.3	mg/L	83	Standard
Ca	43	58.3	35.7	**18.0654**	6.601	36.5	mg/L	2	Standard
Fe	54	506.0	4.8	**0.0127**	0.006	47.3	mg/L	355	Standard
Fe	57	5284.3	6.0	**0.0425**	0.003	7.2	mg/L	1985	Standard
Sc-1	45	268495.7	2.4				mg/L	243359	Standard
Cl	35	41.7	8.4				ug/L	3	Standard
Kr	83	37.0	3.2				ug/L	33	Standard
Br	81	8951.0	4.1				ug/L	741	Standard
P	31	253.3	7.7				ug/L	223	Standard
S	34	12336.7	1.3				ug/L	3154	Standard
Sr	88	250.0	5.3				ug/L	32	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		99.996	
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	107.740
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	110.066
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207032801PS WG403681-01
Sample Date/Time: Wednesday, July 18, 2012 12:27:31
Number of Replicates: 3
Autosampler Position: 216
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	42205.4	2.5	**8646.9546**	227.869	2.6	ug/L	6510	Standard
	Be	9	67150.2	1.1	**42.0224**	0.452	1.1	ug/L	8	Standard
	Al	27	543917.3	1.6	**49.6464**	0.616	1.2	ug/L	4354	Standard
>	**Sc**	45	294938.0	0.5				ug/L	243359	Standard
	Ti	47	871.7	1.1	**0.8894**	0.003	0.4	ug/L	43	Standard
	V	51	401655.9	0.7	**50.9914**	1.002	2.0	ug/L	1887	Standard
	Cr	52	320917.0	0.5	**50.1468**	0.523	1.0	ug/L	5892	Standard
	Cr	53	53031.8	2.0	**50.1362**	0.776	1.5	ug/L	123	Standard
	Mn	55	529368.3	1.9	**51.1627**	1.516	3.0	ug/L	545	Standard
	Co	59	373324.6	0.3	**50.7744**	0.742	1.5	ug/L	73	Standard
	Ni	60	85952.1	1.2	**47.9903**	0.362	0.8	ug/L	42	Standard
	Cu	65	76186.1	1.1	**47.6910**	0.336	0.7	ug/L	48	Standard
	Zn	66	35120.3	0.8	**47.8673**	0.267	0.6	ug/L	65	Standard
>	**Ge**	72	198778.9	1.2				ug/L	188156	Standard
	As	75	36567.9	1.4	**47.4134**	0.255	0.5	ug/L	-124	Standard
	Se	82	3954.8	1.0	**49.0972**	0.387	0.8	ug/L	16	Standard
	Se-1	77	2453.9	0.9	**46.2027**	0.835	1.8	ug/L	59	Standard
>	**Ga**	71	503.3	9.5				mg/L	355	Standard
	Rb	85	16565.7	1.8				ug/L	17	Standard
	Y	89	204796.7	1.5				ug/L	183245	Standard
>	**Rh**	103	385.0	17.0				ug/L	345	Standard
	Mo	98	3097.6	1.6	**0.9536**	0.009	0.9	ug/L	38	Standard
	Ag	107	349720.7	0.2	**48.0446**	0.403	0.8	ug/L	79	Standard
	Cd	111	140716.1	0.4	**46.2140**	0.537	1.2	mg/L	49	Standard
	Cd	114	381904.2	0.4	**46.3869**	0.265	0.6	ug/L	130	Standard
>	**In**	115	591298.5	0.7				ug/L	515710	Standard
	Sn	118	765.7	3.4	**0.0007**	0.002	267.2	ug/L	398	Standard
	Sb	123	389134.4	0.3	**46.7899**	0.483	1.0	ug/L	221	Standard
	Ba	135	322497.8	0.8	**94.4079**	0.760	0.8	ug/L	22	Standard
	Ce	140	429.0	7.2				ug/L	19	Standard
>	**Tb**	159	893563.5	1.3				ug/L	695601	Standard
	Ho	165	16.0	12.5				ug/L	12	Standard
	Tl	203	666904.0	0.6	**49.6278**	0.450	0.9	ug/L	21	Standard
	Tl	205	1560271.8	1.0	**48.4625**	0.165	0.3	ug/L	49	Standard
	Pb	206	519448.5	0.7	**49.2534**	0.269	0.5	ug/L	281	Standard
	Pb	207	440794.4	0.6	**49.6704**	0.357	0.7	ug/L	226	Standard
	Pb	208	2043982.9	0.8	**49.6204**	0.361	0.7	ug/L	1051	Standard
	U	238	632226.0	1.0	**49.9715**	0.126	0.3	ug/L	13	Standard
>	**Bi**	209	463804.8	1.2				ug/L	407761	Standard

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	Na	23	144334.3	1.0	**6.6770**	0.059	0.9	mg/L	187	Standard
	Mg	24	1245484.7	3.5	**2.7940**	0.083	3.0	mg/L	35	Standard
	K	39	1010.0	11.9	**1.0110**	0.130	12.9	mg/L	83	Standard
	Ca	43	33.3	56.8	**9.3999**	5.384	57.3	mg/L	2	Standard
	Fe	54	635.5	12.7	**0.0331**	0.020	60.4	mg/L	355	Standard
	Fe	57	5987.9	4.3	**0.0448**	0.003	7.7	mg/L	1985	Standard
>	**Sc-1**	45	294938.0	0.5				mg/L	243359	Standard
	Cl	35	38.7	15.6				ug/L	3	Standard
	Kr	83	36.6	9.8				ug/L	33	Standard
	Br	81	10110.0	3.3				ug/L	741	Standard
	P	31	347.5	7.5				ug/L	223	Standard
	S	34	12917.2	1.9				ug/L	3154	Standard
	Sr	88	270.0	8.1				ug/L	32	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		105.646	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98			
	Ag	107			

Sample ID: L1207032801PS WG403681-01
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	Cd	111	
	Cd	114	
>	In	115	114.657
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	113.744
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032801PS WG403681-01
Report Date/Time: Wednesday, July 18, 2012 12:30:01
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Method 6020 - Summary Report

Sample ID: L1207032801SDL WG403681-02
Sample Date/Time: Wednesday, July 18, 2012 12:35:56
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	10898.9	3.7	**1905.2637**	150.239	7.9	ug/L	6510	Standard
	Be	9	5.0	100.0	**0.0030**	0.004	148.1	ug/L	8	Standard
	Al	27	19140.4	1.3	**2.1055**	0.019	0.9	ug/L	4354	Standard
>	**Sc**	45	208070.6	0.6				ug/L	243359	Standard
	Ti	47	188.7	6.8	**0.1999**	0.020	10.0	ug/L	43	Standard
	V	51	4506.8	1.5	**0.4293**	0.011	2.5	ug/L	1887	Standard
	Cr	52	6461.4	2.1	**0.2063**	0.007	3.2	ug/L	5892	Standard
	Cr	53	506.7	4.7	**0.4739**	0.026	5.4	ug/L	123	Standard
	Mn	55	1337.7	4.5	**0.0884**	0.005	5.3	ug/L	545	Standard
	Co	59	94.7	18.1	**0.0025**	0.003	121.9	ug/L	73	Standard
	Ni	60	323.0	4.3	**0.1920**	0.007	3.5	ug/L	42	Standard
	Cu	65	115.7	9.8	**0.0494**	0.009	18.8	ug/L	48	Standard
	Zn	66	1002.7	2.6	**1.5317**	0.024	1.6	ug/L	65	Standard
>	**Ge**	72	165308.7	1.5				ug/L	188156	Standard
	As	75	-16.5	67.4	**0.1578**	0.017	10.8	ug/L	-124	Standard
	Se	82	33.3	11.4	**0.3724**	0.062	16.6	ug/L	16	Standard
	Se-1	77	65.7	4.9	**0.3064**	0.095	31.1	ug/L	59	Standard
>	**Ga**	71	343.3	13.2				mg/L	355	Standard
	Rb	85	2446.9	7.7				ug/L	17	Standard
	Y	89	157272.2	2.0				ug/L	183245	Standard
>	**Rh**	103	261.7	21.3				ug/L	345	Standard
	Mo	98	475.0	3.1	**0.1731**	0.009	5.3	ug/L	38	Standard
	Ag	107	142.0	12.5	**0.0202**	0.003	12.7	ug/L	79	Standard
	Cd	111	23.2	28.1	**-0.0042**	0.003	61.2	mg/L	49	Standard
	Cd	114	70.8	10.0	**-0.0098**	0.001	13.1	ug/L	130	Standard
>	**In**	115	471520.7	2.0				ug/L	515710	Standard
	Sn	118	344.0	1.5	**-0.0209**	0.001	4.6	ug/L	398	Standard
	Sb	123	256.5	8.9	**0.0255**	0.003	10.6	ug/L	221	Standard
	Ba	135	25182.6	1.1	**9.2391**	0.159	1.7	ug/L	22	Standard
	Ce	140	89.0	8.8				ug/L	19	Standard
>	**Tb**	159	736331.6	0.9				ug/L	695601	Standard
	Ho	165	8.0	25.0				ug/L	12	Standard
	Tl	203	207.3	16.9	**0.0166**	0.003	15.4	ug/L	21	Standard
	Tl	205	470.7	2.7	**0.0158**	0.000	0.5	ug/L	49	Standard
	Pb	206	307.0	3.5	**0.0057**	0.001	18.1	ug/L	281	Standard
	Pb	207	248.7	0.6	**-0.0003**	0.001	242.3	ug/L	226	Standard
	Pb	208	1161.4	4.3	**0.0032**	0.001	18.6	ug/L	1051	Standard
	U	238	732.7	3.7	**0.0651**	0.004	5.9	ug/L	13	Standard
>	**Bi**	209	408446.9	2.4				ug/L	407761	Standard

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⌈	**Na**	23	61436.0	2.5	**4.0191**	0.104	2.6	mg/L	187	Standard
|	**Mg**	24	250641.1	3.6	**0.7968**	0.030	3.8	mg/L	35	Standard
|	**K**	39	253.3	8.2	**0.2909**	0.035	12.0	mg/L	83	Standard
|	**Ca**	43	15.0	33.3	**5.9945**	2.024	33.8	mg/L	2	Standard
|	**Fe**	54	181.4	8.8	**-0.0639**	0.006	8.8	mg/L	355	Standard
|	**Fe**	57	2071.8	2.2	**0.0059**	0.001	16.4	mg/L	1985	Standard
⌊>	**Sc-1**	45	208070.6	0.6				mg/L	243359	Standard
	Cl	35	6.3	55.5				ug/L	3	Standard
	Kr	83	29.9	7.2				ug/L	33	Standard
	Br	81	1958.5	7.5				ug/L	741	Standard
	P	31	107.5	22.2				ug/L	223	Standard
	S	34	5635.2	4.1				ug/L	3154	Standard
	Sr	88	71.7	21.3				ug/L	32	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		87.857	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			
⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107			

Sample ID: L1207032801SDL WG403681-02
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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

91.431

100.168

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 18, 2012 12:39:07
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	6034.5	9.1	**-47.7523**	130.921	274.2	ug/L	6510	Standard
	Be	9	61805.8	0.2	**49.4195**	1.208	2.4	ug/L	8	Standard
	Al	27	460951.4	1.8	**53.8027**	2.120	3.9	ug/L	4354	Standard
>	**Sc**	45	230929.0	2.6				ug/L	243359	Standard
	Ti	47	84130.9	0.8	**98.1521**	0.808	0.8	ug/L	43	Standard
	V	51	364187.8	1.3	**50.4500**	0.630	1.2	ug/L	1887	Standard
	Cr	52	298049.6	1.3	**50.8408**	0.656	1.3	ug/L	5892	Standard
	Cr	53	48051.1	1.6	**49.5788**	0.754	1.5	ug/L	123	Standard
	Mn	55	501834.8	1.2	**52.9254**	0.615	1.2	ug/L	545	Standard
	Co	59	352792.9	1.0	**52.3621**	0.505	1.0	ug/L	73	Standard
	Ni	60	81166.9	1.8	**49.4606**	0.886	1.8	ug/L	42	Standard
	Cu	65	73152.8	0.4	**49.9787**	0.202	0.4	ug/L	48	Standard
	Zn	66	33248.1	1.5	**49.4599**	0.726	1.5	ug/L	65	Standard
>	**Ge**	72	182129.8	0.1				ug/L	188156	Standard
	As	75	34701.2	1.0	**49.0996**	0.509	1.0	ug/L	-124	Standard
	Se	82	3653.3	0.2	**49.4992**	0.108	0.2	ug/L	16	Standard
	Se-1	77	2386.9	2.2	**49.1183**	1.136	2.3	ug/L	59	Standard
>	**Ga**	71	378.3	6.0				mg/L	355	Standard
	Rb	85	590.0	12.7				ug/L	17	Standard
	Y	89	170227.8	2.0				ug/L	183245	Standard
>	**Rh**	103	265.0	10.0				ug/L	345	Standard
	Mo	98	256628.6	0.7	**90.5183**	1.900	2.1	ug/L	38	Standard
	Ag	107	288304.0	1.8	**44.7772**	1.116	2.5	ug/L	79	Standard
	Cd	111	132710.1	0.8	**49.2742**	0.898	1.8	mg/L	49	Standard
	Cd	114	366046.2	1.0	**50.2622**	0.472	0.9	ug/L	130	Standard
>	**In**	115	523102.3	1.7				ug/L	515710	Standard
	Sn	118	893880.7	0.5	**65.5282**	1.095	1.7	ug/L	398	Standard
	Sb	123	358143.8	1.0	**48.6813**	0.571	1.2	ug/L	221	Standard
	Ba	135	160348.0	0.2	**53.0647**	0.838	1.6	ug/L	22	Standard
	Ce	140	639.7	6.2				ug/L	19	Standard
>	**Tb**	159	798670.9	0.7				ug/L	695601	Standard
	Ho	165	20.3	24.3				ug/L	12	Standard
	Tl	203	634031.4	0.2	**50.3498**	0.568	1.1	ug/L	21	Standard
	Tl	205	1468522.3	0.8	**48.6802**	0.863	1.8	ug/L	49	Standard
	Pb	206	495271.9	0.3	**50.1148**	0.375	0.7	ug/L	281	Standard
	Pb	207	422693.2	0.7	**50.8323**	0.871	1.7	ug/L	226	Standard
	Pb	208	1950704.1	0.3	**50.5382**	0.686	1.4	ug/L	1051	Standard
	U	238	571284.8	0.7	**48.1865**	0.147	0.3	ug/L	13	Standard
>	**Bi**	209	434623.2	1.0				ug/L	407761	Standard

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Na	23	106133.8	1.1	**6.2710**	0.112	1.8	mg/L	187	Standard
Mg	24	1592857.4	1.4	**4.5675**	0.180	3.9	mg/L	35	Standard
K	39	4070.5	2.3	**5.6514**	0.243	4.3	mg/L	83	Standard
Ca	43	11.7	89.2	**4.2248**	3.806	90.1	mg/L	2	Standard
Fe	54	15694.3	1.9	**5.0126**	0.143	2.9	mg/L	355	Standard
Fe	57	263676.1	3.3	**4.2723**	0.253	5.9	mg/L	1985	Standard
Sc-1	45	230929.0	2.6				mg/L	243359	Standard
Cl	35	3.7	41.7				ug/L	3	Standard
Kr	83	32.1	8.4				ug/L	33	Standard
Br	81	695.0	8.4				ug/L	741	Standard
P	31	258.3	8.2				ug/L	223	Standard
S	34	4481.5	1.3				ug/L	3154	Standard
Sr	88	33.3	52.7				ug/L	32	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	107.605		
Sc	45			
Ti	47	98.152		
V	51	100.900		
Cr	52	101.682		
Cr	53			
Mn	55	105.851		
Co	59	104.724		
Ni	60	98.921		
Cu	65	99.957		
Zn	66	98.920		
Ge	72		96.797	
As	75	98.199		
Se	82	98.998		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	90.518		
Ag	107	89.554		

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	Cd	111	98.548	
	Cd	114		
>	In	115		101.433
	Sn	118	131.056	
	Sb	123	97.363	
	Ba	135	106.129	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	100.700	
	Tl	205		
	Pb	206	100.230	
	Pb	207	101.665	
	Pb	208	101.076	
	U	238	96.373	
>	Bi	209		106.588
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Ag	107	
QC Std 6	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 18, 2012 12:42:17
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	6102.9	3.3	**-6.6624**	21.581	323.9	ug/L	6510	Standard
	Be	9	13.3	21.7	**0.0093**	0.002	25.8	ug/L	8	Standard
	Al	27	3548.8	6.8	**0.0308**	0.039	125.4	ug/L	4354	Standard
>	**Sc**	45	228891.5	2.3				ug/L	243359	Standard
	Ti	47	49.7	18.6	**0.0158**	0.011	71.3	ug/L	43	Standard
	V	51	1845.3	2.0	**-0.0022**	0.006	255.1	ug/L	1887	Standard
	Cr	52	5766.8	1.4	**-0.0174**	0.015	85.1	ug/L	5892	Standard
	Cr	53	134.2	7.5	**0.0371**	0.011	30.6	ug/L	123	Standard
	Mn	55	645.0	1.2	**0.0017**	0.001	55.5	ug/L	545	Standard
	Co	59	92.0	16.0	**0.0008**	0.002	279.3	ug/L	73	Standard
	Ni	60	61.0	21.3	**0.0127**	0.008	64.2	ug/L	42	Standard
	Cu	65	50.3	12.1	**-0.0030**	0.004	130.1	ug/L	48	Standard
	Zn	66	70.3	7.2	**-0.0093**	0.007	80.4	ug/L	65	Standard
>	**Ge**	72	180051.9	0.8				ug/L	188156	Standard
	As	75	-103.0	21.2	**0.0364**	0.032	88.3	ug/L	-124	Standard
	Se	82	14.3	37.2	**0.0700**	0.072	102.6	ug/L	16	Standard
	Se-1	77	67.0	9.3	**0.2089**	0.132	63.3	ug/L	59	Standard
>	**Ga**	71	333.3	9.6				mg/L	355	Standard
	Rb	85	6.7	86.6				ug/L	17	Standard
	Y	89	169469.2	0.5				ug/L	183245	Standard
>	**Rh**	103	215.0	21.3				ug/L	345	Standard
	Mo	98	94.1	36.9	**0.0205**	0.012	58.6	ug/L	38	Standard
	Ag	107	229.7	3.3	**0.0317**	0.001	2.1	ug/L	79	Standard
	Cd	111	48.4	20.0	**0.0043**	0.003	78.3	mg/L	49	Standard
	Cd	114	138.1	4.9	**-0.0015**	0.001	45.1	ug/L	130	Standard
>	**In**	115	519931.4	1.5				ug/L	515710	Standard
	Sn	118	704.3	6.5	**0.0030**	0.003	106.1	ug/L	398	Standard
	Sb	123	878.3	33.4	**0.1068**	0.039	36.6	ug/L	221	Standard
	Ba	135	24.7	20.8	**0.0004**	0.002	426.0	ug/L	22	Standard
	Ce	140	14.3	16.1				ug/L	19	Standard
>	**Tb**	159	778566.1	0.5				ug/L	695601	Standard
	Ho	165	6.0	44.1				ug/L	12	Standard
	Tl	203	58.0	13.7	**0.0037**	0.001	16.3	ug/L	21	Standard
	Tl	205	130.3	29.1	**0.0035**	0.001	34.6	ug/L	49	Standard
	Pb	206	315.7	3.2	**0.0045**	0.001	19.3	ug/L	281	Standard
	Pb	207	264.0	5.6	**-0.0005**	0.002	307.7	ug/L	226	Standard
	Pb	208	1220.0	3.5	**0.0026**	0.001	35.5	ug/L	1051	Standard
	U	238	55.0	53.7	**0.0039**	0.002	62.2	ug/L	13	Standard
>	**Bi**	209	436528.2	0.6				ug/L	407761	Standard

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Na	23	248.3	13.7	**-0.0092**	0.002	24.2	mg/L	187	Standard
Mg	24	236.7	45.4	**0.0002**	0.000	176.9	mg/L	35	Standard
K	39	93.3	21.7	**0.0267**	0.031	115.0	mg/L	83	Standard
Ca	43	6.7	114.6	**2.4646**	2.849	115.6	mg/L	2	Standard
Fe	54	336.3	15.6	**-0.0187**	0.017	89.3	mg/L	355	Standard
Fe	57	1630.1	8.7	**-0.0048**	0.002	50.5	mg/L	1985	Standard
Sc-1	45	228891.5	2.3				mg/L	243359	Standard
Cl	35	6.3	32.9				ug/L	3	Standard
Kr	83	31.9	14.9				ug/L	33	Standard
Br	81	610.0	10.7				ug/L	741	Standard
P	31	279.2	9.0				ug/L	223	Standard
S	34	4424.0	4.8				ug/L	3154	Standard
Sr	88	30.0	0.0				ug/L	32	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		95.693	
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	100.819
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	107.055
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Wednesday, July 18, 2012 12:44:47
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Method 6020 - Summary Report

Sample ID: L1207032802
Sample Date/Time: Wednesday, July 18, 2012 12:45:29
Number of Replicates: 3
Autosampler Position: 218
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	34200.2	0.8	**7712.0938**	217.635	2.8	ug/L	6510	Standard
	Be	9	20.0	152.1	**0.0123**	0.021	168.6	ug/L	8	Standard
	Al	27	153178.8	1.1	**15.4693**	0.306	2.0	ug/L	4354	Standard
>	**Sc**	45	262151.3	2.8				ug/L	243359	Standard
	Ti	47	1127.0	3.3	**1.2325**	0.049	3.9	ug/L	43	Standard
	V	51	25005.1	2.5	**3.1127**	0.040	1.3	ug/L	1887	Standard
	Cr	52	15120.5	1.5	**1.5182**	0.010	0.7	ug/L	5892	Standard
	Cr	53	1932.6	6.1	**1.8331**	0.099	5.4	ug/L	123	Standard
	Mn	55	8733.9	2.2	**0.8268**	0.012	1.5	ug/L	545	Standard
	Co	59	227.0	11.8	**0.0196**	0.003	17.5	ug/L	73	Standard
	Ni	60	890.7	2.0	**0.5014**	0.007	1.4	ug/L	42	Standard
	Cu	65	367.7	3.8	**0.2059**	0.012	5.7	ug/L	48	Standard
	Zn	66	2895.3	1.1	**4.0701**	0.091	2.2	ug/L	65	Standard
>	**Ge**	72	187889.3	1.3				ug/L	188156	Standard
	As	75	424.4	2.5	**0.7635**	0.017	2.2	ug/L	-124	Standard
	Se	82	63.5	3.9	**0.7096**	0.038	5.4	ug/L	16	Standard
	Se-1	77	91.3	7.9	**0.6463**	0.136	21.1	ug/L	59	Standard
>	**Ga**	71	380.0	8.2				mg/L	355	Standard
	Rb	85	10825.5	0.9				ug/L	17	Standard
	Y	89	181853.8	2.9				ug/L	183245	Standard
>	**Rh**	103	283.3	22.8				ug/L	345	Standard
	Mo	98	4318.2	2.2	**1.4608**	0.019	1.3	ug/L	38	Standard
	Ag	107	115.3	4.4	**0.0131**	0.001	5.3	ug/L	79	Standard
	Cd	111	66.6	21.1	**0.0101**	0.005	47.3	mg/L	49	Standard
	Cd	114	204.4	13.4	**0.0066**	0.003	50.5	ug/L	130	Standard
>	**In**	115	540590.2	1.3				ug/L	515710	Standard
	Sn	118	767.0	12.7	**0.0054**	0.006	113.8	ug/L	398	Standard
	Sb	123	499.7	5.5	**0.0526**	0.003	5.2	ug/L	221	Standard
	Ba	135	179276.8	1.3	**57.4040**	0.825	1.4	ug/L	22	Standard
	Ce	140	1689.8	1.8				ug/L	19	Standard
>	**Tb**	159	821714.6	1.7				ug/L	695601	Standard
	Ho	165	36.0	28.2				ug/L	12	Standard
	Tl	203	288.3	12.1	**0.0217**	0.002	11.3	ug/L	21	Standard
	Tl	205	612.7	12.2	**0.0193**	0.002	11.2	ug/L	49	Standard
	Pb	206	995.0	1.8	**0.0721**	0.003	4.3	ug/L	281	Standard
	Pb	207	791.7	6.1	**0.0618**	0.004	7.1	ug/L	226	Standard
	Pb	208	3741.8	1.9	**0.0668**	0.001	1.0	ug/L	1051	Standard
	U	238	4253.9	2.1	**0.3533**	0.006	1.7	ug/L	13	Standard
>	**Bi**	209	440606.5	1.5				ug/L	407761	Standard

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Na	23	126159.8	0.9	**6.5687**	0.168	2.6	mg/L	187	Standard
Mg	24	823355.5	2.1	**2.0785**	0.028	1.3	mg/L	35	Standard
K	39	763.4	13.8	**0.8451**	0.143	16.9	mg/L	83	Standard
Ca	43	26.7	65.8	**8.3768**	5.320	63.5	mg/L	2	Standard
Fe	54	537.0	14.5	**0.0248**	0.018	72.7	mg/L	355	Standard
Fe	57	5417.6	5.2	**0.0463**	0.006	13.0	mg/L	1985	Standard
Sc-1	45	262151.3	2.8				mg/L	243359	Standard
Cl	35	15.3	3.8				ug/L	3	Standard
Kr	83	31.4	10.1				ug/L	33	Standard
Br	81	2768.6	7.9				ug/L	741	Standard
P	31	280.0	7.1				ug/L	223	Standard
S	34	9545.5	1.7				ug/L	3154	Standard
Sr	88	211.7	13.0				ug/L	32	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		99.858	
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	104.824
	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	108.055
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032802
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Method 6020 - Summary Report

Sample ID: L1207032803
Sample Date/Time: Wednesday, July 18, 2012 12:48:38
Number of Replicates: 3
Autosampler Position: 219
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	38575.7	2.2	**8393.0263**	232.451	2.8	ug/L	6510	Standard
	Be	9	13.3	78.1	**0.0075**	0.007	92.9	ug/L	8	Standard
	Al	27	110437.7	1.0	**10.4595**	0.124	1.2	ug/L	4354	Standard
>	**Sc**	45	276181.0	0.1				ug/L	243359	Standard
	Ti	47	1059.4	3.4	**1.1492**	0.039	3.4	ug/L	43	Standard
	V	51	16786.4	2.3	**1.9915**	0.054	2.7	ug/L	1887	Standard
	Cr	52	9910.6	1.2	**0.6303**	0.019	3.0	ug/L	5892	Standard
	Cr	53	1845.1	3.4	**1.7359**	0.061	3.5	ug/L	123	Standard
	Mn	55	3917.2	2.7	**0.3317**	0.011	3.4	ug/L	545	Standard
	Co	59	288.0	12.5	**0.0282**	0.005	18.1	ug/L	73	Standard
	Ni	60	1267.4	6.9	**0.7200**	0.050	7.0	ug/L	42	Standard
	Cu	65	352.7	5.7	**0.1946**	0.013	6.7	ug/L	48	Standard
	Zn	66	2663.2	1.9	**3.7132**	0.078	2.1	ug/L	65	Standard
>	**Ge**	72	188910.7	0.2				ug/L	188156	Standard
	As	75	424.5	13.3	**0.7604**	0.076	10.0	ug/L	-124	Standard
	Se	82	230.8	9.2	**2.8968**	0.278	9.6	ug/L	16	Standard
	Se-1	77	143.3	5.9	**1.6941**	0.174	10.3	ug/L	59	Standard
>	**Ga**	71	356.7	4.5				mg/L	355	Standard
	Rb	85	19459.2	1.1				ug/L	17	Standard
	Y	89	188686.0	1.1				ug/L	183245	Standard
>	**Rh**	103	323.3	5.0				ug/L	345	Standard
	Mo	98	2382.8	4.3	**0.7848**	0.035	4.5	ug/L	38	Standard
	Ag	107	159.3	83.3	**0.0193**	0.020	101.3	ug/L	79	Standard
	Cd	111	105.9	49.9	**0.0236**	0.019	78.8	mg/L	49	Standard
	Cd	114	291.8	43.8	**0.0174**	0.017	95.0	ug/L	130	Standard
>	**In**	115	551194.8	1.0				ug/L	515710	Standard
	Sn	118	667.7	26.8	**-0.0025**	0.012	494.6	ug/L	398	Standard
	Sb	123	393.8	23.5	**0.0377**	0.012	31.5	ug/L	221	Standard
	Ba	135	92180.6	1.1	**28.9428**	0.242	0.8	ug/L	22	Standard
	Ce	140	931.7	2.5				ug/L	19	Standard
>	**Tb**	159	850798.3	0.5				ug/L	695601	Standard
	Ho	165	25.3	20.3				ug/L	12	Standard
	Tl	203	478.7	31.0	**0.0362**	0.011	30.9	ug/L	21	Standard
	Tl	205	1069.0	25.0	**0.0338**	0.008	24.7	ug/L	49	Standard
	Pb	206	506.7	17.9	**0.0227**	0.009	37.6	ug/L	281	Standard
	Pb	207	411.7	16.1	**0.0162**	0.007	45.5	ug/L	226	Standard
	Pb	208	1942.7	18.8	**0.0203**	0.009	43.6	ug/L	1051	Standard
	U	238	3282.7	5.5	**0.2697**	0.013	4.7	ug/L	13	Standard
>	**Bi**	209	445025.3	0.9				ug/L	407761	Standard

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Na	23	141679.5	2.1	**7.0006**	0.157	2.2	mg/L	187	Standard
Mg	24	1148915.3	1.1	**2.7526**	0.029	1.1	mg/L	35	Standard
K	39	1173.4	7.1	**1.2802**	0.098	7.7	mg/L	83	Standard
Ca	43	40.0	25.0	**12.0212**	2.991	24.9	mg/L	2	Standard
Fe	54	508.8	5.6	**0.0095**	0.008	82.6	mg/L	355	Standard
Fe	57	5942.8	1.9	**0.0494**	0.002	3.4	mg/L	1985	Standard
Sc-1	45	276181.0	0.1				mg/L	243359	Standard
Cl	35	34.7	9.3				ug/L	3	Standard
Kr	83	35.4	10.9				ug/L	33	Standard
Br	81	17177.2	1.8				ug/L	741	Standard
P	31	235.0	7.4				ug/L	223	Standard
S	34	15588.8	0.5				ug/L	3154	Standard
Sr	88	308.3	14.6				ug/L	32	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		100.401	
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	106.881
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	109.139
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 18, 2012

Method 6020 - Summary Report

Sample ID: L1207035502
Sample Date/Time: Wednesday, July 18, 2012 12:51:47
Number of Replicates: 3
Autosampler Position: 220
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	10517.0	3.2	**1149.7349**	61.089	5.3	ug/L	6510	Standard
	Be	9	10.0	50.0	**0.0060**	0.004	63.1	ug/L	8	Standard
	Al	27	62580.7	2.5	**6.4282**	0.222	3.5	ug/L	4354	Standard
>	**Sc**	45	249082.8	1.7				ug/L	243359	Standard
	Ti	47	573.0	39.3	**0.6121**	0.251	41.1	ug/L	43	Standard
	V	51	2568.9	3.0	**0.0890**	0.014	15.2	ug/L	1887	Standard
	Cr	52	8734.9	0.9	**0.4595**	0.018	4.0	ug/L	5892	Standard
	Cr	53	516.7	8.0	**0.4214**	0.049	11.6	ug/L	123	Standard
	Mn	55	16792.0	2.8	**1.6729**	0.025	1.5	ug/L	545	Standard
	Co	59	240.0	8.3	**0.0220**	0.003	12.2	ug/L	73	Standard
	Ni	60	951.4	0.4	**0.5444**	0.006	1.2	ug/L	42	Standard
	Cu	65	564.3	4.1	**0.3411**	0.021	6.3	ug/L	48	Standard
	Zn	66	2344.8	1.4	**3.3161**	0.029	0.9	ug/L	65	Standard
>	**Ge**	72	185576.1	1.5				ug/L	188156	Standard
	As	75	-5.1	481.3	**0.1760**	0.034	19.5	ug/L	-124	Standard
	Se	82	46.1	9.1	**0.4886**	0.057	11.6	ug/L	16	Standard
	Se-1	77	59.3	10.8	**0.0084**	0.140	1661.4	ug/L	59	Standard
>	**Ga**	71	373.3	10.7				mg/L	355	Standard
	Rb	85	2210.2	4.0				ug/L	17	Standard
	Y	89	180942.4	1.1				ug/L	183245	Standard
>	**Rh**	103	325.0	14.8				ug/L	345	Standard
	Mo	98	204.3	11.2	**0.0555**	0.008	13.6	ug/L	38	Standard
	Ag	107	55.3	11.6	**0.0040**	0.001	24.2	ug/L	79	Standard
	Cd	111	73.2	4.5	**0.0120**	0.001	10.2	mg/L	49	Standard
	Cd	114	207.0	6.2	**0.0064**	0.002	25.1	ug/L	130	Standard
>	**In**	115	551579.4	0.4				ug/L	515710	Standard
	Sn	118	498.3	2.0	**-0.0143**	0.001	5.0	ug/L	398	Standard
	Sb	123	477.4	5.0	**0.0484**	0.003	6.8	ug/L	221	Standard
	Ba	135	115152.3	0.4	**36.1315**	0.061	0.2	ug/L	22	Standard
	Ce	140	322.0	3.1				ug/L	19	Standard
>	**Tb**	159	845772.3	0.5				ug/L	695601	Standard
	Ho	165	27.7	11.0				ug/L	12	Standard
	Tl	203	149.3	10.4	**0.0106**	0.001	12.8	ug/L	21	Standard
	Tl	205	368.7	6.2	**0.0111**	0.001	8.1	ug/L	49	Standard
	Pb	206	521.0	1.0	**0.0238**	0.000	1.4	ug/L	281	Standard
	Pb	207	457.7	3.0	**0.0212**	0.002	8.7	ug/L	226	Standard
	Pb	208	2080.7	1.5	**0.0234**	0.001	4.7	ug/L	1051	Standard
	U	238	820.4	1.8	**0.0664**	0.002	2.4	ug/L	13	Standard
>	**Bi**	209	448579.4	1.4				ug/L	407761	Standard

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⌈	**Na**	23	141733.2	1.0	**7.7683**	0.060	0.8	mg/L	187	Standard
|	**Mg**	24	1275651.1	1.6	**3.3894**	0.073	2.2	mg/L	35	Standard
|	**K**	39	576.7	10.3	**0.6483**	0.064	9.9	mg/L	83	Standard
|	**Ca**	43	10.0		**3.3372**	0.057	1.7	mg/L	2	Standard
|	**Fe**	54	402.3	10.0	**-0.0077**	0.011	145.5	mg/L	355	Standard
|	**Fe**	57	3258.7	2.6	**0.0177**	0.001	8.5	mg/L	1985	Standard
⌊>	**Sc-1**	45	249082.8	1.7				mg/L	243359	Standard
	Cl	35	10.3	36.6				ug/L	3	Standard
	Kr	83	35.6	8.2				ug/L	33	Standard
	Br	81	3903.8	1.3				ug/L	741	Standard
	P	31	269.2	1.9				ug/L	223	Standard
	S	34	8397.3	5.5				ug/L	3154	Standard
	Sr	88	205.0	7.3				ug/L	32	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		98.629	
|	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	106.955
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	110.010
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 18, 2012

Method 6020 - Summary Report

Sample ID: L1207035504
Sample Date/Time: Wednesday, July 18, 2012 12:55:19
Number of Replicates: 3
Autosampler Position: 221
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	163993.5	6.5	**63225.5761**	3037.227	4.8	ug/L	6510	Standard
	Be	9	13.3	43.3	**0.0117**	0.005	46.4	ug/L	8	Standard
	Al	27	48161.5	4.2	**6.6032**	0.171	2.6	ug/L	4354	Standard
>	**Sc**	45	186796.3	1.8				ug/L	243359	Standard
	Ti	47	1188.7	33.3	**1.8397**	0.643	34.9	ug/L	43	Standard
	V	51	4052.4	28.3	**0.4989**	0.201	40.4	ug/L	1887	Standard
	Cr	52	7900.4	3.9	**0.8267**	0.044	5.3	ug/L	5892	Standard
	Cr	53	31010.5	14.6	**43.2174**	5.733	13.3	ug/L	123	Standard
	Mn	55	475245.4	2.8	**67.8019**	0.778	1.1	ug/L	545	Standard
	Co	59	558.3	5.0	**0.0992**	0.008	7.9	ug/L	73	Standard
	Ni	60	1303.7	8.9	**1.0507**	0.102	9.7	ug/L	42	Standard
	Cu	65	1523.1	36.7	**1.3752**	0.529	38.5	ug/L	48	Standard
	Zn	66	1335.7	2.2	**2.5785**	0.040	1.6	ug/L	65	Standard
>	**Ge**	72	134661.9	2.0				ug/L	188156	Standard
	As	75	-3518.6	131.0	**-6.5882**	8.764	133.0	ug/L	-124	Standard
	Se	82	-45.2	2286.6	**-1.0882**	18.785	1726.2	ug/L	16	Standard
	Se-1	77	1658.4	9.8	**46.0519**	3.917	8.5	ug/L	59	Standard
>	**Ga**	71	340.0	1.5				mg/L	355	Standard
	Rb	85	13501.0	3.4				ug/L	17	Standard
	Y	89	138418.3	3.7				ug/L	183245	Standard
>	**Rh**	103	3180.3	20.5				ug/L	345	Standard
	Mo	98	13753.4	3.1	**7.2816**	0.025	0.3	ug/L	38	Standard
	Ag	107	67.0	18.7	**0.0114**	0.003	24.1	ug/L	79	Standard
	Cd	111	20.6	29.7	**-0.0022**	0.004	158.8	mg/L	49	Standard
	Cd	114	145.2	4.5	**0.0094**	0.002	16.5	ug/L	130	Standard
>	**In**	115	347882.4	3.4				ug/L	515710	Standard
	Sn	118	414.0	2.5	**-0.0033**	0.002	49.7	ug/L	398	Standard
	Sb	123	203.9	5.0	**0.0286**	0.002	7.9	ug/L	221	Standard
	Ba	135	1794364.7	2.1	**893.1580**	14.681	1.6	ug/L	22	Standard
	Ce	140	190.3	8.4				ug/L	19	Standard
>	**Tb**	159	604251.7	2.4				ug/L	695601	Standard
	Ho	165	10.3	24.4				ug/L	12	Standard
	Tl	203	30.0	18.6	**0.0040**	0.001	23.5	ug/L	21	Standard
	Tl	205	64.7	10.3	**0.0036**	0.001	14.6	ug/L	49	Standard
	Pb	206	230.0	11.0	**0.0201**	0.005	22.6	ug/L	281	Standard
	Pb	207	170.3	6.4	**0.0096**	0.002	21.0	ug/L	226	Standard
	Pb	208	830.0	6.7	**0.0150**	0.002	14.6	ug/L	1051	Standard
	U	238	7989.4	4.4	**1.3727**	0.039	2.8	ug/L	13	Standard
>	**Bi**	209	213199.5	1.8				ug/L	407761	Standard

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Na	23	809324.2	1.0	**59.3113**	0.750	1.3	mg/L	187	Standard
Mg	24	1701335.7	19.5	**6.0150**	1.059	17.6	mg/L	35	Standard
K	39	1498.4	5.1	**2.5114**	0.109	4.3	mg/L	83	Standard
Ca	43	33.3	82.6	**14.9226**	12.332	82.6	mg/L	2	Standard
Fe	54	759.6	1.7	**0.1779**	0.010	5.5	mg/L	355	Standard
Fe	57	16685.9	2.9	**0.3049**	0.014	4.6	mg/L	1985	Standard
Sc-1	45	186796.3	1.8				mg/L	243359	Standard
Cl	35	2746.2	2.3				ug/L	3	Standard
Kr	83	2552.8	66.1				ug/L	33	Standard
Br	81	188013.8	2.0				ug/L	741	Standard
P	31	208.3	13.4				ug/L	223	Standard
S	34	3111.2	2.8				ug/L	3154	Standard
Sr	88	3195.3	0.6				ug/L	32	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		71.569	
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	67.457
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	52.285
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
As 75 Lower	As	75	
Se 82 Lower	Se	82	
Ba 135 Upper, S, EEE	Ba	135	

Approved: July 18, 2012

Method 6020 - Summary Report

Sample ID: L1207035506 WG403259-02
Sample Date/Time: Wednesday, July 18, 2012 13:00:57
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	23895.5	0.8	**6863.9938**	152.508	2.2	ug/L	6510	Standard
	Be	9	1.7	173.2	**0.0001**	0.003	2984.1	ug/L	8	Standard
	Al	27	29527.1	3.3	**3.6028**	0.143	4.0	ug/L	4354	Standard
>	**Sc**	45	200651.6	1.0				ug/L	243359	Standard
	Ti	47	224.0	2.3	**0.2286**	0.009	3.8	ug/L	43	Standard
	V	51	3485.0	2.1	**0.2418**	0.014	5.9	ug/L	1887	Standard
	Cr	52	7891.1	1.7	**0.3935**	0.040	10.2	ug/L	5892	Standard
	Cr	53	895.0	12.8	**0.8582**	0.131	15.2	ug/L	123	Standard
	Mn	55	9580.4	0.8	**0.9832**	0.004	0.4	ug/L	545	Standard
	Co	59	159.7	18.9	**0.0116**	0.004	38.1	ug/L	73	Standard
	Ni	60	178.7	0.9	**0.0882**	0.002	2.3	ug/L	42	Standard
	Cu	65	427.0	5.0	**0.2652**	0.012	4.6	ug/L	48	Standard
	Zn	66	1350.1	4.1	**1.9741**	0.062	3.1	ug/L	65	Standard
>	**Ge**	72	175428.5	1.1				ug/L	188156	Standard
	As	75	891.5	1.1	**1.4881**	0.009	0.6	ug/L	-124	Standard
	Se	82	55.8	4.9	**0.6611**	0.043	6.5	ug/L	16	Standard
	Se-1	77	75.3	0.8	**0.4292**	0.019	4.5	ug/L	59	Standard
>	**Ga**	71	405.0	8.1				mg/L	355	Standard
	Rb	85	1511.7	1.9				ug/L	17	Standard
	Y	89	146410.7	0.9				ug/L	183245	Standard
>	**Rh**	103	241.7	26.2				ug/L	345	Standard
	Mo	98	9701.9	1.2	**4.2745**	0.047	1.1	ug/L	38	Standard
	Ag	107	36.7	7.9	**0.0029**	0.001	18.9	ug/L	79	Standard
	Cd	111	40.4	14.3	**0.0050**	0.003	53.1	mg/L	49	Standard
	Cd	114	147.3	5.5	**0.0048**	0.001	30.5	ug/L	130	Standard
>	**In**	115	417492.6	0.2				ug/L	515710	Standard
	Sn	118	399.7	2.1	**-0.0122**	0.001	6.3	ug/L	398	Standard
	Sb	123	429.8	3.3	**0.0601**	0.002	3.7	ug/L	221	Standard
	Ba	135	48007.9	0.5	**19.8979**	0.067	0.3	ug/L	22	Standard
	Ce	140	163.3	2.5				ug/L	19	Standard
>	**Tb**	159	643804.2	0.4				ug/L	695601	Standard
	Ho	165	17.7	34.1				ug/L	12	Standard
	Tl	203	201.0	3.3	**0.0200**	0.001	3.5	ug/L	21	Standard
	Tl	205	467.3	6.2	**0.0195**	0.001	6.7	ug/L	49	Standard
	Pb	206	299.3	9.3	**0.0123**	0.004	30.8	ug/L	281	Standard
	Pb	207	249.0	18.4	**0.0070**	0.007	101.3	ug/L	226	Standard
	Pb	208	1147.7	5.2	**0.0100**	0.002	19.6	ug/L	1051	Standard
	U	238	5730.4	1.0	**0.6315**	0.005	0.7	ug/L	13	Standard
>	**Bi**	209	332276.6	0.3				ug/L	407761	Standard

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Na	23	235502.9	0.9	**16.0487**	0.239	1.5	mg/L	187	Standard
Mg	24	69293.2	2.5	**0.2281**	0.006	2.7	mg/L	35	Standard
K	39	253.3	11.6	**0.3052**	0.045	14.7	mg/L	83	Standard
Ca	43	1.7	173.2	**0.6942**	1.194	172.0	mg/L	2	Standard
Fe	54	398.0	8.6	**0.0203**	0.014	67.3	mg/L	355	Standard
Fe	57	2081.8	5.6	**0.0075**	0.002	29.3	mg/L	1985	Standard
Sc-1	45	200651.6	1.0				mg/L	243359	Standard
Cl	35	16.3	9.4				ug/L	3	Standard
Kr	83	33.4	8.1				ug/L	33	Standard
Br	81	5978.7	4.8				ug/L	741	Standard
P	31	281.7	16.8				ug/L	223	Standard
S	34	8640.8	1.7				ug/L	3154	Standard
Sr	88	98.3	14.7				ug/L	32	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		93.236	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207035506 WG403259-02
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	Cd	111	
	Cd	114	
>	In	115	80.955
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	81.488
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207035506 WG403259-02
Report Date/Time: Wednesday, July 18, 2012 13:03:29
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Method 6020 - Summary Report

Sample ID: L1207035506DP WG403259-08
Sample Date/Time: Wednesday, July 18, 2012 13:04:07
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	24695.1	1.5	**7269.2603**	313.817	4.3	ug/L	6510	Standard
	Be	9	6.7	114.6	**0.0047**	0.007	148.3	ug/L	8	Standard
	Al	27	31489.4	2.6	**3.9167**	0.043	1.1	ug/L	4354	Standard
>	**Sc**	45	198351.9	1.9				ug/L	243359	Standard
	Ti	47	215.3	4.1	**0.2215**	0.011	4.9	ug/L	43	Standard
	V	51	3602.1	1.9	**0.2654**	0.010	3.6	ug/L	1887	Standard
	Cr	52	8217.2	0.9	**0.4714**	0.013	2.8	ug/L	5892	Standard
	Cr	53	673.3	9.2	**0.6289**	0.068	10.8	ug/L	123	Standard
	Mn	55	9852.2	0.6	**1.0270**	0.006	0.6	ug/L	545	Standard
	Co	59	137.7	4.9	**0.0085**	0.001	12.6	ug/L	73	Standard
	Ni	60	196.3	10.3	**0.1009**	0.013	12.9	ug/L	42	Standard
	Cu	65	382.3	4.9	**0.2371**	0.013	5.7	ug/L	48	Standard
	Zn	66	1360.1	2.7	**2.0174**	0.059	2.9	ug/L	65	Standard
>	**Ge**	72	173179.1	0.1				ug/L	188156	Standard
	As	75	967.2	2.9	**1.6173**	0.042	2.6	ug/L	-124	Standard
	Se	82	66.5	6.8	**0.8235**	0.064	7.8	ug/L	16	Standard
	Se-1	77	71.0	5.1	**0.3545**	0.080	22.7	ug/L	59	Standard
>	**Ga**	71	443.3	12.2				mg/L	355	Standard
	Rb	85	1445.1	2.2				ug/L	17	Standard
	Y	89	149110.7	3.4				ug/L	183245	Standard
>	**Rh**	103	215.0	4.7				ug/L	345	Standard
	Mo	98	9945.1	2.1	**4.3916**	0.059	1.3	ug/L	38	Standard
	Ag	107	27.3	8.4	**0.0011**	0.000	36.0	ug/L	79	Standard
	Cd	111	38.1	17.3	**0.0040**	0.003	74.4	mg/L	49	Standard
	Cd	114	161.4	4.2	**0.0073**	0.001	18.0	ug/L	130	Standard
>	**In**	115	416553.3	0.8				ug/L	515710	Standard
	Sn	118	368.7	3.1	**-0.0150**	0.001	8.3	ug/L	398	Standard
	Sb	123	410.7	1.7	**0.0570**	0.001	1.1	ug/L	221	Standard
	Ba	135	48606.2	0.1	**20.1922**	0.146	0.7	ug/L	22	Standard
	Ce	140	155.0	9.8				ug/L	19	Standard
>	**Tb**	159	649462.3	1.2				ug/L	695601	Standard
	Ho	165	19.7	17.9				ug/L	12	Standard
	Tl	203	173.3	4.4	**0.0170**	0.001	5.7	ug/L	21	Standard
	Tl	205	437.0	5.4	**0.0181**	0.001	6.7	ug/L	49	Standard
	Pb	206	285.0	5.4	**0.0102**	0.002	24.3	ug/L	281	Standard
	Pb	207	239.3	5.7	**0.0052**	0.002	33.0	ug/L	226	Standard
	Pb	208	1127.0	0.3	**0.0091**	0.000	5.4	ug/L	1051	Standard
	U	238	5916.5	1.3	**0.6475**	0.013	2.0	ug/L	13	Standard
>	**Bi**	209	334656.1	1.2				ug/L	407761	Standard

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Na	23	240329.5	1.0	**16.5732**	0.486	2.9	mg/L	187	Standard
Mg	24	71843.3	1.0	**0.2392**	0.002	1.0	mg/L	35	Standard
K	39	273.3	17.4	**0.3429**	0.077	22.4	mg/L	83	Standard
Ca	43	6.7	43.3	**2.7801**	1.144	41.2	mg/L	2	Standard
Fe	54	411.5	8.6	**0.0270**	0.010	38.7	mg/L	355	Standard
Fe	57	2073.5	7.4	**0.0077**	0.002	28.4	mg/L	1985	Standard
Sc-1	45	198351.9	1.9				mg/L	243359	Standard
Cl	35	14.3	28.2				ug/L	3	Standard
Kr	83	32.3	5.7				ug/L	33	Standard
Br	81	5896.1	3.0				ug/L	741	Standard
P	31	339.2	11.1				ug/L	223	Standard
S	34	8548.2	2.7				ug/L	3154	Standard
Sr	88	91.7	17.5				ug/L	32	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		92.040	
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	80.773
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	82.072
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207035506S WG403259-07
Sample Date/Time: Wednesday, July 18, 2012 13:07:15
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	25735.2	3.1	**7535.0758**	363.281	4.8	ug/L	6510	Standard
	Be	9	25015.6	2.1	**22.9837**	0.497	2.2	ug/L	8	Standard
	Al	27	265518.8	2.4	**35.4723**	0.814	2.3	ug/L	4354	Standard
>	**Sc**	45	200888.0	0.8				ug/L	243359	Standard
	Ti	47	273.3	3.0	**0.2823**	0.014	4.9	ug/L	43	Standard
	V	51	175703.3	0.8	**24.6629**	0.267	1.1	ug/L	1887	Standard
	Cr	52	145429.7	1.6	**24.7516**	0.297	1.2	ug/L	5892	Standard
	Cr	53	22280.5	1.5	**23.3642**	0.264	1.1	ug/L	123	Standard
	Mn	55	247511.3	1.7	**26.5572**	0.236	0.9	ug/L	545	Standard
	Co	59	164066.6	1.5	**24.7997**	0.316	1.3	ug/L	73	Standard
	Ni	60	39133.1	1.8	**24.2792**	0.302	1.2	ug/L	42	Standard
	Cu	65	36175.1	1.6	**25.1574**	0.084	0.3	ug/L	48	Standard
	Zn	66	17972.0	1.0	**27.1844**	0.343	1.3	ug/L	65	Standard
>	**Ge**	72	178791.8	1.3				ug/L	188156	Standard
	As	75	18551.5	1.2	**26.8228**	0.046	0.2	ug/L	-124	Standard
	Se	82	1718.7	2.1	**23.6538**	0.202	0.9	ug/L	16	Standard
	Se-1	77	1224.4	1.5	**25.0834**	0.045	0.2	ug/L	59	Standard
>	**Ga**	71	360.0	5.0				mg/L	355	Standard
	Rb	85	1496.7	6.7				ug/L	17	Standard
	Y	89	150037.5	0.3				ug/L	183245	Standard
>	**Rh**	103	273.3	13.7				ug/L	345	Standard
	Mo	98	10095.4	1.3	**4.4822**	0.018	0.4	ug/L	38	Standard
	Ag	107	109157.1	0.7	**21.3972**	0.100	0.5	ug/L	79	Standard
	Cd	111	51772.5	0.7	**24.2568**	0.057	0.2	mg/L	49	Standard
	Cd	114	150996.5	0.9	**26.1633**	0.132	0.5	ug/L	130	Standard
>	**In**	115	414349.5	0.9				ug/L	515710	Standard
	Sn	118	410.3	8.4	**-0.0109**	0.003	30.9	ug/L	398	Standard
	Sb	123	144268.5	0.2	**24.7486**	0.166	0.7	ug/L	221	Standard
	Ba	135	117543.9	0.2	**49.1028**	0.523	1.1	ug/L	22	Standard
	Ce	140	925.0	6.7				ug/L	19	Standard
>	**Tb**	159	651501.3	0.4				ug/L	695601	Standard
	Ho	165	49.7	11.8				ug/L	12	Standard
	Tl	203	256322.4	1.0	**26.3605**	0.251	1.0	ug/L	21	Standard
	Tl	205	593816.0	1.3	**25.4898**	0.130	0.5	ug/L	49	Standard
	Pb	206	200300.8	1.6	**26.2338**	0.190	0.7	ug/L	281	Standard
	Pb	207	168504.2	1.0	**26.2273**	0.371	1.4	ug/L	226	Standard
	Pb	208	786526.2	1.0	**26.3759**	0.346	1.3	ug/L	1051	Standard
	U	238	224315.0	0.8	**24.5051**	0.336	1.4	ug/L	13	Standard
>	**Bi**	209	335599.8	1.5				ug/L	407761	Standard

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Na	23	240571.8	1.5	**16.3738**	0.167	1.0	mg/L	187	Standard
Mg	24	75211.3	2.0	**0.2473**	0.005	2.1	mg/L	35	Standard
K	39	343.3	17.6	**0.4510**	0.097	21.4	mg/L	83	Standard
Ca	43	1.7	173.2	**0.6986**	1.201	172.0	mg/L	2	Standard
Fe	54	361.5	10.6	**0.0064**	0.016	242.6	mg/L	355	Standard
Fe	57	2185.2	8.5	**0.0093**	0.003	36.4	mg/L	1985	Standard
Sc-1	45	200888.0	0.8				mg/L	243359	Standard
Cl	35	11.7	35.7				ug/L	3	Standard
Kr	83	34.4	13.4				ug/L	33	Standard
Br	81	4432.3	1.9				ug/L	741	Standard
P	31	329.2	15.8				ug/L	223	Standard
S	34	8880.1	1.4				ug/L	3154	Standard
Sr	88	95.0	13.9				ug/L	32	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		95.023	
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	80.345
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	82.303
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207035506S WG403259-07
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Method 6020 - Summary Report

Sample ID: L1207035508
Sample Date/Time: Wednesday, July 18, 2012 13:10:26
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	5277.6	5.5	**-121.1709**	67.562	55.8	ug/L	6510	Standard
	Be	9	6.7	43.3	**0.0045**	0.003	60.0	ug/L	8	Standard
	Al	27	52094.5	3.0	**6.3406**	0.185	2.9	ug/L	4354	Standard
>	**Sc**	45	210015.9	2.0				ug/L	243359	Standard
	Ti	47	167.7	4.9	**0.1430**	0.009	6.0	ug/L	43	Standard
	V	51	2090.3	7.9	**0.0143**	0.022	156.3	ug/L	1887	Standard
	Cr	52	6670.8	2.0	**0.0700**	0.025	35.3	ug/L	5892	Standard
	Cr	53	379.2	16.1	**0.2690**	0.060	22.4	ug/L	123	Standard
	Mn	55	1880.5	1.7	**0.1214**	0.003	2.7	ug/L	545	Standard
	Co	59	108.3	7.4	**0.0023**	0.001	50.3	ug/L	73	Standard
	Ni	60	244.3	11.3	**0.1165**	0.016	13.4	ug/L	42	Standard
	Cu	65	376.3	5.6	**0.2065**	0.013	6.3	ug/L	48	Standard
	Zn	66	1492.4	4.4	**1.9978**	0.090	4.5	ug/L	65	Standard
>	**Ge**	72	191781.5	0.3				ug/L	188156	Standard
	As	75	-130.7	8.6	**0.0085**	0.015	174.1	ug/L	-124	Standard
	Se	82	15.5	28.5	**0.0740**	0.057	76.8	ug/L	16	Standard
	Se-1	77	63.0	4.8	**0.0414**	0.058	139.0	ug/L	59	Standard
>	**Ga**	71	381.7	6.6				mg/L	355	Standard
	Rb	85	153.3	18.0				ug/L	17	Standard
	Y	89	160655.9	2.4				ug/L	183245	Standard
>	**Rh**	103	273.3	14.8				ug/L	345	Standard
	Mo	98	25.2	22.7	**-0.0026**	0.002	86.4	ug/L	38	Standard
	Ag	107	150.0	26.0	**0.0227**	0.007	29.6	ug/L	79	Standard
	Cd	111	55.6	6.8	**0.0102**	0.002	17.0	mg/L	49	Standard
	Cd	114	162.3	10.1	**0.0052**	0.002	44.9	ug/L	130	Standard
>	**In**	115	451670.2	1.0				ug/L	515710	Standard
	Sn	118	795.0	6.7	**0.0186**	0.005	27.4	ug/L	398	Standard
	Sb	123	123.4	13.4	**0.0063**	0.002	38.7	ug/L	221	Standard
	Ba	135	394.3	5.6	**0.1433**	0.008	5.6	ug/L	22	Standard
	Ce	140	237.3	3.4				ug/L	19	Standard
>	**Tb**	159	667974.2	0.4				ug/L	695601	Standard
	Ho	165	8.7	24.0				ug/L	12	Standard
	Tl	203	119.3	30.9	**0.0102**	0.003	32.6	ug/L	21	Standard
	Tl	205	269.7	17.7	**0.0096**	0.002	18.0	ug/L	49	Standard
	Pb	206	325.3	8.1	**0.0110**	0.003	26.0	ug/L	281	Standard
	Pb	207	295.0	12.1	**0.0092**	0.005	50.4	ug/L	226	Standard
	Pb	208	1277.7	10.0	**0.0097**	0.004	36.5	ug/L	1051	Standard
	U	238	50.7	32.6	**0.0043**	0.002	36.6	ug/L	13	Standard
>	**Bi**	209	372969.9	0.9				ug/L	407761	Standard

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Na	23	8380.7	4.4	**0.5221**	0.013	2.5	mg/L	187	Standard
Mg	24	13716.2	3.6	**0.0427**	0.002	4.3	mg/L	35	Standard
K	39	125.0	27.7	**0.0882**	0.057	64.1	mg/L	83	Standard
Ca	43	5.0	100.0	**1.9548**	1.940	99.3	mg/L	2	Standard
Fe	54	406.9	17.8	**0.0170**	0.029	167.3	mg/L	355	Standard
Fe	57	2230.2	2.8	**0.0084**	0.002	22.1	mg/L	1985	Standard
Sc-1	45	210015.9	2.0				mg/L	243359	Standard
Cl	35	4.7	61.9				ug/L	3	Standard
Kr	83	29.7	4.9				ug/L	33	Standard
Br	81	799.2	8.4				ug/L	741	Standard
P	31	258.3	3.9				ug/L	223	Standard
S	34	4202.2	3.0				ug/L	3154	Standard
Sr	88	33.3	17.3				ug/L	32	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		101.927	
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	87.582
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	91.468
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 18, 2012

Method 6020 - Summary Report

Sample ID: L1207029331
Sample Date/Time: Wednesday, July 18, 2012 13:13:36
Number of Replicates: 3
Autosampler Position: 226
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	4870.8	6.6	**17.1005**	89.469	523.2	ug/L	6510	Standard
	Be	9	13.3	43.3	**0.0122**	0.006	48.0	ug/L	8	Standard
	Al	27	864072.9	4.1	**129.6299**	7.459	5.8	ug/L	4354	Standard
>	**Sc**	45	180469.1	3.1				ug/L	243359	Standard
	Ti	47	871.7	1.4	**1.0744**	0.006	0.6	ug/L	43	Standard
	V	51	2898.4	1.4	**0.1812**	0.014	8.0	ug/L	1887	Standard
	Cr	52	5644.1	1.5	**0.0461**	0.019	40.8	ug/L	5892	Standard
	Cr	53	342.5	8.3	**0.2860**	0.038	13.4	ug/L	123	Standard
	Mn	55	38439.4	0.9	**4.3908**	0.068	1.6	ug/L	545	Standard
	Co	59	592.7	6.0	**0.0836**	0.004	4.7	ug/L	73	Standard
	Ni	60	425.7	5.6	**0.2599**	0.011	4.1	ug/L	42	Standard
	Cu	65	374.3	7.3	**0.2433**	0.022	8.9	ug/L	48	Standard
	Zn	66	1799.4	5.5	**2.8311**	0.159	5.6	ug/L	65	Standard
>	**Ge**	72	165863.5	1.9				ug/L	188156	Standard
	As	75	-27.6	17.3	**0.1406**	0.008	5.8	ug/L	-124	Standard
	Se	82	10.3	5.2	**0.0268**	0.007	24.6	ug/L	16	Standard
	Se-1	77	56.7	10.6	**0.0911**	0.123	134.9	ug/L	59	Standard
>	**Ga**	71	391.7	8.2				mg/L	355	Standard
	Rb	85	905.0	3.8				ug/L	17	Standard
	Y	89	136649.2	4.2				ug/L	183245	Standard
>	**Rh**	103	211.7	32.2				ug/L	345	Standard
	Mo	98	73.1	10.4	**0.0214**	0.003	12.6	ug/L	38	Standard
	Ag	107	41.7	7.3	**0.0044**	0.000	11.1	ug/L	79	Standard
	Cd	111	34.8	2.9	**0.0034**	0.001	24.2	mg/L	49	Standard
	Cd	114	83.1	17.0	**-0.0054**	0.003	53.5	ug/L	130	Standard
>	**In**	115	393762.4	2.6				ug/L	515710	Standard
	Sn	118	245.7	6.8	**-0.0250**	0.001	4.3	ug/L	398	Standard
	Sb	123	46.4	9.8	**-0.0047**	0.001	21.4	ug/L	221	Standard
	Ba	135	2425.9	1.6	**1.0589**	0.022	2.1	ug/L	22	Standard
	Ce	140	26213.3	1.1				ug/L	19	Standard
>	**Tb**	159	600295.9	1.2				ug/L	695601	Standard
	Ho	165	393.0	2.3				ug/L	12	Standard
	Tl	203	71.0	17.1	**0.0063**	0.001	20.7	ug/L	21	Standard
	Tl	205	149.7	9.4	**0.0056**	0.001	11.9	ug/L	49	Standard
	Pb	206	80080.4	1.5	**10.2886**	0.186	1.8	ug/L	281	Standard
	Pb	207	65549.8	1.3	**10.0043**	0.210	2.1	ug/L	226	Standard
	Pb	208	306957.4	1.5	**10.0951**	0.166	1.6	ug/L	1051	Standard
	U	238	152.3	6.0	**0.0157**	0.001	6.3	ug/L	13	Standard
>	**Bi**	209	341588.3	1.2				ug/L	407761	Standard

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Na	23	775.0	3.9	**0.0347**	0.001	3.2	mg/L	187	Standard
Mg	24	9808.2	1.3	**0.0355**	0.001	4.2	mg/L	35	Standard
K	39	75.0	11.5	**0.0293**	0.019	65.2	mg/L	83	Standard
Ca	43	1.7	173.2	**0.7976**	1.373	172.1	mg/L	2	Standard
Fe	54	717.9	3.1	**0.1713**	0.015	8.7	mg/L	355	Standard
Fe	57	12530.2	4.2	**0.2298**	0.007	2.9	mg/L	1985	Standard
Sc-1	45	180469.1	3.1				mg/L	243359	Standard
Cl	35	4.3	53.3				ug/L	3	Standard
Kr	83	27.9	5.9				ug/L	33	Standard
Br	81	545.0	1.4				ug/L	741	Standard
P	31	274.2	24.0				ug/L	223	Standard
S	34	3744.6	2.6				ug/L	3154	Standard
Sr	88	23.3	12.4				ug/L	32	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		88.152	
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	76.353
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	83.772
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Wednesday, July 18, 2012 13:16:47
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	5417.6	3.8	**-186.6536**	110.610	59.3	ug/L	6510	Standard
	Be	9	56093.6	0.7	**46.3213**	2.373	5.1	ug/L	8	Standard
	Al	27	450303.8	2.1	**54.2861**	3.300	6.1	ug/L	4354	Standard
>	**Sc**	45	223853.7	4.5				ug/L	243359	Standard
	Ti	47	82532.9	1.0	**86.6712**	0.810	0.9	ug/L	43	Standard
	V	51	374741.0	0.4	**46.7120**	0.355	0.8	ug/L	1887	Standard
	Cr	52	310442.1	0.5	**47.6066**	0.543	1.1	ug/L	5892	Standard
	Cr	53	47930.7	1.0	**44.5085**	0.510	1.1	ug/L	123	Standard
	Mn	55	498765.2	1.3	**47.3428**	0.354	0.7	ug/L	545	Standard
	Co	59	347071.1	0.2	**46.3700**	0.201	0.4	ug/L	73	Standard
	Ni	60	86127.5	1.3	**47.2427**	0.477	1.0	ug/L	42	Standard
	Cu	65	79301.4	1.6	**48.7689**	0.561	1.1	ug/L	48	Standard
	Zn	66	36729.5	0.9	**49.1848**	0.536	1.1	ug/L	65	Standard
>	**Ge**	72	202327.3	0.6				ug/L	188156	Standard
	As	75	37486.2	1.4	**47.7518**	0.730	1.5	ug/L	-124	Standard
	Se	82	3576.0	1.2	**43.6033**	0.756	1.7	ug/L	16	Standard
	Se-1	77	2600.2	2.6	**48.1397**	0.978	2.0	ug/L	59	Standard
>	**Ga**	71	436.7	4.0				mg/L	355	Standard
	Rb	85	471.7	8.8				ug/L	17	Standard
	Y	89	166535.2	0.6				ug/L	183245	Standard
>	**Rh**	103	253.3	15.3				ug/L	345	Standard
	Mo	98	244004.6	1.5	**96.2734**	1.717	1.8	ug/L	38	Standard
	Ag	107	236499.5	0.7	**41.0885**	0.482	1.2	ug/L	79	Standard
	Cd	111	114504.5	0.6	**47.5564**	0.209	0.4	mg/L	49	Standard
	Cd	114	327863.0	2.2	**50.3598**	0.810	1.6	ug/L	130	Standard
>	**In**	115	467563.5	1.0				ug/L	515710	Standard
	Sn	118	779899.6	0.4	**63.9539**	0.513	0.8	ug/L	398	Standard
	Sb	123	312156.9	1.0	**47.4653**	0.312	0.7	ug/L	221	Standard
	Ba	135	144076.1	0.3	**53.3362**	0.382	0.7	ug/L	22	Standard
	Ce	140	604.3	4.9				ug/L	19	Standard
>	**Tb**	159	683752.1	0.4				ug/L	695601	Standard
	Ho	165	11.7	9.9				ug/L	12	Standard
	Tl	203	559323.2	1.1	**50.8069**	0.745	1.5	ug/L	21	Standard
	Tl	205	1292115.4	0.7	**48.9901**	0.182	0.4	ug/L	49	Standard
	Pb	206	433986.5	0.8	**50.2331**	0.737	1.5	ug/L	281	Standard
	Pb	207	369508.8	0.4	**50.8256**	0.253	0.5	ug/L	226	Standard
	Pb	208	1707559.8	0.3	**50.6020**	0.466	0.9	ug/L	1051	Standard
	U	238	483197.7	0.5	**46.6214**	0.360	0.8	ug/L	13	Standard
>	**Bi**	209	379953.6	0.8				ug/L	407761	Standard

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	Na	23	91007.6	1.7	**5.5486**	0.203	3.7	mg/L	187	Standard
	Mg	24	1570043.7	1.0	**4.6476**	0.217	4.7	mg/L	35	Standard
	K	39	4118.9	3.3	**5.9049**	0.229	3.9	mg/L	83	Standard
	Ca	43	6.7	114.6	**2.4411**	2.712	111.1	mg/L	2	Standard
	Fe	54	16589.4	2.0	**5.4848**	0.320	5.8	mg/L	355	Standard
	Fe	57	313946.2	1.3	**5.2586**	0.306	5.8	mg/L	1985	Standard
>	**Sc-1**	45	223853.7	4.5				mg/L	243359	Standard
	Cl	35	4.3	81.0				ug/L	3	Standard
	Kr	83	32.3	7.4				ug/L	33	Standard
	Br	81	670.8	2.6				ug/L	741	Standard
	P	31	239.2	9.1				ug/L	223	Standard
	S	34	4462.3	1.4				ug/L	3154	Standard
	Sr	88	26.7	39.0				ug/L	32	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	108.572		
>	Sc	45			
	Ti	47	86.671		
	V	51	93.424		
	Cr	52	95.213		
	Cr	53			
	Mn	55	94.686		
	Co	59	92.740		
	Ni	60	94.485		
	Cu	65	97.538		
	Zn	66	98.370		
>	Ge	72		107.532	
	As	75	95.504		
	Se	82	87.207		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	96.273		
	Ag	107	82.177		

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	Cd	111	95.113	
	Cd	114		
>	In	115		90.664
	Sn	118	127.908	
	Sb	123	94.931	
	Ba	135	106.672	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	101.614	
	Tl	205		
	Pb	206	100.466	
	Pb	207	101.651	
	Pb	208	101.204	
	U	238	93.243	
>	Bi	209		93.181
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Ti	47	
QC Std 6	Se	82	
QC Std 6	Ag	107	
QC Std 6	Sn	118	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 18, 2012 13:19:57
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	5452.6	5.3	**-154.3757**	82.215	53.3	ug/L	6510	Standard
	Be	9	6.7	43.3	**0.0042**	0.002	59.9	ug/L	8	Standard
	Al	27	3697.1	2.0	**0.0635**	0.005	8.1	ug/L	4354	Standard
>	**Sc**	45	220968.1	1.2				ug/L	243359	Standard
	Ti	47	54.0	27.7	**0.0145**	0.017	117.0	ug/L	43	Standard
	V	51	1822.4	2.4	**-0.0321**	0.006	17.3	ug/L	1887	Standard
	Cr	52	5704.1	3.3	**-0.1330**	0.014	10.5	ug/L	5892	Standard
	Cr	53	226.7	10.7	**0.1095**	0.027	24.4	ug/L	123	Standard
	Mn	55	769.7	6.8	**0.0066**	0.006	91.1	ug/L	545	Standard
	Co	59	110.3	48.3	**0.0019**	0.007	388.2	ug/L	73	Standard
	Ni	60	67.0	3.0	**0.0121**	0.001	8.3	ug/L	42	Standard
	Cu	65	75.3	17.7	**0.0090**	0.009	100.6	ug/L	48	Standard
	Zn	66	78.7	4.8	**-0.0090**	0.007	79.0	ug/L	65	Standard
>	**Ge**	72	200939.3	2.0				ug/L	188156	Standard
	As	75	-120.9	18.8	**0.0287**	0.030	105.8	ug/L	-124	Standard
	Se	82	16.0	11.1	**0.0699**	0.019	26.5	ug/L	16	Standard
	Se-1	77	71.0	6.5	**0.1361**	0.062	45.9	ug/L	59	Standard
>	**Ga**	71	415.0	7.5				mg/L	355	Standard
	Rb	85	15.0	33.3				ug/L	17	Standard
	Y	89	164756.0	1.3				ug/L	183245	Standard
>	**Rh**	103	220.0	20.2				ug/L	345	Standard
	Mo	98	135.6	76.0	**0.0411**	0.042	103.3	ug/L	38	Standard
	Ag	107	217.3	34.8	**0.0336**	0.014	42.5	ug/L	79	Standard
	Cd	111	54.3	56.1	**0.0089**	0.013	150.1	mg/L	49	Standard
	Cd	114	185.4	62.6	**0.0081**	0.019	232.6	ug/L	130	Standard
>	**In**	115	470308.8	2.7				ug/L	515710	Standard
	Sn	118	655.7	34.1	**0.0049**	0.020	407.8	ug/L	398	Standard
	Sb	123	797.6	40.3	**0.1084**	0.052	48.4	ug/L	221	Standard
	Ba	135	39.3	57.7	**0.0068**	0.009	129.7	ug/L	22	Standard
	Ce	140	18.3	22.0				ug/L	19	Standard
>	**Tb**	159	658551.0	1.7				ug/L	695601	Standard
	Ho	165	7.0	28.6				ug/L	12	Standard
	Tl	203	102.7	103.2	**0.0083**	0.009	114.1	ug/L	21	Standard
	Tl	205	249.7	99.3	**0.0086**	0.009	108.1	ug/L	49	Standard
	Pb	206	330.0	18.3	**0.0102**	0.007	68.2	ug/L	281	Standard
	Pb	207	258.7	25.9	**0.0029**	0.009	321.2	ug/L	226	Standard
	Pb	208	1245.4	20.9	**0.0074**	0.008	103.5	ug/L	1051	Standard
	U	238	71.7	82.0	**0.0061**	0.006	91.0	ug/L	13	Standard
>	**Bi**	209	386891.1	1.6				ug/L	407761	Standard

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Na	23	580.0	17.3	**0.0119**	0.007	54.9	mg/L	187	Standard
Mg	24	266.7	92.0	**0.0003**	0.001	248.5	mg/L	35	Standard
K	39	103.3	15.6	**0.0457**	0.022	48.3	mg/L	83	Standard
Ca	43	0.0		**0.0050**	0.000	0.0	mg/L	2	Standard
Fe	54	365.1	14.6	**-0.0047**	0.019	402.9	mg/L	355	Standard
Fe	57	1973.5	2.0	**0.0020**	0.000	18.5	mg/L	1985	Standard
Sc-1	45	220968.1	1.2				mg/L	243359	Standard
Cl	35	3.3	17.3				ug/L	3	Standard
Kr	83	28.8	10.9				ug/L	33	Standard
Br	81	605.0	3.8				ug/L	741	Standard
P	31	242.5	10.9				ug/L	223	Standard
S	34	4347.3	1.4				ug/L	3154	Standard
Sr	88	46.7	53.9				ug/L	32	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		106.794	
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	91.196
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	94.882
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Wednesday, July 18, 2012 13:47:14
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	6124.6	4.0	**-68.4199**	75.538	110.4	ug/L	6510	Standard
	Be	9	5.0	0.0	**0.0025**	0.000	1.3	ug/L	8	Standard
	Al	27	4574.0	3.9	**0.1328**	0.017	13.1	ug/L	4354	Standard
>	**Sc**	45	237134.7	0.8				ug/L	243359	Standard
	Ti	47	56.0	16.4	**0.0133**	0.010	78.8	ug/L	43	Standard
	V	51	5059.1	1.4	**0.3416**	0.017	4.9	ug/L	1887	Standard
	Cr	52	11407.0	1.3	**0.6686**	0.041	6.2	ug/L	5892	Standard
	Cr	53	917.5	0.5	**0.7098**	0.024	3.4	ug/L	123	Standard
	Mn	55	5652.4	2.2	**0.4442**	0.007	1.7	ug/L	545	Standard
	Co	59	2842.3	1.7	**0.3485**	0.006	1.8	ug/L	73	Standard
	Ni	60	3156.0	2.2	**1.6237**	0.039	2.4	ug/L	42	Standard
	Cu	65	1372.7	1.7	**0.7663**	0.012	1.5	ug/L	48	Standard
	Zn	66	6309.0	1.3	**7.9452**	0.152	1.9	ug/L	65	Standard
>	**Ge**	72	212640.4	3.2				ug/L	188156	Standard
	As	75	167.0	13.1	**0.3851**	0.027	7.0	ug/L	-124	Standard
	Se	82	45.6	23.7	**0.4065**	0.136	33.5	ug/L	16	Standard
	Se-1	77	89.3	12.3	**0.3968**	0.232	58.4	ug/L	59	Standard
>	**Ga**	71	440.0	2.3				mg/L	355	Standard
	Rb	85	10.0	50.0				ug/L	17	Standard
	Y	89	176458.8	2.9				ug/L	183245	Standard
>	**Rh**	103	203.3	19.9				ug/L	345	Standard
	Mo	98	14.3	26.3	**-0.0077**	0.001	17.3	ug/L	38	Standard
	Ag	107	2021.1	2.0	**0.3189**	0.011	3.4	ug/L	79	Standard
	Cd	111	610.0	3.1	**0.2194**	0.010	4.6	mg/L	49	Standard
	Cd	114	1833.8	1.3	**0.2387**	0.006	2.3	ug/L	130	Standard
>	**In**	115	508321.4	1.3				ug/L	515710	Standard
	Sn	118	421.7	8.6	**-0.0171**	0.002	13.8	ug/L	398	Standard
	Sb	123	2712.5	2.7	**0.3663**	0.007	1.9	ug/L	221	Standard
	Ba	135	2192.8	2.2	**0.7389**	0.010	1.4	ug/L	22	Standard
	Ce	140	15.7	20.5				ug/L	19	Standard
>	**Tb**	159	689679.9	1.2				ug/L	695601	Standard
	Ho	165	9.0	19.2				ug/L	12	Standard
	Tl	203	953.4	3.1	**0.0806**	0.001	1.7	ug/L	21	Standard
	Tl	205	2171.2	1.8	**0.0767**	0.001	0.8	ug/L	49	Standard
	Pb	206	2050.1	4.3	**0.1961**	0.006	3.2	ug/L	281	Standard
	Pb	207	1674.1	1.5	**0.1848**	0.002	1.3	ug/L	226	Standard
	Pb	208	8026.2	1.9	**0.1952**	0.001	0.7	ug/L	1051	Standard
	U	238	4091.2	1.1	**0.3710**	0.003	0.7	ug/L	13	Standard
>	**Bi**	209	403589.0	1.5				ug/L	407761	Standard

Sample ID: QC Std 8
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Na	23	310.0	12.6	**-0.0062**	0.002	34.4	mg/L	187	Standard
Mg	24	73.3	23.9	**-0.0003**	0.000	16.1	mg/L	35	Standard
K	39	108.3	7.1	**0.0424**	0.012	27.5	mg/L	83	Standard
Ca	43	1.7	173.2	**0.5839**	1.003	171.7	mg/L	2	Standard
Fe	54	396.2	9.6	**-0.0034**	0.013	378.5	mg/L	355	Standard
Fe	57	2235.2	3.4	**0.0039**	0.001	31.0	mg/L	1985	Standard
> **Sc-1**	45	237134.7	0.8				mg/L	243359	Standard
Cl	35	2.7	78.1				ug/L	3	Standard
Kr	83	30.2	16.0				ug/L	33	Standard
Br	81	635.0	7.5				ug/L	741	Standard
P	31	264.2	15.6				ug/L	223	Standard
S	34	4441.5	1.6				ug/L	3154	Standard
Sr	88	25.0	34.6				ug/L	32	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	85.390		
Cr	52	83.574		
Cr	53			
Mn	55	88.842		
Co	59	87.134		
Ni	60	101.481		
Cu	65	95.791		
Zn	66	127.123		
> Ge	72		113.013	
As	75	96.272		
Se	82	101.620		
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107	79.725		

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	Cd	111	91.420	
	Cd	114		
>	In	115		98.567
	Sn	118		
	Sb	123	91.578	
	Ba	135	98.522	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	100.802	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	97.579	
	U	238	92.741	
>	Bi	209		98.977
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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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MassCal File Name

Mass Calibration File Name
MassCal File Path C:\NexIONData\MassCal\
Peak Search Window: 1.00

Sample Information

Sample Date/Time: Thursday, July 19, 2012 09:19:25

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	1326	2021	0.707
Mg	23.985	23.975	4710	2020	0.696
In	114.904	114.875	22869	2023	0.680
U	238.050	238.025	47468	2034	0.678

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	16.221
5.575	9.872
5.625	3.071
5.675	7.396
5.725	5.188
5.775	3.256
5.825	4.646
5.875	3.365
5.925	3.237
5.975	2.897
6.025	2.146
6.075	4.217
6.125	3.256
6.175	2.188
6.225	1.438
6.275	5.506
6.325	6.415
6.375	223.607
6.425	136.931
6.475	50.000
6.525	8.574
6.575	8.043
6.625	4.690
6.675	3.271
6.725	4.263
6.775	3.108
6.825	2.228
6.875	2.464

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6.925	2.782
6.975	3.187
7.025	2.904
7.075	3.199
7.125	3.342
7.175	2.471
7.225	4.198
7.275	5.729
7.325	9.615
7.375	136.931
7.425	136.931
7.475	71.261
7.525	136.931
7.575	223.607
7.625	223.607
7.675	91.287
7.725	
7.775	136.931
7.825	223.607
7.875	136.931
7.925	136.931
7.975	
8.025	223.607
8.075	223.607
8.125	108.653
8.175	136.931
8.225	223.607
8.275	
8.325	223.607
8.375	
8.425	
8.475	149.071
22.525	8.924
22.575	2.374
22.625	1.817
22.675	2.197
22.725	1.604
22.775	0.956
22.825	2.509
22.875	1.266
22.925	2.012
22.975	1.580
23.025	2.252
23.075	2.449
23.125	2.386
23.175	3.301
23.225	2.369

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23.275	3.499
23.325	20.787
23.375	149.071
23.425	149.071
23.475	50.047
23.525	15.250
23.575	7.187
23.625	4.523
23.675	7.875
23.725	4.423
23.775	2.692
23.825	2.649
23.875	3.599
23.925	3.707
23.975	3.055
24.025	3.554
24.075	3.963
24.125	4.407
24.175	4.683
24.225	4.867
24.275	6.203
24.325	26.307
24.375	
24.425	
24.475	136.931
24.525	23.981
24.575	12.492
24.625	11.374
24.675	9.390
24.725	4.245
24.775	5.781
24.825	8.260
24.875	1.573
24.925	7.681
24.975	4.186
25.025	4.405
25.075	3.306
25.125	5.018
25.175	3.586
25.225	5.337
25.275	9.296
25.325	108.653
25.375	136.931
25.425	91.287
25.475	34.233
113.525	9.843
113.575	5.569

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113.625	4.287
113.675	2.784
113.725	3.271
113.775	5.958
113.825	4.057
113.875	2.698
113.925	2.921
113.975	2.012
114.025	3.143
114.075	2.898
114.125	3.281
114.175	3.486
114.225	8.444
114.275	34.468
114.325	79.057
114.375	16.517
114.425	10.601
114.475	4.285
114.525	3.838
114.575	4.711
114.625	2.995
114.675	1.878
114.725	1.405
114.775	2.624
114.825	1.241
114.875	2.787
114.925	2.764
114.975	2.217
115.025	1.320
115.075	1.107
115.125	0.872
115.175	2.594
115.225	6.013
115.275	15.351
115.325	100.000
115.375	104.583
115.425	49.778
115.475	20.398
115.525	11.207
115.575	8.940
115.625	9.618
115.675	5.832
115.725	3.616
115.775	1.973
115.825	4.896
115.875	7.020
115.925	3.742

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115.975	4.849
116.025	6.183
116.075	3.765
116.125	11.161
116.175	5.938
116.225	30.682
116.275	34.233
116.325	136.931
116.375	
116.425	70.711
116.475	104.583
236.525	
236.575	
236.625	
236.675	
236.725	
236.775	
236.825	
236.875	
236.925	
236.975	
237.025	223.607
237.075	
237.125	
237.175	
237.225	
237.275	
237.325	91.287
237.375	223.607
237.425	136.931
237.475	39.460
237.525	30.000
237.575	18.764
237.625	4.927
237.675	3.740
237.725	3.192
237.775	1.666
237.825	3.011
237.875	0.872
237.925	1.740
237.975	1.184
238.025	2.095
238.075	1.960
238.125	1.121
238.175	2.195
238.225	1.375
238.275	1.721

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238.325	3.637
238.375	4.733
238.425	4.120
238.475	12.817
238.525	17.770
238.575	223.607
238.625	
238.675	
238.725	
238.775	223.607
238.825	149.071
238.875	136.931
238.925	223.607
238.975	223.607
239.025	
239.075	223.607
239.125	136.931
239.175	
239.225	
239.275	136.931
239.325	223.607
239.375	
239.425	
239.475	

Approved: July 20, 2012

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, July 19, 2012 09:23:26
Sample Description:
Method File: C:\NexION Data\Method\ESI Daily Performance.mth
Dataset File: C:\NexION Data\DataSet\071112\Daily Performance Check.759
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	2317.2	2317.244	33.141	1.4	Standard
	Mg	24.0	28376.4	28376.415	199.995	0.7	Standard
	In	114.9	79378.5	79378.524	329.215	0.4	Standard
	U	238.1	66508.0	66507.988	457.514	0.7	Standard
⌈	CeO	155.9	1619.1	0.016	0.000	1.4	Standard
| >	Ce	139.9	101618.0	101617.967	540.896	0.5	Standard
⌊	Ce++	70.0	780.2	0.008	0.000	2.2	Standard
	Bkgd	220.0	0.3	0.333	0.236	70.7	Standard

Current Conditions File Data

Current Value	Description
0.96	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: Thursday, July 19, 2012 09:25:45
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SmartTune Wizard - Summary

```
Optimization Summary

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

Start Time: 7/19/2012 9:23:26 AM
End Time: 7/19/2012 9:25:45 AM

Daily Performance Check - [Passed]  Optimum value(s): N/A
        Obtained Intensity (Be 9.0122): 2317.24
        Obtained Intensity (Mg 23.985): 28376.42
        Obtained Intensity (In 114.904): 79378.52
        Obtained Intensity (U 238.05): 66507.99
        Obtained Intensity (Bkgd 220): 0.33
        Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1619.09 / 101617.97)
        Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.008 (=780.15 / 101617.97)
```

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SmartTune Wizard - Details

```
Optimization Details

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

Optimization Status

Start Time: 7/19/2012 9:23:26 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): 2317.24
                Obtained Intensity (Mg 23.985): 28376.42
                Obtained Intensity (In 114.904): 79378.52
                Obtained Intensity (U 238.05): 66507.99
                Obtained Intensity (Bkgd 220): 0.33
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1619.09 / 101617.97)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.008 (=780.15 / 101617.97)
[Passed]  Optimum value(s): N/A

End Time: 7/19/2012 9:25:45 AM
```


Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, July 19, 2012 13:55:50
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	6819.9	3.4				ug/L		Standard
	Be	9	3.3	86.6				ug/L		Standard
	Al	27	4265.6	3.4				ug/L		Standard
>	**Sc**	45	272954.8	3.0				ug/L		Standard
	Ti	47	51.3	10.7				ug/L		Standard
	V	51	2088.2	4.6				ug/L		Standard
	Cr	52	6617.1	2.6				ug/L		Standard
	Cr	53	165.8	14.0				ug/L		Standard
	Mn	55	940.0	3.6				ug/L		Standard
	Co	59	76.0	8.0				ug/L		Standard
	Ni	60	52.0	1.9				ug/L		Standard
	Cu	65	68.0	20.4				ug/L		Standard
	Zn	66	103.7	10.4				ug/L		Standard
>	**Ge**	72	221789.9	2.0				ug/L		Standard
	As	75	-133.0	23.1				ug/L		Standard
	Se	82	18.4	17.1				ug/L		Standard
	Se-1	77	69.7	20.6				ug/L		Standard
>	**Ga**	71	476.7	4.2				mg/L		Standard
	Rb	85	23.3	49.5				ug/L		Standard
	Y	89	197249.1	1.4				ug/L		Standard
>	**Rh**	103	295.0	6.1				ug/L		Standard
	Mo	98	13.2	33.4				ug/L		Standard
	Ag	107	64.0	11.8				ug/L		Standard
	Cd	111	52.6	6.1				mg/L		Standard
	Cd	114	149.6	7.0				ug/L		Standard
>	**In**	115	644840.4	1.5				ug/L		Standard
	Sn	118	486.7	6.6				ug/L		Standard
	Sb	123	125.9	1.6				ug/L		Standard
	Ba	135	25.0	6.9				ug/L		Standard
	Ce	140	22.0	9.1				ug/L		Standard
>	**Tb**	159	958910.2	2.1				ug/L		Standard
	Ho	165	13.7	18.4				ug/L		Standard
	Tl	203	10.3	20.1				ug/L		Standard
	Tl	205	27.3	5.6				ug/L		Standard
	Pb	206	319.0	11.7				ug/L		Standard
	Pb	207	287.3	4.2				ug/L		Standard
	Pb	208	1244.0	3.7				ug/L		Standard
	U	238	5.3	39.0				ug/L		Standard
>	**Bi**	209	497972.5	2.2				ug/L		Standard

Sample ID: Blank
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Na	23	236.7	11.6	mg/L	Standard
Mg	24	60.0	44.1	mg/L	Standard
K	39	105.0	14.3	mg/L	Standard
Ca	43	6.7	43.3	mg/L	Standard
Fe	54	483.3	6.3	mg/L	Standard
Fe	57	2095.1	7.6	mg/L	Standard
Sc-1	45	272954.8	3.0	mg/L	Standard
Cl	35	8.7	17.6	ug/L	Standard
Kr	83	39.3	13.6	ug/L	Standard
Br	81	644.2	5.6	ug/L	Standard
P	31	324.2	10.3	ug/L	Standard
S	34	5485.2	3.6	ug/L	Standard
Sr	88	28.3	27.0	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			

Sample ID: Blank
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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: Thursday, July 19, 2012 13:58:21
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Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, July 19, 2012 13:59:02
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	7088.3	5.2				ug/L	6820	Standard
	Be	9	10.0	50.0				ug/L	3	Standard
	Al	27	5044.2	19.7				ug/L	4266	Standard
>	**Sc**	45	276394.5	2.8				ug/L	272955	Standard
	Ti	47	54.7	10.4				ug/L	51	Standard
	V	51	2175.8	2.8				ug/L	2088	Standard
	Cr	52	6782.5	0.7				ug/L	6617	Standard
	Cr	53	178.3	7.7				ug/L	166	Standard
	Mn	55	1031.4	9.9				ug/L	940	Standard
	Co	59	82.0	19.6				ug/L	76	Standard
	Ni	60	46.7	2.5				ug/L	52	Standard
	Cu	65	74.0	13.0				ug/L	68	Standard
	Zn	66	94.0	2.8				ug/L	104	Standard
>	**Ge**	72	223291.8	1.0				ug/L	221790	Standard
	As	75	-131.0	15.0				ug/L	-133	Standard
	Se	82	20.9	44.1				ug/L	18	Standard
	Se-1	77	70.3	5.0				ug/L	70	Standard
>	**Ga**	71	466.7	11.3				mg/L	477	Standard
	Rb	85	13.3	173.2				ug/L	23	Standard
	Y	89	201354.4	1.8				ug/L	197249	Standard
>	**Rh**	103	300.0	12.6				ug/L	295	Standard
	Mo	98	34.2	109.9				ug/L	13	Standard
	Ag	107	72.0	53.4				ug/L	64	Standard
	Cd	111	58.9	37.1				mg/L	53	Standard
	Cd	114	202.8	29.6				ug/L	150	Standard
>	**In**	115	648464.7	0.7				ug/L	644840	Standard
	Sn	118	505.7	9.9				ug/L	487	Standard
	Sb	123	68.2	57.7				ug/L	126	Standard
	Ba	135	31.3	50.9				ug/L	25	Standard
	Ce	140	29.3	29.0				ug/L	22	Standard
>	**Tb**	159	961827.7	0.9				ug/L	958910	Standard
	Ho	165	14.3	17.6				ug/L	14	Standard
	Tl	203	41.0	147.9				ug/L	10	Standard
	Tl	205	102.3	144.6				ug/L	27	Standard
	Pb	206	347.3	2.9				ug/L	319	Standard
	Pb	207	276.7	10.1				ug/L	287	Standard
	Pb	208	1305.4	8.6				ug/L	1244	Standard
	U	238	15.7	108.6				ug/L	5	Standard
>	**Bi**	209	507284.3	0.7				ug/L	497973	Standard

Sample ID: Standard 1
Report Date/Time: Thursday, July 19, 2012 14:01:33
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Na	23	276.7	16.8	mg/L	237	Standard
Mg	24	295.0	125.0	mg/L	60	Standard
K	39	111.7	2.6	mg/L	105	Standard
Ca	43	5.0	100.0	mg/L	7	Standard
Fe	54	461.4	3.5	mg/L	483	Standard
Fe	57	2021.8	3.5	mg/L	2095	Standard
Sc-1	45	276394.5	2.8	mg/L	272955	Standard
Cl	35	5.3	60.3	ug/L	9	Standard
Kr	83	36.9	12.7	ug/L	39	Standard
Br	81	583.3	4.1	ug/L	644	Standard
P	31	272.5	3.3	ug/L	324	Standard
S	34	5386.8	5.0	ug/L	5485	Standard
Sr	88	46.7	37.6	ug/L	28	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 1
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Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, July 19, 2012 14:02:13
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	6856.6	7.8				ug/L	6820	Standard
	Be	9	70.0	61.0				ug/L	3	Standard
	Al	27	5637.7	5.7				ug/L	4266	Standard
>	**Sc**	45	276097.9	0.6				ug/L	272955	Standard
	Ti	47	144.7	5.2				ug/L	51	Standard
	V	51	2556.6	2.6				ug/L	2088	Standard
	Cr	52	7054.3	2.6				ug/L	6617	Standard
	Cr	53	208.3	12.0				ug/L	166	Standard
	Mn	55	1645.8	3.8				ug/L	940	Standard
	Co	59	494.0	0.9				ug/L	76	Standard
	Ni	60	145.3	10.6				ug/L	52	Standard
	Cu	65	172.0	5.5				ug/L	68	Standard
	Zn	66	180.3	10.0				ug/L	104	Standard
>	**Ge**	72	221191.6	0.7				ug/L	221790	Standard
	As	75	-109.1	32.5				ug/L	-133	Standard
	Se	82	20.2	8.0				ug/L	18	Standard
	Se-1	77	84.3	5.8				ug/L	70	Standard
>	**Ga**	71	490.0	4.4				mg/L	477	Standard
	Rb	85	28.3	20.4				ug/L	23	Standard
	Y	89	195314.4	1.7				ug/L	197249	Standard
>	**Rh**	103	308.3	14.6				ug/L	295	Standard
	Mo	98	311.6	5.8				ug/L	13	Standard
	Ag	107	315.7	5.2				ug/L	64	Standard
	Cd	111	229.3	7.2				mg/L	53	Standard
	Cd	114	619.9	4.7				ug/L	150	Standard
>	**In**	115	644793.8	0.5				ug/L	644840	Standard
	Sn	118	1582.1	1.3				ug/L	487	Standard
	Sb	123	448.4	5.8				ug/L	126	Standard
	Ba	135	233.0	3.4				ug/L	25	Standard
	Ce	140	29.7	7.8				ug/L	22	Standard
>	**Tb**	159	968472.6	1.8				ug/L	958910	Standard
	Ho	165	11.3	44.4				ug/L	14	Standard
	Tl	203	782.0	9.0				ug/L	10	Standard
	Tl	205	1826.1	7.8				ug/L	27	Standard
	Pb	206	927.7	7.0				ug/L	319	Standard
	Pb	207	823.7	2.7				ug/L	287	Standard
	Pb	208	3731.8	2.7				ug/L	1244	Standard
	U	238	681.3	2.0				ug/L	5	Standard
>	**Bi**	209	507320.8	1.1				ug/L	497973	Standard

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Na	23	550.0	10.5	mg/L	237	Standard
Mg	24	2746.9	4.7	mg/L	60	Standard
K	39	110.0	19.8	mg/L	105	Standard
Ca	43	11.7	49.5	mg/L	7	Standard
Fe	54	507.5	3.9	mg/L	483	Standard
Fe	57	2291.8	2.2	mg/L	2095	Standard
> **Sc-1**	45	276097.9	0.6	mg/L	272955	Standard
Cl	35	7.7	7.5	ug/L	9	Standard
Kr	83	40.6	9.0	ug/L	39	Standard
Br	81	598.3	2.3	ug/L	644	Standard
P	31	301.7	9.5	ug/L	324	Standard
S	34	5346.8	3.2	ug/L	5485	Standard
Sr	88	46.7	22.3	ug/L	28	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
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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Thursday, July 19, 2012 14:05:23
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	6968.3	4.0	**50.0000**	55.894	111.8	ug/L	6820	Standard
	Be	9	66410.3	2.0	**50.0000**	1.339	2.7	ug/L	3	Standard
	Al	27	545730.7	1.5	**50.0000**	0.912	1.8	ug/L	4266	Standard
>	**Sc**	45	272741.4	0.9				ug/L	272955	Standard
	Ti	47	97175.3	0.9	**100.0000**	0.325	0.3	ug/L	51	Standard
	V	51	412240.0	0.3	**50.0000**	0.493	1.0	ug/L	2088	Standard
	Cr	52	342659.0	1.0	**50.0000**	0.834	1.7	ug/L	6617	Standard
	Cr	53	56296.9	1.0	**50.0000**	0.898	1.8	ug/L	166	Standard
	Mn	55	595704.9	0.5	**50.0000**	0.451	0.9	ug/L	940	Standard
	Co	59	403861.2	0.9	**50.0000**	0.808	1.6	ug/L	76	Standard
	Ni	60	94862.4	0.4	**50.0000**	0.575	1.1	ug/L	52	Standard
	Cu	65	89773.8	0.3	**50.0000**	0.404	0.8	ug/L	68	Standard
	Zn	66	41959.0	1.0	**50.0000**	0.812	1.6	ug/L	104	Standard
>	**Ge**	72	228288.4	0.8				ug/L	221790	Standard
	As	75	42843.9	1.0	**50.0000**	0.887	1.8	ug/L	-133	Standard
	Se	82	4256.8	1.5	**50.0000**	1.053	2.1	ug/L	18	Standard
	Se-1	77	2943.0	2.8	**50.0000**	1.078	2.2	ug/L	70	Standard
>	**Ga**	71	460.0	8.6				mg/L	477	Standard
	Rb	85	673.3	8.3				ug/L	23	Standard
	Y	89	201967.3	0.9				ug/L	197249	Standard
>	**Rh**	103	311.7	13.6				ug/L	295	Standard
	Mo	98	298230.7	0.4	**100.0000**	0.768	0.8	ug/L	13	Standard
	Ag	107	307011.6	1.3	**50.0000**	0.218	0.4	ug/L	64	Standard
	Cd	111	163581.8	2.1	**50.0000**	0.743	1.5	mg/L	53	Standard
	Cd	114	457426.0	0.6	**50.0000**	0.199	0.4	ug/L	150	Standard
>	**In**	115	655916.8	0.9				ug/L	644840	Standard
	Sn	118	1077064.0	2.1	**50.0000**	1.089	2.2	ug/L	487	Standard
	Sb	123	434074.6	1.0	**50.0000**	0.495	1.0	ug/L	126	Standard
	Ba	135	192885.7	0.4	**50.0000**	0.448	0.9	ug/L	25	Standard
	Ce	140	803.0	3.6				ug/L	22	Standard
>	**Tb**	159	985938.0	0.6				ug/L	958910	Standard
	Ho	165	20.3	19.9				ug/L	14	Standard
	Tl	203	745321.0	0.3	**50.0000**	0.259	0.5	ug/L	10	Standard
	Tl	205	1718061.2	1.1	**50.0000**	0.349	0.7	ug/L	27	Standard
	Pb	206	575552.2	0.7	**50.0000**	0.393	0.8	ug/L	319	Standard
	Pb	207	491472.8	0.8	**50.0000**	0.490	1.0	ug/L	287	Standard
	Pb	208	2261235.3	0.5	**50.0000**	0.373	0.7	ug/L	1244	Standard
	U	238	682762.1	0.2	**50.0000**	0.286	0.6	ug/L	5	Standard
>	**Bi**	209	500308.9	0.6				ug/L	497973	Standard

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	Na	23	106065.0	1.7	**5.0000**	0.040	0.8	mg/L	237	Standard
	Mg	24	2737533.8	2.2	**5.0000**	0.072	1.4	mg/L	60	Standard
	K	39	4940.8	2.5	**5.0000**	0.080	1.6	mg/L	105	Standard
	Ca	43	16.7	34.6	**5.0000**	5.668	113.4	mg/L	7	Standard
	Fe	54	19512.0	0.8	**5.0000**	0.071	1.4	mg/L	483	Standard
	Fe	57	324794.1	3.8	**5.0000**	0.236	4.7	mg/L	2095	Standard
>	**Sc-1**	45	272741.4	0.9				mg/L	272955	Standard
	Cl	35	5.0	52.9				ug/L	9	Standard
	Kr	83	42.4	15.4				ug/L	39	Standard
	Br	81	597.5	11.3				ug/L	644	Standard
	P	31	327.5	6.2				ug/L	324	Standard
	S	34	5187.6	2.1				ug/L	5485	Standard
	Sr	88	43.3	48.0				ug/L	28	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: Thursday, July 19, 2012 14:08:34
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	7261.7	6.1	**101.4419**	91.424	90.1	ug/L	6820	Standard
	Be	9	132258.3	2.6	**99.1811**	2.371	2.4	ug/L	3	Standard
	Al	27	1060025.1	1.1	**98.1597**	1.148	1.2	ug/L	4266	Standard
>	**Sc**	45	276042.1	1.1				ug/L	272955	Standard
	Ti	47	193713.8	2.0	**200.8654**	4.005	2.0	ug/L	51	Standard
	V	51	816952.4	0.4	**100.2608**	1.314	1.3	ug/L	2088	Standard
	Cr	52	668443.3	0.6	**99.8425**	1.158	1.2	ug/L	6617	Standard
	Cr	53	111319.1	1.1	**100.0813**	1.427	1.4	ug/L	166	Standard
	Mn	55	1175971.6	0.7	**99.9753**	0.663	0.7	ug/L	940	Standard
	Co	59	809539.9	0.5	**100.6997**	1.143	1.1	ug/L	76	Standard
	Ni	60	187992.7	0.2	**100.1388**	1.232	1.2	ug/L	52	Standard
	Cu	65	175465.2	0.9	**99.4606**	1.934	1.9	ug/L	68	Standard
	Zn	66	83060.5	2.7	**100.1540**	2.867	2.9	ug/L	104	Standard
>	**Ge**	72	225648.6	1.0				ug/L	221790	Standard
	As	75	84952.4	0.7	**100.0570**	0.791	0.8	ug/L	-133	Standard
	Se	82	8491.8	1.0	**100.5528**	1.883	1.9	ug/L	18	Standard
	Se-1	77	5954.5	1.0	**101.9162**	1.565	1.5	ug/L	70	Standard
>	**Ga**	71	433.3	22.3				mg/L	477	Standard
	Rb	85	4600.7	1.3				ug/L	23	Standard
	Y	89	200992.8	1.4				ug/L	197249	Standard
>	**Rh**	103	335.0	7.9				ug/L	295	Standard
	Mo	98	591290.9	0.6	**199.8287**	2.153	1.1	ug/L	13	Standard
	Ag	107	611032.5	0.7	**100.1061**	0.335	0.3	ug/L	64	Standard
	Cd	111	319453.0	0.4	**99.1704**	0.774	0.8	mg/L	53	Standard
	Cd	114	903364.2	0.5	**99.7263**	0.822	0.8	ug/L	150	Standard
>	**In**	115	651364.3	0.5				ug/L	644840	Standard
	Sn	118	1077233.6	0.5	**66.9878**	0.188	0.3	ug/L	487	Standard
	Sb	123	878471.7	1.3	**100.9416**	1.736	1.7	ug/L	126	Standard
	Ba	135	383062.1	0.8	**100.0014**	1.273	1.3	ug/L	25	Standard
	Ce	140	280.0	5.0				ug/L	22	Standard
>	**Tb**	159	987882.1	1.0				ug/L	958910	Standard
	Ho	165	31.3	8.0				ug/L	14	Standard
	Tl	203	1461104.8	1.0	**99.8657**	0.169	0.2	ug/L	10	Standard
	Tl	205	3476279.9	1.0	**101.4483**	0.492	0.5	ug/L	27	Standard
	Pb	206	1132596.5	0.4	**100.0717**	0.658	0.7	ug/L	319	Standard
	Pb	207	931401.3	0.8	**98.1892**	0.237	0.2	ug/L	287	Standard
	Pb	208	4445344.7	0.2	**100.0230**	0.664	0.7	ug/L	1244	Standard
	U	238	1330198.3	2.0	**99.5630**	2.815	2.8	ug/L	5	Standard
>	**Bi**	209	491711.7	0.9				ug/L	497973	Standard

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	Na	23	128758.1	0.8	**7.5020**	0.027	0.4	mg/L	237	Standard
	Mg	24	5378267.4	1.8	**9.8509**	0.114	1.2	mg/L	60	Standard
	K	39	9683.1	1.3	**9.8906**	0.087	0.9	mg/L	105	Standard
	Ca	43	36.7	39.4	**14.0985**	8.119	57.6	mg/L	7	Standard
	Fe	54	38107.5	1.8	**9.8814**	0.132	1.3	mg/L	483	Standard
	Fe	57	647494.9	4.5	**9.9374**	0.458	4.6	mg/L	2095	Standard
>	**Sc-1**	45	276042.1	1.1				mg/L	272955	Standard
	Cl	35	6.0	33.3				ug/L	9	Standard
	Kr	83	42.7	8.3				ug/L	39	Standard
	Br	81	697.5	1.1				ug/L	644	Standard
	P	31	319.2	6.3				ug/L	324	Standard
	S	34	4895.8	3.4				ug/L	5485	Standard
	Sr	88	41.7	45.4				ug/L	28	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.	Sn	118	Correlation coefficient < 0.998
Corr. Coef.	Na	23	Correlation coefficient < 0.998
Corr. Coef.	Ca	43	Correlation coefficient < 0.998

Sample ID: Standard 4
Report Date/Time: Thursday, July 19, 2012 14:11:04
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Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, July 19, 2012 14:11:47
Number of Replicates: 3
Autosampler Position: 201
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	6896.6	4.6	**-37.5355**	76.255	203.2	ug/L	6820	Standard
	Be	9	66877.3	1.4	**48.7578**	0.394	0.8	ug/L	3	Standard
	Al	27	556075.5	0.4	**49.8314**	0.290	0.6	ug/L	4266	Standard
>	**Sc**	45	283917.1	0.7				ug/L	272955	Standard
	Ti	47	98626.0	1.2	**100.3449**	2.161	2.2	ug/L	51	Standard
	V	51	412099.9	1.8	**49.4913**	0.747	1.5	ug/L	2088	Standard
	Cr	52	342114.4	0.8	**49.6304**	0.454	0.9	ug/L	6617	Standard
	Cr	53	56805.5	0.5	**50.0512**	0.845	1.7	ug/L	166	Standard
	Mn	55	606521.2	0.7	**50.5618**	0.973	1.9	ug/L	940	Standard
	Co	59	409416.1	0.9	**49.9722**	0.714	1.4	ug/L	76	Standard
	Ni	60	96040.8	0.3	**50.1890**	0.478	1.0	ug/L	52	Standard
	Cu	65	89943.8	0.2	**50.0067**	0.667	1.3	ug/L	68	Standard
	Zn	66	43947.6	0.9	**51.9229**	0.862	1.7	ug/L	104	Standard
>	**Ge**	72	229938.8	1.2				ug/L	221790	Standard
	As	75	43400.5	1.1	**50.2560**	0.770	1.5	ug/L	-133	Standard
	Se	82	4322.3	0.7	**50.1282**	0.750	1.5	ug/L	18	Standard
	Se-1	77	3055.6	1.9	**50.6140**	1.478	2.9	ug/L	70	Standard
>	**Ga**	71	550.0	6.9				mg/L	477	Standard
	Rb	85	653.3	8.2				ug/L	23	Standard
	Y	89	201972.3	0.6				ug/L	197249	Standard
>	**Rh**	103	278.3	10.8				ug/L	295	Standard
	Mo	98	299615.6	0.8	**99.3272**	0.443	0.4	ug/L	13	Standard
	Ag	107	315244.2	0.6	**50.6665**	0.353	0.7	ug/L	64	Standard
	Cd	111	165293.8	1.0	**50.3266**	0.083	0.2	mg/L	53	Standard
	Cd	114	467183.0	0.9	**50.5870**	0.663	1.3	ug/L	150	Standard
>	**In**	115	663975.4	0.9				ug/L	644840	Standard
	Sn	118	1099296.5	1.3	**67.0624**	0.823	1.2	ug/L	487	Standard
	Sb	123	442886.1	1.2	**49.9198**	0.414	0.8	ug/L	126	Standard
	Ba	135	194580.0	1.6	**49.8219**	0.372	0.7	ug/L	25	Standard
	Ce	140	785.0	1.6				ug/L	22	Standard
>	**Tb**	159	973642.6	0.3				ug/L	958910	Standard
	Ho	165	20.3	19.9				ug/L	14	Standard
	Tl	203	738598.1	0.2	**49.5269**	0.054	0.1	ug/L	10	Standard
	Tl	205	1704666.2	0.1	**48.8053**	0.080	0.2	ug/L	27	Standard
	Pb	206	571995.4	0.9	**49.5668**	0.490	1.0	ug/L	319	Standard
	Pb	207	487067.3	0.3	**50.3588**	0.200	0.4	ug/L	287	Standard
	Pb	208	2253663.6	0.5	**49.7319**	0.312	0.6	ug/L	1244	Standard
	U	238	678661.6	0.6	**49.8277**	0.298	0.6	ug/L	5	Standard
>	**Bi**	209	501195.0	0.1				ug/L	497973	Standard

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Na	23	105966.0	2.1	**5.9973**	0.128	2.1	mg/L	237	Standard
Mg	24	2399759.7	20.1	**4.2758**	0.874	20.4	mg/L	60	Standard
K	39	4830.8	4.6	**4.7407**	0.194	4.1	mg/L	105	Standard
Ca	43	15.0	120.2	**1.6887**	9.975	590.7	mg/L	7	Standard
Fe	54	19560.9	2.9	**4.8670**	0.124	2.5	mg/L	483	Standard
Fe	57	332544.1	2.1	**4.9473**	0.137	2.8	mg/L	2095	Standard
Sc-1	45	283917.1	0.7				mg/L	272955	Standard
Cl	35	8.7	6.7				ug/L	9	Standard
Kr	83	41.1	14.7				ug/L	39	Standard
Br	81	620.0	7.0				ug/L	644	Standard
P	31	348.3	6.4				ug/L	324	Standard
S	34	4921.6	2.2				ug/L	5485	Standard
Sr	88	46.7	12.4				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9	97.516		
Al	27	99.663		
Sc	45			
Ti	47	100.345		
V	51	98.983		
Cr	52	99.261		
Cr	53	100.102		
Mn	55	101.124		
Co	59	99.944		
Ni	60	100.378		
Cu	65	100.013		
Zn	66	103.846		
Ge	72		103.674	
As	75	100.512		
Se	82	100.256		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	99.327		
Ag	107	101.333		

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	Cd	111	100.653	
	Cd	114		
>	In	115		102.967
	Sn	118	134.125	
	Sb	123	99.840	
	Ba	135	99.644	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.054	
	Tl	205		
	Pb	206	99.134	
	Pb	207	100.718	
	Pb	208	99.464	
	U	238	99.655	
>	Bi	209		100.647
	Na	23	119.946	
	Mg	24	85.517	
	K	39	94.813	
	Ca	43	33.774	
	Fe	54	97.339	
	Fe	57	98.945	
>	Sc-1	45		
	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	Sn	118	
QC Std 1	Na	23	
QC Std 1	Mg	24	
QC Std 1	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, July 19, 2012 14:14:59
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	6634.8	4.5	**-52.8007**	70.221	133.0	ug/L	6820	Standard
	Be	9	21.7	93.3	**0.0135**	0.015	111.5	ug/L	3	Standard
	Al	27	4920.8	1.6	**-0.0160**	0.003	20.8	ug/L	4266	Standard
>	**Sc**	45	275664.3	2.3				ug/L	272955	Standard
	Ti	47	72.3	20.9	**0.0240**	0.017	69.4	ug/L	51	Standard
	V	51	1902.2	2.1	**-0.0307**	0.008	24.8	ug/L	2088	Standard
	Cr	52	6117.9	2.4	**-0.0888**	0.021	23.5	ug/L	6617	Standard
	Cr	53	155.0	4.8	**0.0019**	0.010	551.2	ug/L	166	Standard
	Mn	55	981.4	2.3	**-0.0071**	0.005	76.9	ug/L	940	Standard
	Co	59	114.3	21.9	**0.0020**	0.004	193.9	ug/L	76	Standard
	Ni	60	96.7	11.1	**0.0240**	0.007	29.6	ug/L	52	Standard
	Cu	65	91.7	13.7	**0.0038**	0.007	171.9	ug/L	68	Standard
	Zn	66	142.0	8.1	**0.0041**	0.020	491.0	ug/L	104	Standard
>	**Ge**	72	220025.6	4.3				ug/L	221790	Standard
	As	75	-134.0	42.9	**0.0207**	0.063	304.8	ug/L	-133	Standard
	Se	82	18.4	14.5	**0.0300**	0.039	130.3	ug/L	18	Standard
	Se-1	77	79.7	10.7	**-0.0276**	0.105	381.6	ug/L	70	Standard
>	**Ga**	71	475.0	17.2				mg/L	477	Standard
	Rb	85	30.0	33.3				ug/L	23	Standard
	Y	89	194795.3	5.8				ug/L	197249	Standard
>	**Rh**	103	295.0	14.8				ug/L	295	Standard
	Mo	98	90.3	26.3	**0.0250**	0.009	36.0	ug/L	13	Standard
	Ag	107	215.3	15.0	**0.0339**	0.006	17.9	ug/L	64	Standard
	Cd	111	65.8	10.6	**-0.0010**	0.002	202.9	mg/L	53	Standard
	Cd	114	194.3	4.8	**0.0028**	0.001	43.6	ug/L	150	Standard
>	**In**	115	636342.9	3.2				ug/L	644840	Standard
	Sn	118	872.7	8.6	**0.0062**	0.006	97.7	ug/L	487	Standard
	Sb	123	965.4	28.3	**0.1121**	0.035	31.6	ug/L	126	Standard
	Ba	135	47.3	36.0	**0.0012**	0.004	371.8	ug/L	25	Standard
	Ce	140	26.7	2.2				ug/L	22	Standard
>	**Tb**	159	933330.4	1.9				ug/L	958910	Standard
	Ho	165	17.3	44.8				ug/L	14	Standard
	Tl	203	93.3	32.6	**0.0046**	0.002	49.0	ug/L	10	Standard
	Tl	205	208.3	34.7	**0.0044**	0.002	51.1	ug/L	27	Standard
	Pb	206	374.3	5.9	**0.0034**	0.002	61.8	ug/L	319	Standard
	Pb	207	310.3	8.3	**-0.0017**	0.004	216.0	ug/L	287	Standard
	Pb	208	1458.0	3.0	**0.0012**	0.002	149.1	ug/L	1244	Standard
	U	238	73.7	18.1	**0.0061**	0.001	18.8	ug/L	5	Standard
>	**Bi**	209	495423.2	3.4				ug/L	497973	Standard

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Na	23	290.0	10.3	**-0.0102**	0.001	14.4	mg/L	237	Standard
Mg	24	333.3	24.1	**0.0006**	0.000	28.0	mg/L	60	Standard
K	39	118.3	13.6	**0.0139**	0.018	131.7	mg/L	105	Standard
Ca	43	3.3	86.6	**-4.6817**	1.645	35.1	mg/L	7	Standard
Fe	54	472.3	8.0	**-0.0040**	0.010	238.0	mg/L	483	Standard
Fe	57	2028.5	9.0	**0.0010**	0.003	331.5	mg/L	2095	Standard
Sc-1	45	275664.3	2.3				mg/L	272955	Standard
Cl	35	11.7	19.8				ug/L	9	Standard
Kr	83	46.0	11.2				ug/L	39	Standard
Br	81	655.8	3.7				ug/L	644	Standard
P	31	297.5	8.9				ug/L	324	Standard
S	34	4862.4	3.2				ug/L	5485	Standard
Sr	88	40.0	21.7				ug/L	28	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		99.205	
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	98.682
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.488
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Thursday, July 19, 2012 14:18:12
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	6943.3	1.1	**10.0091**	10.320	103.1	ug/L	6820	Standard
	Be	9	10.0	50.0	**0.0048**	0.004	75.4	ug/L	3	Standard
	Al	27	45872.7	1.8	**3.7639**	0.071	1.9	ug/L	4266	Standard
>	**Sc**	45	277995.8	1.6				ug/L	272955	Standard
	Ti	47	64.3	6.5	**0.0136**	0.004	32.7	ug/L	51	Standard
	V	51	5078.4	1.0	**0.3536**	0.005	1.4	ug/L	2088	Standard
	Cr	52	11513.4	0.7	**0.7005**	0.015	2.1	ug/L	6617	Standard
	Cr	53	1044.2	0.8	**0.7982**	0.008	1.0	ug/L	166	Standard
	Mn	55	6796.9	0.9	**0.4852**	0.004	0.8	ug/L	940	Standard
	Co	59	3214.0	3.5	**0.3869**	0.013	3.5	ug/L	76	Standard
	Ni	60	3154.7	3.3	**1.6510**	0.059	3.5	ug/L	52	Standard
	Cu	65	1510.7	2.0	**0.8068**	0.018	2.3	ug/L	68	Standard
	Zn	66	6160.9	1.3	**7.2652**	0.094	1.3	ug/L	104	Standard
>	**Ge**	72	225758.8	0.2				ug/L	221790	Standard
	As	75	192.9	16.7	**0.4076**	0.037	9.2	ug/L	-133	Standard
	Se	82	47.3	10.8	**0.3662**	0.061	16.7	ug/L	18	Standard
	Se-1	77	96.7	9.4	**0.2333**	0.154	66.0	ug/L	70	Standard
>	**Ga**	71	491.7	9.8				mg/L	477	Standard
	Rb	85	20.0	43.3				ug/L	23	Standard
	Y	89	197782.5	0.4				ug/L	197249	Standard
>	**Rh**	103	270.0	19.3				ug/L	295	Standard
	Mo	98	132.0	129.6	**0.0378**	0.057	150.8	ug/L	13	Standard
	Ag	107	2512.9	4.9	**0.4081**	0.017	4.1	ug/L	64	Standard
	Cd	111	893.0	5.1	**0.2545**	0.012	4.6	mg/L	53	Standard
	Cd	114	2442.4	7.8	**0.2496**	0.019	7.6	ug/L	150	Standard
>	**In**	115	653328.8	0.9				ug/L	644840	Standard
	Sn	118	787.7	31.5	**-0.0007**	0.015	2209.2	ug/L	487	Standard
	Sb	123	3721.2	3.1	**0.4242**	0.009	2.2	ug/L	126	Standard
	Ba	135	2835.6	1.9	**0.7266**	0.013	1.8	ug/L	25	Standard
	Ce	140	20.7	37.6				ug/L	22	Standard
>	**Tb**	159	948783.3	0.6				ug/L	958910	Standard
	Ho	165	16.0	6.3				ug/L	14	Standard
	Tl	203	1235.7	11.2	**0.0812**	0.009	10.7	ug/L	10	Standard
	Tl	205	2970.3	11.0	**0.0835**	0.009	10.4	ug/L	27	Standard
	Pb	206	2740.2	3.8	**0.2085**	0.007	3.5	ug/L	319	Standard
	Pb	207	2225.8	4.5	**0.1964**	0.009	4.4	ug/L	287	Standard
	Pb	208	10461.1	3.5	**0.1999**	0.006	3.2	ug/L	1244	Standard
	U	238	5217.9	0.8	**0.3842**	0.004	0.9	ug/L	5	Standard
>	**Bi**	209	500469.5	0.7				ug/L	497973	Standard

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Na	23	281.7	12.6	**-0.0108**	0.002	17.9	mg/L	237	Standard
Mg	24	323.3	79.5	**0.0006**	0.000	82.7	mg/L	60	Standard
K	39	95.0	13.9	**-0.0111**	0.015	137.1	mg/L	105	Standard
Ca	43	5.0	100.0	**-3.7693**	2.792	74.1	mg/L	7	Standard
Fe	54	473.5	9.0	**-0.0048**	0.011	220.8	mg/L	483	Standard
Fe	57	2086.8	8.9	**0.0016**	0.002	147.9	mg/L	2095	Standard
Sc-1	45	277995.8	1.6				mg/L	272955	Standard
Cl	35	7.0	51.5				ug/L	9	Standard
Kr	83	40.2	6.2				ug/L	39	Standard
Br	81	601.7	5.2				ug/L	644	Standard
P	31	322.5	4.0				ug/L	324	Standard
S	34	5049.2	1.7				ug/L	5485	Standard
Sr	88	31.7	24.1				ug/L	28	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	88.410		
Cr	52	87.557		
Cr	53			
Mn	55	97.036		
Co	59	96.730		
Ni	60	103.187		
Cu	65	100.847		
Zn	66	116.243		
Ge	72		101.789	
As	75	101.909		
Se	82	91.550		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	102.031		

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	Cd	111	106.039	
	Cd	114		
>	In	115		101.316
	Sn	118		
	Sb	123	106.051	
	Ba	135	96.884	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	101.453	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	99.944	
	U	238	96.058	
>	Bi	209		100.501
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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: Thursday, July 19, 2012 14:21:22
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	5769.4	2.2	**-34.3797**	60.033	174.6	ug/L	6820	Standard
	Be	9	70.0	143.4	**0.0586**	0.088	149.3	ug/L	3	Standard
	Al	27	45835880.5	3.5	**4963.7162**	155.004	3.1	ug/L	4266	Standard
>	**Sc**	45	237153.6	1.7				ug/L	272955	Standard
	Ti	47	26419.0	1.0	**31.3383**	0.585	1.9	ug/L	51	Standard
	V	51	1844.7	4.7	**-0.0110**	0.010	91.2	ug/L	2088	Standard
	Cr	52	5729.8	1.9	**-0.0456**	0.023	51.1	ug/L	6617	Standard
	Cr	53	1725.9	4.8	**1.6385**	0.085	5.2	ug/L	166	Standard
	Mn	55	844.0	6.1	**-0.0106**	0.005	48.8	ug/L	940	Standard
	Co	59	233.7	17.9	**0.0206**	0.006	29.3	ug/L	76	Standard
	Ni	60	753.4	11.8	**0.4308**	0.055	12.7	ug/L	52	Standard
	Cu	65	243.7	29.3	**0.1089**	0.047	43.0	ug/L	68	Standard
	Zn	66	871.0	4.3	**1.0332**	0.061	5.9	ug/L	104	Standard
>	**Ge**	72	196982.6	0.9				ug/L	221790	Standard
	As	75	-130.2	7.4	**0.0057**	0.013	232.6	ug/L	-133	Standard
	Se	82	15.9	6.8	**0.0214**	0.015	69.7	ug/L	18	Standard
	Se-1	77	169.7	5.6	**1.9290**	0.161	8.3	ug/L	70	Standard
>	**Ga**	71	416.7	18.4				mg/L	477	Standard
	Rb	85	1976.8	6.4				ug/L	23	Standard
	Y	89	177665.7	1.5				ug/L	197249	Standard
>	**Rh**	103	293.3	11.0				ug/L	295	Standard
	Mo	98	232440.7	0.5	**89.1058**	1.022	1.1	ug/L	13	Standard
	Ag	107	141.3	31.5	**0.0240**	0.008	34.6	ug/L	64	Standard
	Cd	111	-0.2	18309.4	**-0.0219**	0.012	53.7	mg/L	53	Standard
	Cd	114	1198.8	8.6	**0.1310**	0.013	10.3	ug/L	150	Standard
>	**In**	115	574230.0	1.1				ug/L	644840	Standard
	Sn	118	431.0	33.8	**-0.0190**	0.010	54.1	ug/L	487	Standard
	Sb	123	397.9	14.4	**0.0498**	0.007	14.9	ug/L	126	Standard
	Ba	135	69.7	51.0	**0.0092**	0.011	114.6	ug/L	25	Standard
	Ce	140	1361.1	2.7				ug/L	22	Standard
>	**Tb**	159	876968.2	1.1				ug/L	958910	Standard
	Ho	165	19.3	23.3				ug/L	14	Standard
	Tl	203	155.3	65.0	**0.0097**	0.008	78.6	ug/L	10	Standard
	Tl	205	338.0	65.4	**0.0091**	0.007	78.7	ug/L	27	Standard
	Pb	206	440.3	16.0	**0.0126**	0.007	57.6	ug/L	319	Standard
	Pb	207	368.0	17.7	**0.0077**	0.008	102.4	ug/L	287	Standard
	Pb	208	1730.7	17.1	**0.0107**	0.008	72.3	ug/L	1244	Standard
	U	238	132.0	148.3	**0.0114**	0.016	141.3	ug/L	5	Standard
>	**Bi**	209	455530.0	1.5				ug/L	497973	Standard

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Na	23	134694.4	1.1	**9.1417**	0.142	1.5	mg/L	237	Standard
Mg	24	1833330.0	22.7	**3.9177**	0.952	24.3	mg/L	60	Standard
K	39	3977.2	5.2	**4.6739**	0.293	6.3	mg/L	105	Standard
Ca	43	35.0	37.8	**16.3890**	8.590	52.4	mg/L	7	Standard
Fe	54	15667.8	3.5	**4.6623**	0.158	3.4	mg/L	483	Standard
Fe	57	265478.2	2.5	**4.7283**	0.187	3.9	mg/L	2095	Standard
Sc-1	45	237153.6	1.7				mg/L	272955	Standard
Cl	35	206.7	7.2				ug/L	9	Standard
Kr	83	39.8	2.9				ug/L	39	Standard
Br	81	551.7	3.1				ug/L	644	Standard
P	31	28100.2	1.3				ug/L	324	Standard
S	34	10024.2	4.3				ug/L	5485	Standard
Sr	88	43.3	13.3				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	99.274		
Sc	45			
Ti	47	31.338		
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72		88.815	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	89.106		
Ag	107			

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	Cd	111		
	Cd	114		
>	In	115		89.050
	Sn	118		
	Sb	123		
	Ba	135		
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203		
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208		
	U	238		
>	Bi	209		91.477
	Na	23	73.134	
	Mg	24	78.354	
	K	39	93.479	
	Ca	43	109.260	
	Fe	54	37.298	
	Fe	57	37.827	
>	Sc-1	45		
	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	Mg	24	
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: Thursday, July 19, 2012 14:24:31
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	7195.0	3.1	**6.7016**	18.225	272.0	ug/L	6820	Standard
	Be	9	137378.6	2.7	**98.5514**	1.954	2.0	ug/L	3	Standard
	Al	27	53023187.1	1.8	**4720.1826**	127.663	2.7	ug/L	4266	Standard
>	**Sc**	45	288581.5	2.3				ug/L	272955	Standard
	Ti	47	100830.5	1.7	**103.1648**	1.654	1.6	ug/L	51	Standard
	V	51	800794.8	1.5	**96.9888**	1.810	1.9	ug/L	2088	Standard
	Cr	52	657705.7	1.7	**96.9366**	2.360	2.4	ug/L	6617	Standard
	Cr	53	112155.4	2.7	**99.5503**	4.125	4.1	ug/L	166	Standard
	Mn	55	1188518.0	0.6	**99.7344**	1.605	1.6	ug/L	940	Standard
	Co	59	815736.0	1.1	**100.1469**	1.197	1.2	ug/L	76	Standard
	Ni	60	187006.7	0.7	**98.3287**	2.337	2.4	ug/L	52	Standard
	Cu	65	175010.4	1.1	**97.9219**	2.682	2.7	ug/L	68	Standard
	Zn	66	84783.6	0.4	**100.9112**	1.961	1.9	ug/L	104	Standard
>	**Ge**	72	228637.8	1.7				ug/L	221790	Standard
	As	75	87358.7	0.7	**101.5660**	2.375	2.3	ug/L	-133	Standard
	Se	82	8795.7	0.5	**102.8049**	2.076	2.0	ug/L	18	Standard
	Se-1	77	6119.9	0.2	**103.4122**	1.946	1.9	ug/L	70	Standard
>	**Ga**	71	798.4	6.3				mg/L	477	Standard
	Rb	85	2483.5	6.2				ug/L	23	Standard
	Y	89	208949.5	1.6				ug/L	197249	Standard
>	**Rh**	103	326.7	17.7				ug/L	295	Standard
	Mo	98	295830.6	0.9	**96.2337**	0.601	0.6	ug/L	13	Standard
	Ag	107	657627.9	1.8	**103.7126**	1.541	1.5	ug/L	64	Standard
	Cd	111	338662.2	0.9	**101.2021**	0.478	0.5	mg/L	53	Standard
	Cd	114	930303.7	1.2	**98.8654**	1.626	1.6	ug/L	150	Standard
>	**In**	115	676650.6	0.6				ug/L	644840	Standard
	Sn	118	1213.4	3.5	**0.0232**	0.003	12.5	ug/L	487	Standard
	Sb	123	911102.7	0.2	**100.7754**	0.549	0.5	ug/L	126	Standard
	Ba	135	380531.1	0.8	**95.6285**	1.277	1.3	ug/L	25	Standard
	Ce	140	1701.4	1.8				ug/L	22	Standard
>	**Tb**	159	1001800.6	0.3				ug/L	958910	Standard
	Ho	165	25.3	19.9				ug/L	14	Standard
	Tl	203	1469256.9	0.2	**97.5331**	0.223	0.2	ug/L	10	Standard
	Tl	205	3509988.1	1.0	**99.4867**	1.338	1.3	ug/L	27	Standard
	Pb	206	1131943.2	0.6	**97.1335**	0.969	1.0	ug/L	319	Standard
	Pb	207	963987.5	0.7	**98.7014**	1.042	1.1	ug/L	287	Standard
	Pb	208	4539356.6	0.6	**99.1963**	0.881	0.9	ug/L	1244	Standard
	U	238	1397291.0	0.9	**101.5601**	1.180	1.2	ug/L	5	Standard
>	**Bi**	209	506284.4	0.4				ug/L	497973	Standard

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Na	23	138912.3	1.1	**7.7457**	0.220	2.8	mg/L	237	Standard
Mg	24	2513544.9	2.6	**4.4048**	0.125	2.8	mg/L	60	Standard
K	39	4464.0	6.4	**4.3066**	0.385	8.9	mg/L	105	Standard
Ca	43	26.7	10.8	**7.8382**	1.886	24.1	mg/L	7	Standard
Fe	54	44664.6	3.8	**11.1020**	0.614	5.5	mg/L	483	Standard
Fe	57	843114.7	1.6	**12.3854**	0.101	0.8	mg/L	2095	Standard
> **Sc-1**	45	288581.5	2.3				mg/L	272955	Standard
Cl	35	213.0	7.4				ug/L	9	Standard
Kr	83	41.4	3.8				ug/L	39	Standard
Br	81	763.4	5.1				ug/L	644	Standard
P	31	60029.5	2.0				ug/L	324	Standard
S	34	10995.7	2.0				ug/L	5485	Standard
Sr	88	38.3	39.8				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	94.404		
> Sc	45			
Ti	47	103.165		
V	51	96.989		
Cr	52	96.937		
Cr	53			
Mn	55	99.734		
Co	59	100.147		
Ni	60	98.329		
Cu	65	97.922		
Zn	66	100.911		
> Ge	72		103.088	
As	75	101.566		
Se	82	102.805		
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98	96.234		
Ag	107	103.713		

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	Cd	111	101.202	
	Cd	114		
>	In	115		104.933
	Sn	118		
	Sb	123	100.775	
	Ba	135	95.629	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.533	
	Tl	205		
	Pb	206	97.133	
	Pb	207	98.701	
	Pb	208	99.196	
	U	238	101.560	
>	Bi	209		101.669
	Na	23	61.966	
	Mg	24	88.097	
	K	39	86.132	
	Ca	43	52.255	
	Fe	54	88.816	
	Fe	57	99.083	
>	Sc-1	45		
	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: Thursday, July 19, 2012 14:27:44
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	7125.0	3.6	**-50.9364**	61.473	120.7	ug/L	6820	Standard
	Be	9	69257.9	1.2	**48.4855**	0.457	0.9	ug/L	3	Standard
	Al	27	563984.6	2.2	**48.5161**	1.058	2.2	ug/L	4266	Standard
>	**Sc**	45	295680.6	0.3				ug/L	272955	Standard
	Ti	47	99508.7	0.5	**100.5054**	0.905	0.9	ug/L	51	Standard
	V	51	415532.8	0.2	**49.5467**	0.272	0.5	ug/L	2088	Standard
	Cr	52	347789.0	0.2	**50.1005**	0.354	0.7	ug/L	6617	Standard
	Cr	53	56947.7	3.1	**49.8120**	1.616	3.2	ug/L	166	Standard
	Mn	55	617514.8	1.0	**51.1034**	0.507	1.0	ug/L	940	Standard
	Co	59	416724.3	0.9	**50.4981**	0.706	1.4	ug/L	76	Standard
	Ni	60	96468.6	2.5	**50.0479**	1.226	2.4	ug/L	52	Standard
	Cu	65	91330.8	1.6	**50.4112**	0.924	1.8	ug/L	68	Standard
	Zn	66	42932.7	1.4	**50.3504**	0.726	1.4	ug/L	104	Standard
>	**Ge**	72	231595.6	0.5				ug/L	221790	Standard
	As	75	44017.8	0.7	**50.6018**	0.494	1.0	ug/L	-133	Standard
	Se	82	4508.3	1.8	**51.9154**	1.154	2.2	ug/L	18	Standard
	Se-1	77	3110.3	2.1	**51.1534**	0.872	1.7	ug/L	70	Standard
>	**Ga**	71	453.3	7.7				mg/L	477	Standard
	Rb	85	610.0	3.8				ug/L	23	Standard
	Y	89	213197.9	1.0				ug/L	197249	Standard
>	**Rh**	103	353.3	14.2				ug/L	295	Standard
	Mo	98	310055.8	1.2	**99.7065**	2.303	2.3	ug/L	13	Standard
	Ag	107	336646.9	1.7	**52.4854**	1.488	2.8	ug/L	64	Standard
	Cd	111	173293.7	0.7	**51.1780**	0.787	1.5	mg/L	53	Standard
	Cd	114	480825.4	1.0	**50.5003**	1.074	2.1	ug/L	150	Standard
>	**In**	115	684614.5	1.2				ug/L	644840	Standard
	Sn	118	1128767.8	0.7	**66.7931**	1.258	1.9	ug/L	487	Standard
	Sb	123	457703.9	1.6	**50.0450**	1.330	2.7	ug/L	126	Standard
	Ba	135	196343.5	1.3	**48.7687**	1.174	2.4	ug/L	25	Standard
	Ce	140	795.7	5.5				ug/L	22	Standard
>	**Tb**	159	992400.0	0.9				ug/L	958910	Standard
	Ho	165	16.0	28.6				ug/L	14	Standard
	Tl	203	754761.5	0.8	**49.8287**	0.414	0.8	ug/L	10	Standard
	Tl	205	1726726.8	1.3	**48.6731**	0.656	1.3	ug/L	27	Standard
	Pb	206	583136.5	1.9	**49.7513**	0.941	1.9	ug/L	319	Standard
	Pb	207	494224.7	1.0	**50.3090**	0.512	1.0	ug/L	287	Standard
	Pb	208	2281987.6	1.0	**49.5786**	0.522	1.1	ug/L	1244	Standard
	U	238	704175.1	1.2	**50.9014**	0.565	1.1	ug/L	5	Standard
>	**Bi**	209	509061.5	0.1				ug/L	497973	Standard

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Na	23	106446.0	1.5	**5.7838**	0.087	1.5	mg/L	237	Standard
Mg	24	2675800.7	2.6	**4.5758**	0.130	2.8	mg/L	60	Standard
K	39	4849.1	2.9	**4.5662**	0.135	2.9	mg/L	105	Standard
Ca	43	11.7	107.9	**-0.4285**	6.631	1547.7	mg/L	7	Standard
Fe	54	20083.7	1.8	**4.7967**	0.088	1.8	mg/L	483	Standard
Fe	57	368681.8	4.2	**5.2684**	0.237	4.5	mg/L	2095	Standard
Sc-1	45	295680.6	0.3				mg/L	272955	Standard
Cl	35	4.0	66.1				ug/L	9	Standard
Kr	83	42.0	6.2				ug/L	39	Standard
Br	81	775.0	1.2				ug/L	644	Standard
P	31	325.8	9.5				ug/L	324	Standard
S	34	4807.4	3.0				ug/L	5485	Standard
Sr	88	31.7	71.2				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.032		
Sc	45			
Ti	47	100.505		
V	51	99.093		
Cr	52	100.201		
Cr	53			
Mn	55	102.207		
Co	59	100.996		
Ni	60	100.096		
Cu	65	100.822		
Zn	66	100.701		
Ge	72		104.421	
As	75	101.204		
Se	82	103.831		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	99.706		
Ag	107	104.971		

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	Cd	111	102.356	
	Cd	114		
>	In	115		106.168
	Sn	118	133.586	
	Sb	123	100.090	
	Ba	135	97.537	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	99.657	
	Tl	205		
	Pb	206	99.503	
	Pb	207	100.618	
	Pb	208	99.157	
	U	238	101.803	
>	Bi	209		102.227
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 14:30:54
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	7148.4	5.1	**-4.0482**	75.631	1868.3	ug/L	6820	Standard
	Be	9	13.3	21.7	**0.0070**	0.002	30.1	ug/L	3	Standard
	Al	27	6169.6	1.8	**0.0748**	0.010	13.4	ug/L	4266	Standard
>	**Sc**	45	288475.4	0.7				ug/L	272955	Standard
	Ti	47	62.0	9.7	**0.0106**	0.006	55.8	ug/L	51	Standard
	V	51	1926.7	1.6	**-0.0361**	0.003	9.1	ug/L	2088	Standard
	Cr	52	6135.6	1.0	**-0.1189**	0.007	5.9	ug/L	6617	Standard
	Cr	53	232.5	8.8	**0.0659**	0.018	26.6	ug/L	166	Standard
	Mn	55	1015.4	1.3	**-0.0073**	0.001	9.2	ug/L	940	Standard
	Co	59	105.0	11.2	**0.0002**	0.001	592.4	ug/L	76	Standard
	Ni	60	95.0	8.2	**0.0211**	0.004	19.1	ug/L	52	Standard
	Cu	65	83.0	20.5	**-0.0029**	0.010	335.8	ug/L	68	Standard
	Zn	66	129.7	4.4	**-0.0171**	0.007	42.9	ug/L	104	Standard
>	**Ge**	72	227773.7	0.5				ug/L	221790	Standard
	As	75	-113.0	23.4	**0.0493**	0.031	62.9	ug/L	-133	Standard
	Se	82	19.4	10.2	**0.0330**	0.024	73.0	ug/L	18	Standard
	Se-1	77	82.7	12.2	**-0.0216**	0.179	828.4	ug/L	70	Standard
>	**Ga**	71	451.7	10.0				mg/L	477	Standard
	Rb	85	13.3	86.6				ug/L	23	Standard
	Y	89	210293.1	2.3				ug/L	197249	Standard
>	**Rh**	103	306.7	20.8				ug/L	295	Standard
	Mo	98	110.9	23.6	**0.0297**	0.009	31.5	ug/L	13	Standard
	Ag	107	276.3	9.3	**0.0411**	0.004	9.7	ug/L	64	Standard
	Cd	111	76.7	13.2	**0.0010**	0.003	338.6	mg/L	53	Standard
	Cd	114	209.5	3.3	**0.0030**	0.001	41.6	ug/L	150	Standard
>	**In**	115	679578.7	2.5				ug/L	644840	Standard
	Sn	118	789.0	6.1	**-0.0023**	0.004	158.5	ug/L	487	Standard
	Sb	123	1257.0	20.6	**0.1369**	0.032	23.3	ug/L	126	Standard
	Ba	135	45.7	16.1	**-0.0000**	0.002	7645.5	ug/L	25	Standard
	Ce	140	19.0	29.3				ug/L	22	Standard
>	**Tb**	159	962978.8	1.1				ug/L	958910	Standard
	Ho	165	13.7	8.4				ug/L	14	Standard
	Tl	203	106.7	19.2	**0.0053**	0.001	27.3	ug/L	10	Standard
	Tl	205	246.7	20.2	**0.0053**	0.001	27.6	ug/L	27	Standard
	Pb	206	394.0	6.7	**0.0042**	0.003	62.8	ug/L	319	Standard
	Pb	207	325.7	5.6	**-0.0010**	0.002	221.9	ug/L	287	Standard
	Pb	208	1548.4	5.5	**0.0023**	0.002	100.1	ug/L	1244	Standard
	U	238	95.3	16.8	**0.0075**	0.001	16.1	ug/L	5	Standard
>	**Bi**	209	509021.3	1.3				ug/L	497973	Standard

Sample ID: QC Std 7
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Na	23	351.7	18.3	**-0.0075**	0.004	49.9	mg/L	237	Standard
Mg	24	276.7	29.0	**0.0005**	0.000	31.6	mg/L	60	Standard
K	39	91.7	8.3	**-0.0181**	0.007	39.5	mg/L	105	Standard
Ca	43	6.7	86.6	**-2.9715**	3.126	105.2	mg/L	7	Standard
Fe	54	446.3	9.4	**-0.0161**	0.011	66.5	mg/L	483	Standard
Fe	57	2023.5	2.8	**-0.0005**	0.001	131.1	mg/L	2095	Standard
Sc-1	45	288475.4	0.7				mg/L	272955	Standard
Cl	35	4.7	24.7				ug/L	9	Standard
Kr	83	36.2	4.3				ug/L	39	Standard
Br	81	711.7	12.9				ug/L	644	Standard
P	31	236.7	7.2				ug/L	324	Standard
S	34	4863.3	1.2				ug/L	5485	Standard
Sr	88	28.3	36.7				ug/L	28	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		102.698	
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	105.387
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.219
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 67 WG403259-03
Sample Date/Time: Thursday, July 19, 2012 14:37:30
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	7026.6	1.9	**34.2708**	48.564	141.7	ug/L	6820	Standard
	Be	9	11.7	24.7	**0.0061**	0.002	33.5	ug/L	3	Standard
	Al	27	4549.0	11.6	**-0.0530**	0.055	103.4	ug/L	4266	Standard
>	**Sc**	45	277488.3	1.5				ug/L	272955	Standard
	Ti	47	49.3	22.3	**-0.0018**	0.012	648.9	ug/L	51	Standard
	V	51	1935.9	6.0	**-0.0325**	0.012	37.8	ug/L	2088	Standard
	Cr	52	6169.9	1.7	**-0.1039**	0.011	10.6	ug/L	6617	Standard
	Cr	53	175.8	20.1	**0.0171**	0.032	187.5	ug/L	166	Standard
	Mn	55	978.4	0.6	**-0.0095**	0.001	11.6	ug/L	940	Standard
	Co	59	77.7	7.1	**-0.0030**	0.001	20.2	ug/L	76	Standard
	Ni	60	103.3	14.1	**0.0261**	0.008	28.9	ug/L	52	Standard
	Cu	65	64.7	15.9	**-0.0127**	0.006	47.6	ug/L	68	Standard
	Zn	66	560.3	4.3	**0.5054**	0.029	5.7	ug/L	104	Standard
>	**Ge**	72	225369.8	0.8				ug/L	221790	Standard
	As	75	-131.4	15.8	**0.0264**	0.024	90.0	ug/L	-133	Standard
	Se	82	18.8	24.7	**0.0285**	0.057	199.9	ug/L	18	Standard
	Se-1	77	75.7	16.7	**-0.1297**	0.209	161.2	ug/L	70	Standard
>	**Ga**	71	431.7	11.3				mg/L	477	Standard
	Rb	85	15.0	88.2				ug/L	23	Standard
	Y	89	199145.3	1.1				ug/L	197249	Standard
>	**Rh**	103	321.7	6.3				ug/L	295	Standard
	Mo	98	29.3	1.5	**0.0034**	0.000	6.3	ug/L	13	Standard
	Ag	107	71.0	19.1	**0.0092**	0.002	24.2	ug/L	64	Standard
	Cd	111	57.6	9.9	**-0.0043**	0.002	41.5	mg/L	53	Standard
	Cd	114	175.5	8.3	**-0.0001**	0.002	1973.7	ug/L	150	Standard
>	**In**	115	661911.5	0.7				ug/L	644840	Standard
	Sn	118	527.0	2.2	**-0.0172**	0.001	4.8	ug/L	487	Standard
	Sb	123	267.8	7.4	**0.0282**	0.002	7.4	ug/L	126	Standard
	Ba	135	27.7	35.7	**-0.0043**	0.003	59.6	ug/L	25	Standard
	Ce	140	21.3	5.4				ug/L	22	Standard
>	**Tb**	159	957808.9	0.4				ug/L	958910	Standard
	Ho	165	11.3	20.4				ug/L	14	Standard
	Tl	203	19.7	40.8	**-0.0005**	0.001	104.1	ug/L	10	Standard
	Tl	205	44.7	32.4	**-0.0004**	0.000	106.7	ug/L	27	Standard
	Pb	206	357.7	6.9	**0.0011**	0.002	216.1	ug/L	319	Standard
	Pb	207	280.7	2.4	**-0.0056**	0.001	16.8	ug/L	287	Standard
	Pb	208	1325.4	4.9	**-0.0026**	0.002	58.8	ug/L	1244	Standard
	U	238	30.0	93.3	**0.0027**	0.002	74.8	ug/L	5	Standard
>	**Bi**	209	509425.1	1.4				ug/L	497973	Standard

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	Na	23	250.0	11.1	**-0.0126**	0.002	11.9	mg/L	237	Standard
	Mg	24	118.3	61.6	**0.0002**	0.000	73.6	mg/L	60	Standard
	K	39	100.0	13.2	**-0.0058**	0.015	259.5	mg/L	105	Standard
	Ca	43	1.7	173.2	**-5.6299**	1.647	29.2	mg/L	7	Standard
	Fe	54	451.0	13.0	**-0.0103**	0.017	164.6	mg/L	483	Standard
	Fe	57	1963.5	3.0	**-0.0002**	0.001	438.5	mg/L	2095	Standard
>	**Sc-1**	45	277488.3	1.5				mg/L	272955	Standard
	Cl	35	3.0	33.3				ug/L	9	Standard
	Kr	83	36.1	14.0				ug/L	39	Standard
	Br	81	699.2	6.1				ug/L	644	Standard
	P	31	290.8	18.9				ug/L	324	Standard
	S	34	4768.3	4.0				ug/L	5485	Standard
	Sr	88	46.7	27.0				ug/L	28	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		101.614	
	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	102.647
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.300
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: LCSW 67 WG403259-04
Sample Date/Time: Thursday, July 19, 2012 14:40:40
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	7828.7	0.7	**16.2944**	31.202	191.5	ug/L	6820	Standard
	Be	9	37588.3	2.5	**24.9223**	1.110	4.5	ug/L	3	Standard
	Al	27	323040.0	2.1	**26.0870**	0.059	0.2	ug/L	4266	Standard
>	**Sc**	45	312367.9	2.0				ug/L	272955	Standard
	Ti	47	78.3	13.0	**0.0201**	0.010	47.3	ug/L	51	Standard
	V	51	234245.3	0.9	**25.7137**	0.250	1.0	ug/L	2088	Standard
	Cr	52	196139.1	0.9	**25.6474**	0.237	0.9	ug/L	6617	Standard
	Cr	53	31989.6	1.1	**25.8217**	0.304	1.2	ug/L	166	Standard
	Mn	55	346067.7	0.6	**26.4548**	0.241	0.9	ug/L	940	Standard
	Co	59	231488.4	0.9	**25.9480**	0.203	0.8	ug/L	76	Standard
	Ni	60	53824.8	1.6	**25.8245**	0.478	1.8	ug/L	52	Standard
	Cu	65	51621.1	0.8	**26.3398**	0.270	1.0	ug/L	68	Standard
	Zn	66	23552.0	0.5	**25.4720**	0.086	0.3	ug/L	104	Standard
>	**Ge**	72	250298.8	0.3				ug/L	221790	Standard
	As	75	23071.1	0.5	**24.6331**	0.184	0.7	ug/L	-133	Standard
	Se	82	2309.2	2.5	**24.5003**	0.602	2.5	ug/L	18	Standard
	Se-1	77	1606.8	2.5	**23.6994**	0.696	2.9	ug/L	70	Standard
>	**Ga**	71	551.7	7.7				mg/L	477	Standard
	Rb	85	81.7	19.7				ug/L	23	Standard
	Y	89	222848.9	1.9				ug/L	197249	Standard
>	**Rh**	103	378.3	4.2				ug/L	295	Standard
	Mo	98	92.5	50.4	**0.0211**	0.013	63.8	ug/L	13	Standard
	Ag	107	190219.3	0.9	**27.5224**	0.559	2.0	ug/L	64	Standard
	Cd	111	92206.9	2.1	**25.2585**	0.208	0.8	mg/L	53	Standard
	Cd	114	255538.3	1.4	**24.8958**	0.015	0.1	ug/L	150	Standard
>	**In**	115	737635.2	1.4				ug/L	644840	Standard
	Sn	118	802.7	14.1	**-0.0054**	0.006	106.2	ug/L	487	Standard
	Sb	123	242828.3	0.3	**24.6392**	0.338	1.4	ug/L	126	Standard
	Ba	135	108071.1	0.7	**24.9074**	0.444	1.8	ug/L	25	Standard
	Ce	140	132.7	1.9				ug/L	22	Standard
>	**Tb**	159	1028345.3	0.6				ug/L	958910	Standard
	Ho	165	13.3	28.4				ug/L	14	Standard
	Tl	203	409342.7	1.3	**25.5540**	0.452	1.8	ug/L	10	Standard
	Tl	205	948715.7	0.1	**25.2864**	0.153	0.6	ug/L	27	Standard
	Pb	206	319765.2	1.0	**25.7831**	0.374	1.5	ug/L	319	Standard
	Pb	207	270446.0	0.2	**26.0152**	0.173	0.7	ug/L	287	Standard
	Pb	208	1253093.5	0.1	**25.7281**	0.148	0.6	ug/L	1244	Standard
	U	238	369336.2	0.8	**25.2454**	0.267	1.1	ug/L	5	Standard
>	**Bi**	209	538368.6	0.6				ug/L	497973	Standard

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Na	23	1053.4	13.0	**0.0272**	0.006	23.6	mg/L	237	Standard
Mg	24	1708.4	9.7	**0.0027**	0.000	8.9	mg/L	60	Standard
K	39	125.0	28.0	**0.0056**	0.033	578.7	mg/L	105	Standard
Ca	43	6.7	173.2	**-3.1773**	5.894	185.5	mg/L	7	Standard
Fe	54	713.1	4.3	**0.0373**	0.010	25.7	mg/L	483	Standard
Fe	57	2410.2	5.7	**0.0025**	0.001	52.8	mg/L	2095	Standard
Sc-1	45	312367.9	2.0				mg/L	272955	Standard
Cl	35	5.0	52.9				ug/L	9	Standard
Kr	83	40.8	2.5				ug/L	39	Standard
Br	81	795.0	1.9				ug/L	644	Standard
P	31	460.0	3.8				ug/L	324	Standard
S	34	4964.1	1.6				ug/L	5485	Standard
Sr	88	21.7	35.3				ug/L	28	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		112.854	
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	114.390
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	108.112
	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: LCSW 67 WG403259-04
Report Date/Time: Thursday, July 19, 2012 14:43:11
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032804 WG403259-01
Sample Date/Time: Thursday, July 19, 2012 14:43:49
Number of Replicates: 3
Autosampler Position: 209
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	37835.5	1.7	**6360.5125**	216.049	3.4	ug/L	6820	Standard
	Be	9	18.3	41.7	**0.0091**	0.005	52.5	ug/L	3	Standard
	Al	27	97531.4	3.1	**7.2466**	0.196	2.7	ug/L	4266	Standard
>	**Sc**	45	324427.0	1.5				ug/L	272955	Standard
	Ti	47	1418.4	4.4	**1.3668**	0.072	5.3	ug/L	51	Standard
	V	51	18859.2	0.2	**1.9685**	0.018	0.9	ug/L	2088	Standard
	Cr	52	10783.5	0.7	**0.5343**	0.017	3.1	ug/L	6617	Standard
	Cr	53	1846.8	7.3	**1.4624**	0.106	7.2	ug/L	166	Standard
	Mn	55	4673.4	2.6	**0.2908**	0.008	2.8	ug/L	940	Standard
	Co	59	320.7	7.5	**0.0258**	0.003	12.3	ug/L	76	Standard
	Ni	60	1221.4	3.2	**0.5990**	0.021	3.4	ug/L	52	Standard
	Cu	65	402.3	3.1	**0.1707**	0.008	4.5	ug/L	68	Standard
	Zn	66	2735.9	1.2	**3.0165**	0.025	0.8	ug/L	104	Standard
>	**Ge**	72	233832.3	0.8				ug/L	221790	Standard
	As	75	434.5	10.0	**0.6741**	0.051	7.6	ug/L	-133	Standard
	Se	82	205.3	5.1	**2.1553**	0.102	4.7	ug/L	18	Standard
	Se-1	77	152.0	4.6	**1.1020**	0.103	9.4	ug/L	70	Standard
>	**Ga**	71	480.0	3.6				mg/L	477	Standard
	Rb	85	19237.2	1.1				ug/L	23	Standard
	Y	89	212259.8	0.4				ug/L	197249	Standard
>	**Rh**	103	360.0	11.4				ug/L	295	Standard
	Mo	98	2724.9	1.0	**0.8566**	0.011	1.3	ug/L	13	Standard
	Ag	107	245.0	8.2	**0.0354**	0.004	9.9	ug/L	64	Standard
	Cd	111	85.8	16.5	**0.0030**	0.004	129.7	mg/L	53	Standard
	Cd	114	260.5	6.7	**0.0078**	0.002	25.2	ug/L	150	Standard
>	**In**	115	695169.5	1.3				ug/L	644840	Standard
	Sn	118	776.4	2.7	**-0.0042**	0.002	42.7	ug/L	487	Standard
	Sb	123	781.9	24.1	**0.0822**	0.021	25.4	ug/L	126	Standard
	Ba	135	114769.7	0.9	**28.0663**	0.344	1.2	ug/L	25	Standard
	Ce	140	584.7	5.2				ug/L	22	Standard
>	**Tb**	159	1004890.0	1.2				ug/L	958910	Standard
	Ho	165	23.0	19.9				ug/L	14	Standard
	Tl	203	426.3	7.9	**0.0267**	0.003	9.6	ug/L	10	Standard
	Tl	205	1009.7	2.1	**0.0271**	0.001	3.0	ug/L	27	Standard
	Pb	206	723.7	3.1	**0.0330**	0.003	7.8	ug/L	319	Standard
	Pb	207	601.3	2.6	**0.0277**	0.001	4.0	ug/L	287	Standard
	Pb	208	2754.1	0.9	**0.0291**	0.001	2.6	ug/L	1244	Standard
	U	238	2583.9	2.1	**0.1894**	0.006	3.2	ug/L	5	Standard
>	**Bi**	209	503739.6	1.1				ug/L	497973	Standard

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Na	23	135143.4	0.8	**6.6979**	0.132	2.0	mg/L	237	Standard
Mg	24	1270701.1	1.7	**1.9805**	0.035	1.8	mg/L	60	Standard
K	39	1011.7	1.6	**0.7805**	0.023	3.0	mg/L	105	Standard
Ca	43	43.3	33.3	**14.1578**	6.569	46.4	mg/L	7	Standard
Fe	54	543.8	13.4	**-0.0068**	0.015	224.1	mg/L	483	Standard
Fe	57	6691.5	4.4	**0.0573**	0.003	4.8	mg/L	2095	Standard
Sc-1	45	324427.0	1.5				mg/L	272955	Standard
Cl	35	43.7	22.6				ug/L	9	Standard
Kr	83	36.7	7.4				ug/L	39	Standard
Br	81	12943.9	6.7				ug/L	644	Standard
P	31	311.7	6.9				ug/L	324	Standard
S	34	14928.2	0.3				ug/L	5485	Standard
Sr	88	338.3	11.9				ug/L	28	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		105.430	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207032804 WG403259-01
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	Cd	111	
	Cd	114	
>	In	115	107.805
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.158
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032805S WG403259-05
Sample Date/Time: Thursday, July 19, 2012 14:46:58
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	39043.6	2.5	**6534.0719**	217.523	3.3	ug/L	6820	Standard
	Be	9	35626.8	1.1	**22.5065**	0.458	2.0	ug/L	3	Standard
	Al	27	316789.6	1.4	**24.3560**	0.367	1.5	ug/L	4266	Standard
>	**Sc**	45	327694.3	1.0				ug/L	272955	Standard
	Ti	47	1064.7	3.2	**1.0212**	0.039	3.8	ug/L	51	Standard
	V	51	221083.2	1.4	**26.1911**	0.194	0.7	ug/L	2088	Standard
	Cr	52	176879.2	0.9	**24.9302**	0.323	1.3	ug/L	6617	Standard
	Cr	53	30070.7	2.1	**26.1907**	0.302	1.2	ug/L	166	Standard
	Mn	55	313763.6	1.9	**25.8762**	0.116	0.4	ug/L	940	Standard
	Co	59	209461.3	0.5	**25.3362**	0.349	1.4	ug/L	76	Standard
	Ni	60	47674.2	0.7	**24.6822**	0.453	1.8	ug/L	52	Standard
	Cu	65	44689.5	1.8	**24.6002**	0.267	1.1	ug/L	68	Standard
	Zn	66	23018.8	0.4	**26.8748**	0.400	1.5	ug/L	104	Standard
>	**Ge**	72	231987.2	1.9				ug/L	221790	Standard
	As	75	22558.7	0.9	**25.9809**	0.362	1.4	ug/L	-133	Standard
	Se	82	2462.1	1.6	**28.2159**	0.204	0.7	ug/L	18	Standard
	Se-1	77	1597.1	5.4	**25.5125**	1.131	4.4	ug/L	70	Standard
>	**Ga**	71	490.0	3.5				mg/L	477	Standard
	Rb	85	19796.3	1.1				ug/L	23	Standard
	Y	89	218636.2	0.7				ug/L	197249	Standard
>	**Rh**	103	403.3	15.6				ug/L	295	Standard
	Mo	98	2734.2	0.9	**0.8657**	0.005	0.6	ug/L	13	Standard
	Ag	107	181166.4	1.0	**28.0085**	0.218	0.8	ug/L	64	Standard
	Cd	111	88286.0	1.4	**25.8482**	0.363	1.4	mg/L	53	Standard
	Cd	114	239192.1	2.0	**24.9044**	0.485	1.9	ug/L	150	Standard
>	**In**	115	690208.8	0.3				ug/L	644840	Standard
	Sn	118	793.4	3.8	**-0.0029**	0.002	56.9	ug/L	487	Standard
	Sb	123	234039.0	0.5	**25.3763**	0.155	0.6	ug/L	126	Standard
	Ba	135	213240.5	0.8	**52.5271**	0.255	0.5	ug/L	25	Standard
	Ce	140	537.7	1.9				ug/L	22	Standard
>	**Tb**	159	999649.0	0.8				ug/L	958910	Standard
	Ho	165	18.7	17.2				ug/L	14	Standard
	Tl	203	372043.0	1.6	**24.9433**	0.451	1.8	ug/L	10	Standard
	Tl	205	860559.5	0.3	**24.6358**	0.429	1.7	ug/L	27	Standard
	Pb	206	288542.9	0.3	**24.9879**	0.459	1.8	ug/L	319	Standard
	Pb	207	246327.2	0.5	**25.4488**	0.383	1.5	ug/L	287	Standard
	Pb	208	1140186.7	0.5	**25.1420**	0.306	1.2	ug/L	1244	Standard
	U	238	354053.2	0.3	**25.9930**	0.414	1.6	ug/L	5	Standard
>	**Bi**	209	501314.7	1.5				ug/L	497973	Standard

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Na	23	136878.8	0.5	**6.7157**	0.093	1.4	mg/L	237	Standard
Mg	24	1292176.6	0.6	**1.9939**	0.028	1.4	mg/L	60	Standard
K	39	1040.0	5.2	**0.7964**	0.055	6.9	mg/L	105	Standard
Ca	43	35.0	28.6	**10.0717**	4.864	48.3	mg/L	7	Standard
Fe	54	503.7	10.4	**-0.0169**	0.011	62.5	mg/L	483	Standard
Fe	57	6448.0	1.3	**0.0533**	0.001	2.8	mg/L	2095	Standard
Sc-1	45	327694.3	1.0				mg/L	272955	Standard
Cl	35	45.7	12.1				ug/L	9	Standard
Kr	83	44.8	6.4				ug/L	39	Standard
Br	81	12528.5	5.8				ug/L	644	Standard
P	31	284.2	7.1				ug/L	324	Standard
S	34	15348.6	1.7				ug/L	5485	Standard
Sr	88	328.3	17.7				ug/L	28	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		104.598	
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	107.036
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	100.671
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032805S WG403259-05
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032806SD WG403259-06
Sample Date/Time: Thursday, July 19, 2012 14:50:07
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	40532.5	1.9	**6925.3999**	138.389	2.0	ug/L	6820	Standard
	Be	9	35849.0	2.8	**22.8536**	0.872	3.8	ug/L	3	Standard
	Al	27	507303.0	1.8	**39.6480**	0.852	2.1	ug/L	4266	Standard
>	**Sc**	45	324782.8	1.3				ug/L	272955	Standard
	Ti	47	1903.5	5.5	**1.8549**	0.100	5.4	ug/L	51	Standard
	V	51	227464.7	1.8	**26.7833**	0.533	2.0	ug/L	2088	Standard
	Cr	52	179026.7	1.7	**25.0775**	0.451	1.8	ug/L	6617	Standard
	Cr	53	30995.8	1.1	**26.8308**	0.305	1.1	ug/L	166	Standard
	Mn	55	326564.6	1.6	**26.7660**	0.362	1.4	ug/L	940	Standard
	Co	59	212942.7	1.0	**25.5922**	0.287	1.1	ug/L	76	Standard
	Ni	60	49903.1	2.3	**25.6703**	0.591	2.3	ug/L	52	Standard
	Cu	65	47541.1	1.3	**26.0082**	0.375	1.4	ug/L	68	Standard
	Zn	66	27000.7	2.2	**31.3489**	0.675	2.2	ug/L	104	Standard
>	**Ge**	72	233448.7	0.4				ug/L	221790	Standard
	As	75	23018.7	0.9	**26.3389**	0.342	1.3	ug/L	-133	Standard
	Se	82	2447.1	0.3	**27.8645**	0.129	0.5	ug/L	18	Standard
	Se-1	77	1603.1	1.1	**25.4516**	0.322	1.3	ug/L	70	Standard
>	**Ga**	71	536.7	13.6				mg/L	477	Standard
	Rb	85	20513.9	2.4				ug/L	23	Standard
	Y	89	219015.0	0.9				ug/L	197249	Standard
>	**Rh**	103	390.0	7.1				ug/L	295	Standard
	Mo	98	2761.7	1.2	**0.8681**	0.020	2.3	ug/L	13	Standard
	Ag	107	187730.9	1.1	**28.8117**	0.206	0.7	ug/L	64	Standard
	Cd	111	91030.7	0.8	**26.4578**	0.172	0.7	mg/L	53	Standard
	Cd	114	244047.3	1.3	**25.2248**	0.276	1.1	ug/L	150	Standard
>	**In**	115	695321.3	1.4				ug/L	644840	Standard
	Sn	118	1048.4	1.7	**0.0117**	0.000	2.0	ug/L	487	Standard
	Sb	123	238182.6	1.2	**25.6416**	0.653	2.5	ug/L	126	Standard
	Ba	135	215161.8	1.2	**52.6210**	1.183	2.2	ug/L	25	Standard
	Ce	140	2692.2	2.2				ug/L	22	Standard
>	**Tb**	159	1006024.0	0.9				ug/L	958910	Standard
	Ho	165	58.3	24.3				ug/L	14	Standard
	Tl	203	380959.7	0.9	**25.1975**	0.663	2.6	ug/L	10	Standard
	Tl	205	877610.7	0.3	**24.7845**	0.636	2.6	ug/L	27	Standard
	Pb	206	296190.0	0.3	**25.3041**	0.673	2.7	ug/L	319	Standard
	Pb	207	250274.3	1.3	**25.5116**	0.887	3.5	ug/L	287	Standard
	Pb	208	1159230.0	1.1	**25.2184**	0.717	2.8	ug/L	1244	Standard
	U	238	363660.2	1.3	**26.3397**	0.830	3.2	ug/L	5	Standard
>	**Bi**	209	508303.2	2.5				ug/L	497973	Standard

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Na	23	136932.7	0.1	**6.7790**	0.094	1.4	mg/L	237	Standard
Mg	24	1283828.1	1.9	**1.9989**	0.048	2.4	mg/L	60	Standard
K	39	1048.4	3.1	**0.8116**	0.031	3.8	mg/L	105	Standard
Ca	43	38.3	30.1	**11.8306**	5.653	47.8	mg/L	7	Standard
Fe	54	601.9	18.3	**0.0060**	0.024	397.6	mg/L	483	Standard
Fe	57	7902.1	1.9	**0.0731**	0.002	2.8	mg/L	2095	Standard
Sc-1	45	324782.8	1.3				mg/L	272955	Standard
Cl	35	46.3	9.7				ug/L	9	Standard
Kr	83	43.6	9.0				ug/L	39	Standard
Br	81	9546.3	3.1				ug/L	644	Standard
P	31	289.2	2.8				ug/L	324	Standard
S	34	15405.3	2.6				ug/L	5485	Standard
Sr	88	320.0	16.2				ug/L	28	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		105.257	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207032806SD WG403259-06
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	Cd	111	
	Cd	114	
>	In	115	107.828
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.075
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032806SD WG403259-06
Report Date/Time: Thursday, July 19, 2012 14:52:37
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032801
Sample Date/Time: Thursday, July 19, 2012 14:53:14
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	44906.5	0.8	**8033.0324**	27.579	0.3	ug/L	6820	Standard
	Be	9	25.0	60.0	**0.0136**	0.010	71.1	ug/L	3	Standard
	Al	27	87476.8	1.5	**6.5705**	0.168	2.6	ug/L	4266	Standard
>	**Sc**	45	318962.5	0.9				ug/L	272955	Standard
	Ti	47	955.0	4.4	**0.9215**	0.054	5.9	ug/L	51	Standard
	V	51	19134.6	0.4	**2.0449**	0.032	1.6	ug/L	2088	Standard
	Cr	52	13375.6	0.9	**0.9491**	0.020	2.1	ug/L	6617	Standard
	Cr	53	2508.5	1.5	**2.0796**	0.013	0.6	ug/L	166	Standard
	Mn	55	20372.7	5.8	**1.6114**	0.079	4.9	ug/L	940	Standard
	Co	59	344.3	21.6	**0.0295**	0.010	32.5	ug/L	76	Standard
	Ni	60	1827.8	2.2	**0.9286**	0.010	1.1	ug/L	52	Standard
	Cu	65	512.3	1.7	**0.2362**	0.004	1.8	ug/L	68	Standard
	Zn	66	5312.6	4.5	**6.1366**	0.209	3.4	ug/L	104	Standard
>	**Ge**	72	229439.3	1.2				ug/L	221790	Standard
	As	75	391.0	4.4	**0.6332**	0.024	3.8	ug/L	-133	Standard
	Se	82	189.3	5.1	**2.0138**	0.100	5.0	ug/L	18	Standard
	Se-1	77	151.3	4.5	**1.1393**	0.096	8.4	ug/L	70	Standard
>	**Ga**	71	553.3	11.4				mg/L	477	Standard
	Rb	85	16969.5	1.4				ug/L	23	Standard
	Y	89	217424.0	0.9				ug/L	197249	Standard
>	**Rh**	103	398.3	8.1				ug/L	295	Standard
	Mo	98	3139.0	3.4	**0.9929**	0.033	3.3	ug/L	13	Standard
	Ag	107	389.7	44.6	**0.0579**	0.027	46.4	ug/L	64	Standard
	Cd	111	130.1	61.3	**0.0162**	0.023	144.3	mg/L	53	Standard
	Cd	114	371.6	58.7	**0.0195**	0.023	116.4	ug/L	150	Standard
>	**In**	115	691456.7	0.1				ug/L	644840	Standard
	Sn	118	2786.6	7.7	**0.1139**	0.012	10.9	ug/L	487	Standard
	Sb	123	426.1	40.2	**0.0441**	0.019	42.1	ug/L	126	Standard
	Ba	135	171582.4	0.4	**42.1875**	0.210	0.5	ug/L	25	Standard
	Ce	140	489.7	9.6				ug/L	22	Standard
>	**Tb**	159	1016410.9	0.3				ug/L	958910	Standard
	Ho	165	20.0	15.0				ug/L	14	Standard
	Tl	203	588.3	31.3	**0.0373**	0.012	32.8	ug/L	10	Standard
	Tl	205	1300.4	28.1	**0.0353**	0.010	29.4	ug/L	27	Standard
	Pb	206	635.7	18.2	**0.0252**	0.010	39.6	ug/L	319	Standard
	Pb	207	504.0	22.6	**0.0175**	0.012	67.0	ug/L	287	Standard
	Pb	208	2381.1	17.3	**0.0207**	0.009	43.6	ug/L	1244	Standard
	U	238	5038.8	1.1	**0.3673**	0.006	1.5	ug/L	5	Standard
>	**Bi**	209	505612.2	0.4				ug/L	497973	Standard

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	Na	23	136335.7	1.0	**6.8722**	0.039	0.6	mg/L	237	Standard
	Mg	24	1378749.0	1.7	**2.1859**	0.057	2.6	mg/L	60	Standard
	K	39	1075.0	8.3	**0.8518**	0.073	8.6	mg/L	105	Standard
	Ca	43	48.3	15.8	**17.0268**	3.769	22.1	mg/L	7	Standard
	Fe	54	584.1	7.6	**0.0045**	0.010	215.7	mg/L	483	Standard
	Fe	57	6996.6	3.8	**0.0629**	0.004	6.0	mg/L	2095	Standard
>	**Sc-1**	45	318962.5	0.9				mg/L	272955	Standard
	Cl	35	50.0	8.7				ug/L	9	Standard
	Kr	83	40.0	1.7				ug/L	39	Standard
	Br	81	11078.2	5.7				ug/L	644	Standard
	P	31	301.7	7.1				ug/L	324	Standard
	S	34	14495.3	2.8				ug/L	5485	Standard
	Sr	88	388.3	8.6				ug/L	28	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		103.449	
	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	107.229
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.534
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032801PS WG403681-01
Sample Date/Time: Thursday, July 19, 2012 14:56:24
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	51037.5	3.3	**8448.9105**	333.665	3.9	ug/L	6820	Standard
	Be	9	73677.1	1.2	**43.8655**	0.530	1.2	ug/L	3	Standard
	Al	27	635203.7	0.7	**46.4509**	0.442	1.0	ug/L	4266	Standard
>	**Sc**	45	347678.8	0.2				ug/L	272955	Standard
	Ti	47	1118.0	2.3	**1.0168**	0.021	2.1	ug/L	51	Standard
	V	51	436257.2	0.4	**49.2612**	0.490	1.0	ug/L	2088	Standard
	Cr	52	355642.1	0.2	**48.4856**	0.501	1.0	ug/L	6617	Standard
	Cr	53	60432.8	0.5	**50.0612**	0.638	1.3	ug/L	166	Standard
	Mn	55	641022.0	0.5	**50.2398**	0.735	1.5	ug/L	940	Standard
	Co	59	427683.9	1.0	**49.0776**	0.414	0.8	ug/L	76	Standard
	Ni	60	97510.8	0.7	**47.9110**	0.764	1.6	ug/L	52	Standard
	Cu	65	90671.8	0.5	**47.3947**	0.693	1.5	ug/L	68	Standard
	Zn	66	42878.9	0.7	**47.6173**	0.820	1.7	ug/L	104	Standard
>	**Ge**	72	244558.3	1.0				ug/L	221790	Standard
	As	75	43796.1	0.8	**47.6929**	0.819	1.7	ug/L	-133	Standard
	Se	82	4535.7	0.6	**49.4554**	0.729	1.5	ug/L	18	Standard
	Se-1	77	2967.0	3.3	**46.0849**	2.003	4.3	ug/L	70	Standard
>	**Ga**	71	548.3	18.7				mg/L	477	Standard
	Rb	85	19681.1	4.3				ug/L	23	Standard
	Y	89	233934.0	1.4				ug/L	197249	Standard
>	**Rh**	103	463.3	13.3				ug/L	295	Standard
	Mo	98	3626.7	1.2	**1.0658**	0.008	0.7	ug/L	13	Standard
	Ag	107	375696.6	1.2	**53.8437**	0.611	1.1	ug/L	64	Standard
	Cd	111	179013.1	0.9	**48.6015**	0.184	0.4	mg/L	53	Standard
	Cd	114	479536.9	1.6	**46.3048**	1.161	2.5	ug/L	150	Standard
>	**In**	115	744615.7	1.1				ug/L	644840	Standard
	Sn	118	1130.7	3.7	**0.0121**	0.002	15.1	ug/L	487	Standard
	Sb	123	473832.0	0.3	**47.6271**	0.444	0.9	ug/L	126	Standard
	Ba	135	384369.7	1.1	**87.7723**	0.514	0.6	ug/L	25	Standard
	Ce	140	522.7	3.7				ug/L	22	Standard
>	**Tb**	159	1069560.3	0.9				ug/L	958910	Standard
	Ho	165	20.7	11.2				ug/L	14	Standard
	Tl	203	743742.9	1.1	**47.7483**	0.619	1.3	ug/L	10	Standard
	Tl	205	1709492.7	0.8	**46.8593**	0.473	1.0	ug/L	27	Standard
	Pb	206	570633.1	0.8	**47.3414**	0.462	1.0	ug/L	319	Standard
	Pb	207	488005.1	0.3	**48.3055**	0.245	0.5	ug/L	287	Standard
	Pb	208	2253928.4	0.7	**47.6177**	0.298	0.6	ug/L	1244	Standard
	U	238	741485.7	2.0	**52.1222**	1.070	2.1	ug/L	5	Standard
>	**Bi**	209	523490.9	0.2				ug/L	497973	Standard

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Na	23	139712.9	0.6	**6.4591**	0.032	0.5	mg/L	237	Standard
Mg	24	1481284.3	1.3	**2.1542**	0.029	1.4	mg/L	60	Standard
K	39	1183.4	1.3	**0.8616**	0.013	1.5	mg/L	105	Standard
Ca	43	45.0	22.2	**13.5777**	4.486	33.0	mg/L	7	Standard
Fe	54	752.5	1.6	**0.0286**	0.002	8.7	mg/L	483	Standard
Fe	57	8270.6	6.8	**0.0708**	0.007	9.4	mg/L	2095	Standard
Sc-1	45	347678.8	0.2				mg/L	272955	Standard
Cl	35	38.3	17.8				ug/L	9	Standard
Kr	83	45.9	13.5				ug/L	39	Standard
Br	81	12722.0	5.4				ug/L	644	Standard
P	31	457.5	6.8				ug/L	324	Standard
S	34	15300.2	1.5				ug/L	5485	Standard
Sr	88	461.7	8.8				ug/L	28	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		110.266	
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	115.473
	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	105.124
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032801SDL WG403681-02
Sample Date/Time: Thursday, July 19, 2012 14:59:33
Number of Replicates: 3
Autosampler Position: 214
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	14945.7	2.3	**1762.1167**	112.009	6.4	ug/L	6820	Standard
	Be	9	20.0	25.0	**0.0113**	0.004	31.7	ug/L	3	Standard
	Al	27	35244.4	7.7	**2.5705**	0.251	9.8	ug/L	4266	Standard
>	**Sc**	45	297373.4	1.0				ug/L	272955	Standard
	Ti	47	249.3	6.3	**0.1968**	0.018	9.2	ug/L	51	Standard
	V	51	5586.6	2.4	**0.3931**	0.023	5.9	ug/L	2088	Standard
	Cr	52	7869.4	0.9	**0.1109**	0.019	17.6	ug/L	6617	Standard
	Cr	53	767.5	7.7	**0.5262**	0.058	10.9	ug/L	166	Standard
	Mn	55	16193.0	3.5	**1.2382**	0.059	4.7	ug/L	940	Standard
	Co	59	255.0	76.4	**0.0181**	0.024	131.9	ug/L	76	Standard
	Ni	60	460.0	11.4	**0.2079**	0.030	14.3	ug/L	52	Standard
	Cu	65	242.7	9.0	**0.0835**	0.013	16.1	ug/L	68	Standard
	Zn	66	2597.2	3.1	**2.8580**	0.118	4.1	ug/L	104	Standard
>	**Ge**	72	233640.1	1.1				ug/L	221790	Standard
	As	75	-39.8	62.6	**0.1360**	0.028	20.6	ug/L	-133	Standard
	Se	82	49.0	14.7	**0.3666**	0.088	23.9	ug/L	18	Standard
	Se-1	77	89.3	12.5	**0.0541**	0.187	345.5	ug/L	70	Standard
>	**Ga**	71	455.0	9.6				mg/L	477	Standard
	Rb	85	3318.7	2.5				ug/L	23	Standard
	Y	89	213563.5	2.4				ug/L	197249	Standard
>	**Rh**	103	321.7	19.7				ug/L	295	Standard
	Mo	98	649.9	5.0	**0.1980**	0.009	4.7	ug/L	13	Standard
	Ag	107	285.0	33.8	**0.0411**	0.014	34.9	ug/L	64	Standard
	Cd	111	183.4	103.4	**0.0309**	0.054	175.7	mg/L	53	Standard
	Cd	114	553.3	116.7	**0.0374**	0.066	175.6	ug/L	150	Standard
>	**In**	115	700058.5	0.7				ug/L	644840	Standard
	Sn	118	1480.1	12.4	**0.0362**	0.010	27.7	ug/L	487	Standard
	Sb	123	1109.0	73.3	**0.1161**	0.086	73.9	ug/L	126	Standard
	Ba	135	34458.5	2.4	**8.3585**	0.140	1.7	ug/L	25	Standard
	Ce	140	140.7	18.0				ug/L	22	Standard
>	**Tb**	159	1010812.8	0.6				ug/L	958910	Standard
	Ho	165	14.7	21.9				ug/L	14	Standard
	Tl	203	618.0	105.1	**0.0381**	0.042	109.5	ug/L	10	Standard
	Tl	205	1299.4	102.0	**0.0342**	0.036	106.4	ug/L	27	Standard
	Pb	206	709.4	51.5	**0.0299**	0.030	100.9	ug/L	319	Standard
	Pb	207	571.0	55.1	**0.0228**	0.031	136.3	ug/L	287	Standard
	Pb	208	2621.1	53.5	**0.0245**	0.030	120.8	ug/L	1244	Standard
	U	238	1184.7	19.9	**0.0846**	0.016	19.2	ug/L	5	Standard
>	**Bi**	209	518217.1	0.8				ug/L	497973	Standard

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Na	23	70980.9	2.1	**3.8254**	0.047	1.2	mg/L	237	Standard
Mg	24	326569.1	1.6	**0.5552**	0.003	0.6	mg/L	60	Standard
K	39	281.7	11.8	**0.1615**	0.034	20.8	mg/L	105	Standard
Ca	43	6.7	114.6	**-3.0838**	4.028	130.6	mg/L	7	Standard
Fe	54	446.2	5.2	**-0.0195**	0.006	31.4	mg/L	483	Standard
Fe	57	2987.0	2.4	**0.0124**	0.001	11.6	mg/L	2095	Standard
Sc-1	45	297373.4	1.0				mg/L	272955	Standard
Cl	35	17.0	38.6				ug/L	9	Standard
Kr	83	41.0	6.9				ug/L	39	Standard
Br	81	2822.8	3.9				ug/L	644	Standard
P	31	300.8	8.7				ug/L	324	Standard
S	34	7056.6	0.9				ug/L	5485	Standard
Sr	88	83.3	33.0				ug/L	28	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		105.343	
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	108.563
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	104.065
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1207032801SDL WG403681-02
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 15:02:46
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	7226.7	3.4	**2.6254**	85.037	3239.1	ug/L	6820	Standard
	Be	9	70039.9	2.1	**49.8888**	1.810	3.6	ug/L	3	Standard
	Al	27	561868.9	0.9	**49.1679**	0.383	0.8	ug/L	4266	Standard
>	**Sc**	45	290726.5	1.6				ug/L	272955	Standard
	Ti	47	99544.3	1.8	**100.7077**	3.049	3.0	ug/L	51	Standard
	V	51	412679.1	0.7	**49.2835**	1.064	2.2	ug/L	2088	Standard
	Cr	52	342870.9	0.7	**49.4589**	1.166	2.4	ug/L	6617	Standard
	Cr	53	56168.1	0.8	**49.2070**	1.153	2.3	ug/L	166	Standard
	Mn	55	627908.7	0.6	**52.0491**	1.125	2.2	ug/L	940	Standard
	Co	59	423319.0	0.8	**51.3795**	1.232	2.4	ug/L	76	Standard
	Ni	60	94828.2	0.5	**49.2711**	0.585	1.2	ug/L	52	Standard
	Cu	65	90552.5	1.1	**50.0518**	0.298	0.6	ug/L	68	Standard
	Zn	66	42541.6	0.9	**49.9641**	0.516	1.0	ug/L	104	Standard
>	**Ge**	72	231275.4	1.7				ug/L	221790	Standard
	As	75	43529.4	1.1	**50.1140**	0.410	0.8	ug/L	-133	Standard
	Se	82	4438.6	0.7	**51.1890**	1.028	2.0	ug/L	18	Standard
	Se-1	77	3024.0	1.1	**49.7729**	0.770	1.5	ug/L	70	Standard
>	**Ga**	71	501.7	4.1				mg/L	477	Standard
	Rb	85	728.4	9.2				ug/L	23	Standard
	Y	89	211257.6	0.4				ug/L	197249	Standard
>	**Rh**	103	356.7	16.1				ug/L	295	Standard
	Mo	98	315569.9	0.9	**100.4990**	1.186	1.2	ug/L	13	Standard
	Ag	107	347282.0	0.7	**53.6177**	0.501	0.9	ug/L	64	Standard
	Cd	111	177422.2	0.8	**51.8951**	0.611	1.2	mg/L	53	Standard
	Cd	114	483922.6	0.8	**50.3337**	0.333	0.7	ug/L	150	Standard
>	**In**	115	691185.8	0.3				ug/L	644840	Standard
	Sn	118	1139735.5	1.0	**66.7914**	0.695	1.0	ug/L	487	Standard
	Sb	123	462030.2	0.7	**50.0276**	0.277	0.6	ug/L	126	Standard
	Ba	135	196704.0	0.2	**48.3853**	0.262	0.5	ug/L	25	Standard
	Ce	140	817.0	3.6				ug/L	22	Standard
>	**Tb**	159	1005780.2	0.6				ug/L	958910	Standard
	Ho	165	21.7	33.4				ug/L	14	Standard
	Tl	203	749090.1	0.5	**49.4394**	0.779	1.6	ug/L	10	Standard
	Tl	205	1726895.7	0.4	**48.6611**	0.526	1.1	ug/L	27	Standard
	Pb	206	581835.6	0.5	**49.6223**	0.442	0.9	ug/L	319	Standard
	Pb	207	496234.4	1.3	**50.4993**	1.041	2.1	ug/L	287	Standard
	Pb	208	2293976.1	0.6	**49.8223**	0.609	1.2	ug/L	1244	Standard
	U	238	721707.5	0.4	**52.1503**	0.382	0.7	ug/L	5	Standard
>	**Bi**	209	509272.7	1.1				ug/L	497973	Standard

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	Na	23	109551.4	2.4	**6.0549**	0.081	1.3	mg/L	237	Standard
	Mg	24	2752235.6	1.9	**4.7872**	0.115	2.4	mg/L	60	Standard
	K	39	4845.8	3.2	**4.6448**	0.221	4.8	mg/L	105	Standard
	Ca	43	21.7	74.2	**5.0492**	8.706	172.4	mg/L	7	Standard
	Fe	54	19639.9	3.0	**4.7724**	0.225	4.7	mg/L	483	Standard
	Fe	57	364818.0	2.3	**5.3030**	0.165	3.1	mg/L	2095	Standard
>	**Sc-1**	45	290726.5	1.6				mg/L	272955	Standard
	Cl	35	6.3	81.0				ug/L	9	Standard
	Kr	83	43.8	15.1				ug/L	39	Standard
	Br	81	874.2	4.9				ug/L	644	Standard
	P	31	350.8	6.6				ug/L	324	Standard
	S	34	5194.2	3.1				ug/L	5485	Standard
	Sr	88	36.7	20.8				ug/L	28	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	98.336		
>	Sc	45			
	Ti	47	100.708		
	V	51	98.567		
	Cr	52	98.918		
	Cr	53			
	Mn	55	104.098		
	Co	59	102.759		
	Ni	60	98.542		
	Cu	65	100.104		
	Zn	66	99.928		
>	Ge	72		104.277	
	As	75	100.228		
	Se	82	102.378		
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	100.499		
	Ag	107	107.235		

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	Cd	111	103.790	
	Cd	114		
>	In	115		107.187
	Sn	118	133.583	
	Sb	123	100.055	
	Ba	135	96.771	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.879	
	Tl	205		
	Pb	206	99.245	
	Pb	207	100.999	
	Pb	208	99.645	
	U	238	104.301	
>	Bi	209		102.269
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
Report Date/Time: Thursday, July 19, 2012 15:05:17
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 15:05:56
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	7233.4	1.6	**70.2209**	10.546	15.0	ug/L	6820	Standard
	Be	9	15.0	145.3	**0.0083**	0.016	190.0	ug/L	3	Standard
	Al	27	4944.1	3.1	**-0.0209**	0.005	25.5	ug/L	4266	Standard
>	**Sc**	45	279871.8	1.9				ug/L	272955	Standard
	Ti	47	63.0	12.0	**0.0127**	0.008	60.7	ug/L	51	Standard
	V	51	1940.6	4.1	**-0.0305**	0.011	35.3	ug/L	2088	Standard
	Cr	52	6090.2	1.3	**-0.1109**	0.015	13.5	ug/L	6617	Standard
	Cr	53	203.3	11.7	**0.0428**	0.021	48.8	ug/L	166	Standard
	Mn	55	1082.7	13.1	**-0.0001**	0.012	10594.2	ug/L	940	Standard
	Co	59	147.0	54.2	**0.0057**	0.010	174.8	ug/L	76	Standard
	Ni	60	104.0	8.2	**0.0268**	0.005	17.2	ug/L	52	Standard
	Cu	65	84.0	9.4	**-0.0015**	0.005	306.7	ug/L	68	Standard
	Zn	66	125.0	10.0	**-0.0202**	0.016	77.9	ug/L	104	Standard
>	**Ge**	72	224134.6	0.4				ug/L	221790	Standard
	As	75	-122.6	27.9	**0.0359**	0.040	111.4	ug/L	-133	Standard
	Se	82	18.7	27.8	**0.0288**	0.063	217.8	ug/L	18	Standard
	Se-1	77	78.3	17.9	**-0.0746**	0.247	331.0	ug/L	70	Standard
>	**Ga**	71	453.3	10.0				mg/L	477	Standard
	Rb	85	20.0	90.1				ug/L	23	Standard
	Y	89	208831.8	3.0				ug/L	197249	Standard
>	**Rh**	103	345.0	10.1				ug/L	295	Standard
	Mo	98	111.4	66.5	**0.0300**	0.024	81.3	ug/L	13	Standard
	Ag	107	377.0	78.8	**0.0574**	0.047	82.5	ug/L	64	Standard
	Cd	111	153.1	89.7	**0.0240**	0.041	172.5	mg/L	53	Standard
	Cd	114	431.9	99.1	**0.0269**	0.046	170.4	ug/L	150	Standard
>	**In**	115	676810.2	0.5				ug/L	644840	Standard
	Sn	118	1185.1	55.4	**0.0216**	0.040	184.0	ug/L	487	Standard
	Sb	123	1152.0	46.9	**0.1256**	0.061	48.2	ug/L	126	Standard
	Ba	135	117.7	116.0	**0.0182**	0.035	189.5	ug/L	25	Standard
	Ce	140	30.0	20.3				ug/L	22	Standard
>	**Tb**	159	970429.8	0.8				ug/L	958910	Standard
	Ho	165	18.0	33.8				ug/L	14	Standard
	Tl	203	229.0	116.2	**0.0134**	0.018	132.2	ug/L	10	Standard
	Tl	205	494.0	111.6	**0.0123**	0.016	127.0	ug/L	27	Standard
	Pb	206	478.7	34.7	**0.0113**	0.014	127.8	ug/L	319	Standard
	Pb	207	375.0	33.0	**0.0039**	0.013	330.0	ug/L	287	Standard
	Pb	208	1808.4	35.1	**0.0078**	0.014	179.9	ug/L	1244	Standard
	U	238	112.3	78.8	**0.0087**	0.006	74.2	ug/L	5	Standard
>	**Bi**	209	511093.9	0.8				ug/L	497973	Standard

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Na	23	296.7	13.7	**-0.0100**	0.002	22.8	mg/L	237	Standard
Mg	24	451.7	92.0	**0.0008**	0.001	93.8	mg/L	60	Standard
K	39	111.7	6.8	**0.0050**	0.006	112.3	mg/L	105	Standard
Ca	43	13.3	21.7	**0.8324**	1.561	187.5	mg/L	7	Standard
Fe	54	482.6	4.6	**-0.0032**	0.007	203.0	mg/L	483	Standard
Fe	57	2038.5	3.2	**0.0007**	0.002	222.5	mg/L	2095	Standard
Sc-1	45	279871.8	1.9				mg/L	272955	Standard
Cl	35	8.0	33.1				ug/L	9	Standard
Kr	83	42.3	9.3				ug/L	39	Standard
Br	81	791.7	4.6				ug/L	644	Standard
P	31	353.3	7.6				ug/L	324	Standard
S	34	5248.4	3.4				ug/L	5485	Standard
Sr	88	36.7	7.9				ug/L	28	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		101.057	
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	104.958
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.635
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207032802
Sample Date/Time: Thursday, July 19, 2012 15:09:08
Number of Replicates: 3
Autosampler Position: 215
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	41732.4	0.8	**6913.5973**	401.311	5.8	ug/L	6820	Standard
	Be	9	25.0	52.9	**0.0128**	0.008	63.8	ug/L	3	Standard
	Al	27	188144.3	0.6	**13.9554**	0.615	4.4	ug/L	4266	Standard
>	**Sc**	45	335271.2	4.1				ug/L	272955	Standard
	Ti	47	1390.7	6.5	**1.3303**	0.072	5.4	ug/L	51	Standard
	V	51	28621.0	0.3	**3.1085**	0.041	1.3	ug/L	2088	Standard
	Cr	52	16907.8	0.8	**1.4121**	0.018	1.2	ug/L	6617	Standard
	Cr	53	2282.7	2.8	**1.8308**	0.072	3.9	ug/L	166	Standard
	Mn	55	11934.7	1.2	**0.8815**	0.005	0.5	ug/L	940	Standard
	Co	59	295.0	10.0	**0.0225**	0.003	14.2	ug/L	76	Standard
	Ni	60	1096.4	3.8	**0.5313**	0.014	2.7	ug/L	52	Standard
	Cu	65	448.0	1.6	**0.1943**	0.005	2.8	ug/L	68	Standard
	Zn	66	2651.6	5.7	**2.9001**	0.157	5.4	ug/L	104	Standard
>	**Ge**	72	235172.2	1.3				ug/L	221790	Standard
	As	75	587.8	2.1	**0.8441**	0.014	1.7	ug/L	-133	Standard
	Se	82	90.7	8.2	**0.8377**	0.088	10.5	ug/L	18	Standard
	Se-1	77	108.3	7.0	**0.3608**	0.127	35.3	ug/L	70	Standard
>	**Ga**	71	516.7	5.9				mg/L	477	Standard
	Rb	85	13274.1	2.2				ug/L	23	Standard
	Y	89	221726.9	3.5				ug/L	197249	Standard
>	**Rh**	103	365.0	11.7				ug/L	295	Standard
	Mo	98	5388.9	1.5	**1.6608**	0.030	1.8	ug/L	13	Standard
	Ag	107	171.0	40.5	**0.0235**	0.011	46.5	ug/L	64	Standard
	Cd	111	111.7	28.8	**0.0100**	0.010	97.6	mg/L	53	Standard
	Cd	114	321.3	24.1	**0.0134**	0.008	63.2	ug/L	150	Standard
>	**In**	115	711644.0	1.8				ug/L	644840	Standard
	Sn	118	1056.0	6.8	**0.0108**	0.005	49.0	ug/L	487	Standard
	Sb	123	653.0	8.2	**0.0667**	0.007	10.3	ug/L	126	Standard
	Ba	135	224457.4	0.8	**53.6351**	0.862	1.6	ug/L	25	Standard
	Ce	140	2037.5	2.6				ug/L	22	Standard
>	**Tb**	159	1013706.6	1.0				ug/L	958910	Standard
	Ho	165	43.3	10.4				ug/L	14	Standard
	Tl	203	329.3	12.8	**0.0199**	0.003	14.8	ug/L	10	Standard
	Tl	205	750.0	8.3	**0.0195**	0.002	10.2	ug/L	27	Standard
	Pb	206	1122.7	1.8	**0.0662**	0.003	4.2	ug/L	319	Standard
	Pb	207	945.7	5.2	**0.0620**	0.006	9.4	ug/L	287	Standard
	Pb	208	4359.2	2.3	**0.0632**	0.003	5.1	ug/L	1244	Standard
	U	238	5340.9	1.2	**0.3859**	0.000	0.1	ug/L	5	Standard
>	**Bi**	209	510096.4	1.1				ug/L	497973	Standard

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Na	23	127203.6	2.3	**6.1009**	0.177	2.9	mg/L	237	Standard
Mg	24	1010409.4	0.7	**1.5255**	0.066	4.3	mg/L	60	Standard
K	39	915.0	12.0	**0.6689**	0.080	12.0	mg/L	105	Standard
Ca	43	33.3	17.3	**8.9234**	2.765	31.0	mg/L	7	Standard
Fe	54	616.9	7.6	**0.0050**	0.005	92.8	mg/L	483	Standard
Fe	57	7727.0	2.4	**0.0678**	0.006	8.7	mg/L	2095	Standard
Sc-1	45	335271.2	4.1				mg/L	272955	Standard
Cl	35	14.7	30.7				ug/L	9	Standard
Kr	83	43.7	12.6				ug/L	39	Standard
Br	81	3582.9	6.5				ug/L	644	Standard
P	31	339.2	11.2				ug/L	324	Standard
S	34	11661.2	2.8				ug/L	5485	Standard
Sr	88	305.0	14.6				ug/L	28	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		106.034	
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	110.360
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.435
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032803
Sample Date/Time: Thursday, July 19, 2012 15:12:19
Number of Replicates: 3
Autosampler Position: 216
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	43733.0	1.0	**7551.3806**	137.666	1.8	ug/L	6820	Standard
	Be	9	16.7	34.6	**0.0080**	0.004	47.2	ug/L	3	Standard
	Al	27	134955.1	1.7	**10.1350**	0.318	3.1	ug/L	4266	Standard
>	**Sc**	45	326804.1	1.7				ug/L	272955	Standard
	Ti	47	1336.4	1.8	**1.3011**	0.016	1.2	ug/L	51	Standard
	V	51	18707.7	1.1	**1.9784**	0.043	2.2	ug/L	2088	Standard
	Cr	52	10695.1	1.4	**0.5408**	0.016	3.0	ug/L	6617	Standard
	Cr	53	2101.0	3.1	**1.7068**	0.065	3.8	ug/L	166	Standard
	Mn	55	24806.6	1.4	**1.9696**	0.037	1.9	ug/L	940	Standard
	Co	59	322.0	1.6	**0.0265**	0.001	3.9	ug/L	76	Standard
	Ni	60	1357.1	2.0	**0.6775**	0.019	2.8	ug/L	52	Standard
	Cu	65	421.0	5.8	**0.1837**	0.012	6.4	ug/L	68	Standard
	Zn	66	2947.0	1.8	**3.3060**	0.096	2.9	ug/L	104	Standard
>	**Ge**	72	230951.6	1.0				ug/L	221790	Standard
	As	75	551.3	6.9	**0.8145**	0.050	6.1	ug/L	-133	Standard
	Se	82	275.5	0.8	**2.9986**	0.007	0.2	ug/L	18	Standard
	Se-1	77	150.7	8.0	**1.1125**	0.220	19.7	ug/L	70	Standard
>	**Ga**	71	518.3	12.2				mg/L	477	Standard
	Rb	85	23186.1	3.6				ug/L	23	Standard
	Y	89	218286.3	0.9				ug/L	197249	Standard
>	**Rh**	103	460.0	3.9				ug/L	295	Standard
	Mo	98	2780.3	2.4	**0.8671**	0.018	2.1	ug/L	13	Standard
	Ag	107	94.3	17.6	**0.0121**	0.003	20.7	ug/L	64	Standard
	Cd	111	99.3	9.2	**0.0068**	0.003	39.0	mg/L	53	Standard
	Cd	114	294.4	7.3	**0.0111**	0.002	20.3	ug/L	150	Standard
>	**In**	115	700700.0	0.4				ug/L	644840	Standard
	Sn	118	1289.1	2.6	**0.0251**	0.002	7.2	ug/L	487	Standard
	Sb	123	401.8	4.4	**0.0409**	0.002	5.1	ug/L	126	Standard
	Ba	135	111102.9	0.2	**26.9530**	0.149	0.6	ug/L	25	Standard
	Ce	140	1079.0	0.7				ug/L	22	Standard
>	**Tb**	159	1015933.8	1.2				ug/L	958910	Standard
	Ho	165	31.0	43.4				ug/L	14	Standard
	Tl	203	453.7	5.7	**0.0283**	0.002	6.3	ug/L	10	Standard
	Tl	205	1063.7	1.0	**0.0284**	0.000	1.4	ug/L	27	Standard
	Pb	206	534.3	1.4	**0.0163**	0.001	5.1	ug/L	319	Standard
	Pb	207	443.0	2.6	**0.0110**	0.001	12.4	ug/L	287	Standard
	Pb	208	2031.4	1.3	**0.0129**	0.001	5.8	ug/L	1244	Standard
	U	238	3994.5	1.2	**0.2901**	0.003	1.0	ug/L	5	Standard
>	**Bi**	209	507631.1	0.4				ug/L	497973	Standard

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	Na	23	140365.5	0.5	**6.9071**	0.132	1.9	mg/L	237	Standard
	Mg	24	1339108.2	1.2	**2.0721**	0.038	1.8	mg/L	60	Standard
	K	39	1360.1	4.4	**1.0775**	0.043	4.0	mg/L	105	Standard
	Ca	43	48.3	31.6	**16.3825**	6.909	42.2	mg/L	7	Standard
	Fe	54	569.8	3.9	**-0.0019**	0.004	199.7	mg/L	483	Standard
	Fe	57	8163.9	4.0	**0.0759**	0.006	7.8	mg/L	2095	Standard
>	**Sc-1**	45	326804.1	1.7				mg/L	272955	Standard
	Cl	35	49.3	11.2				ug/L	9	Standard
	Kr	83	38.2	8.2				ug/L	39	Standard
	Br	81	22167.0	2.7				ug/L	644	Standard
	P	31	321.7	6.3				ug/L	324	Standard
	S	34	18649.0	0.8				ug/L	5485	Standard
	Sr	88	393.3	17.1				ug/L	28	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		104.131	
	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	108.663
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.940
	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

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032701
Sample Date/Time: Thursday, July 19, 2012 15:15:28
Number of Replicates: 3
Autosampler Position: 217
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	34880.1	0.9	**5791.5694**	123.727	2.1	ug/L	6820	Standard
	Be	9	31.7	24.1	**0.0178**	0.005	30.0	ug/L	3	Standard
	Al	27	48763.4	2.5	**3.4191**	0.113	3.3	ug/L	4266	Standard
>	**Sc**	45	321730.8	1.9				ug/L	272955	Standard
	Ti	47	886.0	1.8	**0.8528**	0.026	3.0	ug/L	51	Standard
	V	51	13449.9	1.4	**1.3606**	0.039	2.9	ug/L	2088	Standard
	Cr	52	11963.7	0.6	**0.7434**	0.017	2.4	ug/L	6617	Standard
	Cr	53	2702.7	5.8	**2.2563**	0.120	5.3	ug/L	166	Standard
	Mn	55	17807.1	1.3	**1.4006**	0.008	0.5	ug/L	940	Standard
	Co	59	442.7	8.7	**0.0416**	0.005	12.7	ug/L	76	Standard
	Ni	60	1870.8	3.9	**0.9533**	0.034	3.6	ug/L	52	Standard
	Cu	65	740.0	3.6	**0.3641**	0.013	3.6	ug/L	68	Standard
	Zn	66	4405.6	1.6	**5.0725**	0.064	1.3	ug/L	104	Standard
>	**Ge**	72	228934.4	1.1				ug/L	221790	Standard
	As	75	1120.5	3.3	**1.4793**	0.037	2.5	ug/L	-133	Standard
	Se	82	609.6	3.1	**6.9335**	0.247	3.6	ug/L	18	Standard
	Se-1	77	155.0	10.4	**1.2103**	0.303	25.0	ug/L	70	Standard
>	**Ga**	71	478.3	13.3				mg/L	477	Standard
	Rb	85	5297.6	2.6				ug/L	23	Standard
	Y	89	216325.2	1.4				ug/L	197249	Standard
>	**Rh**	103	346.7	2.2				ug/L	295	Standard
	Mo	98	3262.7	0.4	**1.0265**	0.010	1.0	ug/L	13	Standard
	Ag	107	125.0	20.8	**0.0169**	0.004	22.5	ug/L	64	Standard
	Cd	111	122.5	19.6	**0.0137**	0.007	50.0	mg/L	53	Standard
	Cd	114	357.9	6.9	**0.0179**	0.002	13.6	ug/L	150	Standard
>	**In**	115	695384.4	1.0				ug/L	644840	Standard
	Sn	118	750.0	4.0	**-0.0058**	0.001	24.9	ug/L	487	Standard
	Sb	123	258.4	12.9	**0.0258**	0.003	13.1	ug/L	126	Standard
	Ba	135	188364.0	0.5	**46.0574**	0.680	1.5	ug/L	25	Standard
	Ce	140	416.7	4.7				ug/L	22	Standard
>	**Tb**	159	1009648.2	0.4				ug/L	958910	Standard
	Ho	165	18.7	31.4				ug/L	14	Standard
	Tl	203	544.0	3.8	**0.0347**	0.001	3.6	ug/L	10	Standard
	Tl	205	1279.7	4.9	**0.0351**	0.002	5.5	ug/L	27	Standard
	Pb	206	691.7	0.4	**0.0306**	0.000	1.1	ug/L	319	Standard
	Pb	207	584.3	1.8	**0.0263**	0.001	4.6	ug/L	287	Standard
	Pb	208	2731.1	1.5	**0.0290**	0.001	2.5	ug/L	1244	Standard
	U	238	2264.2	2.0	**0.1670**	0.004	2.2	ug/L	5	Standard
>	**Bi**	209	500639.8	0.5				ug/L	497973	Standard

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Na	23	143407.2	1.2	**7.1695**	0.167	2.3	mg/L	237	Standard
Mg	24	1845145.2	20.0	**2.8968**	0.553	19.1	mg/L	60	Standard
K	39	986.7	9.7	**0.7651**	0.075	9.8	mg/L	105	Standard
Ca	43	40.0	66.1	**12.6735**	12.526	98.8	mg/L	7	Standard
Fe	54	626.0	2.1	**0.0129**	0.006	44.3	mg/L	483	Standard
Fe	57	9983.3	4.0	**0.1017**	0.008	7.7	mg/L	2095	Standard
> **Sc-1**	45	321730.8	1.9				mg/L	272955	Standard
Cl	35	57.0	1.8				ug/L	9	Standard
Kr	83	40.6	5.6				ug/L	39	Standard
Br	81	57161.0	2.4				ug/L	644	Standard
P	31	323.3	6.5				ug/L	324	Standard
S	34	21753.1	1.0				ug/L	5485	Standard
Sr	88	385.0	22.1				ug/L	28	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		103.221	
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	107.838
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	100.536
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032702
Sample Date/Time: Thursday, July 19, 2012 15:18:38
Number of Replicates: 3
Autosampler Position: 218
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	34247.0	1.8	**5711.3670**	36.115	0.6	ug/L	6820	Standard
	Be	9	10.0	50.0	**0.0039**	0.003	82.9	ug/L	3	Standard
	Al	27	133182.0	4.8	**10.2370**	0.340	3.3	ug/L	4266	Standard
>	**Sc**	45	319256.1	2.1				ug/L	272955	Standard
	Ti	47	1081.4	2.9	**1.0488**	0.032	3.1	ug/L	51	Standard
	V	51	17231.2	1.8	**1.8121**	0.027	1.5	ug/L	2088	Standard
	Cr	52	12289.0	1.6	**0.7858**	0.022	2.8	ug/L	6617	Standard
	Cr	53	2001.8	4.6	**1.6291**	0.079	4.8	ug/L	166	Standard
	Mn	55	5593.0	0.5	**0.3747**	0.005	1.3	ug/L	940	Standard
	Co	59	302.0	6.0	**0.0242**	0.002	9.6	ug/L	76	Standard
	Ni	60	1101.7	3.2	**0.5477**	0.017	3.1	ug/L	52	Standard
	Cu	65	330.3	5.4	**0.1346**	0.010	7.6	ug/L	68	Standard
	Zn	66	3553.1	2.2	**4.0439**	0.080	2.0	ug/L	104	Standard
>	**Ge**	72	229670.6	0.6				ug/L	221790	Standard
	As	75	334.9	7.1	**0.5677**	0.026	4.7	ug/L	-133	Standard
	Se	82	192.9	1.1	**2.0536**	0.026	1.3	ug/L	18	Standard
	Se-1	77	125.3	10.9	**0.6935**	0.229	33.1	ug/L	70	Standard
>	**Ga**	71	511.7	4.1				mg/L	477	Standard
	Rb	85	13202.4	1.0				ug/L	23	Standard
	Y	89	214893.2	0.6				ug/L	197249	Standard
>	**Rh**	103	325.0	9.4				ug/L	295	Standard
	Mo	98	4048.3	3.0	**1.2708**	0.023	1.8	ug/L	13	Standard
	Ag	107	65.3	13.7	**0.0078**	0.001	19.0	ug/L	64	Standard
	Cd	111	86.6	11.7	**0.0032**	0.003	93.3	mg/L	53	Standard
	Cd	114	242.3	0.1	**0.0058**	0.000	5.2	ug/L	150	Standard
>	**In**	115	697641.8	1.2				ug/L	644840	Standard
	Sn	118	597.7	2.7	**-0.0147**	0.001	8.4	ug/L	487	Standard
	Sb	123	272.6	8.9	**0.0272**	0.002	8.4	ug/L	126	Standard
	Ba	135	149939.7	1.3	**36.5422**	0.743	2.0	ug/L	25	Standard
	Ce	140	1800.8	2.2				ug/L	22	Standard
>	**Tb**	159	1015266.2	0.4				ug/L	958910	Standard
	Ho	165	35.0	14.8				ug/L	14	Standard
	Tl	203	407.0	1.5	**0.0252**	0.000	1.9	ug/L	10	Standard
	Tl	205	943.0	3.4	**0.0251**	0.001	3.2	ug/L	27	Standard
	Pb	206	847.0	1.5	**0.0432**	0.001	2.6	ug/L	319	Standard
	Pb	207	720.7	1.8	**0.0396**	0.001	3.4	ug/L	287	Standard
	Pb	208	3344.1	1.9	**0.0416**	0.001	3.2	ug/L	1244	Standard
	U	238	2387.2	1.0	**0.1740**	0.001	0.7	ug/L	5	Standard
>	**Bi**	209	506631.8	0.4				ug/L	497973	Standard

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Na	23	133298.8	0.6	**6.7140**	0.128	1.9	mg/L	237	Standard
Mg	24	1078706.9	1.4	**1.7086**	0.020	1.2	mg/L	60	Standard
K	39	910.0	1.0	**0.7043**	0.025	3.6	mg/L	105	Standard
Ca	43	26.7	71.0	**6.5175**	9.388	144.0	mg/L	7	Standard
Fe	54	538.1	4.9	**-0.0061**	0.005	74.0	mg/L	483	Standard
Fe	57	7763.7	4.0	**0.0730**	0.002	3.3	mg/L	2095	Standard
> **Sc-1**	45	319256.1	2.1				mg/L	272955	Standard
Cl	35	33.3	35.2				ug/L	9	Standard
Kr	83	43.1	3.9				ug/L	39	Standard
Br	81	12160.7	4.2				ug/L	644	Standard
P	31	300.0	3.3				ug/L	324	Standard
S	34	14843.9	1.4				ug/L	5485	Standard
Sr	88	306.7	8.0				ug/L	28	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		103.553	
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	108.188
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.739
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207032703
Sample Date/Time: Thursday, July 19, 2012 15:21:47
Number of Replicates: 3
Autosampler Position: 219
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	34673.0	0.7	**5686.1219**	94.621	1.7	ug/L	6820	Standard
	Be	9	28.3	27.0	**0.0155**	0.005	32.4	ug/L	3	Standard
	Al	27	222808.6	2.4	**17.1697**	0.385	2.2	ug/L	4266	Standard
>	**Sc**	45	324334.8	1.0				ug/L	272955	Standard
	Ti	47	1231.1	2.8	**1.1907**	0.046	3.8	ug/L	51	Standard
	V	51	17660.9	3.3	**1.8462**	0.090	4.8	ug/L	2088	Standard
	Cr	52	13367.2	0.8	**0.9286**	0.009	1.0	ug/L	6617	Standard
	Cr	53	2261.8	0.5	**1.8419**	0.025	1.3	ug/L	166	Standard
	Mn	55	7830.4	0.5	**0.5561**	0.008	1.4	ug/L	940	Standard
	Co	59	383.0	13.4	**0.0337**	0.006	17.5	ug/L	76	Standard
	Ni	60	1198.7	1.5	**0.5930**	0.004	0.6	ug/L	52	Standard
	Cu	65	402.3	5.1	**0.1727**	0.009	5.4	ug/L	68	Standard
	Zn	66	4152.6	2.0	**4.7123**	0.055	1.2	ug/L	104	Standard
>	**Ge**	72	231678.9	0.9				ug/L	221790	Standard
	As	75	329.1	9.6	**0.5578**	0.036	6.5	ug/L	-133	Standard
	Se	82	199.9	3.3	**2.1144**	0.057	2.7	ug/L	18	Standard
	Se-1	77	128.3	6.3	**0.7256**	0.127	17.5	ug/L	70	Standard
>	**Ga**	71	531.7	8.0				mg/L	477	Standard
	Rb	85	13607.8	3.3				ug/L	23	Standard
	Y	89	217590.0	1.9				ug/L	197249	Standard
>	**Rh**	103	420.0	8.6				ug/L	295	Standard
	Mo	98	4034.8	0.8	**1.2517**	0.018	1.4	ug/L	13	Standard
	Ag	107	74.3	17.9	**0.0090**	0.002	21.9	ug/L	64	Standard
	Cd	111	97.0	7.9	**0.0059**	0.002	40.3	mg/L	53	Standard
	Cd	114	281.5	9.8	**0.0095**	0.003	30.4	ug/L	150	Standard
>	**In**	115	706028.7	0.8				ug/L	644840	Standard
	Sn	118	778.0	5.1	**-0.0048**	0.002	46.3	ug/L	487	Standard
	Sb	123	293.4	21.3	**0.0290**	0.007	22.4	ug/L	126	Standard
	Ba	135	152961.6	0.3	**36.8333**	0.389	1.1	ug/L	25	Standard
	Ce	140	2360.9	3.6				ug/L	22	Standard
>	**Tb**	159	1030359.8	1.0				ug/L	958910	Standard
	Ho	165	42.3	5.9				ug/L	14	Standard
	Tl	203	444.3	7.1	**0.0276**	0.002	7.3	ug/L	10	Standard
	Tl	205	1063.0	12.4	**0.0283**	0.004	12.8	ug/L	27	Standard
	Pb	206	1365.4	5.2	**0.0872**	0.006	6.8	ug/L	319	Standard
	Pb	207	1062.7	3.1	**0.0741**	0.003	4.1	ug/L	287	Standard
	Pb	208	5151.0	1.6	**0.0806**	0.001	1.9	ug/L	1244	Standard
	U	238	2551.5	4.0	**0.1851**	0.007	3.7	ug/L	5	Standard
>	**Bi**	209	508812.0	0.4				ug/L	497973	Standard

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Na	23	133668.8	1.9	**6.6248**	0.069	1.0	mg/L	237	Standard
Mg	24	1080005.5	0.9	**1.6837**	0.013	0.7	mg/L	60	Standard
K	39	893.4	3.7	**0.6767**	0.034	5.0	mg/L	105	Standard
Ca	43	46.7	32.7	**15.8692**	7.519	47.4	mg/L	7	Standard
Fe	54	593.0	9.3	**0.0043**	0.012	279.2	mg/L	483	Standard
Fe	57	8337.3	1.0	**0.0790**	0.001	1.7	mg/L	2095	Standard
Sc-1	45	324334.8	1.0				mg/L	272955	Standard
Cl	35	37.0	7.2				ug/L	9	Standard
Kr	83	41.7	13.6				ug/L	39	Standard
Br	81	13840.5	3.1				ug/L	644	Standard
P	31	285.0	10.7				ug/L	324	Standard
S	34	14869.8	1.1				ug/L	5485	Standard
Sr	88	390.0	7.8				ug/L	28	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		104.459	
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	109.489
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.177
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 15:24:58
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	7400.1	3.1	**52.9170**	58.044	109.7	ug/L	6820	Standard
	Be	9	69360.1	1.1	**49.6665**	1.105	2.2	ug/L	3	Standard
	Al	27	530002.6	0.9	**46.6090**	0.365	0.8	ug/L	4266	Standard
>	**Sc**	45	289129.5	1.2				ug/L	272955	Standard
	Ti	47	96414.1	0.9	**97.7446**	1.173	1.2	ug/L	51	Standard
	V	51	397531.6	1.5	**47.5694**	0.889	1.9	ug/L	2088	Standard
	Cr	52	328522.6	0.9	**47.4525**	0.863	1.8	ug/L	6617	Standard
	Cr	53	55988.3	0.8	**49.1573**	0.839	1.7	ug/L	166	Standard
	Mn	55	614176.4	2.4	**51.0260**	1.638	3.2	ug/L	940	Standard
	Co	59	415329.5	1.0	**50.5209**	0.966	1.9	ug/L	76	Standard
	Ni	60	92666.2	1.7	**48.2532**	0.601	1.2	ug/L	52	Standard
	Cu	65	87701.4	0.8	**48.5905**	0.822	1.7	ug/L	68	Standard
	Zn	66	41638.1	1.4	**49.0111**	0.713	1.5	ug/L	104	Standard
>	**Ge**	72	230734.0	1.0				ug/L	221790	Standard
	As	75	42728.5	0.9	**49.3100**	0.679	1.4	ug/L	-133	Standard
	Se	82	4409.2	1.3	**50.9619**	0.949	1.9	ug/L	18	Standard
	Se-1	77	2972.0	1.7	**49.0098**	1.171	2.4	ug/L	70	Standard
>	**Ga**	71	470.0	16.5				mg/L	477	Standard
	Rb	85	711.7	14.1				ug/L	23	Standard
	Y	89	212564.0	0.4				ug/L	197249	Standard
>	**Rh**	103	385.0	15.0				ug/L	295	Standard
	Mo	98	309566.5	1.8	**98.1601**	0.890	0.9	ug/L	13	Standard
	Ag	107	354924.3	1.7	**54.5603**	0.217	0.4	ug/L	64	Standard
	Cd	111	175436.0	2.0	**51.0903**	0.492	1.0	mg/L	53	Standard
	Cd	114	478748.4	1.4	**49.5815**	0.148	0.3	ug/L	150	Standard
>	**In**	115	694168.0	1.4				ug/L	644840	Standard
	Sn	118	1128279.1	1.3	**65.8382**	0.757	1.1	ug/L	487	Standard
	Sb	123	453509.5	1.4	**48.8998**	0.937	1.9	ug/L	126	Standard
	Ba	135	193441.8	1.2	**47.3786**	0.107	0.2	ug/L	25	Standard
	Ce	140	775.4	3.5				ug/L	22	Standard
>	**Tb**	159	1014020.3	0.3				ug/L	958910	Standard
	Ho	165	19.7	25.6				ug/L	14	Standard
	Tl	203	738458.6	1.0	**48.5478**	0.122	0.3	ug/L	10	Standard
	Tl	205	1700439.6	1.2	**47.7307**	0.252	0.5	ug/L	27	Standard
	Pb	206	572999.3	1.1	**48.6802**	0.146	0.3	ug/L	319	Standard
	Pb	207	488019.9	1.7	**49.4666**	0.450	0.9	ug/L	287	Standard
	Pb	208	2250418.0	1.6	**48.6854**	0.403	0.8	ug/L	1244	Standard
	U	238	713119.8	0.9	**51.3325**	0.111	0.2	ug/L	5	Standard
>	**Bi**	209	511201.1	0.8				ug/L	497973	Standard

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Na	23	110790.3	1.1	**6.1581**	0.045	0.7	mg/L	237	Standard
Mg	24	2314097.3	19.1	**4.0516**	0.807	19.9	mg/L	60	Standard
K	39	4659.0	1.5	**4.4855**	0.109	2.4	mg/L	105	Standard
Ca	43	18.3	31.5	**3.2896**	3.076	93.5	mg/L	7	Standard
Fe	54	19763.8	3.0	**4.8276**	0.110	2.3	mg/L	483	Standard
Fe	57	360397.8	2.6	**5.2657**	0.077	1.5	mg/L	2095	Standard
Sc-1	45	289129.5	1.2				mg/L	272955	Standard
Cl	35	7.3	15.7				ug/L	9	Standard
Kr	83	39.9	8.4				ug/L	39	Standard
Br	81	1047.5	7.5				ug/L	644	Standard
P	31	329.2	8.1				ug/L	324	Standard
S	34	5254.2	1.2				ug/L	5485	Standard
Sr	88	40.0	57.3				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	93.218		
Sc	45			
Ti	47	97.745		
V	51	95.139		
Cr	52	94.905		
Cr	53			
Mn	55	102.052		
Co	59	101.042		
Ni	60	96.506		
Cu	65	97.181		
Zn	66	98.022		
Ge	72		104.033	
As	75	98.620		
Se	82	101.924		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	98.160		
Ag	107	109.121		

Sample ID: QC Std 6
Report Date/Time: Thursday, July 19, 2012 15:27:28
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	Cd	111	102.181	
	Cd	114		
>	In	115		107.650
	Sn	118	131.676	
	Sb	123	97.800	
	Ba	135	94.757	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.096	
	Tl	205		
	Pb	206	97.360	
	Pb	207	98.933	
	Pb	208	97.371	
	U	238	102.665	
>	Bi	209		102.656
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 15:28:08
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	6964.9	5.2	**-0.6789**	93.296	13742.6	ug/L	6820	Standard
	Be	9	11.7	24.7	**0.0060**	0.002	35.3	ug/L	3	Standard
	Al	27	4277.3	3.5	**-0.0830**	0.015	17.8	ug/L	4266	Standard
>	**Sc**	45	280616.6	0.9				ug/L	272955	Standard
	Ti	47	58.3	20.7	**0.0079**	0.013	163.6	ug/L	51	Standard
	V	51	1926.4	2.1	**-0.0319**	0.008	24.5	ug/L	2088	Standard
	Cr	52	5987.2	0.7	**-0.1251**	0.012	9.8	ug/L	6617	Standard
	Cr	53	204.2	13.5	**0.0438**	0.024	55.3	ug/L	166	Standard
	Mn	55	1031.7	5.9	**-0.0043**	0.006	133.0	ug/L	940	Standard
	Co	59	109.0	8.4	**0.0010**	0.001	102.6	ug/L	76	Standard
	Ni	60	52.3	12.4	**-0.0009**	0.003	348.6	ug/L	52	Standard
	Cu	65	81.0	16.0	**-0.0031**	0.008	257.8	ug/L	68	Standard
	Zn	66	96.3	15.0	**-0.0548**	0.019	34.4	ug/L	104	Standard
>	**Ge**	72	223804.3	1.3				ug/L	221790	Standard
	As	75	-130.9	18.6	**0.0258**	0.030	115.1	ug/L	-133	Standard
	Se	82	18.3	8.8	**0.0236**	0.017	73.2	ug/L	18	Standard
	Se-1	77	76.3	7.6	**-0.1073**	0.108	100.3	ug/L	70	Standard
>	**Ga**	71	433.3	26.9				mg/L	477	Standard
	Rb	85	6.7	43.3				ug/L	23	Standard
	Y	89	206859.2	0.3				ug/L	197249	Standard
>	**Rh**	103	335.0	10.3				ug/L	295	Standard
	Mo	98	69.7	36.3	**0.0159**	0.008	50.8	ug/L	13	Standard
	Ag	107	176.3	12.0	**0.0251**	0.004	14.1	ug/L	64	Standard
	Cd	111	65.5	13.8	**-0.0027**	0.003	103.1	mg/L	53	Standard
	Cd	114	195.4	9.7	**0.0012**	0.002	159.8	ug/L	150	Standard
>	**In**	115	689460.0	1.1				ug/L	644840	Standard
	Sn	118	867.4	5.4	**0.0015**	0.003	190.6	ug/L	487	Standard
	Sb	123	899.7	25.9	**0.0957**	0.026	26.8	ug/L	126	Standard
	Ba	135	49.0	14.1	**0.0006**	0.002	272.7	ug/L	25	Standard
	Ce	140	49.3	1.2				ug/L	22	Standard
>	**Tb**	159	976611.7	0.6				ug/L	958910	Standard
	Ho	165	9.3	27.0				ug/L	14	Standard
	Tl	203	90.7	22.5	**0.0042**	0.001	31.3	ug/L	10	Standard
	Tl	205	200.0	18.8	**0.0040**	0.001	25.5	ug/L	27	Standard
	Pb	206	390.3	7.5	**0.0039**	0.002	56.2	ug/L	319	Standard
	Pb	207	327.3	8.0	**-0.0008**	0.002	277.7	ug/L	287	Standard
	Pb	208	1495.4	6.0	**0.0011**	0.002	144.1	ug/L	1244	Standard
	U	238	79.7	20.6	**0.0063**	0.001	17.9	ug/L	5	Standard
>	**Bi**	209	508448.7	1.1				ug/L	497973	Standard

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⌈	**Na**	23	350.0	21.6	**-0.0070**	0.004	61.7	mg/L	237	Standard
|	**Mg**	24	295.0	19.5	**0.0005**	0.000	20.7	mg/L	60	Standard
|	**K**	39	106.7	19.5	**-0.0002**	0.022	13488.4	mg/L	105	Standard
|	**Ca**	43	3.3	86.6	**-4.7232**	1.609	34.1	mg/L	7	Standard
|	**Fe**	54	474.9	9.0	**-0.0056**	0.010	184.4	mg/L	483	Standard
|	**Fe**	57	1958.5	0.8	**-0.0006**	0.000	40.5	mg/L	2095	Standard
⌊>	**Sc-1**	45	280616.6	0.9				mg/L	272955	Standard
	Cl	35	5.0	40.0				ug/L	9	Standard
	Kr	83	39.6	6.2				ug/L	39	Standard
	Br	81	892.5	12.1				ug/L	644	Standard
	P	31	295.8	12.9				ug/L	324	Standard
	S	34	5231.7	3.5				ug/L	5485	Standard
	Sr	88	33.3	56.8				ug/L	28	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		100.908	
|	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	106.919
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.104
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 79 WG403245-02
Sample Date/Time: Thursday, July 19, 2012 15:47:59
Number of Replicates: 3
Autosampler Position: 220
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	7493.5	5.0	**70.6315**	87.167	123.4	ug/L	6820	Standard
	Be	9	6.7	114.6	**0.0021**	0.005	254.2	ug/L	3	Standard
	Al	27	4242.3	10.2	**-0.0986**	0.039	39.5	ug/L	4266	Standard
>	**Sc**	45	289842.7	0.2				ug/L	272955	Standard
	Ti	47	62.3	2.5	**0.0100**	0.001	14.6	ug/L	51	Standard
	V	51	1977.4	1.6	**-0.0333**	0.005	13.8	ug/L	2088	Standard
	Cr	52	6294.3	2.3	**-0.1085**	0.019	17.6	ug/L	6617	Standard
	Cr	53	177.5	12.0	**0.0145**	0.018	121.0	ug/L	166	Standard
	Mn	55	1058.4	4.3	**-0.0049**	0.003	66.6	ug/L	940	Standard
	Co	59	78.7	18.1	**-0.0031**	0.002	58.3	ug/L	76	Standard
	Ni	60	83.3	30.2	**0.0143**	0.013	90.0	ug/L	52	Standard
	Cu	65	69.3	7.1	**-0.0111**	0.003	27.9	ug/L	68	Standard
	Zn	66	709.3	7.4	**0.6644**	0.061	9.1	ug/L	104	Standard
>	**Ge**	72	231056.9	0.9				ug/L	221790	Standard
	As	75	-124.7	17.8	**0.0379**	0.025	64.8	ug/L	-133	Standard
	Se	82	18.4	7.9	**0.0183**	0.015	81.9	ug/L	18	Standard
	Se-1	77	74.3	8.2	**-0.1829**	0.114	62.5	ug/L	70	Standard
>	**Ga**	71	445.0	5.6				mg/L	477	Standard
	Rb	85	18.3	15.7				ug/L	23	Standard
	Y	89	207742.8	0.5				ug/L	197249	Standard
>	**Rh**	103	278.3	4.5				ug/L	295	Standard
	Mo	98	38.0	96.4	**0.0057**	0.012	201.8	ug/L	13	Standard
	Ag	107	92.0	66.9	**0.0119**	0.009	78.4	ug/L	64	Standard
	Cd	111	66.9	43.4	**-0.0023**	0.008	358.6	mg/L	53	Standard
	Cd	114	197.1	41.2	**0.0014**	0.008	605.6	ug/L	150	Standard
>	**In**	115	689459.0	1.0				ug/L	644840	Standard
	Sn	118	594.0	15.7	**-0.0146**	0.005	35.4	ug/L	487	Standard
	Sb	123	185.9	23.4	**0.0181**	0.005	25.0	ug/L	126	Standard
	Ba	135	46.3	74.2	**-0.0001**	0.008	11289.2	ug/L	25	Standard
	Ce	140	24.7	6.2				ug/L	22	Standard
>	**Tb**	159	983028.2	0.8				ug/L	958910	Standard
	Ho	165	13.3	17.3				ug/L	14	Standard
	Tl	203	35.3	114.4	**0.0005**	0.003	491.4	ug/L	10	Standard
	Tl	205	78.7	124.9	**0.0006**	0.003	476.6	ug/L	27	Standard
	Pb	206	356.3	9.9	**0.0009**	0.003	325.5	ug/L	319	Standard
	Pb	207	278.3	11.2	**-0.0059**	0.003	51.4	ug/L	287	Standard
	Pb	208	1358.4	8.0	**-0.0020**	0.002	115.3	ug/L	1244	Standard
	U	238	17.7	96.3	**0.0018**	0.001	66.3	ug/L	5	Standard
>	**Bi**	209	510246.1	0.5				ug/L	497973	Standard

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⌈	**Na**	23	285.0	25.8	**-0.0113**	0.004	36.6	mg/L	237	Standard
|	**Mg**	24	103.3	59.1	**0.0001**	0.000	71.7	mg/L	60	Standard
|	**K**	39	103.3	42.3	**-0.0070**	0.043	620.0	mg/L	105	Standard
|	**Ca**	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
|	**Fe**	54	461.3	2.2	**-0.0129**	0.002	17.9	mg/L	483	Standard
|	**Fe**	57	2068.5	4.9	**0.0000**	0.001	3032.4	mg/L	2095	Standard
⌊>	**Sc-1**	45	289842.7	0.2				mg/L	272955	Standard
	Cl	35	6.7	22.9				ug/L	9	Standard
	Kr	83	38.8	8.9				ug/L	39	Standard
	Br	81	788.4	2.6				ug/L	644	Standard
	P	31	297.5	8.3				ug/L	324	Standard
	S	34	5204.2	1.3				ug/L	5485	Standard
	Sr	88	36.7	75.1				ug/L	28	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		104.178	
|	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	106.919
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.465
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: LCSW 79 WG403245-03
Sample Date/Time: Thursday, July 19, 2012 15:51:07
Number of Replicates: 3
Autosampler Position: 221
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	8037.1	1.8	**61.5135**	58.648	95.3	ug/L	6820	Standard
	Be	9	35977.7	0.6	**23.8308**	0.599	2.5	ug/L	3	Standard
	Al	27	303194.5	2.2	**24.4517**	1.066	4.4	ug/L	4266	Standard
>	**Sc**	45	312601.1	2.1				ug/L	272955	Standard
	Ti	47	83.7	19.4	**0.0257**	0.016	60.7	ug/L	51	Standard
	V	51	222027.5	0.6	**24.5196**	0.075	0.3	ug/L	2088	Standard
	Cr	52	188510.1	0.4	**24.7778**	0.102	0.4	ug/L	6617	Standard
	Cr	53	30821.3	2.8	**25.0343**	0.514	2.1	ug/L	166	Standard
	Mn	55	338584.2	1.1	**26.0509**	0.294	1.1	ug/L	940	Standard
	Co	59	224661.8	0.8	**25.3472**	0.031	0.1	ug/L	76	Standard
	Ni	60	52178.7	1.2	**25.1970**	0.207	0.8	ug/L	52	Standard
	Cu	65	49855.6	0.3	**25.6049**	0.272	1.1	ug/L	68	Standard
	Zn	66	23122.0	1.4	**25.1679**	0.207	0.8	ug/L	104	Standard
>	**Ge**	72	248671.8	0.8				ug/L	221790	Standard
	As	75	22405.3	0.9	**24.0843**	0.376	1.6	ug/L	-133	Standard
	Se	82	2202.7	2.1	**23.5199**	0.681	2.9	ug/L	18	Standard
	Se-1	77	1573.1	0.4	**23.3335**	0.236	1.0	ug/L	70	Standard
>	**Ga**	71	523.3	12.5				mg/L	477	Standard
	Rb	85	36.7	55.1				ug/L	23	Standard
	Y	89	228884.5	1.6				ug/L	197249	Standard
>	**Rh**	103	370.0	9.7				ug/L	295	Standard
	Mo	98	39.2	23.8	**0.0052**	0.003	55.8	ug/L	13	Standard
	Ag	107	193979.2	0.4	**27.6610**	0.455	1.6	ug/L	64	Standard
	Cd	111	92674.1	0.8	**25.0228**	0.135	0.5	mg/L	53	Standard
	Cd	114	249813.7	0.2	**23.9888**	0.261	1.1	ug/L	150	Standard
>	**In**	115	748416.5	1.2				ug/L	644840	Standard
	Sn	118	690.0	5.3	**-0.0121**	0.002	17.4	ug/L	487	Standard
	Sb	123	237440.2	0.7	**23.7446**	0.317	1.3	ug/L	126	Standard
	Ba	135	105059.0	1.0	**23.8608**	0.094	0.4	ug/L	25	Standard
	Ce	140	93.7	3.4				ug/L	22	Standard
>	**Tb**	159	1050807.0	1.0				ug/L	958910	Standard
	Ho	165	19.0	13.9				ug/L	14	Standard
	Tl	203	400354.3	0.9	**24.7618**	0.303	1.2	ug/L	10	Standard
	Tl	205	927524.9	0.6	**24.4933**	0.141	0.6	ug/L	27	Standard
	Pb	206	310217.8	1.1	**24.7823**	0.440	1.8	ug/L	319	Standard
	Pb	207	263258.0	1.4	**25.0876**	0.164	0.7	ug/L	287	Standard
	Pb	208	1224419.8	0.2	**24.9070**	0.224	0.9	ug/L	1244	Standard
	U	238	367379.6	0.2	**24.8811**	0.312	1.3	ug/L	5	Standard
>	**Bi**	209	543389.7	1.0				ug/L	497973	Standard

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Na	23	1553.4	5.7	**0.0531**	0.005	9.8	mg/L	237	Standard
Mg	24	10984.0	3.4	**0.0177**	0.001	5.5	mg/L	60	Standard
K	39	128.3	12.5	**0.0086**	0.016	190.9	mg/L	105	Standard
Ca	43	6.7	173.2	**-3.3003**	5.681	172.1	mg/L	7	Standard
Fe	54	674.3	9.5	**0.0283**	0.017	61.1	mg/L	483	Standard
Fe	57	2498.5	3.2	**0.0037**	0.002	42.4	mg/L	2095	Standard
Sc-1	45	312601.1	2.1				mg/L	272955	Standard
Cl	35	8.0	25.0				ug/L	9	Standard
Kr	83	49.2	9.2				ug/L	39	Standard
Br	81	925.0	7.2				ug/L	644	Standard
P	31	429.2	7.3				ug/L	324	Standard
S	34	5300.1	0.3				ug/L	5485	Standard
Sr	88	36.7	47.9				ug/L	28	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		112.120	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: LCSW 79 WG403245-03
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	Cd	111	
	Cd	114	
>	In	115	116.062
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	109.120
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 79 WG403245-03
Report Date/Time: Thursday, July 19, 2012 15:53:38
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Method 6020 - Summary Report

Sample ID: L1207035301 WG403245-01
Sample Date/Time: Thursday, July 19, 2012 15:54:17
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	40931.9	1.2	**7932.8473**	170.421	2.1	ug/L	6820	Standard
	Be	9	13.3	86.6	**0.0068**	0.008	119.9	ug/L	3	Standard
	Al	27	557021.4	2.5	**48.2249**	1.051	2.2	ug/L	4266	Standard
>	**Sc**	45	293767.3	0.7				ug/L	272955	Standard
	Ti	47	501.3	8.4	**0.4629**	0.027	5.8	ug/L	51	Standard
	V	51	12069.7	1.6	**1.2050**	0.026	2.1	ug/L	2088	Standard
	Cr	52	8048.1	3.1	**0.1704**	0.012	7.0	ug/L	6617	Standard
	Cr	53	361.7	4.9	**0.1826**	0.026	14.4	ug/L	166	Standard
	Mn	55	1194214.2	1.5	**100.8941**	1.912	1.9	ug/L	940	Standard
	Co	59	3272.0	0.8	**0.3919**	0.010	2.5	ug/L	76	Standard
	Ni	60	2153.5	2.1	**1.1111**	0.018	1.6	ug/L	52	Standard
	Cu	65	609.0	5.4	**0.2934**	0.008	2.8	ug/L	68	Standard
	Zn	66	3320.0	0.5	**3.8143**	0.143	3.8	ug/L	104	Standard
>	**Ge**	72	227147.5	3.2				ug/L	221790	Standard
	As	75	4551.2	1.1	**5.4986**	0.114	2.1	ug/L	-133	Standard
	Se	82	53.1	4.4	**0.4322**	0.044	10.2	ug/L	18	Standard
	Se-1	77	73.0	9.0	**-0.1816**	0.154	84.9	ug/L	70	Standard
>	**Ga**	71	1258.4	12.3				mg/L	477	Standard
	Rb	85	6539.7	2.3				ug/L	23	Standard
	Y	89	209655.8	1.6				ug/L	197249	Standard
>	**Rh**	103	383.3	21.9				ug/L	295	Standard
	Mo	98	6443.3	2.1	**2.0490**	0.032	1.6	ug/L	13	Standard
	Ag	107	203.7	14.0	**0.0292**	0.004	14.6	ug/L	64	Standard
	Cd	111	90.2	5.3	**0.0045**	0.002	33.4	mg/L	53	Standard
	Cd	114	273.0	16.0	**0.0093**	0.004	47.4	ug/L	150	Standard
>	**In**	115	690052.6	0.6				ug/L	644840	Standard
	Sn	118	584.0	2.1	**-0.0152**	0.001	3.5	ug/L	487	Standard
	Sb	123	5480.6	1.8	**0.5924**	0.008	1.3	ug/L	126	Standard
	Ba	135	291758.7	0.7	**71.8899**	0.423	0.6	ug/L	25	Standard
	Ce	140	5032.5	1.9				ug/L	22	Standard
>	**Tb**	159	990010.5	2.2				ug/L	958910	Standard
	Ho	165	157.0	10.3				ug/L	14	Standard
	Tl	203	163.7	8.9	**0.0092**	0.001	9.8	ug/L	10	Standard
	Tl	205	365.3	5.1	**0.0089**	0.000	5.3	ug/L	27	Standard
	Pb	206	5901.5	0.4	**0.4833**	0.004	0.7	ug/L	319	Standard
	Pb	207	4905.1	1.0	**0.4743**	0.001	0.2	ug/L	287	Standard
	Pb	208	22769.0	1.0	**0.4724**	0.001	0.3	ug/L	1244	Standard
	U	238	4198.6	1.2	**0.3095**	0.004	1.4	ug/L	5	Standard
>	**Bi**	209	500153.4	0.9				ug/L	497973	Standard

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Na	23	100814.3	0.8	**5.5122**	0.038	0.7	mg/L	237	Standard
Mg	24	1188211.5	1.1	**2.0450**	0.009	0.4	mg/L	60	Standard
K	39	1056.7	3.4	**0.9166**	0.029	3.1	mg/L	105	Standard
Ca	43	35.0	51.5	**11.9364**	9.433	79.0	mg/L	7	Standard
Fe	54	813.9	2.8	**0.0726**	0.006	8.5	mg/L	483	Standard
Fe	57	11636.1	0.5	**0.1380**	0.002	1.3	mg/L	2095	Standard
Sc-1	45	293767.3	0.7				mg/L	272955	Standard
Cl	35	9.7	33.3				ug/L	9	Standard
Kr	83	43.1	5.1				ug/L	39	Standard
Br	81	3619.6	6.5				ug/L	644	Standard
P	31	551.7	9.0				ug/L	324	Standard
S	34	7798.7	2.2				ug/L	5485	Standard
Sr	88	288.3	20.7				ug/L	28	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		102.416	
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	107.011
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	100.438
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207035301S WG403245-04
Sample Date/Time: Thursday, July 19, 2012 15:57:26
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	42060.0	1.0	**8309.1982**	144.951	1.7	ug/L	6820	Standard
	Be	9	35832.3	2.0	**25.5377**	0.938	3.7	ug/L	3	Standard
	Al	27	590149.8	2.5	**51.6926**	0.895	1.7	ug/L	4266	Standard
>	**Sc**	45	290570.6	2.1				ug/L	272955	Standard
	Ti	47	380.3	8.0	**0.3435**	0.035	10.2	ug/L	51	Standard
	V	51	215561.5	0.9	**26.3816**	0.313	1.2	ug/L	2088	Standard
	Cr	52	174720.7	0.9	**25.4574**	0.252	1.0	ug/L	6617	Standard
	Cr	53	28589.4	0.7	**25.7205**	0.066	0.3	ug/L	166	Standard
	Mn	55	1519459.6	1.6	**129.8215**	1.906	1.5	ug/L	940	Standard
	Co	59	209090.9	0.9	**26.1229**	0.131	0.5	ug/L	76	Standard
	Ni	60	48345.3	0.4	**25.8541**	0.322	1.2	ug/L	52	Standard
	Cu	65	44494.2	0.7	**25.3022**	0.053	0.2	ug/L	68	Standard
	Zn	66	23426.4	0.1	**28.2590**	0.225	0.8	ug/L	104	Standard
>	**Ge**	72	224570.8	0.9				ug/L	221790	Standard
	As	75	26513.4	0.4	**31.5018**	0.272	0.9	ug/L	-133	Standard
	Se	82	2214.1	0.5	**26.1986**	0.346	1.3	ug/L	18	Standard
	Se-1	77	1527.4	3.3	**25.1952**	0.857	3.4	ug/L	70	Standard
>	**Ga**	71	1223.4	9.7				mg/L	477	Standard
	Rb	85	6419.7	1.2				ug/L	23	Standard
	Y	89	202124.8	2.4				ug/L	197249	Standard
>	**Rh**	103	363.3	9.4				ug/L	295	Standard
	Mo	98	6535.7	1.3	**2.1306**	0.047	2.2	ug/L	13	Standard
	Ag	107	175345.8	0.4	**27.7898**	0.371	1.3	ug/L	64	Standard
	Cd	111	86867.0	0.5	**26.0705**	0.209	0.8	mg/L	53	Standard
	Cd	114	238275.3	1.1	**25.4337**	0.531	2.1	ug/L	150	Standard
>	**In**	115	673355.8	1.0				ug/L	644840	Standard
	Sn	118	598.3	6.0	**-0.0134**	0.002	15.9	ug/L	487	Standard
	Sb	123	233719.5	0.8	**25.9781**	0.401	1.5	ug/L	126	Standard
	Ba	135	398105.3	1.0	**100.5432**	1.981	2.0	ug/L	25	Standard
	Ce	140	1472.7	2.2				ug/L	22	Standard
>	**Tb**	159	995318.7	0.3				ug/L	958910	Standard
	Ho	165	105.0	7.6				ug/L	14	Standard
	Tl	203	375944.1	1.3	**25.5749**	0.749	2.9	ug/L	10	Standard
	Tl	205	873179.2	0.1	**25.3593**	0.458	1.8	ug/L	27	Standard
	Pb	206	289999.1	0.7	**25.4765**	0.339	1.3	ug/L	319	Standard
	Pb	207	245421.1	0.7	**25.7216**	0.286	1.1	ug/L	287	Standard
	Pb	208	1137897.1	0.5	**25.4552**	0.318	1.2	ug/L	1244	Standard
	U	238	353910.4	0.7	**26.3591**	0.488	1.9	ug/L	5	Standard
>	**Bi**	209	494174.5	1.8				ug/L	497973	Standard

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	Na	23	100883.1	0.1	**5.5786**	0.117	2.1	mg/L	237	Standard
	Mg	24	1192523.4	0.9	**2.0756**	0.042	2.0	mg/L	60	Standard
	K	39	1010.0	10.0	**0.8831**	0.111	12.6	mg/L	105	Standard
	Ca	43	51.7	29.6	**21.1300**	8.340	39.5	mg/L	7	Standard
	Fe	54	557.3	9.0	**0.0106**	0.010	91.3	mg/L	483	Standard
	Fe	57	7221.7	1.6	**0.0754**	0.004	4.7	mg/L	2095	Standard
>	**Sc-1**	45	290570.6	2.1				mg/L	272955	Standard
	Cl	35	11.7	24.7				ug/L	9	Standard
	Kr	83	39.6	2.7				ug/L	39	Standard
	Br	81	2698.6	4.3				ug/L	644	Standard
	P	31	572.5	2.7				ug/L	324	Standard
	S	34	7744.5	1.9				ug/L	5485	Standard
	Sr	88	301.7	9.1				ug/L	28	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		101.254	
	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	104.422
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.237
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1207035301SD WG403245-05
Sample Date/Time: Thursday, July 19, 2012 16:00:35
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 1
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	40647.8	3.8	**8008.1778**	176.625	2.2	ug/L	6820	Standard
	Be	9	34303.8	2.9	**24.5495**	1.090	4.4	ug/L	3	Standard
	Al	27	536176.3	2.1	**47.1256**	1.239	2.6	ug/L	4266	Standard
>	**Sc**	45	289393.6	2.4				ug/L	272955	Standard
	Ti	47	366.3	5.9	**0.3291**	0.024	7.2	ug/L	51	Standard
	V	51	210468.4	2.3	**25.7714**	0.457	1.8	ug/L	2088	Standard
	Cr	52	170631.5	1.4	**24.8581**	0.233	0.9	ug/L	6617	Standard
	Cr	53	27273.7	1.3	**24.5503**	0.165	0.7	ug/L	166	Standard
	Mn	55	1478618.6	1.3	**126.4334**	0.963	0.8	ug/L	940	Standard
	Co	59	204531.0	2.3	**25.5732**	0.479	1.9	ug/L	76	Standard
	Ni	60	47812.0	0.4	**25.5888**	0.094	0.4	ug/L	52	Standard
	Cu	65	43657.5	1.7	**24.8467**	0.417	1.7	ug/L	68	Standard
	Zn	66	22424.6	1.0	**27.0658**	0.313	1.2	ug/L	104	Standard
>	**Ge**	72	224379.6	0.6				ug/L	221790	Standard
	As	75	25663.5	0.1	**30.5233**	0.230	0.8	ug/L	-133	Standard
	Se	82	2168.5	0.9	**25.6748**	0.130	0.5	ug/L	18	Standard
	Se-1	77	1454.7	1.2	**23.9504**	0.420	1.8	ug/L	70	Standard
>	**Ga**	71	1170.0	0.9				mg/L	477	Standard
	Rb	85	6299.6	4.7				ug/L	23	Standard
	Y	89	203933.7	2.2				ug/L	197249	Standard
>	**Rh**	103	346.7	8.7				ug/L	295	Standard
	Mo	98	6382.3	1.0	**2.0576**	0.028	1.3	ug/L	13	Standard
	Ag	107	166327.8	1.5	**26.0736**	0.369	1.4	ug/L	64	Standard
	Cd	111	84643.6	1.5	**25.1281**	0.459	1.8	mg/L	53	Standard
	Cd	114	232582.7	0.4	**24.5545**	0.192	0.8	ug/L	150	Standard
>	**In**	115	680707.5	0.5				ug/L	644840	Standard
	Sn	118	600.7	4.9	**-0.0137**	0.002	12.5	ug/L	487	Standard
	Sb	123	225989.2	0.9	**24.8459**	0.290	1.2	ug/L	126	Standard
	Ba	135	383167.6	1.2	**95.7153**	1.355	1.4	ug/L	25	Standard
	Ce	140	768.0	3.5				ug/L	22	Standard
>	**Tb**	159	984095.6	0.3				ug/L	958910	Standard
	Ho	165	91.3	5.2				ug/L	14	Standard
	Tl	203	368485.4	1.3	**24.8759**	0.358	1.4	ug/L	10	Standard
	Tl	205	843853.2	0.6	**24.3233**	0.244	1.0	ug/L	27	Standard
	Pb	206	283749.1	0.8	**24.7408**	0.264	1.1	ug/L	319	Standard
	Pb	207	240234.5	1.6	**24.9891**	0.371	1.5	ug/L	287	Standard
	Pb	208	1115229.9	1.1	**24.7611**	0.297	1.2	ug/L	1244	Standard
	U	238	348236.3	1.0	**25.7420**	0.341	1.3	ug/L	5	Standard
>	**Bi**	209	497824.7	0.6				ug/L	497973	Standard

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Na	23	98505.9	1.2	**5.4683**	0.081	1.5	mg/L	237	Standard
Mg	24	1159826.5	1.7	**2.0267**	0.031	1.5	mg/L	60	Standard
K	39	958.4	4.2	**0.8364**	0.062	7.5	mg/L	105	Standard
Ca	43	45.0	29.4	**17.7537**	7.614	42.9	mg/L	7	Standard
Fe	54	520.8	9.0	**0.0023**	0.014	597.5	mg/L	483	Standard
Fe	57	6281.3	2.1	**0.0620**	0.000	0.6	mg/L	2095	Standard
Sc-1	45	289393.6	2.4				mg/L	272955	Standard
Cl	35	7.0					ug/L	9	Standard
Kr	83	40.6	4.5				ug/L	39	Standard
Br	81	2407.7	3.5				ug/L	644	Standard
P	31	537.5	4.1				ug/L	324	Standard
S	34	7513.5	3.0				ug/L	5485	Standard
Sr	88	263.3	10.8				ug/L	28	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		101.168	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207035301SD WG403245-05
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	Cd	111	
	Cd	114	
>	In	115	105.562
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.970
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1207035301SD WG403245-05
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Method 6020 - Summary Report

Sample ID: L1207028601
Sample Date/Time: Thursday, July 19, 2012 16:03:45
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	60738.2	1.9	**12004.2447**	581.784	4.8	ug/L	6820	Standard
	Be	9	55.0	32.8	**0.0347**	0.013	38.1	ug/L	3	Standard
	Al	27	4168166.2	2.4	**348.7268**	15.838	4.5	ug/L	4266	Standard
>	**Sc**	45	306787.7	2.5				ug/L	272955	Standard
	Ti	47	7217.1	1.3	**7.4562**	0.054	0.7	ug/L	51	Standard
	V	51	9992.8	1.1	**0.9626**	0.008	0.9	ug/L	2088	Standard
	Cr	52	35980.0	0.3	**4.4113**	0.060	1.4	ug/L	6617	Standard
	Cr	53	4765.8	4.0	**4.1625**	0.152	3.7	ug/L	166	Standard
	Mn	55	889870.0	1.8	**75.8745**	1.379	1.8	ug/L	940	Standard
	Co	59	7149.0	1.3	**0.8795**	0.002	0.2	ug/L	76	Standard
	Ni	60	9218.8	1.1	**4.8987**	0.064	1.3	ug/L	52	Standard
	Cu	65	1921.1	0.9	**1.0434**	0.009	0.9	ug/L	68	Standard
	Zn	66	13841.0	0.4	**16.5999**	0.188	1.1	ug/L	104	Standard
>	**Ge**	72	224929.1	1.4				ug/L	221790	Standard
	As	75	301.8	8.4	**0.5367**	0.025	4.7	ug/L	-133	Standard
	Se	82	41.9	26.2	**0.3024**	0.124	41.2	ug/L	18	Standard
	Se-1	77	79.7	12.6	**-0.0548**	0.193	352.0	ug/L	70	Standard
>	**Ga**	71	980.0	3.7				mg/L	477	Standard
	Rb	85	18109.2	2.0				ug/L	23	Standard
	Y	89	215687.8	0.8				ug/L	197249	Standard
>	**Rh**	103	351.7	14.0				ug/L	295	Standard
	Mo	98	7452.7	3.0	**2.4213**	0.019	0.8	ug/L	13	Standard
	Ag	107	363.0	76.3	**0.0545**	0.042	77.1	ug/L	64	Standard
	Cd	111	189.1	60.9	**0.0342**	0.033	95.9	mg/L	53	Standard
	Cd	114	545.2	51.3	**0.0385**	0.028	73.3	ug/L	150	Standard
>	**In**	115	675692.1	2.2				ug/L	644840	Standard
	Sn	118	2541.2	10.1	**0.1028**	0.012	11.6	ug/L	487	Standard
	Sb	123	1558.7	11.5	**0.1704**	0.016	9.6	ug/L	126	Standard
	Ba	135	66423.3	0.3	**16.7103**	0.311	1.9	ug/L	25	Standard
	Ce	140	87262.6	0.4				ug/L	22	Standard
>	**Tb**	159	988123.6	0.6				ug/L	958910	Standard
	Ho	165	1174.4	3.4				ug/L	14	Standard
	Tl	203	545.0	31.6	**0.0350**	0.011	32.4	ug/L	10	Standard
	Tl	205	1281.4	29.3	**0.0353**	0.011	29.8	ug/L	27	Standard
	Pb	206	9536.3	1.8	**0.8048**	0.009	1.1	ug/L	319	Standard
	Pb	207	7772.3	2.2	**0.7771**	0.012	1.5	ug/L	287	Standard
	Pb	208	36670.4	1.9	**0.7856**	0.010	1.2	ug/L	1244	Standard
	U	238	27174.4	2.0	**2.0137**	0.037	1.8	ug/L	5	Standard
>	**Bi**	209	496719.7	0.7				ug/L	497973	Standard

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Na	23	77839.5	2.8	**4.0699**	0.149	3.7	mg/L	237	Standard
Mg	24	10890690.5	3.3	**17.9465**	0.147	0.8	mg/L	60	Standard
K	39	1506.7	5.2	**1.2908**	0.042	3.2	mg/L	105	Standard
Ca	43	70.0	18.9	**29.0362**	7.280	25.1	mg/L	7	Standard
Fe	54	4030.5	0.5	**0.8247**	0.024	2.9	mg/L	483	Standard
Fe	57	73395.8	2.7	**0.9869**	0.045	4.6	mg/L	2095	Standard
> **Sc-1**	45	306787.7	2.5				mg/L	272955	Standard
Cl	35	6.3	48.2				ug/L	9	Standard
Kr	83	39.7	9.5				ug/L	39	Standard
Br	81	1278.4	8.2				ug/L	644	Standard
P	31	603.3	4.0				ug/L	324	Standard
S	34	23942.2	2.6				ug/L	5485	Standard
Sr	88	155.0	14.8				ug/L	28	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		101.415	
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	104.784
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.748
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028602
Sample Date/Time: Thursday, July 19, 2012 16:06:56
Number of Replicates: 3
Autosampler Position: 226
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	55611.9	2.1	**11616.4599**	330.930	2.8	ug/L	6820	Standard
	Be	9	10.0	50.0	**0.0045**	0.004	77.7	ug/L	3	Standard
	Al	27	233317.6	3.6	**20.2714**	0.832	4.1	ug/L	4266	Standard
>	**Sc**	45	288889.9	0.8				ug/L	272955	Standard
	Ti	47	1118.7	44.2	**1.1621**	0.544	46.8	ug/L	51	Standard
	V	51	4125.5	2.2	**0.2600**	0.012	4.4	ug/L	2088	Standard
	Cr	52	10281.8	1.5	**0.5867**	0.034	5.8	ug/L	6617	Standard
	Cr	53	484.2	7.0	**0.3144**	0.032	10.1	ug/L	166	Standard
	Mn	55	348181.8	1.1	**30.8937**	0.376	1.2	ug/L	940	Standard
	Co	59	1149.0	4.2	**0.1368**	0.007	5.2	ug/L	76	Standard
	Ni	60	3689.4	0.7	**2.0269**	0.019	0.9	ug/L	52	Standard
	Cu	65	639.3	5.8	**0.3298**	0.025	7.4	ug/L	68	Standard
	Zn	66	1761.4	2.8	**2.0526**	0.052	2.6	ug/L	104	Standard
>	**Ge**	72	215754.3	0.7				ug/L	221790	Standard
	As	75	32.7	23.0	**0.2212**	0.009	4.1	ug/L	-133	Standard
	Se	82	41.3	10.0	**0.3182**	0.054	16.9	ug/L	18	Standard
	Se-1	77	77.3	17.7	**-0.0407**	0.238	585.6	ug/L	70	Standard
>	**Ga**	71	495.0	7.3				mg/L	477	Standard
	Rb	85	7855.4	1.0				ug/L	23	Standard
	Y	89	197674.5	0.4				ug/L	197249	Standard
>	**Rh**	103	280.0	6.4				ug/L	295	Standard
	Mo	98	7046.2	0.8	**2.3447**	0.021	0.9	ug/L	13	Standard
	Ag	107	64.0	8.3	**0.0081**	0.001	10.6	ug/L	64	Standard
	Cd	111	73.8	12.7	**0.0007**	0.003	404.1	mg/L	53	Standard
	Cd	114	243.1	2.4	**0.0073**	0.001	8.3	ug/L	150	Standard
>	**In**	115	659753.0	0.2				ug/L	644840	Standard
	Sn	118	767.7	2.0	**-0.0023**	0.001	43.7	ug/L	487	Standard
	Sb	123	905.3	2.1	**0.1007**	0.002	2.2	ug/L	126	Standard
	Ba	135	54484.5	1.0	**14.0325**	0.158	1.1	ug/L	25	Standard
	Ce	140	3564.4	1.0				ug/L	22	Standard
>	**Tb**	159	974453.7	0.8				ug/L	958910	Standard
	Ho	165	75.0	10.7				ug/L	14	Standard
	Tl	203	284.3	6.3	**0.0179**	0.001	7.6	ug/L	10	Standard
	Tl	205	660.3	1.7	**0.0179**	0.000	1.8	ug/L	27	Standard
	Pb	206	694.7	3.3	**0.0327**	0.002	4.8	ug/L	319	Standard
	Pb	207	547.0	4.5	**0.0242**	0.003	11.6	ug/L	287	Standard
	Pb	208	2638.4	0.6	**0.0287**	0.000	0.7	ug/L	1244	Standard
	U	238	26765.3	2.1	**2.0277**	0.035	1.7	ug/L	5	Standard
>	**Bi**	209	485837.0	0.8				ug/L	497973	Standard

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Na	23	78720.7	1.8	**4.3710**	0.044	1.0	mg/L	237	Standard
Mg	24	10132381.6	0.8	**17.7338**	0.069	0.4	mg/L	60	Standard
K	39	1461.7	3.1	**1.3340**	0.055	4.2	mg/L	105	Standard
Ca	43	65.0	33.5	**28.4040**	11.428	40.2	mg/L	7	Standard
Fe	54	575.2	3.1	**0.0161**	0.004	26.4	mg/L	483	Standard
Fe	57	12802.1	1.3	**0.1580**	0.004	2.6	mg/L	2095	Standard
Sc-1	45	288889.9	0.8				mg/L	272955	Standard
Cl	35	5.0	52.9				ug/L	9	Standard
Kr	83	36.1	3.5				ug/L	39	Standard
Br	81	1634.3	9.4				ug/L	644	Standard
P	31	368.3	4.8				ug/L	324	Standard
S	34	24498.1	0.6				ug/L	5485	Standard
Sr	88	141.7	37.4				ug/L	28	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		97.279	
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	102.313
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	97.563
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028603
Sample Date/Time: Thursday, July 19, 2012 16:10:05
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	74392.4	4.2	**14106.6901**	582.131	4.1	ug/L	6820	Standard
	Be	9	148.3	5.1	**0.0917**	0.004	4.2	ug/L	3	Standard
	Al	27	16503698.1	1.6	**1301.4223**	14.944	1.1	ug/L	4266	Standard
>	**Sc**	45	325610.5	1.7				ug/L	272955	Standard
	Ti	47	23845.1	0.5	**26.2303**	0.199	0.8	ug/L	51	Standard
	V	51	26829.3	1.4	**3.2373**	0.009	0.3	ug/L	2088	Standard
	Cr	52	32404.0	2.1	**4.1601**	0.058	1.4	ug/L	6617	Standard
	Cr	53	4521.5	2.0	**4.1849**	0.111	2.7	ug/L	166	Standard
	Mn	55	9751786.8	1.2	**881.8865**	20.143	2.3	ug/L	940	Standard
	Co	59	20709.5	0.4	**2.7254**	0.040	1.5	ug/L	76	Standard
	Ni	60	19483.9	2.0	**11.0019**	0.099	0.9	ug/L	52	Standard
	Cu	65	4890.5	1.3	**2.8979**	0.056	1.9	ug/L	68	Standard
	Zn	66	40128.4	0.8	**51.3361**	0.403	0.8	ug/L	104	Standard
>	**Ge**	72	212332.2	1.1				ug/L	221790	Standard
	As	75	981.9	0.2	**1.4078**	0.016	1.1	ug/L	-133	Standard
	Se	82	106.4	5.4	**1.1461**	0.073	6.3	ug/L	18	Standard
	Se-1	77	96.0	11.5	**0.3288**	0.223	67.8	ug/L	70	Standard
>	**Ga**	71	2171.8	7.5				mg/L	477	Standard
	Rb	85	46609.9	2.4				ug/L	23	Standard
	Y	89	223427.2	1.6				ug/L	197249	Standard
>	**Rh**	103	340.0	4.4				ug/L	295	Standard
	Mo	98	2706.3	3.1	**0.9082**	0.031	3.4	ug/L	13	Standard
	Ag	107	105.3	14.7	**0.0150**	0.002	16.2	ug/L	64	Standard
	Cd	111	197.8	2.5	**0.0395**	0.002	5.2	mg/L	53	Standard
	Cd	114	545.5	0.6	**0.0411**	0.001	2.0	ug/L	150	Standard
>	**In**	115	651434.5	0.9				ug/L	644840	Standard
	Sn	118	3759.5	1.0	**0.1845**	0.004	2.3	ug/L	487	Standard
	Sb	123	631.7	2.5	**0.0706**	0.002	3.4	ug/L	126	Standard
	Ba	135	122742.5	0.2	**32.0316**	0.218	0.7	ug/L	25	Standard
	Ce	140	278865.3	0.5				ug/L	22	Standard
>	**Tb**	159	983048.3	0.4				ug/L	958910	Standard
	Ho	165	3754.1	0.9				ug/L	14	Standard
	Tl	203	1138.7	3.4	**0.0788**	0.003	3.7	ug/L	10	Standard
	Tl	205	2676.9	1.6	**0.0793**	0.002	2.0	ug/L	27	Standard
	Pb	206	24715.8	1.0	**2.2326**	0.029	1.3	ug/L	319	Standard
	Pb	207	19964.1	1.3	**2.1459**	0.017	0.8	ug/L	287	Standard
	Pb	208	94385.4	0.6	**2.1684**	0.006	0.3	ug/L	1244	Standard
	U	238	12485.5	1.3	**0.9681**	0.009	1.0	ug/L	5	Standard
>	**Bi**	209	474833.8	0.5				ug/L	497973	Standard

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Na	23	134578.4	0.9	**6.6457**	0.146	2.2	mg/L	237	Standard
Mg	24	22993620.8	1.1	**35.7099**	0.542	1.5	mg/L	60	Standard
K	39	1268.4	2.2	**1.0022**	0.042	4.2	mg/L	105	Standard
Ca	43	173.3	14.5	**76.2800**	11.333	14.9	mg/L	7	Standard
Fe	54	11391.6	2.7	**2.4089**	0.081	3.4	mg/L	483	Standard
Fe	57	211115.7	1.1	**2.7250**	0.033	1.2	mg/L	2095	Standard
Sc-1	45	325610.5	1.7				mg/L	272955	Standard
Cl	35	20.7	14.8				ug/L	9	Standard
Kr	83	45.3	12.6				ug/L	39	Standard
Br	81	7112.5	6.8				ug/L	644	Standard
P	31	1146.7	2.2				ug/L	324	Standard
S	34	53071.1	0.4				ug/L	5485	Standard
Sr	88	228.3	7.7				ug/L	28	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		95.736	
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	101.023
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	95.353
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028603PS WG403332-03
Sample Date/Time: Thursday, July 19, 2012 16:13:14
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	78920.0	1.6	**14154.2412**	404.384	2.9	ug/L	6820	Standard
	Be	9	70979.3	2.8	**42.6503**	0.865	2.0	ug/L	3	Standard
	Al	27	18665343.6	0.7	**1391.4432**	23.554	1.7	ug/L	4266	Standard
>	**Sc**	45	344465.3	1.2				ug/L	272955	Standard
	Ti	47	25341.5	0.8	**26.6449**	0.360	1.4	ug/L	51	Standard
	V	51	422718.9	1.2	**52.5662**	1.024	1.9	ug/L	2088	Standard
	Cr	52	351103.2	0.5	**52.7827**	0.516	1.0	ug/L	6617	Standard
	Cr	53	58434.1	1.5	**53.2957**	1.035	1.9	ug/L	166	Standard
	Mn	55	11233168.2	1.3	**970.7695**	6.946	0.7	ug/L	940	Standard
	Co	59	421016.9	0.1	**53.1871**	0.454	0.9	ug/L	76	Standard
	Ni	60	107503.4	0.9	**58.1524**	0.916	1.6	ug/L	52	Standard
	Cu	65	85182.8	0.6	**49.0157**	0.608	1.2	ug/L	68	Standard
	Zn	66	78464.6	0.5	**96.0885**	0.330	0.3	ug/L	104	Standard
>	**Ge**	72	222153.8	0.7				ug/L	221790	Standard
	As	75	42372.2	0.7	**50.7793**	0.351	0.7	ug/L	-133	Standard
	Se	82	4347.7	1.5	**52.1982**	1.147	2.2	ug/L	18	Standard
	Se-1	77	2887.9	1.7	**49.4760**	1.207	2.4	ug/L	70	Standard
>	**Ga**	71	2476.9	1.0				mg/L	477	Standard
	Rb	85	50236.5	3.1				ug/L	23	Standard
	Y	89	235621.9	2.4				ug/L	197249	Standard
>	**Rh**	103	385.0	8.1				ug/L	295	Standard
	Mo	98	3065.8	1.5	**0.9617**	0.027	2.8	ug/L	13	Standard
	Ag	107	336383.1	0.6	**51.4869**	0.812	1.6	ug/L	64	Standard
	Cd	111	167237.0	1.3	**48.4992**	1.391	2.9	mg/L	53	Standard
	Cd	114	447233.0	0.8	**46.1194**	1.070	2.3	ug/L	150	Standard
>	**In**	115	697306.9	1.7				ug/L	644840	Standard
	Sn	118	4484.3	1.4	**0.2113**	0.006	3.0	ug/L	487	Standard
	Sb	123	449290.4	0.5	**48.2320**	0.992	2.1	ug/L	126	Standard
	Ba	135	317366.9	0.8	**77.3940**	0.674	0.9	ug/L	25	Standard
	Ce	140	295327.5	0.5				ug/L	22	Standard
>	**Tb**	159	1034492.9	1.0				ug/L	958910	Standard
	Ho	165	4013.2	1.9				ug/L	14	Standard
	Tl	203	713676.3	0.8	**49.2068**	0.575	1.2	ug/L	10	Standard
	Tl	205	1644817.7	1.1	**48.4203**	0.555	1.1	ug/L	27	Standard
	Pb	206	565044.0	0.4	**50.3456**	0.149	0.3	ug/L	319	Standard
	Pb	207	480981.4	0.9	**51.1338**	0.606	1.2	ug/L	287	Standard
	Pb	208	2222240.8	0.6	**50.4228**	0.460	0.9	ug/L	1244	Standard
	U	238	726818.2	0.3	**54.8684**	0.096	0.2	ug/L	5	Standard
>	**Bi**	209	487446.5	0.3				ug/L	497973	Standard

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Na	23	139238.5	0.3	**6.4979**	0.067	1.0	mg/L	237	Standard
Mg	24	25033304.1	2.5	**36.7423**	0.638	1.7	mg/L	60	Standard
K	39	1331.7	2.9	**0.9937**	0.041	4.1	mg/L	105	Standard
Ca	43	153.3	23.6	**62.8729**	17.208	27.4	mg/L	7	Standard
Fe	54	12052.1	4.6	**2.4081**	0.094	3.9	mg/L	483	Standard
Fe	57	240658.2	1.7	**2.9383**	0.023	0.8	mg/L	2095	Standard
Sc-1	45	344465.3	1.2				mg/L	272955	Standard
Cl	35	29.3	10.4				ug/L	9	Standard
Kr	83	53.3	9.7				ug/L	39	Standard
Br	81	8198.1	5.4				ug/L	644	Standard
P	31	1240.1	1.2				ug/L	324	Standard
S	34	53964.3	0.7				ug/L	5485	Standard
Sr	88	280.0	9.4				ug/L	28	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		100.164	
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	108.136
	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	97.886
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028603SDL WG403332-04
Sample Date/Time: Thursday, July 19, 2012 16:16:24
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	20018.2	3.0	**3465.0913**	102.495	3.0	ug/L	6820	Standard
	Be	9	55.0	24.1	**0.0400**	0.010	26.1	ug/L	3	Standard
	Al	27	3227225.4	0.6	**309.5368**	4.794	1.5	ug/L	4266	Standard
>	**Sc**	45	267414.6	1.6				ug/L	272955	Standard
	Ti	47	4490.0	4.0	**5.0557**	0.156	3.1	ug/L	51	Standard
	V	51	6881.7	1.2	**0.6582**	0.012	1.8	ug/L	2088	Standard
	Cr	52	11370.3	0.4	**0.8467**	0.019	2.2	ug/L	6617	Standard
	Cr	53	1060.0	0.2	**0.9058**	0.012	1.3	ug/L	166	Standard
	Mn	55	1821303.2	1.2	**169.9675**	2.677	1.6	ug/L	940	Standard
	Co	59	4084.2	1.4	**0.5449**	0.013	2.3	ug/L	76	Standard
	Ni	60	4019.9	1.9	**2.3209**	0.025	1.1	ug/L	52	Standard
	Cu	65	1087.0	2.0	**0.6268**	0.008	1.2	ug/L	68	Standard
	Zn	66	10259.5	1.4	**13.4257**	0.282	2.1	ug/L	104	Standard
>	**Ge**	72	205647.3	0.9				ug/L	221790	Standard
	As	75	74.5	51.5	**0.2773**	0.050	18.0	ug/L	-133	Standard
	Se	82	32.4	21.7	**0.2269**	0.093	41.0	ug/L	18	Standard
	Se-1	77	64.3	3.9	**-0.2185**	0.039	17.8	ug/L	70	Standard
>	**Ga**	71	725.0	4.3				mg/L	477	Standard
	Rb	85	8859.3	3.8				ug/L	23	Standard
	Y	89	198904.0	1.8				ug/L	197249	Standard
>	**Rh**	103	281.7	10.4				ug/L	295	Standard
	Mo	98	555.5	4.6	**0.1849**	0.008	4.2	ug/L	13	Standard
	Ag	107	169.3	15.4	**0.0260**	0.004	16.3	ug/L	64	Standard
	Cd	111	86.7	5.0	**0.0055**	0.001	21.9	mg/L	53	Standard
	Cd	114	254.7	6.1	**0.0095**	0.002	18.6	ug/L	150	Standard
>	**In**	115	639285.1	0.6				ug/L	644840	Standard
	Sn	118	1500.7	2.3	**0.0457**	0.002	4.2	ug/L	487	Standard
	Sb	123	818.7	19.0	**0.0938**	0.018	18.8	ug/L	126	Standard
	Ba	135	24024.0	1.7	**6.3790**	0.086	1.3	ug/L	25	Standard
	Ce	140	54015.4	0.5				ug/L	22	Standard
>	**Tb**	159	951778.8	1.1				ug/L	958910	Standard
	Ho	165	724.0	3.1				ug/L	14	Standard
	Tl	203	327.0	11.4	**0.0208**	0.002	11.9	ug/L	10	Standard
	Tl	205	788.0	11.7	**0.0216**	0.003	12.0	ug/L	27	Standard
	Pb	206	5309.9	0.5	**0.4441**	0.001	0.3	ug/L	319	Standard
	Pb	207	4336.0	1.5	**0.4272**	0.005	1.1	ug/L	287	Standard
	Pb	208	20461.7	0.4	**0.4333**	0.002	0.4	ug/L	1244	Standard
	U	238	2478.9	4.5	**0.1877**	0.008	4.1	ug/L	5	Standard
>	**Bi**	209	487289.3	0.5				ug/L	497973	Standard

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Na	23	67865.0	2.0	**4.0703**	0.128	3.2	mg/L	237	Standard
Mg	24	4641395.6	1.8	**8.7767**	0.182	2.1	mg/L	60	Standard
K	39	351.7	15.6	**0.2665**	0.061	22.8	mg/L	105	Standard
Ca	43	40.0	45.1	**16.6128**	10.104	60.8	mg/L	7	Standard
Fe	54	2643.1	4.5	**0.5884**	0.033	5.6	mg/L	483	Standard
Fe	57	39399.5	3.3	**0.5957**	0.012	2.0	mg/L	2095	Standard
Sc-1	45	267414.6	1.6				mg/L	272955	Standard
Cl	35	7.0	57.1				ug/L	9	Standard
Kr	83	41.8	4.9				ug/L	39	Standard
Br	81	1937.6	2.3				ug/L	644	Standard
P	31	436.7	10.1				ug/L	324	Standard
S	34	14706.3	1.5				ug/L	5485	Standard
Sr	88	55.0	55.3				ug/L	28	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		92.722	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207028603SDL WG403332-04
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	Cd	111	
	Cd	114	
>	In	115	99.138
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	97.855
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 16:19:35
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	6473.0	0.6	**-7.6452**	19.866	259.8	ug/L	6820	Standard
	Be	9	62788.2	2.5	**49.6343**	0.965	1.9	ug/L	3	Standard
	Al	27	496982.2	1.6	**48.2778**	0.938	1.9	ug/L	4266	Standard
>	**Sc**	45	261839.8	0.6				ug/L	272955	Standard
	Ti	47	88344.5	0.4	**99.3463**	1.178	1.2	ug/L	51	Standard
	V	51	371682.2	1.2	**49.3449**	0.983	2.0	ug/L	2088	Standard
	Cr	52	305915.8	1.4	**49.0464**	1.067	2.2	ug/L	6617	Standard
	Cr	53	50369.4	0.4	**49.0504**	0.493	1.0	ug/L	166	Standard
	Mn	55	556235.3	0.9	**51.2538**	0.826	1.6	ug/L	940	Standard
	Co	59	378742.1	0.7	**51.0991**	0.703	1.4	ug/L	76	Standard
	Ni	60	84771.9	1.4	**48.9655**	0.719	1.5	ug/L	52	Standard
	Cu	65	79406.2	0.8	**48.7943**	0.149	0.3	ug/L	68	Standard
	Zn	66	38015.6	1.1	**49.6396**	0.978	2.0	ug/L	104	Standard
>	**Ge**	72	208016.9	0.8				ug/L	221790	Standard
	As	75	38842.2	0.7	**49.7190**	0.704	1.4	ug/L	-133	Standard
	Se	82	3977.3	1.2	**50.9859**	0.450	0.9	ug/L	18	Standard
	Se-1	77	2696.2	2.1	**49.3249**	1.201	2.4	ug/L	70	Standard
>	**Ga**	71	451.7	15.7				mg/L	477	Standard
	Rb	85	661.7	5.5				ug/L	23	Standard
	Y	89	193552.0	1.8				ug/L	197249	Standard
>	**Rh**	103	330.0	11.8				ug/L	295	Standard
	Mo	98	280500.7	0.5	**96.8574**	0.367	0.4	ug/L	13	Standard
	Ag	107	312354.5	0.6	**52.2886**	0.117	0.2	ug/L	64	Standard
	Cd	111	159661.4	1.2	**50.6327**	0.294	0.6	mg/L	53	Standard
	Cd	114	439622.9	0.3	**49.5802**	0.227	0.5	ug/L	150	Standard
>	**In**	115	637466.9	0.7				ug/L	644840	Standard
	Sn	118	1033014.3	1.0	**65.6392**	0.742	1.1	ug/L	487	Standard
	Sb	123	423167.6	1.6	**49.6801**	0.593	1.2	ug/L	126	Standard
	Ba	135	181362.7	1.0	**48.3725**	0.648	1.3	ug/L	25	Standard
	Ce	140	752.0	8.3				ug/L	22	Standard
>	**Tb**	159	950075.1	0.5				ug/L	958910	Standard
	Ho	165	20.3	19.9				ug/L	14	Standard
	Tl	203	695291.4	0.1	**48.4313**	0.228	0.5	ug/L	10	Standard
	Tl	205	1601111.9	0.2	**47.6184**	0.232	0.5	ug/L	27	Standard
	Pb	206	541132.1	0.8	**48.7116**	0.638	1.3	ug/L	319	Standard
	Pb	207	461597.6	0.4	**49.5761**	0.344	0.7	ug/L	287	Standard
	Pb	208	2126881.5	0.4	**48.7541**	0.371	0.8	ug/L	1244	Standard
	U	238	661176.4	0.6	**50.4280**	0.590	1.2	ug/L	5	Standard
>	**Bi**	209	482489.0	0.6				ug/L	497973	Standard

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Na	23	107600.8	1.7	**6.6058**	0.092	1.4	mg/L	237	Standard
Mg	24	2448596.3	1.4	**4.7286**	0.096	2.0	mg/L	60	Standard
K	39	4369.0	3.9	**4.6483**	0.204	4.4	mg/L	105	Standard
Ca	43	10.0	100.0	**-0.6556**	5.917	902.4	mg/L	7	Standard
Fe	54	17577.6	4.2	**4.7402**	0.232	4.9	mg/L	483	Standard
Fe	57	296601.8	3.1	**4.7829**	0.141	3.0	mg/L	2095	Standard
Sc-1	45	261839.8	0.6				mg/L	272955	Standard
Cl	35	5.0	34.6				ug/L	9	Standard
Kr	83	39.7	12.4				ug/L	39	Standard
Br	81	709.2	9.6				ug/L	644	Standard
P	31	312.5	8.5				ug/L	324	Standard
S	34	5081.7	2.5				ug/L	5485	Standard
Sr	88	31.7	55.5				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	96.556		
Sc	45			
Ti	47	99.346		
V	51	98.690		
Cr	52	98.093		
Cr	53			
Mn	55	102.508		
Co	59	102.198		
Ni	60	97.931		
Cu	65	97.589		
Zn	66	99.279		
Ge	72		93.790	
As	75	99.438		
Se	82	101.972		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.857		
Ag	107	104.577		

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	Cd	111	101.265	
	Cd	114		
>	In	115		98.857
	Sn	118	131.278	
	Sb	123	99.360	
	Ba	135	96.745	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.863	
	Tl	205		
	Pb	206	97.423	
	Pb	207	99.152	
	Pb	208	97.508	
	U	238	100.856	
>	Bi	209		96.891
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
Report Date/Time: Thursday, July 19, 2012 16:22:05
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 16:22:45
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	6393.0	1.8	**-33.6648**	13.045	38.8	ug/L	6820	Standard
	Be	9	11.7	65.5	**0.0065**	0.006	90.0	ug/L	3	Standard
	Al	27	3918.8	2.4	**-0.0912**	0.012	12.9	ug/L	4266	Standard
>	**Sc**	45	262569.1	1.2				ug/L	272955	Standard
	Ti	47	50.7	15.3	**0.0033**	0.008	248.3	ug/L	51	Standard
	V	51	1837.0	1.6	**-0.0282**	0.001	3.2	ug/L	2088	Standard
	Cr	52	5770.4	3.8	**-0.1011**	0.023	22.5	ug/L	6617	Standard
	Cr	53	159.2	9.1	**0.0124**	0.012	98.6	ug/L	166	Standard
	Mn	55	971.0	1.6	**-0.0041**	0.003	63.2	ug/L	940	Standard
	Co	59	98.7	5.8	**0.0005**	0.001	145.8	ug/L	76	Standard
	Ni	60	55.3	13.3	**0.0027**	0.004	158.0	ug/L	52	Standard
	Cu	65	65.3	11.5	**-0.0097**	0.005	51.3	ug/L	68	Standard
	Zn	66	90.0	18.2	**-0.0556**	0.020	36.3	ug/L	104	Standard
>	**Ge**	72	210094.8	1.3				ug/L	221790	Standard
	As	75	-138.5	4.1	**0.0061**	0.005	87.6	ug/L	-133	Standard
	Se	82	16.4	33.3	**0.0147**	0.070	477.9	ug/L	18	Standard
	Se-1	77	63.7	15.5	**-0.2551**	0.199	78.2	ug/L	70	Standard
>	**Ga**	71	433.3	11.1				mg/L	477	Standard
	Rb	85	6.7	43.3				ug/L	23	Standard
	Y	89	193071.2	2.6				ug/L	197249	Standard
>	**Rh**	103	308.3	2.5				ug/L	295	Standard
	Mo	98	69.7	32.4	**0.0177**	0.008	45.6	ug/L	13	Standard
	Ag	107	167.0	2.6	**0.0256**	0.000	1.0	ug/L	64	Standard
	Cd	111	54.2	23.3	**-0.0047**	0.004	90.0	mg/L	53	Standard
	Cd	114	174.2	3.0	**0.0004**	0.000	59.6	ug/L	150	Standard
>	**In**	115	639292.0	1.7				ug/L	644840	Standard
	Sn	118	726.4	6.9	**-0.0034**	0.004	116.4	ug/L	487	Standard
	Sb	123	929.2	29.6	**0.1070**	0.034	31.4	ug/L	126	Standard
	Ba	135	39.0	35.5	**-0.0011**	0.004	358.4	ug/L	25	Standard
	Ce	140	49.0	28.9				ug/L	22	Standard
>	**Tb**	159	929320.6	0.6				ug/L	958910	Standard
	Ho	165	11.7	26.2				ug/L	14	Standard
	Tl	203	58.3	24.9	**0.0022**	0.001	45.3	ug/L	10	Standard
	Tl	205	152.3	26.0	**0.0028**	0.001	41.3	ug/L	27	Standard
	Pb	206	344.0	4.8	**0.0010**	0.001	136.6	ug/L	319	Standard
	Pb	207	299.0	6.0	**-0.0026**	0.002	74.0	ug/L	287	Standard
	Pb	208	1353.4	1.0	**-0.0009**	0.000	24.4	ug/L	1244	Standard
	U	238	56.3	25.4	**0.0048**	0.001	22.6	ug/L	5	Standard
>	**Bi**	209	490728.3	0.3				ug/L	497973	Standard

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⌈	**Na**	23	245.0	20.7	**-0.0121**	0.003	27.2	mg/L	237	Standard
|	**Mg**	24	400.0	22.6	**0.0007**	0.000	24.6	mg/L	60	Standard
|	**K**	39	106.7	21.7	**0.0071**	0.025	347.4	mg/L	105	Standard
|	**Ca**	43	6.7	86.6	**-2.5994**	3.448	132.6	mg/L	7	Standard
|	**Fe**	54	441.1	13.9	**-0.0065**	0.017	263.1	mg/L	483	Standard
|	**Fe**	57	1740.1	7.1	**-0.0021**	0.002	98.1	mg/L	2095	Standard
⌊>	**Sc-1**	45	262569.1	1.2				mg/L	272955	Standard
	Cl	35	4.0	50.0				ug/L	9	Standard
	Kr	83	34.7	7.7				ug/L	39	Standard
	Br	81	663.3	5.3				ug/L	644	Standard
	P	31	289.2	1.8				ug/L	324	Standard
	S	34	5121.7	1.6				ug/L	5485	Standard
	Sr	88	43.3	29.0				ug/L	28	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		94.727	
|	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: Thursday, July 19, 2012 16:25:15
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	Cd	111	
	Cd	114	
>	In	115	99.140
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	98.545
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207028604
Sample Date/Time: Thursday, July 19, 2012 16:25:57
Number of Replicates: 3
Autosampler Position: 230
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	44669.1	3.1	**9144.1009**	251.845	2.8	ug/L	6820	Standard
	Be	9	15.0	100.0	**0.0085**	0.011	131.4	ug/L	3	Standard
	Al	27	35775.6	3.9	**2.7514**	0.103	3.7	ug/L	4266	Standard
>	**Sc**	45	284873.0	3.0				ug/L	272955	Standard
	Ti	47	511.0	1.1	**0.5362**	0.013	2.5	ug/L	51	Standard
	V	51	4396.5	1.2	**0.3305**	0.009	2.7	ug/L	2088	Standard
	Cr	52	11136.8	1.7	**0.8320**	0.012	1.5	ug/L	6617	Standard
	Cr	53	517.5	7.1	**0.3765**	0.038	10.1	ug/L	166	Standard
	Mn	55	2640572.8	1.5	**249.6749**	1.097	0.4	ug/L	940	Standard
	Co	59	2789.3	2.8	**0.3730**	0.009	2.3	ug/L	76	Standard
	Ni	60	7264.4	4.0	**4.2723**	0.113	2.6	ug/L	52	Standard
	Cu	65	1169.7	1.5	**0.6878**	0.003	0.4	ug/L	68	Standard
	Zn	66	2697.9	3.4	**3.4498**	0.105	3.1	ug/L	104	Standard
>	**Ge**	72	202992.3	1.4				ug/L	221790	Standard
	As	75	58.0	29.9	**0.2570**	0.024	9.2	ug/L	-133	Standard
	Se	82	72.0	3.4	**0.7545**	0.045	6.0	ug/L	18	Standard
	Se-1	77	78.0	15.1	**0.0624**	0.235	377.2	ug/L	70	Standard
>	**Ga**	71	466.7	10.0				mg/L	477	Standard
	Rb	85	6131.2	0.8				ug/L	23	Standard
	Y	89	193464.0	0.7				ug/L	197249	Standard
>	**Rh**	103	275.0	14.5				ug/L	295	Standard
	Mo	98	2207.2	0.8	**0.7637**	0.002	0.2	ug/L	13	Standard
	Ag	107	79.7	11.9	**0.0112**	0.002	15.1	ug/L	64	Standard
	Cd	111	103.7	8.4	**0.0114**	0.003	26.4	mg/L	53	Standard
	Cd	114	306.0	20.3	**0.0157**	0.007	45.0	ug/L	150	Standard
>	**In**	115	630980.8	0.8				ug/L	644840	Standard
	Sn	118	932.7	4.1	**0.0105**	0.003	25.3	ug/L	487	Standard
	Sb	123	541.4	9.2	**0.0622**	0.005	8.7	ug/L	126	Standard
	Ba	135	83731.1	2.0	**22.5541**	0.322	1.4	ug/L	25	Standard
	Ce	140	1322.4	1.9				ug/L	22	Standard
>	**Tb**	159	947772.1	0.9				ug/L	958910	Standard
	Ho	165	72.3	11.8				ug/L	14	Standard
	Tl	203	414.0	8.0	**0.0281**	0.003	9.0	ug/L	10	Standard
	Tl	205	1053.7	3.0	**0.0308**	0.001	3.3	ug/L	27	Standard
	Pb	206	479.7	5.8	**0.0153**	0.003	17.1	ug/L	319	Standard
	Pb	207	373.7	2.2	**0.0074**	0.001	9.0	ug/L	287	Standard
	Pb	208	1861.0	0.5	**0.0128**	0.000	0.6	ug/L	1244	Standard
	U	238	13044.6	1.2	**1.0313**	0.016	1.6	ug/L	5	Standard
>	**Bi**	209	465709.1	0.7				ug/L	497973	Standard

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Na	23	125716.5	3.5	**7.1045**	0.439	6.2	mg/L	237	Standard
Mg	24	17369536.4	0.4	**30.8485**	0.981	3.2	mg/L	60	Standard
K	39	788.4	4.3	**0.6813**	0.055	8.1	mg/L	105	Standard
Ca	43	133.3	26.3	**66.7193**	21.235	31.8	mg/L	7	Standard
Fe	54	477.1	2.8	**-0.0068**	0.004	54.7	mg/L	483	Standard
Fe	57	14677.1	2.0	**0.1887**	0.003	1.4	mg/L	2095	Standard
Sc-1	45	284873.0	3.0				mg/L	272955	Standard
Cl	35	20.7	12.2				ug/L	9	Standard
Kr	83	41.0	16.4				ug/L	39	Standard
Br	81	4586.5	5.3				ug/L	644	Standard
P	31	395.0	5.5				ug/L	324	Standard
S	34	49673.8	1.2				ug/L	5485	Standard
Sr	88	191.7	1.5				ug/L	28	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		91.525	
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	97.851
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	93.521
	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
Mn 55 Upper, S, EEE	Mn	55	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028605
Sample Date/Time: Thursday, July 19, 2012 16:29:07
Number of Replicates: 3
Autosampler Position: 231
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	93846.8	4.5	**17472.5453**	1450.416	8.3	ug/L	6820	Standard
	Be	9	250.0	2.0	**0.1501**	0.006	4.2	ug/L	3	Standard
	Al	27	32984967.3	1.2	**2500.0443**	140.088	5.6	ug/L	4266	Standard
>	**Sc**	45	339352.7	4.3				ug/L	272955	Standard
	Ti	47	48305.6	2.4	**53.5399**	0.725	1.4	ug/L	51	Standard
	V	51	45949.2	3.0	**5.7764**	0.079	1.4	ug/L	2088	Standard
	Cr	52	66217.4	1.5	**9.6542**	0.137	1.4	ug/L	6617	Standard
	Cr	53	10283.5	1.3	**9.7650**	0.265	2.7	ug/L	166	Standard
	Mn	55	5806571.1	1.6	**528.4662**	1.170	0.2	ug/L	940	Standard
	Co	59	25975.3	2.7	**3.4436**	0.032	0.9	ug/L	76	Standard
	Ni	60	29671.0	1.2	**16.8856**	0.380	2.3	ug/L	52	Standard
	Cu	65	9821.8	0.1	**5.9096**	0.103	1.7	ug/L	68	Standard
	Zn	66	47120.5	1.2	**60.7165**	0.901	1.5	ug/L	104	Standard
>	**Ge**	72	210937.1	1.8				ug/L	221790	Standard
	As	75	1887.7	2.2	**2.5551**	0.040	1.6	ug/L	-133	Standard
	Se	82	150.8	3.8	**1.7200**	0.103	6.0	ug/L	18	Standard
	Se-1	77	111.0	6.8	**0.6189**	0.164	26.5	ug/L	70	Standard
>	**Ga**	71	3990.5	3.5				mg/L	477	Standard
	Rb	85	93581.4	0.3				ug/L	23	Standard
	Y	89	227500.5	1.5				ug/L	197249	Standard
>	**Rh**	103	335.0	6.5				ug/L	295	Standard
	Mo	98	4205.1	0.9	**1.4313**	0.019	1.3	ug/L	13	Standard
	Ag	107	261.7	46.1	**0.0412**	0.020	49.2	ug/L	64	Standard
	Cd	111	281.6	23.5	**0.0666**	0.021	31.8	mg/L	53	Standard
	Cd	114	742.8	26.6	**0.0639**	0.022	35.0	ug/L	150	Standard
>	**In**	115	643888.7	0.9				ug/L	644840	Standard
	Sn	118	3759.5	8.9	**0.1872**	0.021	11.2	ug/L	487	Standard
	Sb	123	1194.0	15.9	**0.1368**	0.023	16.7	ug/L	126	Standard
	Ba	135	136854.0	0.5	**36.1351**	0.425	1.2	ug/L	25	Standard
	Ce	140	433917.9	0.7				ug/L	22	Standard
>	**Tb**	159	973721.6	0.7				ug/L	958910	Standard
	Ho	165	4908.8	2.4				ug/L	14	Standard
	Tl	203	2130.8	13.6	**0.1497**	0.021	14.1	ug/L	10	Standard
	Tl	205	4915.5	11.5	**0.1476**	0.018	12.0	ug/L	27	Standard
	Pb	206	43858.4	1.6	**4.0019**	0.069	1.7	ug/L	319	Standard
	Pb	207	35707.4	0.9	**3.8822**	0.046	1.2	ug/L	287	Standard
	Pb	208	168863.8	1.2	**3.9214**	0.065	1.7	ug/L	1244	Standard
	U	238	14579.3	2.0	**1.1354**	0.031	2.7	ug/L	5	Standard
>	**Bi**	209	472800.1	0.8				ug/L	497973	Standard

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	Na	23	152500.3	0.3	**7.2351**	0.300	4.1	mg/L	237	Standard
	Mg	24	18758835.1	2.6	**27.9918**	1.608	5.7	mg/L	60	Standard
	K	39	2260.2	3.1	**1.7919**	0.092	5.1	mg/L	105	Standard
	Ca	43	121.7	10.3	**49.1680**	3.506	7.1	mg/L	7	Standard
	Fe	54	22360.2	1.9	**4.6532**	0.145	3.1	mg/L	483	Standard
	Fe	57	400188.0	2.4	**4.9838**	0.123	2.5	mg/L	2095	Standard
>	**Sc-1**	45	339352.7	4.3				mg/L	272955	Standard
	Cl	35	41.0	8.8				ug/L	9	Standard
	Kr	83	49.2	2.4				ug/L	39	Standard
	Br	81	11664.5	5.0				ug/L	644	Standard
	P	31	1168.4	0.7				ug/L	324	Standard
	S	34	14181.6	1.4				ug/L	5485	Standard
	Sr	88	221.7	22.6				ug/L	28	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		95.107	
	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	99.852
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	94.945
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028606
Sample Date/Time: Thursday, July 19, 2012 16:32:16
Number of Replicates: 3
Autosampler Position: 232
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	57932.3	3.0	**12440.1609**	548.512	4.4	ug/L	6820	Standard
	Be	9	13.3	57.3	**0.0071**	0.005	77.3	ug/L	3	Standard
	Al	27	22541.8	7.0	**1.5686**	0.157	10.0	ug/L	4266	Standard
>	**Sc**	45	283513.6	1.9				ug/L	272955	Standard
	Ti	47	622.0	6.0	**0.6675**	0.046	6.9	ug/L	51	Standard
	V	51	4090.7	3.5	**0.2911**	0.017	5.7	ug/L	2088	Standard
	Cr	52	10816.2	2.8	**0.7866**	0.040	5.1	ug/L	6617	Standard
	Cr	53	858.4	4.0	**0.7217**	0.038	5.3	ug/L	166	Standard
	Mn	55	3798139.3	1.5	**360.8610**	6.238	1.7	ug/L	940	Standard
	Co	59	2683.2	3.5	**0.3601**	0.011	3.2	ug/L	76	Standard
	Ni	60	12687.0	1.5	**7.5200**	0.113	1.5	ug/L	52	Standard
	Cu	65	1256.7	2.1	**0.7463**	0.012	1.6	ug/L	68	Standard
	Zn	66	2094.1	4.5	**2.6523**	0.119	4.5	ug/L	104	Standard
>	**Ge**	72	202047.6	0.6				ug/L	221790	Standard
	As	75	296.9	12.2	**0.5709**	0.050	8.7	ug/L	-133	Standard
	Se	82	164.9	10.3	**1.9910**	0.234	11.8	ug/L	18	Standard
	Se-1	77	106.3	1.4	**0.6178**	0.040	6.5	ug/L	70	Standard
>	**Ga**	71	470.0	11.8				mg/L	477	Standard
	Rb	85	11095.7	2.5				ug/L	23	Standard
	Y	89	190513.8	1.5				ug/L	197249	Standard
>	**Rh**	103	313.3	13.0				ug/L	295	Standard
	Mo	98	3186.3	2.0	**1.1243**	0.014	1.3	ug/L	13	Standard
	Ag	107	46.3	9.7	**0.0057**	0.001	12.8	ug/L	64	Standard
	Cd	111	98.0	8.5	**0.0101**	0.003	25.0	mg/L	53	Standard
	Cd	114	279.0	8.5	**0.0132**	0.003	19.5	ug/L	150	Standard
>	**In**	115	620292.4	0.8				ug/L	644840	Standard
	Sn	118	1279.7	1.7	**0.0342**	0.001	3.9	ug/L	487	Standard
	Sb	123	426.9	5.7	**0.0495**	0.003	6.7	ug/L	126	Standard
	Ba	135	91511.2	1.5	**25.0762**	0.231	0.9	ug/L	25	Standard
	Ce	140	1365.1	3.4				ug/L	22	Standard
>	**Tb**	159	940699.0	1.6				ug/L	958910	Standard
	Ho	165	117.0	7.6				ug/L	14	Standard
	Tl	203	665.0	1.2	**0.0469**	0.000	0.4	ug/L	10	Standard
	Tl	205	1599.8	4.6	**0.0484**	0.003	6.0	ug/L	27	Standard
	Pb	206	590.7	2.8	**0.0265**	0.002	8.4	ug/L	319	Standard
	Pb	207	486.0	1.8	**0.0207**	0.001	5.9	ug/L	287	Standard
	Pb	208	2245.1	0.3	**0.0227**	0.001	3.1	ug/L	1244	Standard
	U	238	16695.5	1.3	**1.3381**	0.009	0.7	ug/L	5	Standard
>	**Bi**	209	459346.8	1.4				ug/L	497973	Standard

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	Na	23	150136.9	0.8	**8.5224**	0.151	1.8	mg/L	237	Standard
	Mg	24	15759189.2	2.4	**28.1193**	1.163	4.1	mg/L	60	Standard
	K	39	1546.7	10.7	**1.4447**	0.137	9.5	mg/L	105	Standard
	Ca	43	103.3	32.9	**50.3642**	19.264	38.2	mg/L	7	Standard
	Fe	54	428.3	17.2	**-0.0189**	0.017	88.6	mg/L	483	Standard
	Fe	57	10903.9	3.9	**0.1331**	0.004	2.8	mg/L	2095	Standard
>	**Sc-1**	45	283513.6	1.9				mg/L	272955	Standard
	Cl	35	41.0	15.2				ug/L	9	Standard
	Kr	83	40.7	3.3				ug/L	39	Standard
	Br	81	12836.3	2.4				ug/L	644	Standard
	P	31	386.7	10.5				ug/L	324	Standard
	S	34	15270.2	0.7				ug/L	5485	Standard
	Sr	88	226.7	10.9				ug/L	28	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		91.099	
	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	96.193
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	92.243
	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
Mn 55 Upper, S, EEE	Mn	55	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207028607
Sample Date/Time: Thursday, July 19, 2012 16:35:26
Number of Replicates: 3
Autosampler Position: 233
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	98013.0	4.2	**21426.9697**	974.379	4.5	ug/L	6820	Standard
	Be	9	20.0	66.1	**0.0117**	0.010	84.8	ug/L	3	Standard
	Al	27	838871.6	5.7	**73.0209**	5.260	7.2	ug/L	4266	Standard
>	**Sc**	45	293434.3	3.1				ug/L	272955	Standard
	Ti	47	3493.1	2.7	**4.1935**	0.126	3.0	ug/L	51	Standard
	V	51	20656.9	5.2	**2.7085**	0.162	6.0	ug/L	2088	Standard
	Cr	52	44274.8	6.2	**6.7961**	0.514	7.6	ug/L	6617	Standard
	Cr	53	2071.8	2.6	**2.0448**	0.059	2.9	ug/L	166	Standard
	Mn	55	8499240.5	0.1	**847.6264**	9.498	1.1	ug/L	940	Standard
	Co	59	40848.0	1.7	**5.9430**	0.072	1.2	ug/L	76	Standard
	Ni	60	19027.9	1.0	**11.8532**	0.030	0.3	ug/L	52	Standard
	Cu	65	2061.5	2.0	**1.3207**	0.028	2.1	ug/L	68	Standard
	Zn	66	4164.9	2.3	**5.7233**	0.096	1.7	ug/L	104	Standard
>	**Ge**	72	192522.2	1.1				ug/L	221790	Standard
	As	75	8900.2	1.8	**12.4441**	0.094	0.8	ug/L	-133	Standard
	Se	82	222.1	0.9	**2.8929**	0.021	0.7	ug/L	18	Standard
	Se-1	77	151.3	23.1	**1.6347**	0.709	43.4	ug/L	70	Standard
>	**Ga**	71	510.0	22.5				mg/L	477	Standard
	Rb	85	9254.5	2.1				ug/L	23	Standard
	Y	89	180024.0	3.4				ug/L	197249	Standard
>	**Rh**	103	366.7	8.3				ug/L	295	Standard
	Mo	98	13712.7	2.2	**5.4209**	0.027	0.5	ug/L	13	Standard
	Ag	107	93.0	8.8	**0.0156**	0.001	9.5	ug/L	64	Standard
	Cd	111	92.4	6.0	**0.0118**	0.003	24.0	mg/L	53	Standard
	Cd	114	354.7	6.0	**0.0267**	0.002	6.2	ug/L	150	Standard
>	**In**	115	556228.8	2.7				ug/L	644840	Standard
	Sn	118	1528.7	3.3	**0.0619**	0.001	2.2	ug/L	487	Standard
	Sb	123	1469.5	3.4	**0.1957**	0.006	3.1	ug/L	126	Standard
	Ba	135	459556.0	1.0	**140.5403**	3.061	2.2	ug/L	25	Standard
	Ce	140	15528.6	0.3				ug/L	22	Standard
>	**Tb**	159	906329.9	2.1				ug/L	958910	Standard
	Ho	165	293.7	4.5				ug/L	14	Standard
	Tl	203	280.0	6.2	**0.0223**	0.001	5.4	ug/L	10	Standard
	Tl	205	657.3	6.0	**0.0225**	0.001	4.8	ug/L	27	Standard
	Pb	206	3393.7	3.8	**0.3473**	0.009	2.5	ug/L	319	Standard
	Pb	207	2677.2	2.7	**0.3205**	0.007	2.2	ug/L	287	Standard
	Pb	208	12793.8	3.2	**0.3303**	0.007	2.0	ug/L	1244	Standard
	U	238	830.0	6.7	**0.0786**	0.004	5.0	ug/L	5	Standard
>	**Bi**	209	391397.0	1.6				ug/L	497973	Standard

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Na	23	399469.5	1.0	**21.9656**	0.901	4.1	mg/L	237	Standard
Mg	24	38590612.1	2.0	**66.5218**	1.611	2.4	mg/L	60	Standard
K	39	3197.0	3.6	**3.0014**	0.208	6.9	mg/L	105	Standard
Ca	43	388.3	3.9	**199.5169**	3.369	1.7	mg/L	7	Standard
Fe	54	103006.4	3.0	**25.3554**	1.505	5.9	mg/L	483	Standard
Fe	57	1800170.5	2.1	**26.0437**	0.290	1.1	mg/L	2095	Standard
Sc-1	45	293434.3	3.1				mg/L	272955	Standard
Cl	35	115.7	4.3				ug/L	9	Standard
Kr	83	51.6	4.3				ug/L	39	Standard
Br	81	18326.1	1.2				ug/L	644	Standard
P	31	7057.5	2.7				ug/L	324	Standard
S	34	4978.3	2.2				ug/L	5485	Standard
Sr	88	951.7	15.3				ug/L	28	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		86.804	
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	86.258
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	78.598
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1207028608
Sample Date/Time: Thursday, July 19, 2012 16:38:35
Number of Replicates: 3
Autosampler Position: 234
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	88747.5	0.4	**19867.3481**	866.587	4.4	ug/L	6820	Standard
	Be	9	16.7	45.8	**0.0095**	0.006	61.3	ug/L	3	Standard
	Al	27	177784.1	2.6	**15.5485**	0.294	1.9	ug/L	4266	Standard
>	**Sc**	45	285124.4	4.3				ug/L	272955	Standard
	Ti	47	2054.8	1.1	**2.4819**	0.044	1.8	ug/L	51	Standard
	V	51	20024.8	1.7	**2.6607**	0.102	3.8	ug/L	2088	Standard
	Cr	52	41618.8	4.0	**6.4380**	0.418	6.5	ug/L	6617	Standard
	Cr	53	1451.7	2.2	**1.4135**	0.058	4.1	ug/L	166	Standard
	Mn	55	8283552.0	0.0	**838.3640**	14.681	1.8	ug/L	940	Standard
	Co	59	39015.5	0.2	**5.7606**	0.091	1.6	ug/L	76	Standard
	Ni	60	16777.6	1.4	**10.6038**	0.220	2.1	ug/L	52	Standard
	Cu	65	1413.1	3.0	**0.9033**	0.012	1.3	ug/L	68	Standard
	Zn	66	3557.1	1.5	**4.9373**	0.017	0.3	ug/L	104	Standard
>	**Ge**	72	189733.8	1.8				ug/L	221790	Standard
	As	75	8598.8	1.5	**12.2057**	0.255	2.1	ug/L	-133	Standard
	Se	82	241.0	9.1	**3.2041**	0.280	8.7	ug/L	18	Standard
	Se-1	77	160.0	7.8	**1.8588**	0.246	13.2	ug/L	70	Standard
>	**Ga**	71	431.7	13.8				mg/L	477	Standard
	Rb	85	7700.3	3.9				ug/L	23	Standard
	Y	89	171534.0	1.7				ug/L	197249	Standard
>	**Rh**	103	348.3	18.2				ug/L	295	Standard
	Mo	98	12616.3	0.3	**5.3912**	0.047	0.9	ug/L	13	Standard
	Ag	107	90.7	58.6	**0.0165**	0.011	65.1	ug/L	64	Standard
	Cd	111	71.7	38.5	**0.0062**	0.010	168.2	mg/L	53	Standard
	Cd	114	262.4	23.1	**0.0175**	0.008	45.7	ug/L	150	Standard
>	**In**	115	514570.1	1.2				ug/L	644840	Standard
	Sn	118	2133.8	1.0	**0.1186**	0.003	2.4	ug/L	487	Standard
	Sb	123	1000.8	5.7	**0.1435**	0.007	4.5	ug/L	126	Standard
	Ba	135	446452.5	1.3	**147.5438**	2.308	1.6	ug/L	25	Standard
	Ce	140	3245.0	6.9				ug/L	22	Standard
>	**Tb**	159	878537.4	1.3				ug/L	958910	Standard
	Ho	165	116.0	12.9				ug/L	14	Standard
	Tl	203	398.3	80.4	**0.0340**	0.028	82.9	ug/L	10	Standard
	Tl	205	904.0	81.7	**0.0330**	0.028	84.1	ug/L	27	Standard
	Pb	206	2643.2	8.7	**0.2796**	0.022	8.0	ug/L	319	Standard
	Pb	207	2129.5	6.7	**0.2630**	0.017	6.3	ug/L	287	Standard
	Pb	208	9928.3	7.8	**0.2642**	0.019	7.0	ug/L	1244	Standard
	U	238	470.3	28.8	**0.0470**	0.013	26.7	ug/L	5	Standard
>	**Bi**	209	371431.5	1.7				ug/L	497973	Standard

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Na	23	401813.3	0.2	**22.7488**	0.998	4.4	mg/L	237	Standard
Mg	24	38988850.0	4.4	**69.3095**	5.888	8.5	mg/L	60	Standard
K	39	3382.0	5.1	**3.2791**	0.276	8.4	mg/L	105	Standard
Ca	43	373.3	2.0	**197.5641**	8.437	4.3	mg/L	7	Standard
Fe	54	104753.4	2.0	**26.5485**	1.397	5.3	mg/L	483	Standard
Fe	57	1774506.0	2.7	**26.4476**	1.336	5.1	mg/L	2095	Standard
Sc-1	45	285124.4	4.3				mg/L	272955	Standard
Cl	35	122.7	5.7				ug/L	9	Standard
Kr	83	41.4	13.7				ug/L	39	Standard
Br	81	18880.1	3.0				ug/L	644	Standard
P	31	6019.5	1.8				ug/L	324	Standard
S	34	4692.4	4.6				ug/L	5485	Standard
Sr	88	871.7	2.9				ug/L	28	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		85.547	
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	79.798
	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	74.589
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	
Ba 135 Upper, S, EEE	Ba	135	

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Method 6020 - Summary Report

Sample ID: L1207028609
Sample Date/Time: Thursday, July 19, 2012 16:41:43
Number of Replicates: 3
Autosampler Position: 235
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	5712.7	5.2	**-81.1756**	88.591	109.1	ug/L	6820	Standard
	Be	9	5.0	0.0	**0.0017**	0.000	0.9	ug/L	3	Standard
	Al	27	76203.2	5.3	**7.6310**	0.424	5.6	ug/L	4266	Standard
>	**Sc**	45	241462.2	0.3				ug/L	272955	Standard
	Ti	47	176.0	1.1	**0.1568**	0.003	1.6	ug/L	51	Standard
	V	51	3138.6	12.8	**0.1734**	0.059	34.2	ug/L	2088	Standard
	Cr	52	9919.9	11.5	**0.6859**	0.206	30.0	ug/L	6617	Standard
	Cr	53	394.2	14.3	**0.2668**	0.060	22.6	ug/L	166	Standard
	Mn	55	22468.1	8.8	**2.1052**	0.185	8.8	ug/L	940	Standard
	Co	59	146.7	9.3	**0.0083**	0.002	24.8	ug/L	76	Standard
	Ni	60	429.3	3.4	**0.2340**	0.009	3.7	ug/L	52	Standard
	Cu	65	348.7	6.5	**0.1779**	0.015	8.5	ug/L	68	Standard
	Zn	66	2249.2	1.6	**2.9515**	0.035	1.2	ug/L	104	Standard
>	**Ge**	72	196223.5	0.5				ug/L	221790	Standard
	As	75	-76.8	17.8	**0.0772**	0.018	23.4	ug/L	-133	Standard
	Se	82	21.3	7.9	**0.0963**	0.023	24.1	ug/L	18	Standard
	Se-1	77	71.0	6.1	**-0.0267**	0.080	300.7	ug/L	70	Standard
>	**Ga**	71	461.7	7.2				mg/L	477	Standard
	Rb	85	143.3	17.6				ug/L	23	Standard
	Y	89	174351.7	3.8				ug/L	197249	Standard
>	**Rh**	103	268.3	8.8				ug/L	295	Standard
	Mo	98	38.6	34.1	**0.0088**	0.005	58.3	ug/L	13	Standard
	Ag	107	42.0	7.1	**0.0057**	0.001	9.1	ug/L	64	Standard
	Cd	111	55.2	17.6	**-0.0020**	0.003	173.4	mg/L	53	Standard
	Cd	114	163.4	4.4	**0.0018**	0.001	43.4	ug/L	150	Standard
>	**In**	115	559971.1	0.6				ug/L	644840	Standard
	Sn	118	1415.7	6.3	**0.0530**	0.007	12.9	ug/L	487	Standard
	Sb	123	112.5	4.7	**0.0130**	0.001	4.8	ug/L	126	Standard
	Ba	135	610.7	32.8	**0.1741**	0.061	35.3	ug/L	25	Standard
	Ce	140	767.0	4.5				ug/L	22	Standard
>	**Tb**	159	888944.6	1.2				ug/L	958910	Standard
	Ho	165	18.3	12.6				ug/L	14	Standard
	Tl	203	36.3	25.0	**0.0010**	0.001	73.0	ug/L	10	Standard
	Tl	205	95.7	23.8	**0.0014**	0.001	50.6	ug/L	27	Standard
	Pb	206	1067.7	2.0	**0.0743**	0.003	3.6	ug/L	319	Standard
	Pb	207	904.0	1.1	**0.0706**	0.002	2.3	ug/L	287	Standard
	Pb	208	4160.6	4.2	**0.0716**	0.005	7.3	ug/L	1244	Standard
	U	238	12.3	41.6	**0.0016**	0.000	27.3	ug/L	5	Standard
>	**Bi**	209	447256.4	1.0				ug/L	497973	Standard

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Na	23	4224.0	33.9	**0.2553**	0.096	37.7	mg/L	237	Standard
Mg	24	17925.1	40.5	**0.0375**	0.015	40.8	mg/L	60	Standard
K	39	100.0	21.8	**0.0095**	0.026	274.9	mg/L	105	Standard
Ca	43	3.3	173.2	**-4.4283**	3.728	84.2	mg/L	7	Standard
Fe	54	540.3	9.0	**0.0340**	0.015	43.7	mg/L	483	Standard
Fe	57	2138.5	15.6	**0.0074**	0.006	80.9	mg/L	2095	Standard
Sc-1	45	241462.2	0.3				mg/L	272955	Standard
Cl	35	3.3	45.8				ug/L	9	Standard
Kr	83	34.4	5.0				ug/L	39	Standard
Br	81	780.9	9.1				ug/L	644	Standard
P	31	283.3	3.1				ug/L	324	Standard
S	34	4990.8	3.2				ug/L	5485	Standard
Sr	88	40.0	12.5				ug/L	28	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		88.473	
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	86.839
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	89.815
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Thursday, July 19, 2012 16:44:53
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	4869.1	3.9	**-115.1651**	40.195	34.9	ug/L	6820	Standard
	Be	9	3.3	86.6	**0.0007**	0.003	433.7	ug/L	3	Standard
	Al	27	39898931.4	1.1	**4877.8698**	93.121	1.9	ug/L	4266	Standard
>	**Sc**	45	210096.8	1.4				ug/L	272955	Standard
	Ti	47	23713.9	2.6	**32.2832**	0.602	1.9	ug/L	51	Standard
	V	51	1811.3	3.9	**0.0222**	0.014	61.1	ug/L	2088	Standard
	Cr	52	5811.8	1.1	**0.1170**	0.009	7.3	ug/L	6617	Standard
	Cr	53	1181.7	15.4	**1.2560**	0.202	16.0	ug/L	166	Standard
	Mn	55	925.7	6.1	**0.0107**	0.007	65.8	ug/L	940	Standard
	Co	59	159.7	6.1	**0.0134**	0.001	10.9	ug/L	76	Standard
	Ni	60	600.0	3.1	**0.3913**	0.008	2.1	ug/L	52	Standard
	Cu	65	160.0	8.7	**0.0698**	0.009	13.3	ug/L	68	Standard
	Zn	66	664.3	1.2	**0.8828**	0.009	1.0	ug/L	104	Standard
>	**Ge**	72	171615.9	1.2				ug/L	221790	Standard
	As	75	-92.7	32.4	**0.0377**	0.047	123.3	ug/L	-133	Standard
	Se	82	21.2	3.6	**0.1367**	0.016	11.6	ug/L	18	Standard
	Se-1	77	133.7	6.5	**1.6061**	0.170	10.6	ug/L	70	Standard
>	**Ga**	71	390.0	3.4				mg/L	477	Standard
	Rb	85	1743.4	3.1				ug/L	23	Standard
	Y	89	153079.8	2.8				ug/L	197249	Standard
>	**Rh**	103	288.3	15.0				ug/L	295	Standard
	Mo	98	203251.9	1.8	**90.6252**	0.863	1.0	ug/L	13	Standard
	Ag	107	59.7	16.5	**0.0107**	0.002	22.3	ug/L	64	Standard
	Cd	111	-24.8	76.7	**-0.0320**	0.008	24.2	mg/L	53	Standard
	Cd	114	993.2	1.7	**0.1256**	0.006	5.1	ug/L	150	Standard
>	**In**	115	493751.9	2.8				ug/L	644840	Standard
	Sn	118	253.0	1.7	**-0.0287**	0.001	1.9	ug/L	487	Standard
	Sb	123	244.7	3.3	**0.0351**	0.000	1.3	ug/L	126	Standard
	Ba	135	47.0	2.1	**0.0047**	0.001	15.3	ug/L	25	Standard
	Ce	140	1312.1	2.3				ug/L	22	Standard
>	**Tb**	159	809994.7	1.6				ug/L	958910	Standard
	Ho	165	15.7	19.5				ug/L	14	Standard
	Tl	203	64.0	14.9	**0.0035**	0.001	22.5	ug/L	10	Standard
	Tl	205	152.0	5.8	**0.0037**	0.000	8.6	ug/L	27	Standard
	Pb	206	328.7	3.9	**0.0058**	0.001	18.3	ug/L	319	Standard
	Pb	207	259.7	2.8	**-0.0010**	0.001	54.9	ug/L	287	Standard
	Pb	208	1252.4	5.4	**0.0027**	0.001	30.7	ug/L	1244	Standard
	U	238	2.7	21.7	**0.0008**	0.000	7.1	ug/L	5	Standard
>	**Bi**	209	405693.9	2.9				ug/L	497973	Standard

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	Na	23	125657.3	1.4	**9.6269**	0.077	0.8	mg/L	237	Standard
	Mg	24	1630704.2	20.9	**3.9306**	0.868	22.1	mg/L	60	Standard
	K	39	3912.2	0.6	**5.2002**	0.099	1.9	mg/L	105	Standard
	Ca	43	20.0	25.0	**8.2806**	3.899	47.1	mg/L	7	Standard
	Fe	54	14286.2	6.9	**4.7998**	0.275	5.7	mg/L	483	Standard
	Fe	57	206939.6	3.3	**4.1545**	0.097	2.3	mg/L	2095	Standard
>	**Sc-1**	45	210096.8	1.4				mg/L	272955	Standard
	Cl	35	194.7	8.4				ug/L	9	Standard
	Kr	83	30.9	9.2				ug/L	39	Standard
	Br	81	583.3	10.0				ug/L	644	Standard
	P	31	26539.9	2.8				ug/L	324	Standard
	S	34	9430.4	1.7				ug/L	5485	Standard
	Sr	88	35.0	51.5				ug/L	28	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
	Li	7			
	Be	9			
	Al	27	97.557		
>	Sc	45			
	Ti	47	32.283		
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		77.378	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			
	Rb	85			
	Y	89			
>	Rh	103			
	Mo	98	90.625		
	Ag	107			

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	Cd	111		
	Cd	114		
>	In	115		76.570
	Sn	118		
	Sb	123		
	Ba	135		
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203		
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208		
	U	238		
>	Bi	209		81.469
	Na	23	77.016	
	Mg	24	78.612	
	K	39	104.003	
	Ca	43	55.204	
	Fe	54	38.398	
	Fe	57	33.236	
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Ti	47	
Ge 72 Int Std for QC Std	Ge	72	Rerun sample
In 115 Int Std for QC Std	In	115	Rerun sample
QC Std 4	Na	23	
QC Std 4	Mg	24	
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: Thursday, July 19, 2012 16:48:02
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	5946.2	2.2	**-77.4722**	25.533	33.0	ug/L	6820	Standard
	Be	9	115198.1	2.1	**95.1052**	1.191	1.3	ug/L	3	Standard
	Al	27	46661390.3	1.3	**4780.2781**	111.927	2.3	ug/L	4266	Standard
>	**Sc**	45	250726.0	1.0				ug/L	272955	Standard
	Ti	47	86534.1	1.2	**100.6552**	1.204	1.2	ug/L	51	Standard
	V	51	704522.5	0.8	**97.0040**	0.952	1.0	ug/L	2088	Standard
	Cr	52	585674.7	0.4	**98.1377**	0.569	0.6	ug/L	6617	Standard
	Cr	53	98455.5	0.5	**99.3188**	0.766	0.8	ug/L	166	Standard
	Mn	55	1063449.2	0.8	**101.4472**	0.850	0.8	ug/L	940	Standard
	Co	59	721122.7	0.8	**100.6474**	0.805	0.8	ug/L	76	Standard
	Ni	60	164602.0	0.9	**98.3777**	1.046	1.1	ug/L	52	Standard
	Cu	65	152503.7	1.1	**96.9878**	1.226	1.3	ug/L	68	Standard
	Zn	66	74912.1	0.2	**101.3544**	0.567	0.6	ug/L	104	Standard
>	**Ge**	72	201094.7	0.4				ug/L	221790	Standard
	As	75	76825.0	0.6	**101.5271**	0.645	0.6	ug/L	-133	Standard
	Se	82	7652.3	0.7	**101.6691**	1.103	1.1	ug/L	18	Standard
	Se-1	77	5271.6	0.2	**101.2275**	0.227	0.2	ug/L	70	Standard
>	**Ga**	71	613.3	11.8				mg/L	477	Standard
	Rb	85	1910.1	1.6				ug/L	23	Standard
	Y	89	181607.0	1.1				ug/L	197249	Standard
>	**Rh**	103	411.7	6.7				ug/L	295	Standard
	Mo	98	251101.0	0.9	**94.0148**	0.955	1.0	ug/L	13	Standard
	Ag	107	568013.9	1.0	**103.1043**	1.039	1.0	ug/L	64	Standard
	Cd	111	293800.8	0.5	**101.0611**	1.841	1.8	mg/L	53	Standard
	Cd	114	815836.5	0.5	**99.7939**	1.802	1.8	ug/L	150	Standard
>	**In**	115	587975.5	2.0				ug/L	644840	Standard
	Sn	118	1063.7	2.1	**0.0239**	0.002	9.4	ug/L	487	Standard
	Sb	123	799921.9	0.9	**101.8407**	1.829	1.8	ug/L	126	Standard
	Ba	135	348067.9	0.3	**100.6872**	2.247	2.2	ug/L	25	Standard
	Ce	140	1480.4	3.2				ug/L	22	Standard
>	**Tb**	159	926994.3	0.8				ug/L	958910	Standard
	Ho	165	19.7	32.7				ug/L	14	Standard
	Tl	203	1326487.9	0.3	**97.5425**	0.511	0.5	ug/L	10	Standard
	Tl	205	3206967.7	0.5	**100.6900**	0.944	0.9	ug/L	27	Standard
	Pb	206	1025158.1	0.9	**97.4441**	0.665	0.7	ug/L	319	Standard
	Pb	207	866810.7	0.4	**98.3108**	0.458	0.5	ug/L	287	Standard
	Pb	208	4128332.9	0.8	**99.9311**	0.690	0.7	ug/L	1244	Standard
	U	238	1211585.8	0.9	**97.5496**	1.190	1.2	ug/L	5	Standard
>	**Bi**	209	457054.1	0.8				ug/L	497973	Standard

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Na	23	133440.0	0.7	**8.5644**	0.137	1.6	mg/L	237	Standard
Mg	24	1582661.8	2.4	**3.1923**	0.109	3.4	mg/L	60	Standard
K	39	4293.9	6.1	**4.7716**	0.248	5.2	mg/L	105	Standard
Ca	43	25.0	0.0	**8.9500**	0.161	1.8	mg/L	7	Standard
Fe	54	39645.1	2.0	**11.3379**	0.275	2.4	mg/L	483	Standard
Fe	57	644597.4	1.2	**10.8939**	0.021	0.2	mg/L	2095	Standard
Sc-1	45	250726.0	1.0				mg/L	272955	Standard
Cl	35	206.7	3.9				ug/L	9	Standard
Kr	83	39.8	7.6				ug/L	39	Standard
Br	81	750.9	3.6				ug/L	644	Standard
P	31	55427.9	0.7				ug/L	324	Standard
S	34	10059.2	1.9				ug/L	5485	Standard
Sr	88	40.0	45.1				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	95.606		
Sc	45			
Ti	47	100.655		
V	51	97.004		
Cr	52	98.138		
Cr	53			
Mn	55	101.447		
Co	59	100.647		
Ni	60	98.378		
Cu	65	96.988		
Zn	66	101.354		
Ge	72		90.669	
As	75	101.527		
Se	82	101.669		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	94.015		
Ag	107	103.104		

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	Cd	111	101.061	
	Cd	114		
>	In	115		91.182
	Sn	118		
	Sb	123	101.841	
	Ba	135	100.687	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.543	
	Tl	205		
	Pb	206	97.444	
	Pb	207	98.311	
	Pb	208	99.931	
	U	238	97.550	
>	Bi	209		91.783
	Na	23	68.515	
	Mg	24	63.846	
	K	39	95.432	
	Ca	43	59.667	
	Fe	54	90.703	
	Fe	57	87.151	
>	Sc-1	45		
	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	Mg	24	
QC Std 5	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 16:51:14
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	5999.5	1.5	**-98.7864**	22.692	23.0	ug/L	6820	Standard
	Be	9	58034.3	0.6	**46.8743**	0.921	2.0	ug/L	3	Standard
	Al	27	507358.4	0.8	**50.3659**	0.338	0.7	ug/L	4266	Standard
>	**Sc**	45	256328.7	1.4				ug/L	272955	Standard
	Ti	47	87185.5	1.1	**99.0693**	0.934	0.9	ug/L	51	Standard
	V	51	366334.3	0.9	**49.1406**	0.309	0.6	ug/L	2088	Standard
	Cr	52	305104.7	0.6	**49.4343**	0.145	0.3	ug/L	6617	Standard
	Cr	53	50866.1	0.9	**50.0576**	0.609	1.2	ug/L	166	Standard
	Mn	55	556102.1	1.5	**51.7771**	0.621	1.2	ug/L	940	Standard
	Co	59	374558.5	0.2	**51.0641**	0.256	0.5	ug/L	76	Standard
	Ni	60	84794.6	0.3	**49.4942**	0.286	0.6	ug/L	52	Standard
	Cu	65	80107.9	0.5	**49.7455**	0.374	0.8	ug/L	68	Standard
	Zn	66	37904.0	0.6	**50.0112**	0.244	0.5	ug/L	104	Standard
>	**Ge**	72	205847.9	0.3				ug/L	221790	Standard
	As	75	38491.7	0.4	**49.7855**	0.097	0.2	ug/L	-133	Standard
	Se	82	3880.3	2.3	**50.2622**	1.041	2.1	ug/L	18	Standard
	Se-1	77	2715.9	3.2	**50.2299**	1.585	3.2	ug/L	70	Standard
>	**Ga**	71	475.0	8.2				mg/L	477	Standard
	Rb	85	608.3	7.6				ug/L	23	Standard
	Y	89	184336.4	1.4				ug/L	197249	Standard
>	**Rh**	103	406.7	9.3				ug/L	295	Standard
	Mo	98	271158.3	0.8	**97.8035**	0.992	1.0	ug/L	13	Standard
	Ag	107	291162.4	0.9	**50.9121**	0.386	0.8	ug/L	64	Standard
	Cd	111	150658.0	1.2	**49.9084**	0.759	1.5	mg/L	53	Standard
	Cd	114	422865.1	0.9	**49.8159**	0.678	1.4	ug/L	150	Standard
>	**In**	115	610284.7	0.7				ug/L	644840	Standard
	Sn	118	997631.5	0.3	**66.2150**	0.469	0.7	ug/L	487	Standard
	Sb	123	406087.8	0.3	**49.8006**	0.358	0.7	ug/L	126	Standard
	Ba	135	179037.3	0.7	**49.8806**	0.700	1.4	ug/L	25	Standard
	Ce	140	717.4	2.9				ug/L	22	Standard
>	**Tb**	159	940723.1	0.9				ug/L	958910	Standard
	Ho	165	16.0	27.2				ug/L	14	Standard
	Tl	203	676331.2	0.7	**49.0469**	0.187	0.4	ug/L	10	Standard
	Tl	205	1566161.2	0.5	**48.4939**	0.261	0.5	ug/L	27	Standard
	Pb	206	528185.7	0.5	**49.4998**	0.141	0.3	ug/L	319	Standard
	Pb	207	448463.5	0.2	**50.1458**	0.105	0.2	ug/L	287	Standard
	Pb	208	2075260.3	0.6	**49.5264**	0.215	0.4	ug/L	1244	Standard
	U	238	616943.1	0.6	**48.9870**	0.131	0.3	ug/L	5	Standard
>	**Bi**	209	463431.0	0.4				ug/L	497973	Standard

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Na	23	103619.8	0.7	**6.4991**	0.136	2.1	mg/L	237	Standard
Mg	24	2448770.1	4.2	**4.8291**	0.142	2.9	mg/L	60	Standard
K	39	4337.3	6.8	**4.7143**	0.312	6.6	mg/L	105	Standard
Ca	43	16.7	62.4	**3.5645**	6.325	177.4	mg/L	7	Standard
Fe	54	18002.6	1.1	**4.9643**	0.039	0.8	mg/L	483	Standard
Fe	57	277599.0	2.0	**4.5716**	0.077	1.7	mg/L	2095	Standard
Sc-1	45	256328.7	1.4				mg/L	272955	Standard
Cl	35	4.7	12.4				ug/L	9	Standard
Kr	83	35.6	11.3				ug/L	39	Standard
Br	81	713.4	4.4				ug/L	644	Standard
P	31	275.8	1.9				ug/L	324	Standard
S	34	4408.1	5.0				ug/L	5485	Standard
Sr	88	28.3	66.8				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	100.732		
Sc	45			
Ti	47	99.069		
V	51	98.281		
Cr	52	98.869		
Cr	53			
Mn	55	103.554		
Co	59	102.128		
Ni	60	98.988		
Cu	65	99.491		
Zn	66	100.022		
Ge	72		92.812	
As	75	99.571		
Se	82	100.524		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	97.804		
Ag	107	101.824		

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	Cd	111	99.817	
	Cd	114		
>	In	115		94.641
	Sn	118	132.430	
	Sb	123	99.601	
	Ba	135	99.761	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.094	
	Tl	205		
	Pb	206	99.000	
	Pb	207	100.292	
	Pb	208	99.053	
	U	238	97.974	
>	Bi	209		93.064
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 16:54:24
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	5889.5	3.8	**-127.5494**	97.981	76.8	ug/L	6820	Standard
	Be	9	25.0	34.6	**0.0177**	0.007	42.1	ug/L	3	Standard
	Al	27	17270.1	73.9	**1.2755**	1.319	103.4	ug/L	4266	Standard
>	**Sc**	45	256410.6	2.4				ug/L	272955	Standard
	Ti	47	96.3	16.4	**0.0573**	0.019	33.2	ug/L	51	Standard
	V	51	2083.8	8.0	**0.0121**	0.025	205.4	ug/L	2088	Standard
	Cr	52	6005.5	2.3	**-0.0359**	0.033	91.4	ug/L	6617	Standard
	Cr	53	240.0	12.7	**0.0972**	0.033	33.5	ug/L	166	Standard
	Mn	55	3606.5	61.2	**0.2471**	0.209	84.6	ug/L	940	Standard
	Co	59	323.0	69.3	**0.0318**	0.031	97.3	ug/L	76	Standard
	Ni	60	81.7	28.4	**0.0191**	0.014	73.2	ug/L	52	Standard
	Cu	65	97.7	20.0	**0.0117**	0.013	108.7	ug/L	68	Standard
	Zn	66	110.7	8.2	**-0.0247**	0.014	55.1	ug/L	104	Standard
>	**Ge**	72	204490.5	1.1				ug/L	221790	Standard
	As	75	-103.8	13.3	**0.0463**	0.018	39.1	ug/L	-133	Standard
	Se	82	19.3	20.3	**0.0577**	0.050	85.9	ug/L	18	Standard
	Se-1	77	70.0	9.4	**-0.1036**	0.113	109.0	ug/L	70	Standard
>	**Ga**	71	456.7	12.8				mg/L	477	Standard
	Rb	85	26.7	43.3				ug/L	23	Standard
	Y	89	184272.2	0.8				ug/L	197249	Standard
>	**Rh**	103	353.3	15.1				ug/L	295	Standard
	Mo	98	118.8	43.8	**0.0369**	0.019	52.1	ug/L	13	Standard
	Ag	107	224.3	17.6	**0.0373**	0.007	19.4	ug/L	64	Standard
	Cd	111	77.0	12.9	**0.0038**	0.004	91.4	mg/L	53	Standard
	Cd	114	212.0	25.7	**0.0061**	0.007	109.9	ug/L	150	Standard
>	**In**	115	605682.5	0.8				ug/L	644840	Standard
	Sn	118	734.0	15.8	**-0.0003**	0.008	2753.9	ug/L	487	Standard
	Sb	123	1343.1	40.4	**0.1643**	0.068	41.6	ug/L	126	Standard
	Ba	135	496.3	88.1	**0.1286**	0.124	96.2	ug/L	25	Standard
	Ce	140	87.7	39.5				ug/L	22	Standard
>	**Tb**	159	913849.7	0.7				ug/L	958910	Standard
	Ho	165	10.3	14.8				ug/L	14	Standard
	Tl	203	817.0	88.1	**0.0567**	0.052	91.3	ug/L	10	Standard
	Tl	205	1692.5	88.7	**0.0501**	0.046	92.1	ug/L	27	Standard
	Pb	206	839.0	57.3	**0.0481**	0.045	93.3	ug/L	319	Standard
	Pb	207	643.7	51.3	**0.0368**	0.037	100.2	ug/L	287	Standard
	Pb	208	2985.1	53.7	**0.0389**	0.038	98.2	ug/L	1244	Standard
	U	238	299.0	77.1	**0.0240**	0.018	75.8	ug/L	5	Standard
>	**Bi**	209	471313.6	0.8				ug/L	497973	Standard

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	Na	23	2113.5	41.3	**0.1067**	0.057	53.3	mg/L	237	Standard
	Mg	24	7013.9	75.6	**0.0140**	0.011	76.4	mg/L	60	Standard
	K	39	96.7	13.0	**-0.0009**	0.016	1823.8	mg/L	105	Standard
	Ca	43	1.7	173.2	**-5.5624**	1.763	31.7	mg/L	7	Standard
	Fe	54	447.9	9.6	**-0.0014**	0.015	1044.6	mg/L	483	Standard
	Fe	57	2061.8	16.2	**0.0040**	0.006	158.2	mg/L	2095	Standard
>	**Sc-1**	45	256410.6	2.4				mg/L	272955	Standard
	Cl	35	5.3	21.7				ug/L	9	Standard
	Kr	83	33.0	11.2				ug/L	39	Standard
	Br	81	603.3	5.5				ug/L	644	Standard
	P	31	291.7	6.5				ug/L	324	Standard
	S	34	4427.3	0.6				ug/L	5485	Standard
	Sr	88	35.0	71.4				ug/L	28	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		92.200	
	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	93.927
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	94.646
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Tl	203	

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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, July 19, 2012 16:57:36
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	5956.2	3.2	**-121.7402**	27.754	22.8	ug/L	6820	Standard
	Be	9	8.3	173.2	**0.0040**	0.011	287.0	ug/L	3	Standard
	Al	27	21844.1	2.1	**1.6994**	0.034	2.0	ug/L	4266	Standard
>	**Sc**	45	258076.4	1.5				ug/L	272955	Standard
	Ti	47	78.0	5.6	**0.0366**	0.006	15.3	ug/L	51	Standard
	V	51	4984.9	3.0	**0.4093**	0.016	4.0	ug/L	2088	Standard
	Cr	52	10888.6	1.6	**0.7864**	0.033	4.2	ug/L	6617	Standard
	Cr	53	1000.0	5.2	**0.8575**	0.063	7.4	ug/L	166	Standard
	Mn	55	6548.1	1.2	**0.5251**	0.001	0.1	ug/L	940	Standard
	Co	59	3010.3	2.6	**0.4026**	0.008	2.1	ug/L	76	Standard
	Ni	60	2834.6	2.9	**1.6462**	0.057	3.5	ug/L	52	Standard
	Cu	65	1365.4	2.5	**0.8092**	0.020	2.5	ug/L	68	Standard
	Zn	66	5168.9	0.2	**6.7522**	0.059	0.9	ug/L	104	Standard
>	**Ge**	72	203453.0	1.1				ug/L	221790	Standard
	As	75	168.8	16.8	**0.4012**	0.039	9.7	ug/L	-133	Standard
	Se	82	48.8	12.0	**0.4479**	0.084	18.8	ug/L	18	Standard
	Se-1	77	84.0	10.3	**0.1740**	0.173	99.6	ug/L	70	Standard
>	**Ga**	71	400.0	6.6				mg/L	477	Standard
	Rb	85	15.0	66.7				ug/L	23	Standard
	Y	89	189583.8	1.2				ug/L	197249	Standard
>	**Rh**	103	326.7	7.9				ug/L	295	Standard
	Mo	98	40.2	16.5	**0.0083**	0.003	31.9	ug/L	13	Standard
	Ag	107	2284.8	2.4	**0.3994**	0.014	3.4	ug/L	64	Standard
	Cd	111	764.3	7.9	**0.2326**	0.019	8.0	mg/L	53	Standard
	Cd	114	2163.7	1.4	**0.2371**	0.003	1.5	ug/L	150	Standard
>	**In**	115	607226.2	1.7				ug/L	644840	Standard
	Sn	118	515.3	7.6	**-0.0151**	0.002	15.3	ug/L	487	Standard
	Sb	123	3477.7	1.4	**0.4266**	0.003	0.6	ug/L	126	Standard
	Ba	135	2692.6	2.7	**0.7429**	0.031	4.2	ug/L	25	Standard
	Ce	140	16.0	34.8				ug/L	22	Standard
>	**Tb**	159	923363.4	0.4				ug/L	958910	Standard
	Ho	165	16.3	30.8				ug/L	14	Standard
	Tl	203	1135.0	2.0	**0.0790**	0.001	1.4	ug/L	10	Standard
	Tl	205	2625.2	0.3	**0.0781**	0.001	0.8	ug/L	27	Standard
	Pb	206	2488.2	3.2	**0.1994**	0.006	2.9	ug/L	319	Standard
	Pb	207	2034.1	4.0	**0.1890**	0.008	4.2	ug/L	287	Standard
	Pb	208	9567.2	1.6	**0.1927**	0.002	0.9	ug/L	1244	Standard
	U	238	4897.5	1.3	**0.3820**	0.002	0.5	ug/L	5	Standard
>	**Bi**	209	472471.5	0.9				ug/L	497973	Standard

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Na	23	858.4	8.8	**0.0265**	0.005	17.5	mg/L	237	Standard
Mg	24	380.0	27.2	**0.0007**	0.000	26.9	mg/L	60	Standard
K	39	88.3	19.9	**-0.0112**	0.018	159.7	mg/L	105	Standard
Ca	43	3.3	173.2	**-4.5974**	3.435	74.7	mg/L	7	Standard
Fe	54	432.2	5.3	**-0.0069**	0.005	79.9	mg/L	483	Standard
Fe	57	1686.8	0.9	**-0.0025**	0.000	11.8	mg/L	2095	Standard
Sc-1	45	258076.4	1.5				mg/L	272955	Standard
Cl	35	7.3	39.4				ug/L	9	Standard
Kr	83	35.3	20.6				ug/L	39	Standard
Br	81	650.0	8.4				ug/L	644	Standard
P	31	276.7	4.2				ug/L	324	Standard
S	34	4329.8	2.4				ug/L	5485	Standard
Sr	88	38.3	49.4				ug/L	28	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	102.328		
Cr	52	98.298		
Cr	53			
Mn	55	105.016		
Co	59	100.653		
Ni	60	102.889		
Cu	65	101.155		
Zn	66	108.035		
Ge	72		91.732	
As	75	100.309		
Se	82	111.963		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	99.853		

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	Cd	111	96.911	
	Cd	114		
>	In	115		94.167
	Sn	118		
	Sb	123	106.657	
	Ba	135	99.059	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.693	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	96.339	
	U	238	95.498	
>	Bi	209		94.879
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

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: PBS 43 WG403527-02
Sample Date/Time: Thursday, July 19, 2012 17:07:50
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	5457.7	5.1	**-108.2453**	36.401	33.6	ug/L	6820	Standard
	Be	9	15.0	57.7	**0.0105**	0.007	68.8	ug/L	3	Standard
	Al	27	60411.2	18.2	**6.1236**	0.997	16.3	ug/L	4266	Standard
>	**Sc**	45	234619.7	5.6				ug/L	272955	Standard
	Ti	47	92.3	25.1	**0.0582**	0.028	47.6	ug/L	51	Standard
	V	51	1983.5	11.2	**0.0129**	0.031	241.6	ug/L	2088	Standard
	Cr	52	5937.8	3.3	**0.0057**	0.026	464.1	ug/L	6617	Standard
	Cr	53	176.7	8.3	**0.0438**	0.020	44.9	ug/L	166	Standard
	Mn	55	8086.4	41.2	**0.7059**	0.325	46.0	ug/L	940	Standard
	Co	59	221.0	96.4	**0.0192**	0.031	159.4	ug/L	76	Standard
	Ni	60	185.7	15.8	**0.0859**	0.017	19.9	ug/L	52	Standard
	Cu	65	184.3	15.6	**0.0721**	0.019	26.4	ug/L	68	Standard
	Zn	66	2206.8	4.9	**2.9268**	0.137	4.7	ug/L	104	Standard
>	**Ge**	72	194087.4	2.6				ug/L	221790	Standard
	As	75	-130.4	9.1	**0.0026**	0.018	683.5	ug/L	-133	Standard
	Se	82	17.9	27.0	**0.0509**	0.060	118.6	ug/L	18	Standard
	Se-1	77	67.3	11.5	**-0.0858**	0.137	159.2	ug/L	70	Standard
>	**Ga**	71	371.7	6.8				mg/L	477	Standard
	Rb	85	58.3	26.2				ug/L	23	Standard
	Y	89	173322.3	5.0				ug/L	197249	Standard
>	**Rh**	103	345.0	5.0				ug/L	295	Standard
	Mo	98	60.9	78.4	**0.0175**	0.018	105.3	ug/L	13	Standard
	Ag	107	122.7	39.9	**0.0211**	0.009	43.1	ug/L	64	Standard
	Cd	111	60.2	50.7	**-0.0003**	0.011	4105.0	mg/L	53	Standard
	Cd	114	173.5	41.7	**0.0030**	0.009	292.8	ug/L	150	Standard
>	**In**	115	559553.8	4.1				ug/L	644840	Standard
	Sn	118	1310.4	8.0	**0.0454**	0.005	11.3	ug/L	487	Standard
	Sb	123	345.1	80.9	**0.0438**	0.037	83.6	ug/L	126	Standard
	Ba	135	460.7	107.8	**0.1276**	0.148	116.4	ug/L	25	Standard
	Ce	140	233.7	33.2				ug/L	22	Standard
>	**Tb**	159	865143.4	4.0				ug/L	958910	Standard
	Ho	165	12.0	44.1				ug/L	14	Standard
	Tl	203	448.4	161.6	**0.0316**	0.054	170.4	ug/L	10	Standard
	Tl	205	925.1	164.1	**0.0278**	0.048	173.6	ug/L	27	Standard
	Pb	206	642.0	76.6	**0.0329**	0.047	142.4	ug/L	319	Standard
	Pb	207	500.0	74.0	**0.0238**	0.042	176.5	ug/L	287	Standard
	Pb	208	2354.4	71.5	**0.0268**	0.041	151.9	ug/L	1244	Standard
	U	238	153.7	161.4	**0.0131**	0.020	154.0	ug/L	5	Standard
>	**Bi**	209	444933.3	4.5				ug/L	497973	Standard

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	Na	23	1841.8	71.6	**0.0981**	0.087	88.2	mg/L	237	Standard
	Mg	24	5265.7	154.6	**0.0111**	0.017	154.2	mg/L	60	Standard
	K	39	100.0	26.0	**0.0124**	0.027	220.5	mg/L	105	Standard
	Ca	43	1.7	173.2	**-5.5032**	1.866	33.9	mg/L	7	Standard
	Fe	54	336.0	11.4	**-0.0246**	0.008	30.9	mg/L	483	Standard
	Fe	57	2001.8	20.9	**0.0059**	0.007	116.0	mg/L	2095	Standard
>	**Sc-1**	45	234619.7	5.6				mg/L	272955	Standard
	Cl	35	5.0	52.9				ug/L	9	Standard
	Kr	83	37.8	11.3				ug/L	39	Standard
	Br	81	623.3	3.5				ug/L	644	Standard
	P	31	177.5	16.6				ug/L	324	Standard
	S	34	4280.6	0.9				ug/L	5485	Standard
	Sr	88	40.0	25.0				ug/L	28	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		87.510	
	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	86.774
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	89.349
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: LCSS 43 WG403527-03
Sample Date/Time: Thursday, July 19, 2012 17:11:00
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	6924.9	2.2	**-33.2212**	84.582	254.6	ug/L	6820	Standard
	Be	9	33196.3	2.2	**24.1459**	0.323	1.3	ug/L	3	Standard
	Al	27	343194.1	1.8	**30.5195**	1.331	4.4	ug/L	4266	Standard
>	**Sc**	45	284659.6	3.5				ug/L	272955	Standard
	Ti	47	120.0	11.7	**0.0698**	0.013	18.9	ug/L	51	Standard
	V	51	218710.0	2.0	**26.3188**	0.799	3.0	ug/L	2088	Standard
	Cr	52	185949.5	0.7	**26.6869**	0.470	1.8	ug/L	6617	Standard
	Cr	53	30087.3	0.1	**26.6180**	0.280	1.1	ug/L	166	Standard
	Mn	55	323428.6	1.8	**27.0982**	0.723	2.7	ug/L	940	Standard
	Co	59	217030.6	1.7	**26.6613**	0.649	2.4	ug/L	76	Standard
	Ni	60	50038.8	0.7	**26.3100**	0.453	1.7	ug/L	52	Standard
	Cu	65	47685.9	2.1	**26.6675**	0.825	3.1	ug/L	68	Standard
	Zn	66	22060.4	0.9	**26.1504**	0.383	1.5	ug/L	104	Standard
>	**Ge**	72	228423.1	1.0				ug/L	221790	Standard
	As	75	21158.2	0.1	**24.7544**	0.217	0.9	ug/L	-133	Standard
	Se	82	2038.8	1.7	**23.6962**	0.251	1.1	ug/L	18	Standard
	Se-1	77	1445.4	1.9	**23.3414**	0.542	2.3	ug/L	70	Standard
>	**Ga**	71	488.3	15.4				mg/L	477	Standard
	Rb	85	83.3	40.0				ug/L	23	Standard
	Y	89	211315.4	2.0				ug/L	197249	Standard
>	**Rh**	103	390.0	4.6				ug/L	295	Standard
	Mo	98	41.0	22.7	**0.0067**	0.003	42.8	ug/L	13	Standard
	Ag	107	160140.3	1.3	**24.7978**	0.437	1.8	ug/L	64	Standard
	Cd	111	84807.6	1.0	**24.8682**	0.320	1.3	mg/L	53	Standard
	Cd	114	235587.9	1.5	**24.5690**	0.507	2.1	ug/L	150	Standard
>	**In**	115	689141.1	0.7				ug/L	644840	Standard
	Sn	118	873.7	3.5	**0.0019**	0.002	105.0	ug/L	487	Standard
	Sb	123	221354.9	0.8	**24.0380**	0.153	0.6	ug/L	126	Standard
	Ba	135	102389.8	0.7	**25.2560**	0.301	1.2	ug/L	25	Standard
	Ce	140	267.7	5.3				ug/L	22	Standard
>	**Tb**	159	997007.2	0.9				ug/L	958910	Standard
	Ho	165	19.7	2.9				ug/L	14	Standard
	Tl	203	385422.2	0.9	**25.5766**	0.235	0.9	ug/L	10	Standard
	Tl	205	885253.9	0.5	**25.0825**	0.158	0.6	ug/L	27	Standard
	Pb	206	299661.0	0.4	**25.6849**	0.187	0.7	ug/L	319	Standard
	Pb	207	254957.8	1.3	**26.0717**	0.358	1.4	ug/L	287	Standard
	Pb	208	1173703.8	0.6	**25.6173**	0.183	0.7	ug/L	1244	Standard
	U	238	342335.9	1.2	**24.8750**	0.319	1.3	ug/L	5	Standard
>	**Bi**	209	506432.2	0.3				ug/L	497973	Standard

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⌈	**Na**	23	1573.4	2.0	**0.0622**	0.004	7.1	mg/L	237	Standard
|	**Mg**	24	2331.8	5.9	**0.0041**	0.000	5.0	mg/L	60	Standard
|	**K**	39	103.3	12.2	**-0.0048**	0.016	335.2	mg/L	105	Standard
|	**Ca**	43	11.7	65.5	**-0.1968**	4.243	2155.7	mg/L	7	Standard
|	**Fe**	54	666.1	4.6	**0.0416**	0.011	26.3	mg/L	483	Standard
|	**Fe**	57	2091.8	4.9	**0.0009**	0.001	61.6	mg/L	2095	Standard
⌊>	**Sc-1**	45	284659.6	3.5				mg/L	272955	Standard
	Cl	35	6.0	50.0				ug/L	9	Standard
	Kr	83	43.2	3.6				ug/L	39	Standard
	Br	81	791.7	1.6				ug/L	644	Standard
	P	31	449.2	1.6				ug/L	324	Standard
	S	34	4728.2	3.4				ug/L	5485	Standard
	Sr	88	43.3	58.1				ug/L	28	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		102.991	
|	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	106.870
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.699
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: LCSS 43 WG403527-03
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Method 6020 - Summary Report

Sample ID: L1207043413 WG403527-01
Sample Date/Time: Thursday, July 19, 2012 17:14:10
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	58641.8	4.9	**13464.5451**	800.254	5.9	ug/L	6820	Standard
	Be	9	715.0	6.0	**0.5508**	0.038	6.8	ug/L	3	Standard
	Al	27	60872019.2	6.1	**5845.1660**	411.389	7.0	ug/L	4266	Standard
>	**Sc**	45	267575.5	1.0				ug/L	272955	Standard
	Ti	47	51482.7	2.3	**62.9410**	0.769	1.2	ug/L	51	Standard
	V	51	76814.2	3.0	**10.8790**	0.192	1.8	ug/L	2088	Standard
	Cr	52	64174.0	2.9	**10.3881**	0.175	1.7	ug/L	6617	Standard
	Cr	53	9809.0	2.6	**10.2762**	0.118	1.1	ug/L	166	Standard
	Mn	55	6247623.6	3.2	**627.0720**	15.042	2.4	ug/L	940	Standard
	Co	59	30497.0	3.3	**4.4626**	0.093	2.1	ug/L	76	Standard
	Ni	60	24084.5	2.8	**15.1093**	0.287	1.9	ug/L	52	Standard
	Cu	65	11474.3	1.8	**7.6277**	0.148	1.9	ug/L	68	Standard
	Zn	66	44186.0	2.3	**62.7898**	0.860	1.4	ug/L	104	Standard
>	**Ge**	72	191254.7	1.4				ug/L	221790	Standard
	As	75	1402.2	4.1	**2.1253**	0.052	2.5	ug/L	-133	Standard
	Se	82	57.2	14.9	**0.6049**	0.117	19.3	ug/L	18	Standard
	Se-1	77	118.3	6.8	**0.9788**	0.139	14.2	ug/L	70	Standard
>	**Ga**	71	7583.6	4.3				mg/L	477	Standard
	Rb	85	234516.2	1.3				ug/L	23	Standard
	Y	89	376314.7	1.2				ug/L	197249	Standard
>	**Rh**	103	268.3	6.0				ug/L	295	Standard
	Mo	98	708.6	7.0	**0.2714**	0.015	5.7	ug/L	13	Standard
	Ag	107	849.4	2.8	**0.1592**	0.006	3.6	ug/L	64	Standard
	Cd	111	6131.2	2.4	**2.1869**	0.037	1.7	mg/L	53	Standard
	Cd	114	17245.0	3.3	**2.1899**	0.054	2.5	ug/L	150	Standard
>	**In**	115	561393.2	1.4				ug/L	644840	Standard
	Sn	118	790.4	3.9	**0.0076**	0.001	18.5	ug/L	487	Standard
	Sb	123	284.1	18.0	**0.0359**	0.007	20.3	ug/L	126	Standard
	Ba	135	466503.9	2.5	**141.2876**	1.494	1.1	ug/L	25	Standard
	Ce	140	1199135.8	2.4				ug/L	22	Standard
>	**Tb**	159	904794.9	0.4				ug/L	958910	Standard
	Ho	165	30443.2	2.7				ug/L	14	Standard
	Tl	203	1945.8	3.9	**0.1437**	0.005	3.3	ug/L	10	Standard
	Tl	205	4361.6	2.3	**0.1376**	0.002	1.4	ug/L	27	Standard
	Pb	206	74216.4	2.1	**7.1477**	0.118	1.6	ug/L	319	Standard
	Pb	207	57861.0	1.6	**6.6426**	0.076	1.1	ug/L	287	Standard
	Pb	208	275929.1	2.6	**6.7637**	0.134	2.0	ug/L	1244	Standard
	U	238	20593.7	3.2	**1.6868**	0.045	2.6	ug/L	5	Standard
>	**Bi**	209	449364.4	1.0				ug/L	497973	Standard

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Na	23	2358.5	7.9	**0.1152**	0.013	10.9	mg/L	237	Standard
Mg	24	593602.4	3.9	**1.1219**	0.052	4.7	mg/L	60	Standard
K	39	1446.7	8.3	**1.4334**	0.141	9.8	mg/L	105	Standard
Ca	43	16.7	17.3	**3.1270**	1.739	55.6	mg/L	7	Standard
Fe	54	24836.0	2.6	**6.6026**	0.204	3.1	mg/L	483	Standard
Fe	57	386693.7	2.0	**6.1116**	0.180	3.0	mg/L	2095	Standard
> **Sc-1**	45	267575.5	1.0				mg/L	272955	Standard
Cl	35	5.0	34.6				ug/L	9	Standard
Kr	83	56.8	8.3				ug/L	39	Standard
Br	81	617.5	5.7				ug/L	644	Standard
P	31	21577.0	4.4				ug/L	324	Standard
S	34	4039.7	1.6				ug/L	5485	Standard
Sr	88	66.7	26.3				ug/L	28	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		86.232	
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	87.059
	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	90.239
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	
Ba 135 Upper, S, EEE	Ba	135	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043413S WG403527-04
Sample Date/Time: Thursday, July 19, 2012 17:17:21
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	69373.8	5.9	**15343.7142**	693.707	4.5	ug/L	6820	Standard
	Be	9	8450.7	1.2	**6.2131**	0.109	1.8	ug/L	3	Standard
	Al	27	79230793.4	2.5	**7228.1724**	51.057	0.7	ug/L	4266	Standard
>	**Sc**	45	281496.5	1.9				ug/L	272955	Standard
	Ti	47	71010.8	3.2	**85.3393**	2.839	3.3	ug/L	51	Standard
	V	51	146208.7	3.0	**20.5868**	0.603	2.9	ug/L	2088	Standard
	Cr	52	126256.1	2.8	**21.0527**	0.566	2.7	ug/L	6617	Standard
	Cr	53	20023.2	2.8	**20.7582**	0.570	2.7	ug/L	166	Standard
	Mn	55	7984333.6	3.5	**787.5836**	26.582	3.4	ug/L	940	Standard
	Co	59	87601.4	3.8	**12.6212**	0.447	3.5	ug/L	76	Standard
	Ni	60	38827.4	3.0	**23.9539**	0.639	2.7	ug/L	52	Standard
	Cu	65	22918.0	2.6	**15.0174**	0.367	2.4	ug/L	68	Standard
	Zn	66	57890.8	3.8	**80.8862**	2.753	3.4	ug/L	104	Standard
>	**Ge**	72	194625.7	0.6				ug/L	221790	Standard
	As	75	6645.5	3.5	**9.2385**	0.295	3.2	ug/L	-133	Standard
	Se	82	582.9	2.4	**7.8224**	0.171	2.2	ug/L	18	Standard
	Se-1	77	487.7	5.3	**8.3715**	0.554	6.6	ug/L	70	Standard
>	**Ga**	71	9764.8	2.1				mg/L	477	Standard
	Rb	85	270056.6	2.7				ug/L	23	Standard
	Y	89	613658.8	2.6				ug/L	197249	Standard
>	**Rh**	103	298.3	11.4				ug/L	295	Standard
	Mo	98	1079.2	1.8	**0.4057**	0.001	0.4	ug/L	13	Standard
	Ag	107	33740.2	4.2	**6.2418**	0.196	3.1	ug/L	64	Standard
	Cd	111	27974.9	3.6	**9.7896**	0.215	2.2	mg/L	53	Standard
	Cd	114	78126.4	2.5	**9.7258**	0.132	1.4	ug/L	150	Standard
>	**In**	115	576540.4	1.5				ug/L	644840	Standard
	Sn	118	1659.8	3.3	**0.0672**	0.003	4.0	ug/L	487	Standard
	Sb	123	3461.6	4.9	**0.4472**	0.017	3.8	ug/L	126	Standard
	Ba	135	597589.7	2.9	**176.2314**	2.731	1.5	ug/L	25	Standard
	Ce	140	1626345.8	3.3				ug/L	22	Standard
>	**Tb**	159	936742.2	0.5				ug/L	958910	Standard
	Ho	165	54184.8	2.6				ug/L	14	Standard
	Tl	203	85518.5	3.3	**6.3554**	0.175	2.8	ug/L	10	Standard
	Tl	205	197435.8	2.9	**6.2654**	0.175	2.8	ug/L	27	Standard
	Pb	206	169792.4	3.2	**16.2908**	0.429	2.6	ug/L	319	Standard
	Pb	207	134127.0	2.4	**15.3494**	0.256	1.7	ug/L	287	Standard
	Pb	208	636003.6	2.9	**15.5369**	0.372	2.4	ug/L	1244	Standard
	U	238	140936.7	3.7	**11.4712**	0.363	3.2	ug/L	5	Standard
>	**Bi**	209	452082.2	1.1				ug/L	497973	Standard

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Na	23	3557.1	7.8	**0.1768**	0.015	8.5	mg/L	237	Standard
Mg	24	708072.5	3.8	**1.2715**	0.025	2.0	mg/L	60	Standard
K	39	1698.4	1.2	**1.6116**	0.035	2.2	mg/L	105	Standard
Ca	43	30.0	33.3	**10.0857**	5.852	58.0	mg/L	7	Standard
Fe	54	29732.0	2.8	**7.5293**	0.067	0.9	mg/L	483	Standard
Fe	57	480403.5	5.5	**7.2186**	0.284	3.9	mg/L	2095	Standard
Sc-1	45	281496.5	1.9				mg/L	272955	Standard
Cl	35	3.3	69.3				ug/L	9	Standard
Kr	83	78.7	7.4				ug/L	39	Standard
Br	81	714.2	7.3				ug/L	644	Standard
P	31	65930.7	2.4				ug/L	324	Standard
S	34	4252.3	0.6				ug/L	5485	Standard
Sr	88	113.3	41.0				ug/L	28	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		87.752	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207043413S WG403527-04
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	Cd	111	
	Cd	114	
>	In	115	89.408
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	90.785
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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	
Ba 135 Upper, S, EEE	Ba	135	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043413SD WG403527-05
Sample Date/Time: Thursday, July 19, 2012 17:20:30
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	66468.9	3.4	**14867.5233**	423.175	2.8	ug/L	6820	Standard
	Be	9	7878.7	2.6	**5.8730**	0.102	1.7	ug/L	3	Standard
	Al	27	70507065.5	2.9	**6523.3777**	139.790	2.1	ug/L	4266	Standard
>	**Sc**	45	277556.0	0.9				ug/L	272955	Standard
	Ti	47	69578.5	3.0	**82.3116**	1.246	1.5	ug/L	51	Standard
	V	51	124831.9	2.3	**17.2618**	0.152	0.9	ug/L	2088	Standard
	Cr	52	106708.8	1.0	**17.3471**	0.137	0.8	ug/L	6617	Standard
	Cr	53	17062.1	4.2	**17.3882**	0.471	2.7	ug/L	166	Standard
	Mn	55	7155263.5	3.1	**694.8556**	13.806	2.0	ug/L	940	Standard
	Co	59	73186.4	2.7	**10.3791**	0.141	1.4	ug/L	76	Standard
	Ni	60	36662.0	3.2	**22.2648**	0.377	1.7	ug/L	52	Standard
	Cu	65	21483.9	2.8	**13.8557**	0.218	1.6	ug/L	68	Standard
	Zn	66	55359.7	2.6	**76.1453**	0.842	1.1	ug/L	104	Standard
>	**Ge**	72	197671.3	1.5				ug/L	221790	Standard
	As	75	5890.9	1.7	**8.0865**	0.021	0.3	ug/L	-133	Standard
	Se	82	527.0	3.4	**6.9404**	0.157	2.3	ug/L	18	Standard
	Se-1	77	441.0	5.3	**7.2913**	0.349	4.8	ug/L	70	Standard
>	**Ga**	71	8589.1	5.2				mg/L	477	Standard
	Rb	85	263450.0	2.6				ug/L	23	Standard
	Y	89	429808.8	2.7				ug/L	197249	Standard
>	**Rh**	103	348.3	14.9				ug/L	295	Standard
	Mo	98	892.7	4.4	**0.3310**	0.010	3.0	ug/L	13	Standard
	Ag	107	30464.9	1.6	**5.5814**	0.056	1.0	ug/L	64	Standard
	Cd	111	25257.6	1.5	**8.7512**	0.012	0.1	mg/L	53	Standard
	Cd	114	71298.9	1.6	**8.7873**	0.025	0.3	ug/L	150	Standard
>	**In**	115	582263.7	1.4				ug/L	644840	Standard
	Sn	118	943.4	3.8	**0.0162**	0.003	16.9	ug/L	487	Standard
	Sb	123	2517.0	1.1	**0.3215**	0.001	0.3	ug/L	126	Standard
	Ba	135	548954.8	2.8	**160.3033**	2.906	1.8	ug/L	25	Standard
	Ce	140	1317288.8	2.3				ug/L	22	Standard
>	**Tb**	159	918709.2	0.4				ug/L	958910	Standard
	Ho	165	35205.9	1.0				ug/L	14	Standard
	Tl	203	77851.2	1.9	**5.6483**	0.100	1.8	ug/L	10	Standard
	Tl	205	179886.1	1.8	**5.5726**	0.096	1.7	ug/L	27	Standard
	Pb	206	142134.4	2.2	**13.3086**	0.275	2.1	ug/L	319	Standard
	Pb	207	114866.9	2.4	**12.8282**	0.308	2.4	ug/L	287	Standard
	Pb	208	540277.7	2.6	**12.8802**	0.331	2.6	ug/L	1244	Standard
	U	238	92202.8	2.8	**7.3270**	0.197	2.7	ug/L	5	Standard
>	**Bi**	209	463085.4	0.5				ug/L	497973	Standard

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Na	23	2786.9	7.4	**0.1349**	0.011	7.8	mg/L	237	Standard
Mg	24	642094.7	2.4	**1.1695**	0.017	1.5	mg/L	60	Standard
K	39	1525.1	0.6	**1.4577**	0.007	0.5	mg/L	105	Standard
Ca	43	25.0	40.0	**7.4261**	5.551	74.8	mg/L	7	Standard
Fe	54	27922.0	3.3	**7.1654**	0.203	2.8	mg/L	483	Standard
Fe	57	444716.2	2.4	**6.7775**	0.118	1.7	mg/L	2095	Standard
Sc-1	45	277556.0	0.9				mg/L	272955	Standard
Cl	35	5.7	44.4				ug/L	9	Standard
Kr	83	65.8	4.6				ug/L	39	Standard
Br	81	667.5	7.9				ug/L	644	Standard
P	31	30089.9	1.8				ug/L	324	Standard
S	34	4158.9	2.1				ug/L	5485	Standard
Sr	88	80.0	16.5				ug/L	28	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		89.125	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207043413SD WG403527-05
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Cd	111	
Cd	114	
> In	115	90.296
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	92.994
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
> Sc-1	45	
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	
Ba 135 Upper, S, EEE	Ba	135	

Sample ID: L1207043413SD WG403527-05
Report Date/Time: Thursday, July 19, 2012 17:23:02
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043401
Sample Date/Time: Thursday, July 19, 2012 17:23:41
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	59493.3	1.6	**11407.1111**	269.111	2.4	ug/L	6820	Standard
	Be	9	1211.7	4.5	**0.7964**	0.039	4.9	ug/L	3	Standard
	Al	27	54616157.9	3.0	**4467.6490**	149.777	3.4	ug/L	4266	Standard
>	**Sc**	45	313976.5	0.5				ug/L	272955	Standard
	Ti	47	127515.1	1.9	**158.7563**	3.204	2.0	ug/L	51	Standard
	V	51	2443526.5	2.0	**360.7439**	5.696	1.6	ug/L	2088	Standard
	Cr	52	1253821.7	2.5	**226.1350**	3.797	1.7	ug/L	6617	Standard
	Cr	53	212035.9	1.0	**229.0778**	2.824	1.2	ug/L	166	Standard
	Mn	55	1707172.3	4.7	**174.3086**	7.303	4.2	ug/L	940	Standard
	Co	59	22748.1	2.0	**3.3852**	0.060	1.8	ug/L	76	Standard
	Ni	60	186194.6	1.7	**119.0873**	1.813	1.5	ug/L	52	Standard
	Cu	65	77421.0	2.3	**52.6655**	1.161	2.2	ug/L	68	Standard
	Zn	66	444448.7	0.8	**644.4046**	5.266	0.8	ug/L	104	Standard
>	**Ge**	72	187924.0	0.9				ug/L	221790	Standard
	As	75	12233.4	1.3	**17.4501**	0.176	1.0	ug/L	-133	Standard
	Se	82	989.7	4.1	**13.9013**	0.530	3.8	ug/L	18	Standard
	Se-1	77	752.4	2.9	**14.2400**	0.594	4.2	ug/L	70	Standard
>	**Ga**	71	10532.0	1.4				mg/L	477	Standard
	Rb	85	94656.8	4.2				ug/L	23	Standard
	Y	89	1702817.5	2.9				ug/L	197249	Standard
>	**Rh**	103	415.0	11.5				ug/L	295	Standard
	Mo	98	49114.3	2.2	**18.6276**	0.176	0.9	ug/L	13	Standard
	Ag	107	9927.3	4.8	**1.8232**	0.061	3.4	ug/L	64	Standard
	Cd	111	107148.4	3.3	**37.3231**	0.694	1.9	mg/L	53	Standard
	Cd	114	296402.8	2.8	**36.7203**	0.627	1.7	ug/L	150	Standard
>	**In**	115	580174.8	1.5				ug/L	644840	Standard
	Sn	118	4021.2	1.4	**0.2315**	0.001	0.3	ug/L	487	Standard
	Sb	123	15468.1	2.9	**1.9931**	0.028	1.4	ug/L	126	Standard
	Ba	135	221271.5	2.8	**64.8379**	0.935	1.4	ug/L	25	Standard
	Ce	140	1697214.3	2.3				ug/L	22	Standard
>	**Tb**	159	1008473.8	1.3				ug/L	958910	Standard
	Ho	165	145927.3	2.4				ug/L	14	Standard
	Tl	203	8771.9	4.1	**0.6755**	0.020	3.0	ug/L	10	Standard
	Tl	205	20236.2	3.4	**0.6656**	0.016	2.4	ug/L	27	Standard
	Pb	206	108651.8	3.4	**10.8196**	0.272	2.5	ug/L	319	Standard
	Pb	207	47295.4	3.0	**5.6008**	0.105	1.9	ug/L	287	Standard
	Pb	208	268384.1	3.1	**6.7932**	0.145	2.1	ug/L	1244	Standard
	U	238	414827.4	2.9	**35.0745**	0.652	1.9	ug/L	5	Standard
>	**Bi**	209	435164.3	1.3				ug/L	497973	Standard

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Na	23	34711.5	5.8	**1.7577**	0.113	6.4	mg/L	237	Standard
Mg	24	782647.0	0.6	**1.2603**	0.012	0.9	mg/L	60	Standard
K	39	1398.4	9.8	**1.1614**	0.131	11.3	mg/L	105	Standard
Ca	43	160.0	43.4	**72.7841**	34.422	47.3	mg/L	7	Standard
Fe	54	27179.3	3.4	**6.1488**	0.229	3.7	mg/L	483	Standard
Fe	57	439434.0	2.6	**5.9171**	0.169	2.9	mg/L	2095	Standard
Sc-1	45	313976.5	0.5				mg/L	272955	Standard
Cl	35	4.7	44.6				ug/L	9	Standard
Kr	83	143.6	4.3				ug/L	39	Standard
Br	81	852.5	4.5				ug/L	644	Standard
P	31	488242.2	0.8				ug/L	324	Standard
S	34	5421.0	1.5				ug/L	5485	Standard
Sr	88	575.0	15.2				ug/L	28	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		84.731	
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	89.972
	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	87.387
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	
V 51 Upper, S, EEE	V	51	
Cr 52 Upper, S, EEE	Cr	52	
Cr 53 Upper, S, EEE	Cr	53	
Mn 55 Upper, S, EEE	Mn	55	
Ni 60 Upper, S, EEE	Ni	60	
Zn 66 Upper, S, EEE	Zn	66	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043403
Sample Date/Time: Thursday, July 19, 2012 17:26:51
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	47559.6	3.8	**10657.6394**	468.050	4.4	ug/L	6820	Standard
	Be	9	621.7	13.7	**0.4808**	0.065	13.6	ug/L	3	Standard
	Al	27	45992277.4	3.2	**4437.3293**	135.922	3.1	ug/L	4266	Standard
>	**Sc**	45	266177.7	0.2				ug/L	272955	Standard
	Ti	47	23446.8	2.0	**28.5981**	0.468	1.6	ug/L	51	Standard
	V	51	71907.6	2.3	**10.1535**	0.188	1.8	ug/L	2088	Standard
	Cr	52	67570.4	1.7	**10.9776**	0.142	1.3	ug/L	6617	Standard
	Cr	53	10415.2	1.6	**10.9063**	0.157	1.4	ug/L	166	Standard
	Mn	55	2391329.6	1.7	**239.6490**	3.049	1.3	ug/L	940	Standard
	Co	59	25051.0	1.7	**3.6589**	0.041	1.1	ug/L	76	Standard
	Ni	60	21024.2	1.5	**13.1685**	0.129	1.0	ug/L	52	Standard
	Cu	65	10785.8	1.6	**7.1566**	0.093	1.3	ug/L	68	Standard
	Zn	66	40899.1	2.0	**58.0274**	0.878	1.5	ug/L	104	Standard
>	**Ge**	72	191512.8	0.5				ug/L	221790	Standard
	As	75	1618.8	2.4	**2.4232**	0.042	1.7	ug/L	-133	Standard
	Se	82	77.6	10.3	**0.8898**	0.106	11.9	ug/L	18	Standard
	Se-1	77	123.7	15.0	**1.0868**	0.392	36.0	ug/L	70	Standard
>	**Ga**	71	5636.0	3.0				mg/L	477	Standard
	Rb	85	130096.2	1.2				ug/L	23	Standard
	Y	89	471811.2	1.6				ug/L	197249	Standard
>	**Rh**	103	345.0	3.8				ug/L	295	Standard
	Mo	98	1161.2	1.8	**0.4291**	0.004	1.0	ug/L	13	Standard
	Ag	107	772.0	4.5	**0.1380**	0.004	3.2	ug/L	64	Standard
	Cd	111	4238.1	2.6	**1.4381**	0.019	1.3	mg/L	53	Standard
	Cd	114	11627.5	0.4	**1.4055**	0.016	1.1	ug/L	150	Standard
>	**In**	115	587041.9	1.5				ug/L	644840	Standard
	Sn	118	929.4	2.9	**0.0147**	0.002	14.7	ug/L	487	Standard
	Sb	123	154.9	4.7	**0.0177**	0.001	5.5	ug/L	126	Standard
	Ba	135	257657.6	1.4	**74.6299**	0.594	0.8	ug/L	25	Standard
	Ce	140	1112924.9	0.4				ug/L	22	Standard
>	**Tb**	159	933804.1	1.1				ug/L	958910	Standard
	Ho	165	37072.6	1.1				ug/L	14	Standard
	Tl	203	1476.7	0.7	**0.1033**	0.002	1.6	ug/L	10	Standard
	Tl	205	3354.7	0.7	**0.1003**	0.001	1.3	ug/L	27	Standard
	Pb	206	67197.7	0.6	**6.1507**	0.069	1.1	ug/L	319	Standard
	Pb	207	51472.3	1.6	**5.6139**	0.049	0.9	ug/L	287	Standard
	Pb	208	247039.2	0.8	**5.7545**	0.072	1.2	ug/L	1244	Standard
	U	238	28231.9	1.4	**2.1990**	0.009	0.4	ug/L	5	Standard
>	**Bi**	209	472577.8	1.7				ug/L	497973	Standard

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Na	23	3025.3	0.7	**0.1563**	0.001	0.8	mg/L	237	Standard
Mg	24	495135.9	2.1	**0.9405**	0.021	2.3	mg/L	60	Standard
K	39	1015.0	6.4	**0.9783**	0.068	7.0	mg/L	105	Standard
Ca	43	13.3	78.1	**1.2215**	6.095	499.0	mg/L	7	Standard
Fe	54	19081.0	1.6	**5.0694**	0.077	1.5	mg/L	483	Standard
Fe	57	301331.3	2.4	**4.7800**	0.110	2.3	mg/L	2095	Standard
Sc-1	45	266177.7	0.2				mg/L	272955	Standard
Cl	35	3.7	56.8				ug/L	9	Standard
Kr	83	68.2	7.9				ug/L	39	Standard
Br	81	676.7	7.9				ug/L	644	Standard
P	31	38747.0	1.0				ug/L	324	Standard
S	34	4442.3	2.1				ug/L	5485	Standard
Sr	88	70.0	12.4				ug/L	28	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		86.349	
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	91.037
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	94.900
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207043403PS WG403596-01
Sample Date/Time: Thursday, July 19, 2012 17:30:00
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	58131.5	5.0	**12436.6710**	202.959	1.6	ug/L	6820	Standard
	Be	9	69368.5	2.6	**50.5274**	1.743	3.4	ug/L	3	Standard
	Al	27	57830919.4	2.8	**5226.0639**	187.263	3.6	ug/L	4266	Standard
>	**Sc**	45	284366.0	3.6				ug/L	272955	Standard
	Ti	47	29189.8	3.8	**34.7687**	1.742	5.0	ug/L	51	Standard
	V	51	477568.2	1.2	**67.3055**	1.714	2.5	ug/L	2088	Standard
	Cr	52	402170.5	0.9	**68.7538**	1.518	2.2	ug/L	6617	Standard
	Cr	53	65778.3	1.9	**67.9619**	2.165	3.2	ug/L	166	Standard
	Mn	55	3555712.4	2.1	**347.8715**	11.813	3.4	ug/L	940	Standard
	Co	59	433468.5	2.5	**62.0032**	2.298	3.7	ug/L	76	Standard
	Ni	60	115783.2	2.5	**70.9178**	2.652	3.7	ug/L	52	Standard
	Cu	65	99659.4	1.3	**64.9376**	1.671	2.6	ug/L	68	Standard
	Zn	66	94407.0	2.3	**130.9651**	4.723	3.6	ug/L	104	Standard
>	**Ge**	72	196262.4	1.3				ug/L	221790	Standard
	As	75	46746.2	1.5	**63.3808**	1.770	2.8	ug/L	-133	Standard
	Se	82	5001.1	1.6	**68.0309**	1.925	2.8	ug/L	18	Standard
	Se-1	77	3414.4	0.6	**66.7033**	1.202	1.8	ug/L	70	Standard
>	**Ga**	71	6796.5	3.0				mg/L	477	Standard
	Rb	85	158006.3	1.2				ug/L	23	Standard
	Y	89	533154.2	2.1				ug/L	197249	Standard
>	**Rh**	103	350.0	14.5				ug/L	295	Standard
	Mo	98	1484.5	3.5	**0.5436**	0.017	3.2	ug/L	13	Standard
	Ag	107	338201.0	2.5	**60.7372**	1.314	2.2	ug/L	64	Standard
	Cd	111	183609.7	3.1	**62.4715**	1.735	2.8	mg/L	53	Standard
	Cd	114	504400.3	2.7	**61.0302**	1.449	2.4	ug/L	150	Standard
>	**In**	115	594180.8	0.4				ug/L	644840	Standard
	Sn	118	1254.7	4.9	**0.0361**	0.004	11.5	ug/L	487	Standard
	Sb	123	466823.2	2.7	**58.7971**	1.445	2.5	ug/L	126	Standard
	Ba	135	515210.4	1.7	**147.4390**	1.988	1.3	ug/L	25	Standard
	Ce	140	1368327.2	1.8				ug/L	22	Standard
>	**Tb**	159	944067.6	0.8				ug/L	958910	Standard
	Ho	165	45427.0	2.0				ug/L	14	Standard
	Tl	203	761590.9	1.1	**54.3806**	0.569	1.0	ug/L	10	Standard
	Tl	205	1770996.1	2.3	**53.9913**	1.143	2.1	ug/L	27	Standard
	Pb	206	670836.1	0.9	**61.9093**	0.605	1.0	ug/L	319	Standard
	Pb	207	566629.2	1.6	**62.3956**	1.282	2.1	ug/L	287	Standard
	Pb	208	2628958.9	1.6	**61.7839**	1.031	1.7	ug/L	1244	Standard
	U	238	734523.3	1.3	**57.4258**	0.692	1.2	ug/L	5	Standard
>	**Bi**	209	470695.6	1.3				ug/L	497973	Standard

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Na	23	3295.4	4.2	**0.1602**	0.015	9.2	mg/L	237	Standard
Mg	24	592755.4	4.2	**1.0538**	0.013	1.2	mg/L	60	Standard
K	39	1296.7	7.4	**1.1907**	0.070	5.9	mg/L	105	Standard
Ca	43	15.0	0.0	**1.6421**	0.301	18.3	mg/L	7	Standard
Fe	54	23680.4	2.6	**5.9112**	0.060	1.0	mg/L	483	Standard
Fe	57	374912.6	3.7	**5.5736**	0.175	3.1	mg/L	2095	Standard
Sc-1	45	284366.0	3.6				mg/L	272955	Standard
Cl	35	5.3	21.7				ug/L	9	Standard
Kr	83	71.7	10.5				ug/L	39	Standard
Br	81	669.2	6.3				ug/L	644	Standard
P	31	46611.6	2.2				ug/L	324	Standard
S	34	4519.0	2.6				ug/L	5485	Standard
Sr	88	126.7	13.9				ug/L	28	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		88.490	
As	75			
Se	82			
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107			

Sample ID: L1207043403PS WG403596-01
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	Cd	111	
	Cd	114	
>	In	115	92.144
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	94.522
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	
Ba 135 Upper, S, EEE	Ba	135	

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043403SDL WG403596-02
Sample Date/Time: Thursday, July 19, 2012 17:33:09
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	13240.8	2.5	**2119.6640**	37.207	1.8	ug/L	6820	Standard
	Be	9	136.7	18.4	**0.1156**	0.020	17.3	ug/L	3	Standard
	Al	27	8549112.2	1.6	**918.9367**	16.747	1.8	ug/L	4266	Standard
>	**Sc**	45	238860.2	2.0				ug/L	272955	Standard
	Ti	47	4268.9	1.1	**5.2911**	0.017	0.3	ug/L	51	Standard
	V	51	14316.0	2.4	**1.8552**	0.036	2.0	ug/L	2088	Standard
	Cr	52	16030.1	1.1	**1.8838**	0.017	0.9	ug/L	6617	Standard
	Cr	53	1941.8	4.4	**1.9691**	0.107	5.4	ug/L	166	Standard
	Mn	55	407048.5	0.8	**41.7154**	0.134	0.3	ug/L	940	Standard
	Co	59	4735.1	2.7	**0.6982**	0.015	2.1	ug/L	76	Standard
	Ni	60	4049.2	3.4	**2.5747**	0.068	2.6	ug/L	52	Standard
	Cu	65	2075.5	0.8	**1.3711**	0.012	0.9	ug/L	68	Standard
	Zn	66	8993.0	1.7	**12.9378**	0.126	1.0	ug/L	104	Standard
>	**Ge**	72	186940.2	0.8				ug/L	221790	Standard
	As	75	218.6	8.3	**0.4913**	0.028	5.7	ug/L	-133	Standard
	Se	82	26.0	23.7	**0.1786**	0.091	50.8	ug/L	18	Standard
	Se-1	77	72.3	2.1	**0.0720**	0.036	50.3	ug/L	70	Standard
>	**Ga**	71	1273.4	3.6				mg/L	477	Standard
	Rb	85	23538.3	2.6				ug/L	23	Standard
	Y	89	219360.1	1.5				ug/L	197249	Standard
>	**Rh**	103	323.3	4.7				ug/L	295	Standard
	Mo	98	227.8	5.2	**0.0820**	0.005	6.7	ug/L	13	Standard
	Ag	107	300.7	23.3	**0.0541**	0.012	22.7	ug/L	64	Standard
	Cd	111	820.5	9.5	**0.2700**	0.024	8.7	mg/L	53	Standard
	Cd	114	2414.0	11.6	**0.2862**	0.031	10.8	ug/L	150	Standard
>	**In**	115	568006.2	1.5				ug/L	644840	Standard
	Sn	118	416.3	7.1	**-0.0197**	0.003	13.0	ug/L	487	Standard
	Sb	123	1042.1	16.0	**0.1351**	0.020	15.0	ug/L	126	Standard
	Ba	135	47249.6	1.5	**14.1353**	0.151	1.1	ug/L	25	Standard
	Ce	140	205555.5	1.5				ug/L	22	Standard
>	**Tb**	159	860409.3	0.9				ug/L	958910	Standard
	Ho	165	6701.8	0.9				ug/L	14	Standard
	Tl	203	483.7	50.5	**0.0338**	0.018	52.7	ug/L	10	Standard
	Tl	205	1049.4	39.2	**0.0313**	0.013	40.7	ug/L	27	Standard
	Pb	206	12614.9	2.4	**1.1716**	0.024	2.1	ug/L	319	Standard
	Pb	207	9751.5	2.8	**1.0736**	0.026	2.5	ug/L	287	Standard
	Pb	208	46653.2	2.4	**1.0997**	0.023	2.1	ug/L	1244	Standard
	U	238	5124.2	1.4	**0.4137**	0.004	1.1	ug/L	5	Standard
>	**Bi**	209	456430.2	0.4				ug/L	497973	Standard

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	Na	23	1268.4	3.2	**0.0586**	0.004	6.3	mg/L	237	Standard
	Mg	24	97746.4	4.6	**0.2068**	0.007	3.2	mg/L	60	Standard
	K	39	278.3	9.9	**0.2236**	0.034	15.1	mg/L	105	Standard
	Ca	43	8.3	69.3	**-1.1195**	3.845	343.4	mg/L	7	Standard
	Fe	54	3536.3	3.8	**0.9457**	0.054	5.8	mg/L	483	Standard
	Fe	57	56804.6	2.1	**0.9803**	0.019	2.0	mg/L	2095	Standard
>	**Sc-1**	45	238860.2	2.0				mg/L	272955	Standard
	Cl	35	6.3	18.2				ug/L	9	Standard
	Kr	83	41.2	12.9				ug/L	39	Standard
	Br	81	568.3	7.0				ug/L	644	Standard
	P	31	7245.9	1.9				ug/L	324	Standard
	S	34	4167.2	0.9				ug/L	5485	Standard
	Sr	88	46.7	34.4				ug/L	28	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		84.287	
	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	88.085
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	91.658
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Thursday, July 19, 2012 17:36:21
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	6803.2	5.5	**19.1793**	93.273	486.3	ug/L	6820	Standard
	Be	9	65176.6	0.3	**49.7989**	0.389	0.8	ug/L	3	Standard
	Al	27	519487.2	0.3	**48.7748**	0.405	0.8	ug/L	4266	Standard
>	**Sc**	45	270930.9	0.7				ug/L	272955	Standard
	Ti	47	92042.7	0.3	**100.2734**	1.237	1.2	ug/L	51	Standard
	V	51	387276.2	0.8	**49.8115**	0.877	1.8	ug/L	2088	Standard
	Cr	52	318173.6	1.0	**49.4232**	0.665	1.3	ug/L	6617	Standard
	Cr	53	52014.2	2.1	**49.0627**	0.402	0.8	ug/L	166	Standard
	Mn	55	573012.0	0.8	**51.1543**	1.108	2.2	ug/L	940	Standard
	Co	59	383703.4	1.0	**50.1505**	0.705	1.4	ug/L	76	Standard
	Ni	60	87766.1	0.8	**49.1151**	0.823	1.7	ug/L	52	Standard
	Cu	65	82624.1	1.8	**49.1828**	0.377	0.8	ug/L	68	Standard
	Zn	66	38912.9	1.7	**49.2211**	1.048	2.1	ug/L	104	Standard
>	**Ge**	72	214733.5	1.4				ug/L	221790	Standard
	As	75	39690.5	1.3	**49.2200**	0.893	1.8	ug/L	-133	Standard
	Se	82	4022.1	1.9	**49.9533**	1.385	2.8	ug/L	18	Standard
	Se-1	77	2799.6	0.6	**49.6230**	0.480	1.0	ug/L	70	Standard
>	**Ga**	71	463.3	15.7				mg/L	477	Standard
	Rb	85	638.3	2.8				ug/L	23	Standard
	Y	89	197635.9	1.9				ug/L	197249	Standard
>	**Rh**	103	345.0	16.7				ug/L	295	Standard
	Mo	98	282592.9	1.6	**94.8629**	1.551	1.6	ug/L	13	Standard
	Ag	107	306519.8	0.3	**49.8834**	0.262	0.5	ug/L	64	Standard
	Cd	111	161474.7	1.9	**49.7856**	1.153	2.3	mg/L	53	Standard
	Cd	114	450391.3	1.5	**49.3800**	0.771	1.6	ug/L	150	Standard
>	**In**	115	655723.3	0.4				ug/L	644840	Standard
	Sn	118	1058507.9	1.5	**65.3858**	1.076	1.6	ug/L	487	Standard
	Sb	123	430064.5	0.4	**49.0851**	0.194	0.4	ug/L	126	Standard
	Ba	135	186085.7	1.8	**48.2488**	0.885	1.8	ug/L	25	Standard
	Ce	140	804.4	6.3				ug/L	22	Standard
>	**Tb**	159	966597.2	0.4				ug/L	958910	Standard
	Ho	165	24.0	4.2				ug/L	14	Standard
	Tl	203	707637.3	0.5	**48.4699**	0.147	0.3	ug/L	10	Standard
	Tl	205	1629883.2	0.6	**47.6662**	0.097	0.2	ug/L	27	Standard
	Pb	206	549184.9	0.8	**48.6108**	0.228	0.5	ug/L	319	Standard
	Pb	207	467112.0	0.8	**49.3338**	0.590	1.2	ug/L	287	Standard
	Pb	208	2156554.3	0.4	**48.6105**	0.211	0.4	ug/L	1244	Standard
	U	238	655174.9	0.9	**49.1396**	0.782	1.6	ug/L	5	Standard
>	**Bi**	209	490664.6	0.8				ug/L	497973	Standard

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Na	23	107881.1	0.9	**6.4006**	0.104	1.6	mg/L	237	Standard
Mg	24	2454897.0	2.1	**4.5819**	0.125	2.7	mg/L	60	Standard
K	39	4464.0	6.1	**4.5875**	0.270	5.9	mg/L	105	Standard
Ca	43	8.3	34.6	**-1.7937**	1.647	91.8	mg/L	7	Standard
Fe	54	18847.1	2.3	**4.9155**	0.100	2.0	mg/L	483	Standard
Fe	57	292854.0	2.2	**4.5633**	0.128	2.8	mg/L	2095	Standard
Sc-1	45	270930.9	0.7				mg/L	272955	Standard
Cl	35	4.7	75.3				ug/L	9	Standard
Kr	83	33.9	8.2				ug/L	39	Standard
Br	81	632.5	4.3				ug/L	644	Standard
P	31	333.3	10.2				ug/L	324	Standard
S	34	5057.5	3.0				ug/L	5485	Standard
Sr	88	45.0	40.1				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.550		
Sc	45			
Ti	47	100.273		
V	51	99.623		
Cr	52	98.846		
Cr	53			
Mn	55	102.309		
Co	59	100.301		
Ni	60	98.230		
Cu	65	98.366		
Zn	66	98.442		
Ge	72		96.818	
As	75	98.440		
Se	82	99.907		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	94.863		
Ag	107	99.767		

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	Cd	111	99.571	
	Cd	114		
>	In	115		101.688
	Sn	118	130.772	
	Sb	123	98.170	
	Ba	135	96.498	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	96.940	
	Tl	205		
	Pb	206	97.222	
	Pb	207	98.668	
	Pb	208	97.221	
	U	238	98.279	
>	Bi	209		98.532
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 17:39:32
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	6993.3	3.3	**85.9222**	53.821	62.6	ug/L	6820	Standard
	Be	9	10.0	86.6	**0.0052**	0.007	132.6	ug/L	3	Standard
	Al	27	5270.9	7.1	**0.0299**	0.028	94.8	ug/L	4266	Standard
>	**Sc**	45	268225.5	1.7				ug/L	272955	Standard
	Ti	47	65.3	10.4	**0.0190**	0.009	46.0	ug/L	51	Standard
	V	51	1906.7	3.1	**-0.0216**	0.009	40.5	ug/L	2088	Standard
	Cr	52	6000.9	2.0	**-0.0737**	0.033	44.5	ug/L	6617	Standard
	Cr	53	141.7	21.6	**-0.0063**	0.027	423.3	ug/L	166	Standard
	Mn	55	1003.7	3.9	**-0.0021**	0.003	140.9	ug/L	940	Standard
	Co	59	100.7	10.6	**0.0006**	0.001	215.4	ug/L	76	Standard
	Ni	60	49.7	3.1	**-0.0009**	0.001	84.4	ug/L	52	Standard
	Cu	65	70.3	5.4	**-0.0071**	0.003	42.9	ug/L	68	Standard
	Zn	66	97.7	3.3	**-0.0469**	0.003	5.3	ug/L	104	Standard
>	**Ge**	72	212386.2	1.9				ug/L	221790	Standard
	As	75	-124.6	6.8	**0.0252**	0.013	51.0	ug/L	-133	Standard
	Se	82	21.2	3.6	**0.0729**	0.006	7.6	ug/L	18	Standard
	Se-1	77	72.0	7.2	**-0.1166**	0.072	62.0	ug/L	70	Standard
>	**Ga**	71	428.3	9.7				mg/L	477	Standard
	Rb	85	40.0	21.7				ug/L	23	Standard
	Y	89	192203.2	1.2				ug/L	197249	Standard
>	**Rh**	103	356.7	17.0				ug/L	295	Standard
	Mo	98	55.0	30.2	**0.0124**	0.006	45.2	ug/L	13	Standard
	Ag	107	187.3	5.7	**0.0287**	0.002	6.9	ug/L	64	Standard
	Cd	111	57.2	27.6	**-0.0040**	0.005	119.3	mg/L	53	Standard
	Cd	114	176.2	4.8	**0.0005**	0.001	201.7	ug/L	150	Standard
>	**In**	115	646023.9	1.0				ug/L	644840	Standard
	Sn	118	637.7	5.0	**-0.0095**	0.002	19.5	ug/L	487	Standard
	Sb	123	1008.1	27.8	**0.1147**	0.032	27.8	ug/L	126	Standard
	Ba	135	37.0	0.0	**-0.0017**	0.000	5.6	ug/L	25	Standard
	Ce	140	75.3	2.0				ug/L	22	Standard
>	**Tb**	159	932941.5	0.8				ug/L	958910	Standard
	Ho	165	10.0	40.0				ug/L	14	Standard
	Tl	203	47.3	48.4	**0.0014**	0.002	104.8	ug/L	10	Standard
	Tl	205	117.0	36.4	**0.0018**	0.001	66.8	ug/L	27	Standard
	Pb	206	349.7	4.6	**0.0015**	0.001	66.1	ug/L	319	Standard
	Pb	207	293.7	2.3	**-0.0032**	0.001	17.8	ug/L	287	Standard
	Pb	208	1352.7	0.4	**-0.0009**	0.000	32.2	ug/L	1244	Standard
	U	238	45.3	22.2	**0.0040**	0.001	17.9	ug/L	5	Standard
>	**Bi**	209	490622.5	1.3				ug/L	497973	Standard

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Na	23	628.3	7.2	**0.0107**	0.003	30.9	mg/L	237	Standard
Mg	24	160.0	16.5	**0.0003**	0.000	16.6	mg/L	60	Standard
K	39	110.0	9.1	**0.0082**	0.010	118.3	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	491.2	2.0	**0.0045**	0.001	16.2	mg/L	483	Standard
Fe	57	1693.4	7.2	**-0.0034**	0.002	69.7	mg/L	2095	Standard
Sc-1	45	268225.5	1.7				mg/L	272955	Standard
Cl	35	2.3	49.5				ug/L	9	Standard
Kr	83	34.2	7.0				ug/L	39	Standard
Br	81	632.5	6.2				ug/L	644	Standard
P	31	289.2	9.5				ug/L	324	Standard
S	34	5079.2	0.3				ug/L	5485	Standard
Sr	88	28.3	44.4				ug/L	28	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		95.760	
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	100.184
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	98.524
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207043405
Sample Date/Time: Thursday, July 19, 2012 17:42:45
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	52111.2	3.4	**11618.2727**	318.189	2.7	ug/L	6820	Standard
	Be	9	573.3	13.1	**0.4354**	0.050	11.4	ug/L	3	Standard
	Al	27	57702721.5	4.6	**5473.6951**	129.602	2.4	ug/L	4266	Standard
>	**Sc**	45	270664.0	2.7				ug/L	272955	Standard
	Ti	47	29656.3	1.5	**35.9702**	0.381	1.1	ug/L	51	Standard
	V	51	72544.2	2.3	**10.1827**	0.162	1.6	ug/L	2088	Standard
	Cr	52	73107.0	1.8	**11.8837**	0.077	0.7	ug/L	6617	Standard
	Cr	53	11494.4	2.0	**11.9772**	0.150	1.3	ug/L	166	Standard
	Mn	55	3328937.5	2.1	**331.6367**	4.068	1.2	ug/L	940	Standard
	Co	59	27795.2	3.1	**4.0362**	0.079	2.0	ug/L	76	Standard
	Ni	60	18017.0	1.5	**11.2129**	0.024	0.2	ug/L	52	Standard
	Cu	65	9464.3	2.7	**6.2350**	0.086	1.4	ug/L	68	Standard
	Zn	66	41159.5	1.9	**58.0510**	1.082	1.9	ug/L	104	Standard
>	**Ge**	72	192672.8	1.3				ug/L	221790	Standard
	As	75	1566.0	0.8	**2.3375**	0.046	2.0	ug/L	-133	Standard
	Se	82	72.7	6.4	**0.8146**	0.060	7.3	ug/L	18	Standard
	Se-1	77	123.7	1.2	**1.0707**	0.051	4.8	ug/L	70	Standard
>	**Ga**	71	6819.9	5.6				mg/L	477	Standard
	Rb	85	137637.7	2.9				ug/L	23	Standard
	Y	89	301581.1	3.6				ug/L	197249	Standard
>	**Rh**	103	280.0	15.3				ug/L	295	Standard
	Mo	98	886.7	1.8	**0.3303**	0.008	2.4	ug/L	13	Standard
	Ag	107	792.0	2.8	**0.1435**	0.005	3.3	ug/L	64	Standard
	Cd	111	3689.7	0.2	**1.2651**	0.010	0.8	mg/L	53	Standard
	Cd	114	10287.4	3.4	**1.2568**	0.041	3.3	ug/L	150	Standard
>	**In**	115	579846.4	0.5				ug/L	644840	Standard
	Sn	118	699.7	7.5	**-0.0005**	0.004	718.3	ug/L	487	Standard
	Sb	123	296.9	13.9	**0.0363**	0.006	15.3	ug/L	126	Standard
	Ba	135	274570.8	2.8	**80.5078**	1.867	2.3	ug/L	25	Standard
	Ce	140	1115854.3	1.6				ug/L	22	Standard
>	**Tb**	159	901329.9	1.2				ug/L	958910	Standard
	Ho	165	19609.0	1.7				ug/L	14	Standard
	Tl	203	1737.8	13.0	**0.1244**	0.017	13.8	ug/L	10	Standard
	Tl	205	3912.8	9.0	**0.1196**	0.012	9.8	ug/L	27	Standard
	Pb	206	69090.2	1.7	**6.4516**	0.136	2.1	ug/L	319	Standard
	Pb	207	54931.8	2.4	**6.1145**	0.168	2.7	ug/L	287	Standard
	Pb	208	261252.2	2.1	**6.2096**	0.157	2.5	ug/L	1244	Standard
	U	238	12340.0	1.9	**0.9808**	0.024	2.5	ug/L	5	Standard
>	**Bi**	209	463296.4	0.6				ug/L	497973	Standard

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	Na	23	2343.5	4.9	**0.1128**	0.010	9.2	mg/L	237	Standard
	Mg	24	594252.8	1.5	**1.1103**	0.014	1.3	mg/L	60	Standard
	K	39	1208.4	8.2	**1.1664**	0.139	11.9	mg/L	105	Standard
	Ca	43	11.7	99.0	**0.0953**	6.551	6872.9	mg/L	7	Standard
	Fe	54	23145.4	1.5	**6.0735**	0.076	1.3	mg/L	483	Standard
	Fe	57	352958.1	3.2	**5.5106**	0.061	1.1	mg/L	2095	Standard
>	**Sc-1**	45	270664.0	2.7				mg/L	272955	Standard
	Cl	35	3.0	66.7				ug/L	9	Standard
	Kr	83	51.1	4.9				ug/L	39	Standard
	Br	81	632.5	12.3				ug/L	644	Standard
	P	31	13595.3	4.3				ug/L	324	Standard
	S	34	3979.7	1.6				ug/L	5485	Standard
	Sr	88	71.7	33.0				ug/L	28	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		86.872	
	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	89.921
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	93.037
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

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: L1207043407
Sample Date/Time: Thursday, July 19, 2012 17:45:54
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	10582.0	2.5	**1298.1124**	75.236	5.8	ug/L	6820	Standard
	Be	9	35.0	49.5	**0.0272**	0.015	54.1	ug/L	3	Standard
	Al	27	2442590.5	1.2	**257.8459**	3.700	1.4	ug/L	4266	Standard
>	**Sc**	45	242867.7	0.3				ug/L	272955	Standard
	Ti	47	5919.5	0.9	**7.3401**	0.184	2.5	ug/L	51	Standard
	V	51	14987.1	1.8	**1.9500**	0.077	4.0	ug/L	2088	Standard
	Cr	52	12739.4	2.4	**1.2793**	0.092	7.2	ug/L	6617	Standard
	Cr	53	965.9	6.1	**0.9060**	0.076	8.4	ug/L	166	Standard
	Mn	55	291782.6	1.2	**29.8070**	0.849	2.8	ug/L	940	Standard
	Co	59	1627.1	2.4	**0.2311**	0.010	4.2	ug/L	76	Standard
	Ni	60	4348.3	4.1	**2.7618**	0.160	5.8	ug/L	52	Standard
	Cu	65	1579.4	5.5	**1.0290**	0.065	6.3	ug/L	68	Standard
	Zn	66	4995.5	1.1	**7.0919**	0.048	0.7	ug/L	104	Standard
>	**Ge**	72	187433.1	1.7				ug/L	221790	Standard
	As	75	190.8	17.7	**0.4509**	0.046	10.1	ug/L	-133	Standard
	Se	82	43.9	8.8	**0.4321**	0.049	11.4	ug/L	18	Standard
	Se-1	77	63.0	10.4	**-0.1253**	0.160	127.7	ug/L	70	Standard
>	**Ga**	71	720.0	6.1				mg/L	477	Standard
	Rb	85	4662.4	2.0				ug/L	23	Standard
	Y	89	173125.2	1.1				ug/L	197249	Standard
>	**Rh**	103	296.7	6.4				ug/L	295	Standard
	Mo	98	163.8	16.1	**0.0578**	0.010	17.1	ug/L	13	Standard
	Ag	107	200.0	21.7	**0.0357**	0.008	22.6	ug/L	64	Standard
	Cd	111	1035.3	3.7	**0.3507**	0.010	2.7	mg/L	53	Standard
	Cd	114	2912.1	1.4	**0.3536**	0.002	0.4	ug/L	150	Standard
>	**In**	115	561826.2	1.2				ug/L	644840	Standard
	Sn	118	1759.8	5.2	**0.0775**	0.007	8.5	ug/L	487	Standard
	Sb	123	319.7	6.5	**0.0405**	0.002	6.1	ug/L	126	Standard
	Ba	135	171991.4	1.2	**52.0562**	1.164	2.2	ug/L	25	Standard
	Ce	140	28823.7	1.4				ug/L	22	Standard
>	**Tb**	159	875346.9	1.4				ug/L	958910	Standard
	Ho	165	620.0	4.5				ug/L	14	Standard
	Tl	203	219.7	8.3	**0.0150**	0.001	9.2	ug/L	10	Standard
	Tl	205	478.3	7.6	**0.0140**	0.001	7.7	ug/L	27	Standard
	Pb	206	20841.7	0.6	**2.0280**	0.026	1.3	ug/L	319	Standard
	Pb	207	17181.4	0.8	**1.9897**	0.033	1.7	ug/L	287	Standard
	Pb	208	80268.6	1.4	**1.9865**	0.040	2.0	ug/L	1244	Standard
	U	238	1360.4	3.0	**0.1143**	0.004	3.4	ug/L	5	Standard
>	**Bi**	209	440252.5	0.8				ug/L	497973	Standard

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Na	23	2031.8	5.4	**0.1079**	0.007	6.9	mg/L	237	Standard
Mg	24	624253.4	2.0	**1.2996**	0.029	2.2	mg/L	60	Standard
K	39	158.3	17.4	**0.0773**	0.033	42.7	mg/L	105	Standard
Ca	43	148.3	22.4	**88.5649**	21.472	24.2	mg/L	7	Standard
Fe	54	1386.4	10.3	**0.2857**	0.044	15.2	mg/L	483	Standard
Fe	57	29715.8	4.3	**0.4897**	0.023	4.8	mg/L	2095	Standard
> **Sc-1**	45	242867.7	0.3				mg/L	272955	Standard
Cl	35	4.0	66.1				ug/L	9	Standard
Kr	83	37.0	10.2				ug/L	39	Standard
Br	81	691.7	11.1				ug/L	644	Standard
P	31	2606.9	5.2				ug/L	324	Standard
S	34	6071.2	4.7				ug/L	5485	Standard
Sr	88	186.7	15.5				ug/L	28	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		84.509	
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	87.126
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	88.409
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207043409
Sample Date/Time: Thursday, July 19, 2012 17:49:03
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	10950.6	4.6	**1509.0751**	74.534	4.9	ug/L	6820	Standard
	Be	9	36.7	15.7	**0.0297**	0.005	18.1	ug/L	3	Standard
	Al	27	1759144.9	2.7	**192.0600**	8.930	4.6	ug/L	4266	Standard
>	**Sc**	45	234833.3	2.6				ug/L	272955	Standard
	Ti	47	4797.4	2.9	**6.1680**	0.230	3.7	ug/L	51	Standard
	V	51	10668.6	2.2	**1.3704**	0.053	3.9	ug/L	2088	Standard
	Cr	52	10722.5	1.6	**0.9868**	0.052	5.3	ug/L	6617	Standard
	Cr	53	643.3	7.3	**0.5824**	0.050	8.6	ug/L	166	Standard
	Mn	55	1210126.3	1.8	**128.6511**	3.701	2.9	ug/L	940	Standard
	Co	59	1837.1	1.7	**0.2730**	0.008	2.9	ug/L	76	Standard
	Ni	60	5935.2	2.0	**3.9244**	0.110	2.8	ug/L	52	Standard
	Cu	65	1277.1	0.2	**0.8558**	0.008	1.0	ug/L	68	Standard
	Zn	66	2769.9	0.2	**4.0100**	0.051	1.3	ug/L	104	Standard
>	**Ge**	72	180515.7	1.1				ug/L	221790	Standard
	As	75	343.4	3.6	**0.6855**	0.015	2.2	ug/L	-133	Standard
	Se	82	47.9	3.8	**0.5151**	0.029	5.7	ug/L	18	Standard
	Se-1	77	84.0	7.2	**0.3785**	0.120	31.7	ug/L	70	Standard
>	**Ga**	71	540.0	7.2				mg/L	477	Standard
	Rb	85	5814.4	2.4				ug/L	23	Standard
	Y	89	164897.5	0.7				ug/L	197249	Standard
>	**Rh**	103	275.0	19.2				ug/L	295	Standard
	Mo	98	166.5	14.0	**0.0617**	0.010	16.0	ug/L	13	Standard
	Ag	107	94.7	3.7	**0.0165**	0.001	3.8	ug/L	64	Standard
	Cd	111	537.9	3.5	**0.1799**	0.006	3.3	mg/L	53	Standard
	Cd	114	1550.4	2.1	**0.1878**	0.007	3.5	ug/L	150	Standard
>	**In**	115	538997.4	1.1				ug/L	644840	Standard
	Sn	118	384.3	2.9	**-0.0206**	0.001	3.5	ug/L	487	Standard
	Sb	123	214.9	9.0	**0.0278**	0.003	10.4	ug/L	126	Standard
	Ba	135	232890.2	1.7	**73.4800**	1.953	2.7	ug/L	25	Standard
	Ce	140	21557.7	0.5				ug/L	22	Standard
>	**Tb**	159	859404.4	0.6				ug/L	958910	Standard
	Ho	165	413.3	7.2				ug/L	14	Standard
	Tl	203	164.7	6.9	**0.0111**	0.001	6.9	ug/L	10	Standard
	Tl	205	387.3	4.8	**0.0113**	0.001	5.3	ug/L	27	Standard
	Pb	206	17055.6	0.4	**1.6993**	0.026	1.5	ug/L	319	Standard
	Pb	207	14156.3	1.3	**1.6778**	0.024	1.4	ug/L	287	Standard
	Pb	208	65986.7	0.5	**1.6718**	0.024	1.4	ug/L	1244	Standard
	U	238	679.3	2.6	**0.0589**	0.002	3.6	ug/L	5	Standard
>	**Bi**	209	428793.7	1.1				ug/L	497973	Standard

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Na	23	2190.2	4.2	**0.1233**	0.002	2.0	mg/L	237	Standard
Mg	24	696891.4	3.2	**1.5012**	0.064	4.3	mg/L	60	Standard
K	39	163.3	17.9	**0.0900**	0.038	42.5	mg/L	105	Standard
Ca	43	175.0	17.1	**109.8635**	22.901	20.8	mg/L	7	Standard
Fe	54	2402.0	2.3	**0.6134**	0.005	0.9	mg/L	483	Standard
Fe	57	47855.5	1.4	**0.8358**	0.012	1.4	mg/L	2095	Standard
> **Sc-1**	45	234833.3	2.6				mg/L	272955	Standard
Cl	35	5.3	43.3				ug/L	9	Standard
Kr	83	35.8	5.6				ug/L	39	Standard
Br	81	650.8	8.6				ug/L	644	Standard
P	31	1995.1	7.2				ug/L	324	Standard
S	34	6527.2	1.2				ug/L	5485	Standard
Sr	88	205.0	14.8				ug/L	28	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		81.390	
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	83.586
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	86.108
	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
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1207043411
Sample Date/Time: Thursday, July 19, 2012 17:52:13
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	47504.4	3.3	**10415.0062**	175.046	1.7	ug/L	6820	Standard
	Be	9	673.3	6.0	**0.5114**	0.028	5.5	ug/L	3	Standard
	Al	27	56443019.8	2.1	**5347.0280**	124.467	2.3	ug/L	4266	Standard
>	**Sc**	45	271190.2	3.0				ug/L	272955	Standard
	Ti	47	48714.9	1.6	**60.1046**	1.124	1.9	ug/L	51	Standard
	V	51	233960.6	2.0	**34.0065**	0.820	2.4	ug/L	2088	Standard
	Cr	52	224228.3	2.5	**39.2533**	1.133	2.9	ug/L	6617	Standard
	Cr	53	35732.9	2.3	**38.1614**	0.980	2.6	ug/L	166	Standard
	Mn	55	2326973.9	2.2	**235.6703**	6.214	2.6	ug/L	940	Standard
	Co	59	24498.8	1.7	**3.6160**	0.075	2.1	ug/L	76	Standard
	Ni	60	61620.8	3.3	**39.0629**	1.430	3.7	ug/L	52	Standard
	Cu	65	28118.4	2.1	**18.9354**	0.470	2.5	ug/L	68	Standard
	Zn	66	119767.6	1.9	**172.0641**	3.887	2.3	ug/L	104	Standard
>	**Ge**	72	189523.6	0.4				ug/L	221790	Standard
	As	75	4460.4	1.2	**6.4245**	0.097	1.5	ug/L	-133	Standard
	Se	82	242.0	1.2	**3.2225**	0.027	0.8	ug/L	18	Standard
	Se-1	77	234.7	4.3	**3.4065**	0.227	6.7	ug/L	70	Standard
>	**Ga**	71	7003.3	3.2				mg/L	477	Standard
	Rb	85	101990.8	4.0				ug/L	23	Standard
	Y	89	647065.4	1.6				ug/L	197249	Standard
>	**Rh**	103	280.0	8.2				ug/L	295	Standard
	Mo	98	7451.5	3.0	**2.8986**	0.032	1.1	ug/L	13	Standard
	Ag	107	2480.9	4.8	**0.4665**	0.015	3.3	ug/L	64	Standard
	Cd	111	19557.1	4.4	**6.9818**	0.177	2.5	mg/L	53	Standard
	Cd	114	54774.7	3.2	**6.9573**	0.105	1.5	ug/L	150	Standard
>	**In**	115	564577.8	1.9				ug/L	644840	Standard
	Sn	118	2153.5	2.2	**0.1052**	0.003	2.5	ug/L	487	Standard
	Sb	123	381.4	7.0	**0.0485**	0.003	5.9	ug/L	126	Standard
	Ba	135	225687.4	2.5	**67.9630**	0.551	0.8	ug/L	25	Standard
	Ce	140	1039455.5	2.4				ug/L	22	Standard
>	**Tb**	159	918367.2	1.1				ug/L	958910	Standard
	Ho	165	52647.7	2.5				ug/L	14	Standard
	Tl	203	2327.2	2.1	**0.1697**	0.004	2.2	ug/L	10	Standard
	Tl	205	5403.3	2.4	**0.1683**	0.003	2.0	ug/L	27	Standard
	Pb	206	74220.8	3.4	**7.0397**	0.167	2.4	ug/L	319	Standard
	Pb	207	50053.6	2.6	**5.6546**	0.084	1.5	ug/L	287	Standard
	Pb	208	249570.8	2.6	**6.0223**	0.095	1.6	ug/L	1244	Standard
	U	238	90697.8	3.0	**7.3154**	0.138	1.9	ug/L	5	Standard
>	**Bi**	209	456207.4	1.4				ug/L	497973	Standard

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Na	23	5874.5	9.7	**0.3221**	0.024	7.4	mg/L	237	Standard
Mg	24	539983.5	1.5	**1.0071**	0.019	1.9	mg/L	60	Standard
K	39	1401.7	8.0	**1.3642**	0.098	7.2	mg/L	105	Standard
Ca	43	31.7	24.1	**11.5565**	3.960	34.3	mg/L	7	Standard
Fe	54	25283.6	3.7	**6.6362**	0.337	5.1	mg/L	483	Standard
Fe	57	371464.3	5.6	**5.7895**	0.253	4.4	mg/L	2095	Standard
Sc-1	45	271190.2	3.0				mg/L	272955	Standard
Cl	35	5.0	72.1				ug/L	9	Standard
Kr	83	77.7	7.4				ug/L	39	Standard
Br	81	630.8	3.3				ug/L	644	Standard
P	31	122919.1	1.2				ug/L	324	Standard
S	34	4590.7	4.7				ug/L	5485	Standard
Sr	88	161.7	25.0				ug/L	28	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		85.452	
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	87.553
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	91.613
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 17:55:25
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	6956.6	4.3	**109.7993**	91.982	83.8	ug/L	6820	Standard
	Be	9	63179.8	1.9	**49.6617**	1.488	3.0	ug/L	3	Standard
	Al	27	529296.5	5.4	**51.1274**	2.404	4.7	ug/L	4266	Standard
>	**Sc**	45	263412.0	1.5				ug/L	272955	Standard
	Ti	47	89723.9	1.1	**99.4587**	2.667	2.7	ug/L	51	Standard
	V	51	377796.4	0.6	**49.4324**	0.653	1.3	ug/L	2088	Standard
	Cr	52	316468.4	1.0	**50.0234**	0.541	1.1	ug/L	6617	Standard
	Cr	53	51481.5	1.5	**49.4088**	0.562	1.1	ug/L	166	Standard
	Mn	55	562433.8	1.0	**51.0794**	0.999	2.0	ug/L	940	Standard
	Co	59	379949.7	0.6	**50.5233**	0.692	1.4	ug/L	76	Standard
	Ni	60	85590.4	1.1	**48.7245**	0.398	0.8	ug/L	52	Standard
	Cu	65	80470.5	1.0	**48.7353**	0.265	0.5	ug/L	68	Standard
	Zn	66	38189.7	0.9	**49.1504**	1.182	2.4	ug/L	104	Standard
>	**Ge**	72	211070.2	1.5				ug/L	221790	Standard
	As	75	38830.5	0.4	**48.9898**	0.586	1.2	ug/L	-133	Standard
	Se	82	3924.3	0.5	**49.5805**	0.689	1.4	ug/L	18	Standard
	Se-1	77	2753.9	1.0	**49.6638**	0.798	1.6	ug/L	70	Standard
>	**Ga**	71	440.0	11.2				mg/L	477	Standard
	Rb	85	726.7	21.7				ug/L	23	Standard
	Y	89	193626.8	3.0				ug/L	197249	Standard
>	**Rh**	103	350.0	8.9				ug/L	295	Standard
	Mo	98	274814.2	0.5	**96.0857**	0.628	0.7	ug/L	13	Standard
	Ag	107	289935.6	0.9	**49.1449**	0.392	0.8	ug/L	64	Standard
	Cd	111	153979.7	1.8	**49.4449**	0.887	1.8	mg/L	53	Standard
	Cd	114	435170.2	1.7	**49.6904**	0.459	0.9	ug/L	150	Standard
>	**In**	115	629582.0	1.1				ug/L	644840	Standard
	Sn	118	1024632.3	0.7	**65.9291**	1.175	1.8	ug/L	487	Standard
	Sb	123	417527.6	0.7	**49.6350**	0.382	0.8	ug/L	126	Standard
	Ba	135	183651.4	1.1	**49.5980**	0.671	1.4	ug/L	25	Standard
	Ce	140	1728.1	85.2				ug/L	22	Standard
>	**Tb**	159	947075.9	0.7				ug/L	958910	Standard
	Ho	165	51.7	96.1				ug/L	14	Standard
	Tl	203	702256.8	0.5	**49.3751**	0.628	1.3	ug/L	10	Standard
	Tl	205	1614324.3	0.5	**48.4615**	0.608	1.3	ug/L	27	Standard
	Pb	206	540089.6	0.5	**49.0709**	0.388	0.8	ug/L	319	Standard
	Pb	207	457842.5	0.3	**49.6331**	0.503	1.0	ug/L	287	Standard
	Pb	208	2118179.3	0.5	**49.0083**	0.402	0.8	ug/L	1244	Standard
	U	238	638133.6	0.9	**49.1248**	0.622	1.3	ug/L	5	Standard
>	**Bi**	209	478029.4	0.8				ug/L	497973	Standard

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Na	23	105836.7	0.6	**6.4595**	0.132	2.0	mg/L	237	Standard
Mg	24	2502522.2	2.8	**4.8045**	0.168	3.5	mg/L	60	Standard
K	39	4665.7	1.0	**4.9406**	0.026	0.5	mg/L	105	Standard
Ca	43	8.3	91.7	**-1.6288**	4.518	277.4	mg/L	7	Standard
Fe	54	18515.6	1.1	**4.9686**	0.025	0.5	mg/L	483	Standard
Fe	57	272986.4	4.0	**4.3756**	0.239	5.5	mg/L	2095	Standard
Sc-1	45	263412.0	1.5				mg/L	272955	Standard
Cl	35	4.7	24.7				ug/L	9	Standard
Kr	83	39.6	2.6				ug/L	39	Standard
Br	81	607.5	6.2				ug/L	644	Standard
P	31	353.3	11.8				ug/L	324	Standard
S	34	4945.8	3.0				ug/L	5485	Standard
Sr	88	41.7	18.3				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	102.255		
Sc	45			
Ti	47	99.459		
V	51	98.865		
Cr	52	100.047		
Cr	53			
Mn	55	102.159		
Co	59	101.047		
Ni	60	97.449		
Cu	65	97.471		
Zn	66	98.301		
Ge	72		95.167	
As	75	97.980		
Se	82	99.161		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	96.086		
Ag	107	98.290		

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	Cd	111	98.890	
	Cd	114		
>	In	115		97.634
	Sn	118	131.858	
	Sb	123	99.270	
	Ba	135	99.196	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.750	
	Tl	205		
	Pb	206	98.142	
	Pb	207	99.266	
	Pb	208	98.017	
	U	238	98.250	
>	Bi	209		95.995
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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	Sn	118	

Sample ID: QC Std 6
Report Date/Time: Thursday, July 19, 2012 17:57:55
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 17:58:35
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	6636.5	4.7	**17.7060**	72.160	407.5	ug/L	6820	Standard
	Be	9	11.7	24.7	**0.0065**	0.002	34.5	ug/L	3	Standard
	Al	27	5821.1	10.8	**0.0908**	0.062	67.8	ug/L	4266	Standard
>	**Sc**	45	264511.0	1.8				ug/L	272955	Standard
	Ti	47	66.7	17.9	**0.0215**	0.013	60.6	ug/L	51	Standard
	V	51	1879.6	1.6	**-0.0212**	0.005	24.5	ug/L	2088	Standard
	Cr	52	5975.5	3.3	**-0.0624**	0.036	58.1	ug/L	6617	Standard
	Cr	53	132.5	3.3	**-0.0127**	0.005	36.1	ug/L	166	Standard
	Mn	55	1028.4	3.7	**0.0016**	0.003	210.5	ug/L	940	Standard
	Co	59	94.0	10.3	**-0.0001**	0.001	1848.7	ug/L	76	Standard
	Ni	60	47.7	10.8	**-0.0016**	0.003	187.1	ug/L	52	Standard
	Cu	65	60.3	8.2	**-0.0125**	0.003	23.3	ug/L	68	Standard
	Zn	66	98.3	15.1	**-0.0441**	0.019	42.7	ug/L	104	Standard
>	**Ge**	72	208996.2	0.5				ug/L	221790	Standard
	As	75	-124.5	11.0	**0.0230**	0.017	75.0	ug/L	-133	Standard
	Se	82	15.0	17.0	**-0.0027**	0.033	1238.6	ug/L	18	Standard
	Se-1	77	71.7	2.1	**-0.1004**	0.034	33.9	ug/L	70	Standard
>	**Ga**	71	428.3	10.6				mg/L	477	Standard
	Rb	85	25.0	40.0				ug/L	23	Standard
	Y	89	188967.9	1.3				ug/L	197249	Standard
>	**Rh**	103	293.3	9.4				ug/L	295	Standard
	Mo	98	63.3	25.9	**0.0160**	0.006	38.5	ug/L	13	Standard
	Ag	107	137.3	13.0	**0.0211**	0.003	12.9	ug/L	64	Standard
	Cd	111	65.5	20.5	**-0.0007**	0.004	551.8	mg/L	53	Standard
	Cd	114	173.2	9.2	**0.0008**	0.002	233.7	ug/L	150	Standard
>	**In**	115	625838.9	1.5				ug/L	644840	Standard
	Sn	118	664.7	6.9	**-0.0064**	0.003	53.4	ug/L	487	Standard
	Sb	123	832.1	27.0	**0.0977**	0.028	29.1	ug/L	126	Standard
	Ba	135	48.0	19.9	**0.0016**	0.003	171.8	ug/L	25	Standard
	Ce	140	83.3	10.9				ug/L	22	Standard
>	**Tb**	159	923411.0	0.5				ug/L	958910	Standard
	Ho	165	9.0	19.2				ug/L	14	Standard
	Tl	203	50.0	2.0	**0.0017**	0.000	5.7	ug/L	10	Standard
	Tl	205	121.0	14.5	**0.0020**	0.001	27.3	ug/L	27	Standard
	Pb	206	357.3	3.5	**0.0028**	0.001	49.0	ug/L	319	Standard
	Pb	207	265.7	12.4	**-0.0056**	0.003	56.9	ug/L	287	Standard
	Pb	208	1323.0	0.4	**-0.0010**	0.000	40.5	ug/L	1244	Standard
	U	238	39.0	31.1	**0.0036**	0.001	27.0	ug/L	5	Standard
>	**Bi**	209	481272.2	1.3				ug/L	497973	Standard

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Na	23	466.7	8.1	**0.0013**	0.002	178.6	mg/L	237	Standard
Mg	24	203.3	21.2	**0.0004**	0.000	22.5	mg/L	60	Standard
K	39	116.7	24.4	**0.0173**	0.032	183.3	mg/L	105	Standard
Ca	43	5.0	100.0	**-3.6211**	2.940	81.2	mg/L	7	Standard
Fe	54	447.2	19.1	**-0.0055**	0.025	445.9	mg/L	483	Standard
Fe	57	1618.4	8.5	**-0.0043**	0.002	47.7	mg/L	2095	Standard
Sc-1	45	264511.0	1.8				mg/L	272955	Standard
Cl	35	2.0	50.0				ug/L	9	Standard
Kr	83	33.9	14.3				ug/L	39	Standard
Br	81	592.5	8.7				ug/L	644	Standard
P	31	272.5	1.8				ug/L	324	Standard
S	34	5010.8	2.5				ug/L	5485	Standard
Sr	88	30.0	33.3				ug/L	28	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		94.232	
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	97.053
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.646
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Thursday, July 19, 2012 18:01:05
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Method 6020 - Summary Report

Sample ID: PBS 60 WG403646-01
Sample Date/Time: Thursday, July 19, 2012 18:01:46
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	6301.3	2.4	**-58.3850**	18.576	31.8	ug/L	6820	Standard
	Be	9	21.7	133.2	**0.0142**	0.022	156.5	ug/L	3	Standard
	Al	27	46456.0	83.9	**4.0233**	3.689	91.7	ug/L	4266	Standard
>	**Sc**	45	262656.0	2.0				ug/L	272955	Standard
	Ti	47	87.0	47.8	**0.0448**	0.046	102.8	ug/L	51	Standard
	V	51	2171.1	20.5	**0.0193**	0.057	297.9	ug/L	2088	Standard
	Cr	52	6213.6	5.2	**-0.0168**	0.048	282.8	ug/L	6617	Standard
	Cr	53	168.3	19.8	**0.0235**	0.033	142.6	ug/L	166	Standard
	Mn	55	3887.9	116.1	**0.2649**	0.413	156.1	ug/L	940	Standard
	Co	59	264.0	125.7	**0.0228**	0.044	194.8	ug/L	76	Standard
	Ni	60	65.7	53.3	**0.0089**	0.020	223.3	ug/L	52	Standard
	Cu	65	74.0	59.9	**-0.0040**	0.027	672.8	ug/L	68	Standard
	Zn	66	1080.0	3.6	**1.2457**	0.035	2.8	ug/L	104	Standard
>	**Ge**	72	207550.0	1.3				ug/L	221790	Standard
	As	75	-114.4	25.9	**0.0344**	0.040	116.6	ug/L	-133	Standard
	Se	82	14.9	36.6	**-0.0027**	0.070	2648.0	ug/L	18	Standard
	Se-1	77	71.7	2.1	**-0.0913**	0.013	14.4	ug/L	70	Standard
>	**Ga**	71	443.3	9.1				mg/L	477	Standard
	Rb	85	46.7	60.9				ug/L	23	Standard
	Y	89	184864.3	0.7				ug/L	197249	Standard
>	**Rh**	103	300.0	17.3				ug/L	295	Standard
	Mo	98	35.8	81.9	**0.0062**	0.010	165.1	ug/L	13	Standard
	Ag	107	71.0	33.8	**0.0098**	0.004	41.3	ug/L	64	Standard
	Cd	111	63.6	22.5	**-0.0014**	0.005	318.8	mg/L	53	Standard
	Cd	114	157.2	24.9	**-0.0011**	0.004	385.9	ug/L	150	Standard
>	**In**	115	627494.4	0.8				ug/L	644840	Standard
	Sn	118	514.3	1.5	**-0.0162**	0.001	3.3	ug/L	487	Standard
	Sb	123	244.5	25.8	**0.0271**	0.007	27.3	ug/L	126	Standard
	Ba	135	63.0	100.4	**0.0056**	0.017	305.4	ug/L	25	Standard
	Ce	140	190.3	143.6				ug/L	22	Standard
>	**Tb**	159	927889.6	2.1				ug/L	958910	Standard
	Ho	165	51.0	142.6				ug/L	14	Standard
	Tl	203	524.4	166.3	**0.0346**	0.060	174.8	ug/L	10	Standard
	Tl	205	1204.1	167.6	**0.0340**	0.060	175.6	ug/L	27	Standard
	Pb	206	775.4	103.3	**0.0403**	0.072	178.3	ug/L	319	Standard
	Pb	207	675.0	103.5	**0.0382**	0.075	195.7	ug/L	287	Standard
	Pb	208	2880.5	99.6	**0.0345**	0.065	189.4	ug/L	1244	Standard
	U	238	217.0	167.6	**0.0171**	0.028	162.0	ug/L	5	Standard
>	**Bi**	209	482188.0	0.6				ug/L	497973	Standard

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Na	23	526.7	22.9	**0.0051**	0.007	131.1	mg/L	237	Standard
Mg	24	891.7	150.9	**0.0017**	0.003	153.1	mg/L	60	Standard
K	39	105.0	16.5	**0.0051**	0.017	322.4	mg/L	105	Standard
Ca	43	1.7	173.2	**-5.5736**	1.744	31.3	mg/L	7	Standard
Fe	54	431.4	5.8	**-0.0091**	0.009	100.4	mg/L	483	Standard
Fe	57	1755.1	21.3	**-0.0019**	0.005	282.1	mg/L	2095	Standard
Sc-1	45	262656.0	2.0				mg/L	272955	Standard
Cl	35	2.3	24.7				ug/L	9	Standard
Kr	83	35.6	20.7				ug/L	39	Standard
Br	81	617.5	14.8				ug/L	644	Standard
P	31	276.7	22.4				ug/L	324	Standard
S	34	4999.2	2.0				ug/L	5485	Standard
Sr	88	30.0	104.1				ug/L	28	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		93.580	
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	97.310
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.830
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBS 60 WG403646-01
Report Date/Time: Thursday, July 19, 2012 18:04:16
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Method 6020 - Summary Report

Sample ID: LCSS 60 WG403646-02
Sample Date/Time: Thursday, July 19, 2012 18:04:56
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	6483.1	3.9	**24.2637**	77.355	318.8	ug/L	6820	Standard
	Be	9	29269.9	1.4	**23.5396**	0.859	3.6	ug/L	3	Standard
	Al	27	277584.9	1.1	**27.2183**	0.518	1.9	ug/L	4266	Standard
>	**Sc**	45	257517.4	2.3				ug/L	272955	Standard
	Ti	47	87.7	12.6	**0.0470**	0.013	27.2	ug/L	51	Standard
	V	51	172900.1	1.0	**23.1560**	0.233	1.0	ug/L	2088	Standard
	Cr	52	148418.4	0.5	**23.6270**	0.165	0.7	ug/L	6617	Standard
	Cr	53	23350.5	2.5	**23.0062**	0.542	2.4	ug/L	166	Standard
	Mn	55	272646.3	0.8	**25.4543**	0.253	1.0	ug/L	940	Standard
	Co	59	175806.1	0.6	**24.0699**	0.184	0.8	ug/L	76	Standard
	Ni	60	40353.7	0.3	**23.6457**	0.036	0.2	ug/L	52	Standard
	Cu	65	38711.4	1.0	**24.1227**	0.288	1.2	ug/L	68	Standard
	Zn	66	20093.0	1.8	**26.5512**	0.509	1.9	ug/L	104	Standard
>	**Ge**	72	204918.1	0.2				ug/L	221790	Standard
	As	75	18091.8	0.3	**23.6019**	0.081	0.3	ug/L	-133	Standard
	Se	82	1848.4	1.2	**23.9500**	0.238	1.0	ug/L	18	Standard
	Se-1	77	1326.7	4.5	**23.9125**	1.090	4.6	ug/L	70	Standard
>	**Ga**	71	426.7	16.4				mg/L	477	Standard
	Rb	85	53.3	27.1				ug/L	23	Standard
	Y	89	184262.0	0.8				ug/L	197249	Standard
>	**Rh**	103	326.7	10.9				ug/L	295	Standard
	Mo	98	55.1	3.2	**0.0134**	0.000	2.2	ug/L	13	Standard
	Ag	107	139102.0	1.3	**24.2405**	0.162	0.7	ug/L	64	Standard
	Cd	111	72613.5	0.8	**23.9673**	0.593	2.5	mg/L	53	Standard
	Cd	114	201733.1	0.7	**23.6763**	0.252	1.1	ug/L	150	Standard
>	**In**	115	612361.3	1.7				ug/L	644840	Standard
	Sn	118	3239.0	2.3	**0.1650**	0.005	2.8	ug/L	487	Standard
	Sb	123	190493.6	0.8	**23.2828**	0.245	1.1	ug/L	126	Standard
	Ba	135	86109.7	0.3	**23.9070**	0.472	2.0	ug/L	25	Standard
	Ce	140	196.3	5.1				ug/L	22	Standard
>	**Tb**	159	920576.9	0.9				ug/L	958910	Standard
	Ho	165	14.3	28.2				ug/L	14	Standard
	Tl	203	326256.6	0.5	**22.7768**	0.274	1.2	ug/L	10	Standard
	Tl	205	755116.7	0.9	**22.5077**	0.231	1.0	ug/L	27	Standard
	Pb	206	256647.2	1.1	**23.1395**	0.340	1.5	ug/L	319	Standard
	Pb	207	217402.0	0.8	**23.3833**	0.120	0.5	ug/L	287	Standard
	Pb	208	1006930.1	0.1	**23.1176**	0.216	0.9	ug/L	1244	Standard
	U	238	284501.6	0.7	**21.7487**	0.318	1.5	ug/L	5	Standard
>	**Bi**	209	481409.7	0.9				ug/L	497973	Standard

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Na	23	1338.4	4.4	**0.0568**	0.006	9.7	mg/L	237	Standard
Mg	24	5120.9	4.9	**0.0100**	0.001	6.2	mg/L	60	Standard
K	39	116.7	9.9	**0.0205**	0.013	61.1	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	419.2	9.6	**-0.0104**	0.009	88.0	mg/L	483	Standard
Fe	57	1986.8	9.2	**0.0025**	0.003	107.3	mg/L	2095	Standard
Sc-1	45	257517.4	2.3				mg/L	272955	Standard
Cl	35	3.3	45.8				ug/L	9	Standard
Kr	83	38.4	8.5				ug/L	39	Standard
Br	81	665.0	3.8				ug/L	644	Standard
P	31	229.2	9.1				ug/L	324	Standard
S	34	4506.5	1.9				ug/L	5485	Standard
Sr	88	41.7	61.6				ug/L	28	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		92.393	
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	94.963
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.674
	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

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Method 6020 - Summary Report

Sample ID: LCSS 60 WG403646-03
Sample Date/Time: Thursday, July 19, 2012 18:08:06
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	6419.7	2.9	**3.9792**	96.355	2421.5	ug/L	6820	Standard
	Be	9	29498.7	2.6	**23.6682**	1.125	4.8	ug/L	3	Standard
	Al	27	268834.1	3.3	**26.2670**	0.182	0.7	ug/L	4266	Standard
>	**Sc**	45	258175.4	2.7				ug/L	272955	Standard
	Ti	47	79.7	10.5	**0.0380**	0.008	21.8	ug/L	51	Standard
	V	51	176704.7	0.5	**23.7317**	0.310	1.3	ug/L	2088	Standard
	Cr	52	141179.7	0.9	**22.4841**	0.456	2.0	ug/L	6617	Standard
	Cr	53	22466.6	1.6	**22.1911**	0.709	3.2	ug/L	166	Standard
	Mn	55	267241.0	0.9	**25.0118**	0.487	1.9	ug/L	940	Standard
	Co	59	174777.7	0.8	**23.9883**	0.263	1.1	ug/L	76	Standard
	Ni	60	40573.6	0.6	**23.8344**	0.296	1.2	ug/L	52	Standard
	Cu	65	39802.9	1.6	**24.8635**	0.189	0.8	ug/L	68	Standard
	Zn	66	19762.9	0.8	**26.1769**	0.261	1.0	ug/L	104	Standard
>	**Ge**	72	204435.9	1.8				ug/L	221790	Standard
	As	75	18508.0	0.5	**24.2030**	0.495	2.0	ug/L	-133	Standard
	Se	82	1872.1	1.3	**24.3239**	0.585	2.4	ug/L	18	Standard
	Se-1	77	1372.4	3.5	**24.8522**	0.965	3.9	ug/L	70	Standard
>	**Ga**	71	376.7	12.6				mg/L	477	Standard
	Rb	85	73.3	33.6				ug/L	23	Standard
	Y	89	185915.8	2.5				ug/L	197249	Standard
>	**Rh**	103	318.3	12.8				ug/L	295	Standard
	Mo	98	53.5	22.4	**0.0129**	0.004	33.5	ug/L	13	Standard
	Ag	107	140435.9	1.3	**24.5001**	0.426	1.7	ug/L	64	Standard
	Cd	111	72318.7	0.8	**23.8905**	0.288	1.2	mg/L	53	Standard
	Cd	114	202306.7	1.3	**23.7685**	0.409	1.7	ug/L	150	Standard
>	**In**	115	611683.6	0.5				ug/L	644840	Standard
	Sn	118	2773.9	1.3	**0.1344**	0.003	2.4	ug/L	487	Standard
	Sb	123	187043.3	1.4	**22.8839**	0.312	1.4	ug/L	126	Standard
	Ba	135	85444.9	0.2	**23.7438**	0.141	0.6	ug/L	25	Standard
	Ce	140	277.3	58.3				ug/L	22	Standard
>	**Tb**	159	917440.3	0.7				ug/L	958910	Standard
	Ho	165	18.3	32.9				ug/L	14	Standard
	Tl	203	327803.9	0.7	**22.9699**	0.282	1.2	ug/L	10	Standard
	Tl	205	761887.9	0.3	**22.7943**	0.185	0.8	ug/L	27	Standard
	Pb	206	254130.5	0.2	**22.9973**	0.171	0.7	ug/L	319	Standard
	Pb	207	215795.9	0.8	**23.2971**	0.188	0.8	ug/L	287	Standard
	Pb	208	999929.4	0.5	**23.0422**	0.251	1.1	ug/L	1244	Standard
	U	238	284900.6	0.4	**21.8592**	0.131	0.6	ug/L	5	Standard
>	**Bi**	209	479619.4	0.6				ug/L	497973	Standard

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Na	23	993.4	8.0	**0.0351**	0.007	18.6	mg/L	237	Standard
Mg	24	2868.6	10.2	**0.0056**	0.001	10.5	mg/L	60	Standard
K	39	90.0	30.9	**-0.0098**	0.028	290.0	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	351.6	3.1	**-0.0295**	0.005	15.7	mg/L	483	Standard
Fe	57	1948.5	2.1	**0.0018**	0.001	61.9	mg/L	2095	Standard
Sc-1	45	258175.4	2.7				mg/L	272955	Standard
Cl	35	5.3	28.6				ug/L	9	Standard
Kr	83	35.6	4.7				ug/L	39	Standard
Br	81	589.2	4.7				ug/L	644	Standard
P	31	216.7	19.0				ug/L	324	Standard
S	34	4257.3	1.8				ug/L	5485	Standard
Sr	88	33.3	48.2				ug/L	28	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		92.175	
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	94.858
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.314
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1207043402
Sample Date/Time: Thursday, July 19, 2012 18:11:15
Number of Replicates: 3
Autosampler Position: 417
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	7987.1	4.9	**720.1301**	102.295	14.2	ug/L	6820	Standard
	Be	9	10.0	100.0	**0.0066**	0.009	141.1	ug/L	3	Standard
	Al	27	5197.6	16.2	**0.1137**	0.089	78.1	ug/L	4266	Standard
>	**Sc**	45	226695.2	1.4				ug/L	272955	Standard
	Ti	47	526.0	2.8	**0.6074**	0.011	1.8	ug/L	51	Standard
	V	51	32372.4	1.8	**4.5522**	0.074	1.6	ug/L	2088	Standard
	Cr	52	5678.1	3.8	**0.0012**	0.031	2567.9	ug/L	6617	Standard
	Cr	53	150.8	11.0	**0.0228**	0.016	69.0	ug/L	166	Standard
	Mn	55	44164.8	7.4	**4.4553**	0.284	6.4	ug/L	940	Standard
	Co	59	216.7	3.4	**0.0199**	0.001	3.2	ug/L	76	Standard
	Ni	60	807.0	12.4	**0.4912**	0.058	11.8	ug/L	52	Standard
	Cu	65	368.7	9.2	**0.2035**	0.020	9.7	ug/L	68	Standard
	Zn	66	2039.1	13.7	**2.8067**	0.366	13.0	ug/L	104	Standard
>	**Ge**	72	186366.3	1.6				ug/L	221790	Standard
	As	75	806.0	2.5	**1.3282**	0.025	1.9	ug/L	-133	Standard
	Se	82	21.5	28.0	**0.1141**	0.086	75.4	ug/L	18	Standard
	Se-1	77	70.3	13.4	**0.0343**	0.196	569.9	ug/L	70	Standard
>	**Ga**	71	423.3	13.0				mg/L	477	Standard
	Rb	85	1811.8	9.3				ug/L	23	Standard
	Y	89	165512.5	0.9				ug/L	197249	Standard
>	**Rh**	103	250.0	18.3				ug/L	295	Standard
	Mo	98	38.6	10.0	**0.0089**	0.001	15.9	ug/L	13	Standard
	Ag	107	94.7	12.6	**0.0159**	0.002	15.0	ug/L	64	Standard
	Cd	111	788.9	15.4	**0.2650**	0.042	15.8	mg/L	53	Standard
	Cd	114	2208.6	15.2	**0.2666**	0.042	15.6	ug/L	150	Standard
>	**In**	115	555660.1	1.1				ug/L	644840	Standard
	Sn	118	405.0	2.0	**-0.0199**	0.001	2.5	ug/L	487	Standard
	Sb	123	1017.6	4.4	**0.1351**	0.007	5.5	ug/L	126	Standard
	Ba	135	16895.5	8.6	**5.1576**	0.406	7.9	ug/L	25	Standard
	Ce	140	16.3	12.7				ug/L	22	Standard
>	**Tb**	159	837867.6	1.1				ug/L	958910	Standard
	Ho	165	6.7	22.9				ug/L	14	Standard
	Tl	203	321.3	3.2	**0.0223**	0.001	4.1	ug/L	10	Standard
	Tl	205	748.4	6.2	**0.0223**	0.001	5.6	ug/L	27	Standard
	Pb	206	299.3	5.8	**-0.0004**	0.002	542.6	ug/L	319	Standard
	Pb	207	254.7	10.6	**-0.0047**	0.003	69.0	ug/L	287	Standard
	Pb	208	1184.7	3.8	**-0.0021**	0.001	64.1	ug/L	1244	Standard
	U	238	26.0	42.8	**0.0027**	0.001	34.8	ug/L	5	Standard
>	**Bi**	209	447762.5	1.2				ug/L	497973	Standard

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Na	23	13307.5	6.1	**0.9201**	0.049	5.4	mg/L	237	Standard
Mg	24	181250.8	4.6	**0.4042**	0.016	3.9	mg/L	60	Standard
K	39	295.0	1.7	**0.2624**	0.010	3.9	mg/L	105	Standard
Ca	43	13.3	108.3	**2.6626**	10.101	379.4	mg/L	7	Standard
Fe	54	168.2	6.1	**-0.0745**	0.004	5.4	mg/L	483	Standard
Fe	57	1941.8	5.5	**0.0061**	0.002	24.9	mg/L	2095	Standard
Sc-1	45	226695.2	1.4				mg/L	272955	Standard
Cl	35	8.3	27.7				ug/L	9	Standard
Kr	83	35.4	7.1				ug/L	39	Standard
Br	81	517.5	6.8				ug/L	644	Standard
P	31	4612.4	4.0				ug/L	324	Standard
S	34	4096.4	2.8				ug/L	5485	Standard
Sr	88	56.7	10.2				ug/L	28	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		84.028	
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	86.170
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	89.917
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043404
Sample Date/Time: Thursday, July 19, 2012 18:14:25
Number of Replicates: 3
Autosampler Position: 418
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	15477.9	4.0	**3002.8514**	116.783	3.9	ug/L	6820	Standard
	Be	9	10.0	50.0	**0.0065**	0.005	71.5	ug/L	3	Standard
	Al	27	15846.6	7.4	**1.3208**	0.166	12.6	ug/L	4266	Standard
>	**Sc**	45	226972.8	2.0				ug/L	272955	Standard
	Ti	47	246.3	7.1	**0.2582**	0.029	11.2	ug/L	51	Standard
	V	51	4138.0	1.5	**0.3490**	0.024	6.8	ug/L	2088	Standard
	Cr	52	5508.7	2.2	**-0.0245**	0.010	39.4	ug/L	6617	Standard
	Cr	53	110.0	8.2	**-0.0210**	0.009	43.4	ug/L	166	Standard
	Mn	55	338868.6	10.5	**35.0068**	3.767	10.8	ug/L	940	Standard
	Co	59	855.7	11.4	**0.1169**	0.015	12.7	ug/L	76	Standard
	Ni	60	801.4	14.7	**0.4907**	0.078	15.9	ug/L	52	Standard
	Cu	65	150.0	7.7	**0.0540**	0.008	13.9	ug/L	68	Standard
	Zn	66	2251.8	13.9	**3.1384**	0.468	14.9	ug/L	104	Standard
>	**Ge**	72	185453.4	2.9				ug/L	221790	Standard
	As	75	22.3	68.3	**0.2131**	0.023	10.7	ug/L	-133	Standard
	Se	82	19.9	15.7	**0.0935**	0.052	55.3	ug/L	18	Standard
	Se-1	77	58.0	19.2	**-0.2201**	0.219	99.6	ug/L	70	Standard
>	**Ga**	71	388.3	15.1				mg/L	477	Standard
	Rb	85	9816.5	8.0				ug/L	23	Standard
	Y	89	161658.2	2.6				ug/L	197249	Standard
>	**Rh**	103	278.3	4.1				ug/L	295	Standard
	Mo	98	102.6	6.8	**0.0352**	0.003	9.0	ug/L	13	Standard
	Ag	107	44.7	12.7	**0.0065**	0.001	18.2	ug/L	64	Standard
	Cd	111	245.1	15.9	**0.0692**	0.014	19.9	mg/L	53	Standard
	Cd	114	708.5	19.4	**0.0745**	0.017	23.5	ug/L	150	Standard
>	**In**	115	543516.4	0.8				ug/L	644840	Standard
	Sn	118	304.7	3.7	**-0.0267**	0.001	2.6	ug/L	487	Standard
	Sb	123	153.4	2.6	**0.0191**	0.000	2.3	ug/L	126	Standard
	Ba	135	51830.8	12.8	**16.1974**	1.963	12.1	ug/L	25	Standard
	Ce	140	99.3	18.7				ug/L	22	Standard
>	**Tb**	159	828520.3	0.7				ug/L	958910	Standard
	Ho	165	16.7	24.2				ug/L	14	Standard
	Tl	203	107.3	2.3	**0.0063**	0.000	3.2	ug/L	10	Standard
	Tl	205	279.7	8.1	**0.0074**	0.001	9.9	ug/L	27	Standard
	Pb	206	325.7	2.0	**0.0022**	0.000	10.9	ug/L	319	Standard
	Pb	207	278.0	2.9	**-0.0019**	0.001	74.6	ug/L	287	Standard
	Pb	208	1256.4	1.6	**-0.0003**	0.000	124.2	ug/L	1244	Standard
	U	238	15.0	24.0	**0.0018**	0.000	15.8	ug/L	5	Standard
>	**Bi**	209	446771.3	1.6				ug/L	497973	Standard

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	Na	23	4624.0	12.9	**0.3018**	0.043	14.2	mg/L	237	Standard
	Mg	24	184170.3	11.3	**0.4103**	0.047	11.4	mg/L	60	Standard
	K	39	871.7	9.6	**0.9857**	0.098	9.9	mg/L	105	Standard
	Ca	43	1.7	173.2	**-5.4315**	1.990	36.6	mg/L	7	Standard
	Fe	54	130.0	13.4	**-0.0867**	0.006	7.0	mg/L	483	Standard
	Fe	57	1713.4	1.2	**0.0018**	0.001	36.8	mg/L	2095	Standard
>	**Sc-1**	45	226972.8	2.0				mg/L	272955	Standard
	Cl	35	5.3	60.3				ug/L	9	Standard
	Kr	83	33.7	4.5				ug/L	39	Standard
	Br	81	438.3	7.4				ug/L	644	Standard
	P	31	1687.6	5.9				ug/L	324	Standard
	S	34	4414.8	2.2				ug/L	5485	Standard
	Sr	88	55.0	9.1				ug/L	28	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		83.617	
	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	84.287
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	89.718
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043406
Sample Date/Time: Thursday, July 19, 2012 18:17:34
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	8243.9	5.3	**814.6515**	49.513	6.1	ug/L	6820	Standard
	Be	9	8.3	69.3	**0.0050**	0.005	103.8	ug/L	3	Standard
	Al	27	109293.3	4.4	**11.9901**	0.301	2.5	ug/L	4266	Standard
>	**Sc**	45	225192.4	3.3				ug/L	272955	Standard
	Ti	47	350.7	4.9	**0.3963**	0.020	5.0	ug/L	51	Standard
	V	51	3572.5	3.0	**0.2723**	0.013	5.0	ug/L	2088	Standard
	Cr	52	5569.0	1.1	**0.0024**	0.008	327.0	ug/L	6617	Standard
	Cr	53	130.0	6.9	**0.0032**	0.010	325.0	ug/L	166	Standard
	Mn	55	40404.5	2.7	**4.1556**	0.095	2.3	ug/L	940	Standard
	Co	59	168.0	6.3	**0.0131**	0.001	11.1	ug/L	76	Standard
	Ni	60	434.7	8.0	**0.2571**	0.021	8.1	ug/L	52	Standard
	Cu	65	65.3	5.8	**-0.0037**	0.002	66.0	ug/L	68	Standard
	Zn	66	1602.4	2.1	**2.2195**	0.049	2.2	ug/L	104	Standard
>	**Ge**	72	182593.7	0.7				ug/L	221790	Standard
	As	75	-59.4	34.1	**0.0947**	0.029	30.9	ug/L	-133	Standard
	Se	82	17.6	10.7	**0.0636**	0.028	43.9	ug/L	18	Standard
	Se-1	77	79.3	5.8	**0.2581**	0.099	38.2	ug/L	70	Standard
>	**Ga**	71	406.7	7.5				mg/L	477	Standard
	Rb	85	2508.5	2.5				ug/L	23	Standard
	Y	89	160241.2	0.5				ug/L	197249	Standard
>	**Rh**	103	228.3	22.0				ug/L	295	Standard
	Mo	98	7.5	32.5	**-0.0033**	0.001	30.9	ug/L	13	Standard
	Ag	107	39.3	10.6	**0.0055**	0.001	14.0	ug/L	64	Standard
	Cd	111	60.6	9.5	**0.0009**	0.002	258.5	mg/L	53	Standard
	Cd	114	172.4	5.2	**0.0039**	0.001	32.2	ug/L	150	Standard
>	**In**	115	538580.8	0.6				ug/L	644840	Standard
	Sn	118	382.7	4.9	**-0.0207**	0.001	6.3	ug/L	487	Standard
	Sb	123	110.4	4.4	**0.0133**	0.001	5.7	ug/L	126	Standard
	Ba	135	4616.7	1.2	**1.4462**	0.013	0.9	ug/L	25	Standard
	Ce	140	431.3	15.9				ug/L	22	Standard
>	**Tb**	159	821703.0	0.3				ug/L	958910	Standard
	Ho	165	16.7	38.1				ug/L	14	Standard
	Tl	203	45.7	4.6	**0.0017**	0.000	8.4	ug/L	10	Standard
	Tl	205	100.3	7.2	**0.0016**	0.000	16.6	ug/L	27	Standard
	Pb	206	315.3	12.1	**0.0017**	0.004	229.8	ug/L	319	Standard
	Pb	207	268.0	5.1	**-0.0026**	0.002	87.7	ug/L	287	Standard
	Pb	208	1221.7	4.0	**-0.0007**	0.002	284.8	ug/L	1244	Standard
	U	238	9.0	22.2	**0.0013**	0.000	11.0	ug/L	5	Standard
>	**Bi**	209	440805.4	3.1				ug/L	497973	Standard

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Na	23	2835.3	7.9	**0.1765**	0.022	12.4	mg/L	237	Standard
Mg	24	27217.8	3.9	**0.0611**	0.001	2.4	mg/L	60	Standard
K	39	523.3	4.5	**0.5538**	0.017	3.0	mg/L	105	Standard
Ca	43	3.3	86.6	**-4.3174**	1.960	45.4	mg/L	7	Standard
Fe	54	175.1	22.4	**-0.0721**	0.011	15.3	mg/L	483	Standard
Fe	57	1583.4	7.4	**-0.0004**	0.001	291.7	mg/L	2095	Standard
> **Sc-1**	45	225192.4	3.3				mg/L	272955	Standard
Cl	35	4.3	48.0				ug/L	9	Standard
Kr	83	32.7	23.8				ug/L	39	Standard
Br	81	477.5	3.8				ug/L	644	Standard
P	31	739.2	8.8				ug/L	324	Standard
S	34	4429.8	4.1				ug/L	5485	Standard
Sr	88	41.7	66.1				ug/L	28	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		82.327	
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	83.522
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	88.520
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207043406PS WG403888-01
Sample Date/Time: Thursday, July 19, 2012 18:20:44
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	9144.4	2.4	**664.5750**	50.054	7.5	ug/L	6820	Standard
	Be	9	55520.2	6.6	**43.2733**	2.970	6.9	ug/L	3	Standard
	Al	27	1034308.6	1.6	**99.5379**	1.191	1.2	ug/L	4266	Standard
>	**Sc**	45	265614.7	0.6				ug/L	272955	Standard
	Ti	47	694.3	9.0	**0.7105**	0.068	9.5	ug/L	51	Standard
	V	51	332801.5	1.5	**43.1551**	0.572	1.3	ug/L	2088	Standard
	Cr	52	276382.7	2.0	**43.1925**	0.748	1.7	ug/L	6617	Standard
	Cr	53	44811.2	2.9	**42.6393**	1.160	2.7	ug/L	166	Standard
	Mn	55	534901.5	0.7	**48.1757**	0.331	0.7	ug/L	940	Standard
	Co	59	326444.7	0.9	**43.0523**	0.286	0.7	ug/L	76	Standard
	Ni	60	77651.2	1.7	**43.8443**	0.720	1.6	ug/L	52	Standard
	Cu	65	72565.4	1.2	**43.5864**	0.406	0.9	ug/L	68	Standard
	Zn	66	39839.7	2.9	**50.8538**	1.381	2.7	ug/L	104	Standard
>	**Ge**	72	212779.0	0.3				ug/L	221790	Standard
	As	75	33999.9	1.2	**42.5689**	0.393	0.9	ug/L	-133	Standard
	Se	82	3420.8	2.5	**42.8379**	0.938	2.2	ug/L	18	Standard
	Se-1	77	2356.5	3.5	**41.9334**	1.562	3.7	ug/L	70	Standard
>	**Ga**	71	498.3	17.7				mg/L	477	Standard
	Rb	85	4288.9	3.0				ug/L	23	Standard
	Y	89	193764.4	0.2				ug/L	197249	Standard
>	**Rh**	103	368.3	5.7				ug/L	295	Standard
	Mo	98	738.3	0.7	**0.2492**	0.002	0.9	ug/L	13	Standard
	Ag	107	238432.6	1.4	**40.0117**	0.592	1.5	ug/L	64	Standard
	Cd	111	134581.0	1.1	**42.7816**	0.517	1.2	mg/L	53	Standard
	Cd	114	376104.5	0.9	**42.5178**	0.463	1.1	ug/L	150	Standard
>	**In**	115	635905.0	0.2				ug/L	644840	Standard
	Sn	118	898.7	4.6	**0.0078**	0.003	32.5	ug/L	487	Standard
	Sb	123	311514.8	1.7	**36.6614**	0.595	1.6	ug/L	126	Standard
	Ba	135	185307.9	1.7	**49.5438**	0.809	1.6	ug/L	25	Standard
	Ce	140	13154.4	1.8				ug/L	22	Standard
>	**Tb**	159	922568.9	0.8				ug/L	958910	Standard
	Ho	165	699.0	2.1				ug/L	14	Standard
	Tl	203	606015.7	0.6	**41.5660**	0.359	0.9	ug/L	10	Standard
	Tl	205	1384994.8	0.8	**40.5602**	0.472	1.2	ug/L	27	Standard
	Pb	206	476253.3	0.5	**42.2097**	0.359	0.9	ug/L	319	Standard
	Pb	207	403646.6	0.8	**42.6839**	0.535	1.3	ug/L	287	Standard
	Pb	208	1865158.2	0.9	**42.0950**	0.434	1.0	ug/L	1244	Standard
	U	238	530320.5	0.9	**39.8263**	0.295	0.7	ug/L	5	Standard
>	**Bi**	209	489995.2	0.5				ug/L	497973	Standard

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Na	23	3035.3	1.0	**0.1573**	0.003	1.8	mg/L	237	Standard
Mg	24	36682.7	2.1	**0.0698**	0.001	2.0	mg/L	60	Standard
K	39	615.0	7.8	**0.5512**	0.047	8.5	mg/L	105	Standard
Ca	43	3.3	86.6	**-4.6283**	1.691	36.5	mg/L	7	Standard
Fe	54	459.7	8.4	**-0.0028**	0.010	369.0	mg/L	483	Standard
Fe	57	2435.2	11.3	**0.0087**	0.004	48.6	mg/L	2095	Standard
Sc-1	45	265614.7	0.6				mg/L	272955	Standard
Cl	35	4.3	13.3				ug/L	9	Standard
Kr	83	29.7	4.5				ug/L	39	Standard
Br	81	608.3	6.5				ug/L	644	Standard
P	31	1282.6	8.9				ug/L	324	Standard
S	34	4924.1	3.3				ug/L	5485	Standard
Sr	88	48.3	41.8				ug/L	28	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		95.937	
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	98.614
	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	98.398
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: L1207043406SDL WG4036888-02
Sample Date/Time: Thursday, July 19, 2012 18:23:53
Number of Replicates: 3
Autosampler Position: 421
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	6994.9	4.1	**186.9225**	70.360	37.6	ug/L	6820	Standard
	Be	9	5.0	100.0	**0.0015**	0.004	277.2	ug/L	3	Standard
	Al	27	35060.7	7.8	**3.0705**	0.286	9.3	ug/L	4266	Standard
>	**Sc**	45	254048.9	0.6				ug/L	272955	Standard
	Ti	47	126.7	13.0	**0.0928**	0.017	18.4	ug/L	51	Standard
	V	51	2469.1	2.1	**0.0669**	0.012	17.8	ug/L	2088	Standard
	Cr	52	6280.3	1.5	**0.0175**	0.031	180.0	ug/L	6617	Standard
	Cr	53	128.3	14.8	**-0.0127**	0.022	172.0	ug/L	166	Standard
	Mn	55	15192.6	1.6	**1.3444**	0.048	3.6	ug/L	940	Standard
	Co	59	130.3	15.1	**0.0053**	0.003	48.3	ug/L	76	Standard
	Ni	60	282.3	4.0	**0.1381**	0.003	2.4	ug/L	52	Standard
	Cu	65	94.0	33.8	**0.0098**	0.020	202.5	ug/L	68	Standard
	Zn	66	2114.5	3.1	**2.6675**	0.133	5.0	ug/L	104	Standard
>	**Ge**	72	203043.2	2.1				ug/L	221790	Standard
	As	75	-111.6	13.4	**0.0350**	0.021	58.7	ug/L	-133	Standard
	Se	82	16.0	16.9	**0.0154**	0.032	206.1	ug/L	18	Standard
	Se-1	77	76.3	21.0	**0.0258**	0.286	1110.8	ug/L	70	Standard
>	**Ga**	71	408.3	6.7				mg/L	477	Standard
	Rb	85	625.0	8.5				ug/L	23	Standard
	Y	89	186526.1	0.5				ug/L	197249	Standard
>	**Rh**	103	281.7	19.8				ug/L	295	Standard
	Mo	98	12.6	18.1	**-0.0018**	0.001	46.4	ug/L	13	Standard
	Ag	107	1013.4	27.0	**0.1748**	0.048	27.5	ug/L	64	Standard
	Cd	111	81.3	32.7	**0.0050**	0.009	176.0	mg/L	53	Standard
	Cd	114	207.0	35.5	**0.0052**	0.009	166.6	ug/L	150	Standard
>	**In**	115	611230.2	0.3				ug/L	644840	Standard
	Sn	118	958.7	4.3	**0.0141**	0.003	18.6	ug/L	487	Standard
	Sb	123	643.5	26.7	**0.0767**	0.021	27.2	ug/L	126	Standard
	Ba	135	1054.7	3.0	**0.2820**	0.008	3.0	ug/L	25	Standard
	Ce	140	135.3	19.5				ug/L	22	Standard
>	**Tb**	159	906259.1	0.2				ug/L	958910	Standard
	Ho	165	14.0	18.9				ug/L	14	Standard
	Tl	203	98.0	62.7	**0.0051**	0.004	84.3	ug/L	10	Standard
	Tl	205	220.3	50.0	**0.0050**	0.003	65.9	ug/L	27	Standard
	Pb	206	395.7	11.5	**0.0065**	0.004	62.6	ug/L	319	Standard
	Pb	207	311.0	6.3	**-0.0005**	0.002	395.3	ug/L	287	Standard
	Pb	208	1504.4	12.2	**0.0034**	0.004	122.5	ug/L	1244	Standard
	U	238	62.0	47.3	**0.0053**	0.002	42.0	ug/L	5	Standard
>	**Bi**	209	478538.5	0.3				ug/L	497973	Standard

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Na	23	1076.7	8.2	**0.0413**	0.006	13.5	mg/L	237	Standard
Mg	24	6076.2	2.9	**0.0121**	0.000	2.5	mg/L	60	Standard
K	39	185.0	4.7	**0.0989**	0.008	8.6	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	354.6	10.3	**-0.0271**	0.010	36.9	mg/L	483	Standard
Fe	57	1731.8	5.5	**-0.0013**	0.002	134.9	mg/L	2095	Standard
Sc-1	45	254048.9	0.6				mg/L	272955	Standard
Cl	35	4.7	12.4				ug/L	9	Standard
Kr	83	34.7	9.8				ug/L	39	Standard
Br	81	529.2	5.5				ug/L	644	Standard
P	31	357.5	7.6				ug/L	324	Standard
S	34	4810.8	0.7				ug/L	5485	Standard
Sr	88	45.0	19.2				ug/L	28	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		91.548	
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	94.788
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.097
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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: Thursday, July 19, 2012 18:27:05
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	6906.6	5.4	**33.9305**	78.218	230.5	ug/L	6820	Standard
	Be	9	61389.2	3.0	**46.5949**	0.457	1.0	ug/L	3	Standard
	Al	27	523168.4	2.8	**48.7966**	0.306	0.6	ug/L	4266	Standard
>	**Sc**	45	272696.2	2.1				ug/L	272955	Standard
	Ti	47	92193.7	0.9	**100.1148**	1.556	1.6	ug/L	51	Standard
	V	51	383360.7	2.0	**49.1391**	0.762	1.6	ug/L	2088	Standard
	Cr	52	316663.8	2.4	**49.0193**	1.104	2.3	ug/L	6617	Standard
	Cr	53	51601.1	0.2	**48.5209**	0.225	0.5	ug/L	166	Standard
	Mn	55	561906.0	2.4	**49.9882**	0.877	1.8	ug/L	940	Standard
	Co	59	378523.3	1.1	**49.3121**	0.494	1.0	ug/L	76	Standard
	Ni	60	87761.2	2.0	**48.9487**	0.854	1.7	ug/L	52	Standard
	Cu	65	83079.2	1.6	**49.2983**	0.765	1.6	ug/L	68	Standard
	Zn	66	38741.1	0.8	**48.8413**	0.120	0.2	ug/L	104	Standard
>	**Ge**	72	215415.6	0.6				ug/L	221790	Standard
	As	75	39209.0	1.5	**48.4646**	0.514	1.1	ug/L	-133	Standard
	Se	82	3904.5	1.0	**48.3233**	0.179	0.4	ug/L	18	Standard
	Se-1	77	2713.2	2.7	**47.8828**	1.008	2.1	ug/L	70	Standard
>	**Ga**	71	455.0	12.7				mg/L	477	Standard
	Rb	85	583.3	5.0				ug/L	23	Standard
	Y	89	193116.8	2.7				ug/L	197249	Standard
>	**Rh**	103	310.0	7.4				ug/L	295	Standard
	Mo	98	276476.0	0.6	**95.6789**	0.794	0.8	ug/L	13	Standard
	Ag	107	287170.2	0.2	**48.1788**	0.171	0.4	ug/L	64	Standard
	Cd	111	153349.3	0.2	**48.7391**	0.241	0.5	mg/L	53	Standard
	Cd	114	430444.6	0.8	**48.6528**	0.612	1.3	ug/L	150	Standard
>	**In**	115	636064.5	0.6				ug/L	644840	Standard
	Sn	118	1025298.3	0.5	**65.2909**	0.249	0.4	ug/L	487	Standard
	Sb	123	411099.3	1.0	**48.3706**	0.449	0.9	ug/L	126	Standard
	Ba	135	184440.8	0.3	**49.3014**	0.378	0.8	ug/L	25	Standard
	Ce	140	737.7	2.5				ug/L	22	Standard
>	**Tb**	159	947772.6	0.4				ug/L	958910	Standard
	Ho	165	17.7	23.6				ug/L	14	Standard
	Tl	203	698301.3	0.7	**48.7774**	0.443	0.9	ug/L	10	Standard
	Tl	205	1615342.1	0.4	**48.1758**	0.051	0.1	ug/L	27	Standard
	Pb	206	538611.5	0.7	**48.6193**	0.433	0.9	ug/L	319	Standard
	Pb	207	456939.9	0.2	**49.2128**	0.204	0.4	ug/L	287	Standard
	Pb	208	2122210.8	0.3	**48.7831**	0.290	0.6	ug/L	1244	Standard
	U	238	634446.2	1.9	**48.5250**	1.050	2.2	ug/L	5	Standard
>	**Bi**	209	481136.9	0.3				ug/L	497973	Standard

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Na	23	105873.7	1.4	**6.2424**	0.201	3.2	mg/L	237	Standard
Mg	24	2529695.2	0.6	**4.6914**	0.076	1.6	mg/L	60	Standard
K	39	4664.1	1.5	**4.7690**	0.164	3.4	mg/L	105	Standard
Ca	43	11.7	65.5	**0.1364**	4.481	3285.2	mg/L	7	Standard
Fe	54	18552.3	1.8	**4.8049**	0.019	0.4	mg/L	483	Standard
Fe	57	279805.2	1.2	**4.3306**	0.081	1.9	mg/L	2095	Standard
Sc-1	45	272696.2	2.1				mg/L	272955	Standard
Cl	35	3.0	57.7				ug/L	9	Standard
Kr	83	37.6	8.2				ug/L	39	Standard
Br	81	580.0	2.4				ug/L	644	Standard
P	31	351.7	8.1				ug/L	324	Standard
S	34	5140.9	1.1				ug/L	5485	Standard
Sr	88	38.3	15.1				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.593		
Sc	45			
Ti	47	100.115		
V	51	98.278		
Cr	52	98.039		
Cr	53			
Mn	55	99.976		
Co	59	98.624		
Ni	60	97.897		
Cu	65	98.597		
Zn	66	97.683		
Ge	72		97.126	
As	75	96.929		
Se	82	96.647		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	95.679		
Ag	107	96.358		

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	Cd	111	97.478	
	Cd	114		
>	In	115		98.639
	Sn	118	130.582	
	Sb	123	96.741	
	Ba	135	98.603	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	97.555	
	Tl	205		
	Pb	206	97.239	
	Pb	207	98.426	
	Pb	208	97.566	
	U	238	97.050	
>	Bi	209		96.619
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Sn	118	

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 18:30:15
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	6641.5	1.9	**15.8062**	23.909	151.3	ug/L	6820	Standard
	Be	9	13.3	21.7	**0.0078**	0.002	29.2	ug/L	3	Standard
	Al	27	5361.0	10.7	**0.0457**	0.064	139.2	ug/L	4266	Standard
>	**Sc**	45	265024.9	1.7				ug/L	272955	Standard
	Ti	47	59.0	13.6	**0.0124**	0.009	74.8	ug/L	51	Standard
	V	51	1908.6	3.6	**-0.0196**	0.008	43.2	ug/L	2088	Standard
	Cr	52	5956.2	1.5	**-0.0741**	0.015	20.6	ug/L	6617	Standard
	Cr	53	131.7	11.6	**-0.0145**	0.015	104.2	ug/L	166	Standard
	Mn	55	967.7	1.9	**-0.0047**	0.002	44.8	ug/L	940	Standard
	Co	59	93.7	15.6	**-0.0002**	0.002	917.1	ug/L	76	Standard
	Ni	60	45.7	4.6	**-0.0030**	0.001	41.1	ug/L	52	Standard
	Cu	65	68.0	18.8	**-0.0082**	0.008	97.4	ug/L	68	Standard
	Zn	66	97.0	8.1	**-0.0469**	0.009	20.1	ug/L	104	Standard
>	**Ge**	72	210819.6	0.6				ug/L	221790	Standard
	As	75	-131.7	8.4	**0.0153**	0.013	85.6	ug/L	-133	Standard
	Se	82	15.6	18.3	**0.0038**	0.036	940.4	ug/L	18	Standard
	Se-1	77	74.3	7.8	**-0.0622**	0.116	186.0	ug/L	70	Standard
>	**Ga**	71	508.3	8.0				mg/L	477	Standard
	Rb	85	26.7	21.7				ug/L	23	Standard
	Y	89	189408.4	1.7				ug/L	197249	Standard
>	**Rh**	103	283.3	19.7				ug/L	295	Standard
	Mo	98	54.3	30.4	**0.0127**	0.006	46.7	ug/L	13	Standard
	Ag	107	340.3	15.9	**0.0556**	0.009	15.6	ug/L	64	Standard
	Cd	111	64.2	14.5	**-0.0012**	0.003	234.2	mg/L	53	Standard
	Cd	114	170.8	6.4	**0.0004**	0.001	324.2	ug/L	150	Standard
>	**In**	115	627105.8	1.2				ug/L	644840	Standard
	Sn	118	729.0	8.1	**-0.0023**	0.004	181.2	ug/L	487	Standard
	Sb	123	912.6	24.2	**0.1070**	0.027	25.4	ug/L	126	Standard
	Ba	135	37.7	6.7	**-0.0012**	0.001	64.2	ug/L	25	Standard
	Ce	140	71.3	8.1				ug/L	22	Standard
>	**Tb**	159	918571.9	0.4				ug/L	958910	Standard
	Ho	165	14.0	50.0				ug/L	14	Standard
	Tl	203	55.0	25.3	**0.0020**	0.001	47.0	ug/L	10	Standard
	Tl	205	135.3	23.0	**0.0024**	0.001	38.6	ug/L	27	Standard
	Pb	206	351.7	4.0	**0.0020**	0.001	61.9	ug/L	319	Standard
	Pb	207	287.0	8.2	**-0.0036**	0.003	74.0	ug/L	287	Standard
	Pb	208	1351.4	2.6	**-0.0006**	0.001	134.9	ug/L	1244	Standard
	U	238	49.0	32.8	**0.0043**	0.001	28.3	ug/L	5	Standard
>	**Bi**	209	486097.6	0.5				ug/L	497973	Standard

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Na	23	473.3	12.7	**0.0017**	0.004	229.8	mg/L	237	Standard
Mg	24	216.7	39.8	**0.0004**	0.000	41.3	mg/L	60	Standard
K	39	106.7	16.5	**0.0063**	0.021	330.1	mg/L	105	Standard
Ca	43	5.0	100.0	**-3.6215**	2.994	82.7	mg/L	7	Standard
Fe	54	419.6	3.0	**-0.0135**	0.005	33.7	mg/L	483	Standard
Fe	57	1555.1	1.9	**-0.0053**	0.000	7.9	mg/L	2095	Standard
Sc-1	45	265024.9	1.7				mg/L	272955	Standard
Cl	35	3.0	33.3				ug/L	9	Standard
Kr	83	34.1	14.5				ug/L	39	Standard
Br	81	578.3	0.2				ug/L	644	Standard
P	31	318.3	10.2				ug/L	324	Standard
S	34	5095.9	3.6				ug/L	5485	Standard
Sr	88	50.0	10.0				ug/L	28	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		95.054	
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	97.250
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	97.615
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 7
Report Date/Time: Thursday, July 19, 2012 18:32:45
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Method 6020 - Summary Report

Sample ID: L1207043408
Sample Date/Time: Thursday, July 19, 2012 18:33:27
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	7216.7	2.2	**505.4444**	53.675	10.6	ug/L	6820	Standard
	Be	9	11.7	89.2	**0.0082**	0.010	116.2	ug/L	3	Standard
	Al	27	23671.9	9.3	**2.2388**	0.345	15.4	ug/L	4266	Standard
>	**Sc**	45	224737.7	3.9				ug/L	272955	Standard
	Ti	47	116.7	4.7	**0.0948**	0.010	10.3	ug/L	51	Standard
	V	51	6708.3	3.9	**0.7368**	0.023	3.1	ug/L	2088	Standard
	Cr	52	5286.9	4.0	**-0.0622**	0.019	29.8	ug/L	6617	Standard
	Cr	53	90.8	14.1	**-0.0413**	0.017	40.3	ug/L	166	Standard
	Mn	55	17740.2	15.6	**1.7490**	0.271	15.5	ug/L	940	Standard
	Co	59	190.0	5.0	**0.0162**	0.002	13.2	ug/L	76	Standard
	Ni	60	360.3	6.6	**0.2054**	0.014	6.8	ug/L	52	Standard
	Cu	65	142.0	6.3	**0.0488**	0.005	10.2	ug/L	68	Standard
	Zn	66	1188.0	30.5	**1.5788**	0.525	33.2	ug/L	104	Standard
>	**Ge**	72	184805.0	2.4				ug/L	221790	Standard
	As	75	79.1	20.5	**0.2948**	0.026	8.7	ug/L	-133	Standard
	Se	82	18.5	17.9	**0.0739**	0.055	74.3	ug/L	18	Standard
	Se-1	77	56.0	12.9	**-0.2551**	0.170	66.6	ug/L	70	Standard
>	**Ga**	71	426.7	8.8				mg/L	477	Standard
	Rb	85	3652.1	13.6				ug/L	23	Standard
	Y	89	160323.9	1.6				ug/L	197249	Standard
>	**Rh**	103	230.0	5.8				ug/L	295	Standard
	Mo	98	42.3	49.5	**0.0111**	0.009	82.0	ug/L	13	Standard
	Ag	107	119.3	23.5	**0.0215**	0.006	26.3	ug/L	64	Standard
	Cd	111	37.6	44.0	**-0.0077**	0.007	86.3	mg/L	53	Standard
	Cd	114	111.8	17.4	**-0.0041**	0.003	71.6	ug/L	150	Standard
>	**In**	115	537448.1	2.4				ug/L	644840	Standard
	Sn	118	404.0	14.7	**-0.0189**	0.005	27.5	ug/L	487	Standard
	Sb	123	340.5	2.4	**0.0454**	0.002	5.1	ug/L	126	Standard
	Ba	135	8022.5	16.1	**2.5250**	0.382	15.1	ug/L	25	Standard
	Ce	140	118.3	4.7				ug/L	22	Standard
>	**Tb**	159	821676.7	1.8				ug/L	958910	Standard
	Ho	165	13.7	22.4				ug/L	14	Standard
	Tl	203	123.3	19.6	**0.0077**	0.002	28.7	ug/L	10	Standard
	Tl	205	299.7	29.4	**0.0083**	0.003	39.5	ug/L	27	Standard
	Pb	206	377.3	9.7	**0.0081**	0.005	61.6	ug/L	319	Standard
	Pb	207	302.7	14.4	**0.0017**	0.006	369.7	ug/L	287	Standard
	Pb	208	1463.4	10.5	**0.0057**	0.005	91.9	ug/L	1244	Standard
	U	238	43.3	105.4	**0.0043**	0.004	94.0	ug/L	5	Standard
>	**Bi**	209	438314.4	3.6				ug/L	497973	Standard

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⌈	**Na**	23	4030.5	7.4	**0.2624**	0.020	7.5	mg/L	237	Standard
|	**Mg**	24	93300.7	7.1	**0.2098**	0.011	5.1	mg/L	60	Standard
|	**K**	39	285.0	13.7	**0.2526**	0.044	17.2	mg/L	105	Standard
|	**Ca**	43	5.0	0.0	**-3.1120**	0.137	4.4	mg/L	7	Standard
|	**Fe**	54	131.7	15.9	**-0.0856**	0.008	9.3	mg/L	483	Standard
|	**Fe**	57	1645.1	8.8	**0.0008**	0.003	306.1	mg/L	2095	Standard
⌊>	**Sc-1**	45	224737.7	3.9				mg/L	272955	Standard
	Cl	35	4.7	12.4				ug/L	9	Standard
	Kr	83	31.8	5.2				ug/L	39	Standard
	Br	81	455.8	9.6				ug/L	644	Standard
	P	31	183.3	15.8				ug/L	324	Standard
	S	34	4552.4	5.2				ug/L	5485	Standard
	Sr	88	30.0	28.9				ug/L	28	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		83.324	
|	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	83.346
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	88.020
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043410
Sample Date/Time: Thursday, July 19, 2012 18:36:36
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	7218.4	7.4	**513.6316**	162.099	31.6	ug/L	6820	Standard
	Be	9	10.0	50.0	**0.0066**	0.004	67.9	ug/L	3	Standard
	Al	27	18983.6	10.9	**1.7042**	0.243	14.2	ug/L	4266	Standard
>	**Sc**	45	223857.0	2.0				ug/L	272955	Standard
	Ti	47	139.0	10.1	**0.1230**	0.014	11.7	ug/L	51	Standard
	V	51	4995.3	2.8	**0.4809**	0.011	2.3	ug/L	2088	Standard
	Cr	52	6200.6	3.0	**0.1083**	0.014	12.6	ug/L	6617	Standard
	Cr	53	115.8	5.0	**-0.0137**	0.010	69.5	ug/L	166	Standard
	Mn	55	23474.5	2.4	**2.3503**	0.010	0.4	ug/L	940	Standard
	Co	59	187.0	7.0	**0.0158**	0.003	15.9	ug/L	76	Standard
	Ni	60	598.0	2.1	**0.3607**	0.002	0.6	ug/L	52	Standard
	Cu	65	253.0	11.8	**0.1258**	0.018	14.1	ug/L	68	Standard
	Zn	66	1145.7	3.8	**1.5220**	0.107	7.0	ug/L	104	Standard
>	**Ge**	72	184485.1	2.4				ug/L	221790	Standard
	As	75	48.5	105.5	**0.2519**	0.076	30.2	ug/L	-133	Standard
	Se	82	22.0	41.1	**0.1266**	0.141	111.2	ug/L	18	Standard
	Se-1	77	69.3	9.8	**0.0313**	0.182	582.1	ug/L	70	Standard
>	**Ga**	71	373.3	5.6				mg/L	477	Standard
	Rb	85	6027.9	2.9				ug/L	23	Standard
	Y	89	159449.8	2.1				ug/L	197249	Standard
>	**Rh**	103	246.7	28.4				ug/L	295	Standard
	Mo	98	554.5	11.4	**0.2217**	0.034	15.3	ug/L	13	Standard
	Ag	107	94.7	59.9	**0.0168**	0.012	71.9	ug/L	64	Standard
	Cd	111	55.0	65.0	**-0.0009**	0.014	1693.2	mg/L	53	Standard
	Cd	114	165.3	59.5	**0.0033**	0.014	428.1	ug/L	150	Standard
>	**In**	115	536928.2	3.4				ug/L	644840	Standard
	Sn	118	424.0	10.0	**-0.0174**	0.004	25.1	ug/L	487	Standard
	Sb	123	307.2	11.7	**0.0408**	0.006	13.7	ug/L	126	Standard
	Ba	135	11601.1	2.0	**3.6649**	0.108	2.9	ug/L	25	Standard
	Ce	140	193.0	54.7				ug/L	22	Standard
>	**Tb**	159	815174.3	0.8				ug/L	958910	Standard
	Ho	165	14.7	38.8				ug/L	14	Standard
	Tl	203	208.3	20.1	**0.0143**	0.004	24.6	ug/L	10	Standard
	Tl	205	442.7	24.6	**0.0129**	0.004	29.6	ug/L	27	Standard
	Pb	206	392.3	11.1	**0.0096**	0.005	52.4	ug/L	319	Standard
	Pb	207	309.7	9.5	**0.0026**	0.004	160.5	ug/L	287	Standard
	Pb	208	1503.4	9.2	**0.0067**	0.004	62.5	ug/L	1244	Standard
	U	238	41.7	60.0	**0.0041**	0.002	53.0	ug/L	5	Standard
>	**Bi**	209	437284.0	1.8				ug/L	497973	Standard

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Na	23	4425.6	5.4	**0.2918**	0.011	3.9	mg/L	237	Standard
Mg	24	247015.2	5.9	**0.5577**	0.026	4.6	mg/L	60	Standard
K	39	356.7	4.0	**0.3457**	0.020	5.8	mg/L	105	Standard
Ca	43	1.7	173.2	**-5.4446**	1.967	36.1	mg/L	7	Standard
Fe	54	143.2	13.9	**-0.0819**	0.006	7.5	mg/L	483	Standard
Fe	57	1925.1	3.9	**0.0063**	0.001	23.8	mg/L	2095	Standard
Sc-1	45	223857.0	2.0				mg/L	272955	Standard
Cl	35	5.3	28.6				ug/L	9	Standard
Kr	83	35.0	9.9				ug/L	39	Standard
Br	81	457.5	9.0				ug/L	644	Standard
P	31	146.7	18.1				ug/L	324	Standard
S	34	4814.9	4.1				ug/L	5485	Standard
Sr	88	48.3	31.6				ug/L	28	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		83.180	
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	83.265
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	87.813
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043412
Sample Date/Time: Thursday, July 19, 2012 18:39:46
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	10350.2	2.0	**1476.1795**	67.855	4.6	ug/L	6820	Standard
	Be	9	5.0	100.0	**0.0021**	0.005	229.3	ug/L	3	Standard
	Al	27	136784.7	0.8	**15.1890**	0.306	2.0	ug/L	4266	Standard
>	**Sc**	45	224345.8	2.0				ug/L	272955	Standard
	Ti	47	495.0	4.5	**0.5759**	0.031	5.4	ug/L	51	Standard
	V	51	7820.1	3.2	**0.9077**	0.026	2.8	ug/L	2088	Standard
	Cr	52	6724.2	3.0	**0.2069**	0.033	16.0	ug/L	6617	Standard
	Cr	53	250.0	5.3	**0.1344**	0.018	13.4	ug/L	166	Standard
	Mn	55	78375.0	3.3	**8.0766**	0.234	2.9	ug/L	940	Standard
	Co	59	211.7	2.4	**0.0196**	0.001	2.6	ug/L	76	Standard
	Ni	60	1061.0	6.6	**0.6635**	0.044	6.7	ug/L	52	Standard
	Cu	65	251.7	2.4	**0.1254**	0.006	4.8	ug/L	68	Standard
	Zn	66	1376.4	3.3	**1.8641**	0.056	3.0	ug/L	104	Standard
>	**Ge**	72	184199.0	1.3				ug/L	221790	Standard
	As	75	-29.2	47.3	**0.1390**	0.019	13.9	ug/L	-133	Standard
	Se	82	16.3	18.7	**0.0430**	0.047	109.8	ug/L	18	Standard
	Se-1	77	75.7	6.5	**0.1649**	0.093	56.2	ug/L	70	Standard
>	**Ga**	71	363.3	11.5				mg/L	477	Standard
	Rb	85	2968.6	4.6				ug/L	23	Standard
	Y	89	159480.5	3.2				ug/L	197249	Standard
>	**Rh**	103	278.3	6.3				ug/L	295	Standard
	Mo	98	177.7	7.9	**0.0669**	0.006	9.6	ug/L	13	Standard
	Ag	107	60.0	10.9	**0.0097**	0.001	11.5	ug/L	64	Standard
	Cd	111	109.6	7.8	**0.0196**	0.004	19.9	mg/L	53	Standard
	Cd	114	322.4	3.8	**0.0243**	0.002	7.4	ug/L	150	Standard
>	**In**	115	534353.8	2.0				ug/L	644840	Standard
	Sn	118	296.3	5.2	**-0.0270**	0.001	2.9	ug/L	487	Standard
	Sb	123	113.3	7.6	**0.0138**	0.001	9.5	ug/L	126	Standard
	Ba	135	7766.7	4.7	**2.4594**	0.067	2.7	ug/L	25	Standard
	Ce	140	320.0	9.3				ug/L	22	Standard
>	**Tb**	159	815228.7	1.5				ug/L	958910	Standard
	Ho	165	19.0	32.9				ug/L	14	Standard
	Tl	203	77.0	12.8	**0.0040**	0.001	23.5	ug/L	10	Standard
	Tl	205	195.0	7.8	**0.0046**	0.000	6.7	ug/L	27	Standard
	Pb	206	299.3	7.1	**-0.0003**	0.001	409.9	ug/L	319	Standard
	Pb	207	275.3	1.3	**-0.0021**	0.001	66.3	ug/L	287	Standard
	Pb	208	1226.0	0.9	**-0.0009**	0.001	81.1	ug/L	1244	Standard
	U	238	15.0	20.0	**0.0018**	0.000	16.0	ug/L	5	Standard
>	**Bi**	209	445695.0	3.4				ug/L	497973	Standard

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Na	23	2661.9	1.9	**0.1645**	0.007	4.5	mg/L	237	Standard
Mg	24	60331.5	0.6	**0.1360**	0.003	2.1	mg/L	60	Standard
K	39	706.7	2.5	**0.7894**	0.025	3.2	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	204.1	16.2	**-0.0623**	0.011	17.9	mg/L	483	Standard
Fe	57	1876.8	8.5	**0.0053**	0.004	66.2	mg/L	2095	Standard
Sc-1	45	224345.8	2.0				mg/L	272955	Standard
Cl	35	5.0	52.9				ug/L	9	Standard
Kr	83	35.6	5.5				ug/L	39	Standard
Br	81	454.2	5.1				ug/L	644	Standard
P	31	1250.9	3.4				ug/L	324	Standard
S	34	4663.2	4.0				ug/L	5485	Standard
Sr	88	45.0	22.2				ug/L	28	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		83.051	
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	82.866
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	89.502
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: L1207043414
Sample Date/Time: Thursday, July 19, 2012 18:42:56
Number of Replicates: 3
Autosampler Position: 425
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	10655.4	4.1	**1534.6413**	138.920	9.1	ug/L	6820	Standard
	Be	9	13.3	21.7	**0.0096**	0.003	27.8	ug/L	3	Standard
	Al	27	7165.0	5.4	**0.3368**	0.042	12.5	ug/L	4266	Standard
>	**Sc**	45	226794.8	0.2				ug/L	272955	Standard
	Ti	47	214.0	8.3	**0.2113**	0.019	8.8	ug/L	51	Standard
	V	51	2936.9	2.7	**0.1598**	0.005	3.3	ug/L	2088	Standard
	Cr	52	5611.4	1.2	**-0.0267**	0.005	17.0	ug/L	6617	Standard
	Cr	53	149.2	10.2	**0.0185**	0.014	75.8	ug/L	166	Standard
	Mn	55	276603.9	7.7	**27.9552**	1.952	7.0	ug/L	940	Standard
	Co	59	336.0	9.3	**0.0372**	0.005	13.8	ug/L	76	Standard
	Ni	60	653.3	6.3	**0.3860**	0.026	6.8	ug/L	52	Standard
	Cu	65	121.7	10.3	**0.0329**	0.010	29.6	ug/L	68	Standard
	Zn	66	1756.1	3.4	**2.3563**	0.091	3.9	ug/L	104	Standard
>	**Ge**	72	189303.4	1.5				ug/L	221790	Standard
	As	75	-70.7	27.6	**0.0820**	0.027	32.7	ug/L	-133	Standard
	Se	82	15.2	16.1	**0.0196**	0.032	164.6	ug/L	18	Standard
	Se-1	77	73.0	4.9	**0.0666**	0.065	98.3	ug/L	70	Standard
>	**Ga**	71	403.3	10.0				mg/L	477	Standard
	Rb	85	14318.4	3.0				ug/L	23	Standard
	Y	89	163837.8	0.8				ug/L	197249	Standard
>	**Rh**	103	233.3	4.9				ug/L	295	Standard
	Mo	98	12.5	13.8	**-0.0013**	0.001	54.3	ug/L	13	Standard
	Ag	107	50.7	8.2	**0.0077**	0.001	10.6	ug/L	64	Standard
	Cd	111	126.0	8.4	**0.0249**	0.004	16.0	mg/L	53	Standard
	Cd	114	365.3	4.4	**0.0291**	0.002	7.5	ug/L	150	Standard
>	**In**	115	544003.1	0.3				ug/L	644840	Standard
	Sn	118	324.3	5.9	**-0.0253**	0.001	5.9	ug/L	487	Standard
	Sb	123	92.2	5.7	**0.0107**	0.001	6.9	ug/L	126	Standard
	Ba	135	32394.1	7.5	**10.1165**	0.791	7.8	ug/L	25	Standard
	Ce	140	397.0	52.3				ug/L	22	Standard
>	**Tb**	159	824431.6	0.1				ug/L	958910	Standard
	Ho	165	13.0	20.4				ug/L	14	Standard
	Tl	203	192.0	5.3	**0.0127**	0.001	7.3	ug/L	10	Standard
	Tl	205	460.7	8.6	**0.0132**	0.001	8.4	ug/L	27	Standard
	Pb	206	286.3	6.3	**-0.0015**	0.002	140.0	ug/L	319	Standard
	Pb	207	256.3	1.8	**-0.0044**	0.000	4.4	ug/L	287	Standard
	Pb	208	1165.0	6.2	**-0.0025**	0.002	82.7	ug/L	1244	Standard
	U	238	11.0	92.3	**0.0015**	0.001	57.4	ug/L	5	Standard
>	**Bi**	209	445642.7	1.2				ug/L	497973	Standard

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Na	23	13441.0	8.7	**0.9296**	0.085	9.1	mg/L	237	Standard
Mg	24	100315.8	8.1	**0.2236**	0.019	8.3	mg/L	60	Standard
K	39	1248.4	13.7	**1.4604**	0.215	14.7	mg/L	105	Standard
Ca	43	3.3	173.2	**-4.2877**	3.971	92.6	mg/L	7	Standard
Fe	54	139.9	14.4	**-0.0836**	0.006	7.6	mg/L	483	Standard
Fe	57	1536.7	5.6	**-0.0015**	0.002	113.5	mg/L	2095	Standard
Sc-1	45	226794.8	0.2				mg/L	272955	Standard
Cl	35	4.7	44.6				ug/L	9	Standard
Kr	83	33.2	4.1				ug/L	39	Standard
Br	81	451.7	3.3				ug/L	644	Standard
P	31	1257.6	5.7				ug/L	324	Standard
S	34	4606.5	0.7				ug/L	5485	Standard
Sr	88	46.7	32.7				ug/L	28	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		85.353	
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	84.362
	Sn	118	
	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: L1207043414
Report Date/Time: Thursday, July 19, 2012 18:45:26
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Approved: July 20, 2012

Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 19, 2012 18:46:08
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	6998.3	3.3	**47.5881**	47.431	99.7	ug/L	6820	Standard
	Be	9	65056.1	1.9	**49.1147**	1.032	2.1	ug/L	3	Standard
	Al	27	526186.1	0.7	**48.8159**	0.625	1.3	ug/L	4266	Standard
>	**Sc**	45	274198.9	0.7				ug/L	272955	Standard
	Ti	47	92106.8	0.9	**99.0468**	1.364	1.4	ug/L	51	Standard
	V	51	391947.4	1.4	**49.7561**	0.459	0.9	ug/L	2088	Standard
	Cr	52	323961.4	1.1	**49.6770**	0.552	1.1	ug/L	6617	Standard
	Cr	53	52270.9	1.8	**48.6759**	1.078	2.2	ug/L	166	Standard
	Mn	55	568801.8	1.1	**50.1145**	0.519	1.0	ug/L	940	Standard
	Co	59	381686.5	1.0	**49.2414**	0.490	1.0	ug/L	76	Standard
	Ni	60	88543.3	1.3	**48.9091**	0.839	1.7	ug/L	52	Standard
	Cu	65	84039.4	1.1	**49.3843**	0.541	1.1	ug/L	68	Standard
	Zn	66	39558.6	0.3	**49.3906**	0.250	0.5	ug/L	104	Standard
>	**Ge**	72	217529.5	0.8				ug/L	221790	Standard
	As	75	40122.9	0.5	**49.1136**	0.545	1.1	ug/L	-133	Standard
	Se	82	3981.3	1.1	**48.7972**	0.301	0.6	ug/L	18	Standard
	Se-1	77	2819.9	1.4	**49.3272**	0.392	0.8	ug/L	70	Standard
>	**Ga**	71	450.0	11.7				mg/L	477	Standard
	Rb	85	625.0	8.1				ug/L	23	Standard
	Y	89	194696.0	4.1				ug/L	197249	Standard
>	**Rh**	103	323.3	9.4				ug/L	295	Standard
	Mo	98	280753.5	1.6	**97.7387**	0.934	1.0	ug/L	13	Standard
	Ag	107	283353.7	0.6	**47.8247**	0.201	0.4	ug/L	64	Standard
	Cd	111	152137.6	0.9	**48.6441**	0.089	0.2	mg/L	53	Standard
	Cd	114	436949.6	2.7	**49.6781**	0.922	1.9	ug/L	150	Standard
>	**In**	115	632267.5	1.0				ug/L	644840	Standard
	Sn	118	1030911.6	0.6	**66.0448**	0.325	0.5	ug/L	487	Standard
	Sb	123	416342.9	0.3	**49.2845**	0.441	0.9	ug/L	126	Standard
	Ba	135	184343.8	1.2	**49.5696**	0.164	0.3	ug/L	25	Standard
	Ce	140	758.0	3.0				ug/L	22	Standard
>	**Tb**	159	939729.9	0.2				ug/L	958910	Standard
	Ho	165	21.0	19.0				ug/L	14	Standard
	Tl	203	708781.3	1.0	**49.0637**	0.411	0.8	ug/L	10	Standard
	Tl	205	1623609.3	0.8	**47.9872**	0.343	0.7	ug/L	27	Standard
	Pb	206	546684.4	0.2	**48.9042**	0.106	0.2	ug/L	319	Standard
	Pb	207	463631.2	0.7	**49.4844**	0.307	0.6	ug/L	287	Standard
	Pb	208	2149476.0	0.6	**48.9653**	0.254	0.5	ug/L	1244	Standard
	U	238	636549.1	1.0	**48.2463**	0.408	0.8	ug/L	5	Standard
>	**Bi**	209	485499.1	0.1				ug/L	497973	Standard

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Na	23	105815.0	2.0	**6.2024**	0.155	2.5	mg/L	237	Standard
Mg	24	2521308.6	2.9	**4.6495**	0.147	3.2	mg/L	60	Standard
K	39	4775.8	1.3	**4.8565**	0.092	1.9	mg/L	105	Standard
Ca	43	6.7	86.6	**-2.7796**	3.292	118.4	mg/L	7	Standard
Fe	54	18199.3	0.7	**4.6845**	0.055	1.2	mg/L	483	Standard
Fe	57	285426.3	4.1	**4.3928**	0.174	4.0	mg/L	2095	Standard
Sc-1	45	274198.9	0.7				mg/L	272955	Standard
Cl	35	8.3	50.0				ug/L	9	Standard
Kr	83	35.9	6.0				ug/L	39	Standard
Br	81	575.8	9.1				ug/L	644	Standard
P	31	350.8	0.4				ug/L	324	Standard
S	34	5358.4	3.3				ug/L	5485	Standard
Sr	88	38.3	27.2				ug/L	28	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	7			
Be	9			
Al	27	97.632		
Sc	45			
Ti	47	99.047		
V	51	99.512		
Cr	52	99.354		
Cr	53			
Mn	55	100.229		
Co	59	98.483		
Ni	60	97.818		
Cu	65	98.769		
Zn	66	98.781		
Ge	72		98.079	
As	75	98.227		
Se	82	97.594		
Se-1	77			
Ga	71			
Rb	85			
Y	89			
Rh	103			
Mo	98	97.739		
Ag	107	95.649		

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	Cd	111	97.288	
	Cd	114		
>	In	115		98.050
	Sn	118	132.090	
	Sb	123	98.569	
	Ba	135	99.139	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	98.127	
	Tl	205		
	Pb	206	97.808	
	Pb	207	98.969	
	Pb	208	97.931	
	U	238	96.493	
>	Bi	209		97.495
	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
QC Std 6	Sn	118	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 19, 2012 18:49:18
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: 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	6861.6	3.4	**73.2799**	62.972	85.9	ug/L	6820	Standard
	Be	9	13.3	78.1	**0.0078**	0.008	103.9	ug/L	3	Standard
	Al	27	4839.1	10.5	**-0.0057**	0.047	830.6	ug/L	4266	Standard
>	**Sc**	45	265027.8	0.4				ug/L	272955	Standard
	Ti	47	61.7	9.2	**0.0147**	0.006	40.3	ug/L	51	Standard
	V	51	1921.4	1.8	**-0.0201**	0.005	24.8	ug/L	2088	Standard
	Cr	52	6043.2	0.8	**-0.0688**	0.008	12.2	ug/L	6617	Standard
	Cr	53	116.7	6.5	**-0.0301**	0.007	22.6	ug/L	166	Standard
	Mn	55	931.4	3.6	**-0.0088**	0.003	30.6	ug/L	940	Standard
	Co	59	94.0	9.5	**-0.0003**	0.001	381.1	ug/L	76	Standard
	Ni	60	53.7	20.5	**0.0013**	0.006	470.0	ug/L	52	Standard
	Cu	65	58.3	9.4	**-0.0144**	0.003	24.1	ug/L	68	Standard
	Zn	66	95.0	11.0	**-0.0505**	0.013	26.1	ug/L	104	Standard
>	**Ge**	72	212722.6	0.5				ug/L	221790	Standard
	As	75	-135.3	10.3	**0.0122**	0.017	140.7	ug/L	-133	Standard
	Se	82	16.2	48.6	**0.0091**	0.099	1094.5	ug/L	18	Standard
	Se-1	77	79.7	12.7	**0.0230**	0.183	797.4	ug/L	70	Standard
>	**Ga**	71	456.7	12.0				mg/L	477	Standard
	Rb	85	25.0	52.9				ug/L	23	Standard
	Y	89	187933.9	2.7				ug/L	197249	Standard
>	**Rh**	103	286.7	16.5				ug/L	295	Standard
	Mo	98	62.2	30.0	**0.0156**	0.007	42.7	ug/L	13	Standard
	Ag	107	207.7	16.4	**0.0332**	0.006	17.1	ug/L	64	Standard
	Cd	111	53.8	5.5	**-0.0045**	0.001	23.6	mg/L	53	Standard
	Cd	114	151.0	3.7	**-0.0018**	0.001	40.3	ug/L	150	Standard
>	**In**	115	624581.6	0.7				ug/L	644840	Standard
	Sn	118	758.0	0.7	**-0.0003**	0.001	257.7	ug/L	487	Standard
	Sb	123	912.2	29.8	**0.1074**	0.033	31.1	ug/L	126	Standard
	Ba	135	41.3	24.4	**-0.0002**	0.003	1505.9	ug/L	25	Standard
	Ce	140	54.0	6.7				ug/L	22	Standard
>	**Tb**	159	914851.7	0.8				ug/L	958910	Standard
	Ho	165	10.3	5.6				ug/L	14	Standard
	Tl	203	50.0	40.0	**0.0017**	0.001	82.5	ug/L	10	Standard
	Tl	205	105.0	33.0	**0.0015**	0.001	70.2	ug/L	27	Standard
	Pb	206	344.3	4.8	**0.0016**	0.002	97.5	ug/L	319	Standard
	Pb	207	282.3	3.4	**-0.0038**	0.001	30.8	ug/L	287	Standard
	Pb	208	1312.4	3.4	**-0.0012**	0.001	100.4	ug/L	1244	Standard
	U	238	44.7	41.4	**0.0040**	0.001	36.0	ug/L	5	Standard
>	**Bi**	209	481579.9	0.7				ug/L	497973	Standard

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Na	23	441.7	4.6	**-0.0003**	0.001	488.4	mg/L	237	Standard
Mg	24	191.7	29.1	**0.0003**	0.000	32.3	mg/L	60	Standard
K	39	121.7	12.6	**0.0223**	0.017	75.4	mg/L	105	Standard
Ca	43	1.7	173.2	**-5.5969**	1.704	30.4	mg/L	7	Standard
Fe	54	429.6	10.8	**-0.0108**	0.012	115.3	mg/L	483	Standard
Fe	57	1516.7	5.6	**-0.0060**	0.001	21.6	mg/L	2095	Standard
Sc-1	45	265027.8	0.4				mg/L	272955	Standard
Cl	35	3.3	75.5				ug/L	9	Standard
Kr	83	34.1	10.8				ug/L	39	Standard
Br	81	545.0	4.5				ug/L	644	Standard
P	31	325.8	18.4				ug/L	324	Standard
S	34	5279.3	1.1				ug/L	5485	Standard
Sr	88	26.7	21.7				ug/L	28	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		95.912	
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	96.858
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	96.708
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	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 8
Sample Date/Time: Thursday, July 19, 2012 18:52:30
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	6758.2	4.2	**66.4602**	48.999	73.7	ug/L	6820	Standard
	Be	9	15.0	57.7	**0.0093**	0.007	74.9	ug/L	3	Standard
	Al	27	24337.9	5.9	**1.9135**	0.175	9.2	ug/L	4266	Standard
>	**Sc**	45	261957.1	1.5				ug/L	272955	Standard
	Ti	47	58.3	18.3	**0.0115**	0.012	105.3	ug/L	51	Standard
	V	51	4947.9	4.0	**0.3791**	0.029	7.5	ug/L	2088	Standard
	Cr	52	11243.8	2.6	**0.7754**	0.054	7.0	ug/L	6617	Standard
	Cr	53	986.7	1.3	**0.8069**	0.015	1.8	ug/L	166	Standard
	Mn	55	6526.4	2.0	**0.5000**	0.011	2.2	ug/L	940	Standard
	Co	59	3096.3	2.7	**0.3985**	0.012	3.0	ug/L	76	Standard
	Ni	60	2888.3	0.9	**1.6138**	0.015	0.9	ug/L	52	Standard
	Cu	65	1377.4	2.6	**0.7844**	0.023	3.0	ug/L	68	Standard
	Zn	66	5167.5	0.7	**6.4910**	0.075	1.2	ug/L	104	Standard
>	**Ge**	72	211365.8	0.5				ug/L	221790	Standard
	As	75	150.6	17.6	**0.3699**	0.033	8.9	ug/L	-133	Standard
	Se	82	40.8	29.5	**0.3217**	0.151	47.0	ug/L	18	Standard
	Se-1	77	85.3	7.1	**0.1380**	0.119	86.0	ug/L	70	Standard
>	**Ga**	71	451.7	2.8				mg/L	477	Standard
	Rb	85	18.3	41.7				ug/L	23	Standard
	Y	89	193435.8	2.6				ug/L	197249	Standard
>	**Rh**	103	316.7	17.4				ug/L	295	Standard
	Mo	98	24.2	42.8	**0.0021**	0.004	171.8	ug/L	13	Standard
	Ag	107	2248.5	2.7	**0.3798**	0.009	2.3	ug/L	64	Standard
	Cd	111	836.3	4.3	**0.2475**	0.013	5.3	mg/L	53	Standard
	Cd	114	2245.0	3.2	**0.2380**	0.010	4.4	ug/L	150	Standard
>	**In**	115	628075.6	0.9				ug/L	644840	Standard
	Sn	118	554.3	1.9	**-0.0137**	0.001	7.0	ug/L	487	Standard
	Sb	123	3432.3	2.0	**0.4070**	0.012	2.8	ug/L	126	Standard
	Ba	135	2729.2	3.7	**0.7276**	0.029	3.9	ug/L	25	Standard
	Ce	140	55.3	61.6				ug/L	22	Standard
>	**Tb**	159	926111.7	1.2				ug/L	958910	Standard
	Ho	165	14.7	15.7				ug/L	14	Standard
	Tl	203	1114.0	3.7	**0.0747**	0.003	3.8	ug/L	10	Standard
	Tl	205	2648.2	2.3	**0.0760**	0.002	2.3	ug/L	27	Standard
	Pb	206	2534.2	1.7	**0.1956**	0.004	1.9	ug/L	319	Standard
	Pb	207	2048.8	3.0	**0.1829**	0.006	3.5	ug/L	287	Standard
	Pb	208	9698.2	1.5	**0.1879**	0.003	1.7	ug/L	1244	Standard
	U	238	4936.1	0.9	**0.3718**	0.003	0.8	ug/L	5	Standard
>	**Bi**	209	489336.0	0.3				ug/L	497973	Standard

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Na	23	391.7	7.8	**-0.0030**	0.002	51.1	mg/L	237	Standard
Mg	24	208.3	51.3	**0.0004**	0.000	56.4	mg/L	60	Standard
K	39	91.7	22.0	**-0.0089**	0.022	245.0	mg/L	105	Standard
Ca	43	8.3	69.3	**-1.6115**	3.475	215.6	mg/L	7	Standard
Fe	54	448.7	14.1	**-0.0041**	0.017	420.1	mg/L	483	Standard
Fe	57	1671.8	5.5	**-0.0031**	0.002	60.3	mg/L	2095	Standard
> **Sc-1**	45	261957.1	1.5				mg/L	272955	Standard
Cl	35	5.0	80.0				ug/L	9	Standard
Kr	83	37.0	9.5				ug/L	39	Standard
Br	81	555.8	3.0				ug/L	644	Standard
P	31	290.8	11.9				ug/L	324	Standard
S	34	5110.0	3.9				ug/L	5485	Standard
Sr	88	55.0	24.1				ug/L	28	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	94.776		
Cr	52	96.929		
Cr	53			
Mn	55	99.995		
Co	59	99.632		
Ni	60	100.863		
Cu	65	98.047		
Zn	66	103.856		
> Ge	72		95.300	
As	75	92.482		
Se	82	80.420		
Se-1	77			
> Ga	71			
Rb	85			
Y	89			
> Rh	103			
Mo	98			
Ag	107	94.943		

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	Cd	111	103.107	
	Cd	114		
>	In	115		97.400
	Sn	118		
	Sb	123	101.758	
	Ba	135	97.008	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	93.415	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	93.964	
	U	238	92.940	
>	Bi	209		98.266
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	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: L
Sample Date/Time: Thursday, July 19, 2012 18:55:41
Number of Replicates: 3
Autosampler Position: 426
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	6461.4	25.5	**31.0541**	179.633	578.5	ug/L	6820	Standard
	Be	9	1.7	173.2	**-0.0013**	0.002	172.2	ug/L	3	Standard
	Al	27	2553.6	15.6	**-0.2152**	0.002	0.9	ug/L	4266	Standard
>	**Sc**	45	253034.6	16.2				ug/L	272955	Standard
	Ti	47	34.7	11.7	**-0.0141**	0.007	49.9	ug/L	51	Standard
	V	51	826.4	2.5	**-0.1599**	0.022	13.5	ug/L	2088	Standard
	Cr	52	2522.9	2.2	**-0.6204**	0.082	13.2	ug/L	6617	Standard
	Cr	53	60.0	22.0	**-0.0824**	0.016	19.6	ug/L	166	Standard
	Mn	55	724.4	21.7	**-0.0272**	0.008	27.8	ug/L	940	Standard
	Co	59	47.7	17.0	**-0.0062**	0.001	22.7	ug/L	76	Standard
	Ni	60	39.3	10.3	**-0.0064**	0.002	32.7	ug/L	52	Standard
	Cu	65	32.7	8.8	**-0.0293**	0.004	13.3	ug/L	68	Standard
	Zn	66	70.7	37.3	**-0.0831**	0.017	20.7	ug/L	104	Standard
>	**Ge**	72	211816.3	19.1				ug/L	221790	Standard
	As	75	-137.5	51.1	**0.0154**	0.055	360.2	ug/L	-133	Standard
	Se	82	36.0	43.9	**0.2459**	0.140	57.1	ug/L	18	Standard
	Se-1	77	44.0	27.6	**-0.6320**	0.124	19.7	ug/L	70	Standard
>	**Ga**	71	438.3	35.6				mg/L	477	Standard
	Rb	85	23.3	12.4				ug/L	23	Standard
	Y	89	170047.6	12.9				ug/L	197249	Standard
>	**Rh**	103	238.3	25.0				ug/L	295	Standard
	Mo	98	8.5	52.5	**-0.0027**	0.002	75.4	ug/L	13	Standard
	Ag	107	43.3	13.9	**0.0066**	0.002	28.8	ug/L	64	Standard
	Cd	111	10.3	36.6	**-0.0178**	0.002	10.3	mg/L	53	Standard
	Cd	114	42.4	24.1	**-0.0134**	0.001	5.4	ug/L	150	Standard
>	**In**	115	527943.6	11.6				ug/L	644840	Standard
	Sn	118	283.0	7.3	**-0.0275**	0.003	12.2	ug/L	487	Standard
	Sb	123	102.6	26.3	**0.0127**	0.004	33.3	ug/L	126	Standard
	Ba	135	25.7	31.5	**-0.0030**	0.003	104.4	ug/L	25	Standard
	Ce	140	17.0	32.8				ug/L	22	Standard
>	**Tb**	159	848668.9	6.4				ug/L	958910	Standard
	Ho	165	9.7	29.9				ug/L	14	Standard
	Tl	203	21.3	33.3	**-0.0003**	0.000	145.1	ug/L	10	Standard
	Tl	205	48.0	22.5	**-0.0002**	0.000	166.3	ug/L	27	Standard
	Pb	206	309.3	11.1	**-0.0005**	0.002	422.7	ug/L	319	Standard
	Pb	207	240.7	5.1	**-0.0073**	0.002	23.9	ug/L	287	Standard
	Pb	208	1155.7	9.6	**-0.0039**	0.000	10.5	ug/L	1244	Standard
	U	238	8.0	37.5	**0.0012**	0.000	15.8	ug/L	5	Standard
>	**Bi**	209	465012.2	8.7				ug/L	497973	Standard

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⌈	**Na**	23	171.7	21.9	**-0.0158**	0.004	27.5	mg/L	237	Standard
|	**Mg**	24	41.7	36.7	**0.0001**	0.000	61.1	mg/L	60	Standard
|	**K**	39	48.3	53.1	**-0.0512**	0.037	73.0	mg/L	105	Standard
|	**Ca**	43	1.7	173.2	**-5.6001**	1.698	30.3	mg/L	7	Standard
|	**Fe**	54	290.7	42.1	**-0.0474**	0.023	48.5	mg/L	483	Standard
|	**Fe**	57	671.7	10.6	**-0.0187**	0.003	15.0	mg/L	2095	Standard
⌊>	**Sc-1**	45	253034.6	16.2				mg/L	272955	Standard
	Cl	35	1.7	91.7				ug/L	9	Standard
	Kr	83	114.2	66.0				ug/L	39	Standard
	Br	81	216.7	11.8				ug/L	644	Standard
	P	31	125.8	42.0				ug/L	324	Standard
	S	34	1561.7	3.6				ug/L	5485	Standard
	Sr	88	28.3	50.9				ug/L	28	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		95.503	
|	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	81.872
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	93.381
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
Cr 52 Lower	Cr	52	

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Method 6020 - Summary Report

Sample ID: L
Sample Date/Time: Thursday, July 19, 2012 18:58:52
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	5516.1	33.1	**-175.3902**	70.964	40.5	ug/L	6820	Standard
	Be	9	1.7	173.2	**-0.0010**	0.003	301.6	ug/L	3	Standard
	Al	27	2550.2	26.6	**-0.2052**	0.045	22.0	ug/L	4266	Standard
>	**Sc**	45	245574.5	29.0				ug/L	272955	Standard
	Ti	47	38.0	16.4	**-0.0087**	0.008	92.9	ug/L	51	Standard
	V	51	833.6	8.1	**-0.1549**	0.016	10.3	ug/L	2088	Standard
	Cr	52	2583.9	10.7	**-0.5965**	0.050	8.4	ug/L	6617	Standard
	Cr	53	55.0	12.0	**-0.0857**	0.005	6.4	ug/L	166	Standard
	Mn	55	729.0	19.7	**-0.0234**	0.011	47.3	ug/L	940	Standard
	Co	59	56.7	29.1	**-0.0049**	0.001	25.4	ug/L	76	Standard
	Ni	60	40.7	31.1	**-0.0050**	0.006	116.3	ug/L	52	Standard
	Cu	65	30.7	18.8	**-0.0291**	0.007	25.1	ug/L	68	Standard
	Zn	66	71.0	22.5	**-0.0769**	0.011	14.6	ug/L	104	Standard
>	**Ge**	72	203537.4	22.7				ug/L	221790	Standard
	As	75	-117.5	56.5	**0.0348**	0.051	146.6	ug/L	-133	Standard
	Se	82	39.2	36.8	**0.3299**	0.216	65.5	ug/L	18	Standard
	Se-1	77	45.3	12.1	**-0.5419**	0.231	42.7	ug/L	70	Standard
>	**Ga**	71	441.7	17.3				mg/L	477	Standard
	Rb	85	15.0	33.3				ug/L	23	Standard
	Y	89	179889.7	20.6				ug/L	197249	Standard
>	**Rh**	103	300.0	22.5				ug/L	295	Standard
	Mo	98	7.1	47.1	**-0.0035**	0.001	42.5	ug/L	13	Standard
	Ag	107	34.7	23.1	**0.0043**	0.000	6.3	ug/L	64	Standard
	Cd	111	20.6	18.4	**-0.0144**	0.000	2.8	mg/L	53	Standard
	Cd	114	37.2	15.6	**-0.0143**	0.001	6.2	ug/L	150	Standard
>	**In**	115	559008.4	20.0				ug/L	644840	Standard
	Sn	118	291.0	16.3	**-0.0283**	0.001	2.9	ug/L	487	Standard
	Sb	123	68.9	33.6	**0.0071**	0.002	21.7	ug/L	126	Standard
	Ba	135	19.0	19.0	**-0.0057**	0.000	2.2	ug/L	25	Standard
	Ce	140	18.3	22.0				ug/L	22	Standard
>	**Tb**	159	919161.9	15.5				ug/L	958910	Standard
	Ho	165	8.7	29.0				ug/L	14	Standard
	Tl	203	16.0	6.3	**-0.0007**	0.000	26.9	ug/L	10	Standard
	Tl	205	31.3	14.4	**-0.0007**	0.000	31.5	ug/L	27	Standard
	Pb	206	314.7	14.1	**-0.0012**	0.002	179.4	ug/L	319	Standard
	Pb	207	261.0	24.3	**-0.0066**	0.002	26.4	ug/L	287	Standard
	Pb	208	1203.7	19.0	**-0.0041**	0.001	20.3	ug/L	1244	Standard
	U	238	2.3	99.0	**0.0007**	0.000	17.2	ug/L	5	Standard
>	**Bi**	209	488956.2	21.2				ug/L	497973	Standard

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Na	23	185.0	26.6	**-0.0149**	0.001	5.7	mg/L	237	Standard
Mg	24	25.0	20.0	**0.0000**	0.000	42.0	mg/L	60	Standard
K	39	50.0	36.1	**-0.0511**	0.008	16.4	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	370.8	26.9	**-0.0138**	0.043	312.1	mg/L	483	Standard
Fe	57	565.0	12.9	**-0.0202**	0.002	8.5	mg/L	2095	Standard
> **Sc-1**	45	245574.5	29.0				mg/L	272955	Standard
Cl	35	2.3	99.0				ug/L	9	Standard
Kr	83	107.0	42.2				ug/L	39	Standard
Br	81	200.8	19.3				ug/L	644	Standard
P	31	150.8	25.7				ug/L	324	Standard
S	34	1587.6	9.3				ug/L	5485	Standard
Sr	88	41.7	42.1				ug/L	28	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		91.770	
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	86.689
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	98.189
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Lower	Cr	52	

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Method 6020 - Summary Report

Sample ID: L
Sample Date/Time: Thursday, July 19, 2012 19:02:02
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	5372.6	3.3	**-204.5306**	35.408	17.3	ug/L	6820	Standard
	Be	9	5.0	100.0	**0.0016**	0.004	266.7	ug/L	3	Standard
	Al	27	2311.8	12.4	**-0.2333**	0.022	9.6	ug/L	4266	Standard
>	**Sc**	45	245664.9	4.5				ug/L	272955	Standard
	Ti	47	32.3	12.9	**-0.0180**	0.005	25.6	ug/L	51	Standard
	V	51	811.7	3.9	**-0.1660**	0.011	6.9	ug/L	2088	Standard
	Cr	52	2502.5	1.8	**-0.6394**	0.038	6.0	ug/L	6617	Standard
	Cr	53	67.5	13.4	**-0.0772**	0.014	17.8	ug/L	166	Standard
	Mn	55	716.4	2.5	**-0.0288**	0.006	21.7	ug/L	940	Standard
	Co	59	49.3	9.1	**-0.0063**	0.000	5.6	ug/L	76	Standard
	Ni	60	42.7	25.1	**-0.0053**	0.005	94.6	ug/L	52	Standard
	Cu	65	25.7	26.5	**-0.0341**	0.005	14.5	ug/L	68	Standard
	Zn	66	70.7	3.3	**-0.0828**	0.004	4.9	ug/L	104	Standard
>	**Ge**	72	215822.0	7.6				ug/L	221790	Standard
	As	75	-156.4	15.3	**-0.0125**	0.036	288.3	ug/L	-133	Standard
	Se	82	30.8	31.7	**0.1911**	0.134	70.3	ug/L	18	Standard
	Se-1	77	39.7	7.7	**-0.7180**	0.114	15.9	ug/L	70	Standard
>	**Ga**	71	421.7	11.0				mg/L	477	Standard
	Rb	85	25.0	80.0				ug/L	23	Standard
	Y	89	194140.9	6.5				ug/L	197249	Standard
>	**Rh**	103	265.0	24.7				ug/L	295	Standard
	Mo	98	8.0	26.4	**-0.0034**	0.001	20.0	ug/L	13	Standard
	Ag	107	39.7	18.2	**0.0049**	0.001	14.1	ug/L	64	Standard
	Cd	111	13.3	48.9	**-0.0171**	0.003	18.2	mg/L	53	Standard
	Cd	114	51.8	14.3	**-0.0128**	0.001	5.1	ug/L	150	Standard
>	**In**	115	592845.2	20.2				ug/L	644840	Standard
	Sn	118	279.0	25.1	**-0.0305**	0.001	3.4	ug/L	487	Standard
	Sb	123	57.2	27.9	**0.0051**	0.001	11.8	ug/L	126	Standard
	Ba	135	19.0	27.9	**-0.0060**	0.001	14.0	ug/L	25	Standard
	Ce	140	17.7	26.1				ug/L	22	Standard
>	**Tb**	159	922001.6	15.4				ug/L	958910	Standard
	Ho	165	10.3	14.8				ug/L	14	Standard
	Tl	203	14.0	25.8	**-0.0008**	0.000	40.3	ug/L	10	Standard
	Tl	205	26.3	37.5	**-0.0008**	0.000	35.9	ug/L	27	Standard
	Pb	206	314.3	3.8	**-0.0012**	0.002	202.9	ug/L	319	Standard
	Pb	207	258.7	12.6	**-0.0066**	0.002	26.6	ug/L	287	Standard
	Pb	208	1193.0	8.7	**-0.0042**	0.001	26.3	ug/L	1244	Standard
	U	238	2.0	50.0	**0.0007**	0.000	12.1	ug/L	5	Standard
>	**Bi**	209	485268.6	7.0				ug/L	497973	Standard

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Na	23	240.0	13.7	**-0.0114**	0.002	16.2	mg/L	237	Standard
Mg	24	23.3	53.9	**0.0000**	0.000	156.6	mg/L	60	Standard
K	39	38.3	41.9	**-0.0644**	0.018	27.9	mg/L	105	Standard
Ca	43	3.3	86.6	**-4.5047**	1.800	40.0	mg/L	7	Standard
Fe	54	323.8	21.7	**-0.0320**	0.025	77.4	mg/L	483	Standard
Fe	57	633.3	12.3	**-0.0193**	0.001	5.3	mg/L	2095	Standard
Sc-1	45	245664.9	4.5				mg/L	272955	Standard
Cl	35	3.7	15.7				ug/L	9	Standard
Kr	83	112.4	19.5				ug/L	39	Standard
Br	81	189.2	6.5				ug/L	644	Standard
P	31	129.2	3.0				ug/L	324	Standard
S	34	1457.6	5.2				ug/L	5485	Standard
Sr	88	25.0	103.9				ug/L	28	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		97.309	
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	91.937
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	97.449
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Lower	Cr	52	

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Method 6020 - Summary Report

Sample ID: L
Sample Date/Time: Thursday, July 19, 2012 19:05:12
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	6057.9	26.3	**-135.4409**	127.421	94.1	ug/L	6820	Standard
	Be	9	5.0	100.0	**0.0019**	0.005	275.1	ug/L	3	Standard
	Al	27	2731.9	4.0	**-0.1996**	0.056	28.1	ug/L	4266	Standard
>	**Sc**	45	263176.2	22.5				ug/L	272955	Standard
	Ti	47	91.3	112.6	**0.0349**	0.084	240.8	ug/L	51	Standard
	V	51	827.8	8.6	**-0.1616**	0.016	9.6	ug/L	2088	Standard
	Cr	52	2588.9	8.4	**-0.6166**	0.060	9.8	ug/L	6617	Standard
	Cr	53	48.3	40.2	**-0.0960**	0.012	12.8	ug/L	166	Standard
	Mn	55	750.4	37.0	**-0.0272**	0.009	34.7	ug/L	940	Standard
	Co	59	54.7	7.6	**-0.0054**	0.001	20.7	ug/L	76	Standard
	Ni	60	38.0	21.5	**-0.0077**	0.001	10.7	ug/L	52	Standard
	Cu	65	30.7	55.0	**-0.0318**	0.006	19.8	ug/L	68	Standard
	Zn	66	69.7	21.3	**-0.0836**	0.004	4.3	ug/L	104	Standard
>	**Ge**	72	214783.5	22.7				ug/L	221790	Standard
	As	75	-123.9	53.0	**0.0352**	0.054	154.0	ug/L	-133	Standard
	Se	82	40.0	59.9	**0.2794**	0.250	89.6	ug/L	18	Standard
	Se-1	77	56.0	17.0	**-0.4101**	0.126	30.8	ug/L	70	Standard
>	**Ga**	71	431.7	28.8				mg/L	477	Standard
	Rb	85	20.0	66.1				ug/L	23	Standard
	Y	89	178223.2	15.3				ug/L	197249	Standard
>	**Rh**	103	266.7	29.9				ug/L	295	Standard
	Mo	98	4.2	14.7	**-0.0047**	0.000	6.4	ug/L	13	Standard
	Ag	107	44.0	12.7	**0.0062**	0.000	3.9	ug/L	64	Standard
	Cd	111	17.3	6.7	**-0.0155**	0.001	6.4	mg/L	53	Standard
	Cd	114	43.4	22.5	**-0.0135**	0.001	5.2	ug/L	150	Standard
>	**In**	115	552401.5	9.8				ug/L	644840	Standard
	Sn	118	258.7	14.3	**-0.0305**	0.001	3.8	ug/L	487	Standard
	Sb	123	38.0	33.3	**0.0030**	0.001	41.7	ug/L	126	Standard
	Ba	135	17.7	58.9	**-0.0058**	0.003	59.6	ug/L	25	Standard
	Ce	140	13.3	11.5				ug/L	22	Standard
>	**Tb**	159	891638.3	5.3				ug/L	958910	Standard
	Ho	165	11.7	42.3				ug/L	14	Standard
	Tl	203	11.3	31.0	**-0.0010**	0.000	21.8	ug/L	10	Standard
	Tl	205	34.0	10.6	**-0.0006**	0.000	18.8	ug/L	27	Standard
	Pb	206	306.3	5.1	**-0.0027**	0.001	47.2	ug/L	319	Standard
	Pb	207	244.7	7.2	**-0.0087**	0.002	23.6	ug/L	287	Standard
	Pb	208	1175.7	3.2	**-0.0052**	0.001	17.2	ug/L	1244	Standard
	U	238	5.0	20.0	**0.0009**	0.000	7.3	ug/L	5	Standard
>	**Bi**	209	497262.4	1.9				ug/L	497973	Standard

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⌈	**Na**	23	193.3	14.2	**-0.0147**	0.005	31.1	mg/L	237	Standard
|	**Mg**	24	36.7	15.7	**0.0000**	0.000	16.5	mg/L	60	Standard
|	**K**	39	40.0	45.1	**-0.0636**	0.021	32.5	mg/L	105	Standard
|	**Ca**	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
|	**Fe**	54	351.2	63.8	**-0.0371**	0.041	109.4	mg/L	483	Standard
|	**Fe**	57	658.3	9.5	**-0.0191**	0.004	19.9	mg/L	2095	Standard
⌊>	**Sc-1**	45	263176.2	22.5				mg/L	272955	Standard
	Cl	35	3.0	33.3				ug/L	9	Standard
	Kr	83	107.8	57.7				ug/L	39	Standard
	Br	81	208.3	16.0				ug/L	644	Standard
	P	31	141.7	40.6				ug/L	324	Standard
	S	34	1572.6	2.4				ug/L	5485	Standard
	Sr	88	28.3	20.4				ug/L	28	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		96.841	
|	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	85.665
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	99.857
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Lower	Cr	52	

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Method 6020 - Summary Report

Sample ID: L
Sample Date/Time: Thursday, July 19, 2012 19:08:22
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	5461.0	10.5	**-274.0728**	79.235	28.9	ug/L	6820	Standard
	Be	9	5.0	173.2	**0.0013**	0.007	534.1	ug/L	3	Standard
	Al	27	2751.9	13.0	**-0.2050**	0.013	6.3	ug/L	4266	Standard
>	**Sc**	45	261967.5	10.8				ug/L	272955	Standard
	Ti	47	34.3	14.9	**-0.0132**	0.014	106.5	ug/L	51	Standard
	V	51	838.3	5.6	**-0.1582**	0.016	10.3	ug/L	2088	Standard
	Cr	52	2597.9	3.6	**-0.6070**	0.068	11.1	ug/L	6617	Standard
	Cr	53	66.7	2.2	**-0.0756**	0.011	15.1	ug/L	166	Standard
	Mn	55	765.0	12.8	**-0.0216**	0.015	67.6	ug/L	940	Standard
	Co	59	53.0	16.1	**-0.0055**	0.001	17.4	ug/L	76	Standard
	Ni	60	38.7	33.7	**-0.0073**	0.004	51.6	ug/L	52	Standard
	Cu	65	34.3	17.8	**-0.0284**	0.003	11.3	ug/L	68	Standard
	Zn	66	68.7	22.4	**-0.0836**	0.008	9.1	ug/L	104	Standard
>	**Ge**	72	210135.2	18.1				ug/L	221790	Standard
	As	75	-122.4	13.5	**0.0211**	0.048	228.9	ug/L	-133	Standard
	Se	82	37.6	19.2	**0.2893**	0.082	28.3	ug/L	18	Standard
	Se-1	77	43.3	9.3	**-0.6263**	0.081	12.9	ug/L	70	Standard
>	**Ga**	71	448.3	12.5				mg/L	477	Standard
	Rb	85	26.7	43.3				ug/L	23	Standard
	Y	89	192047.2	26.9				ug/L	197249	Standard
>	**Rh**	103	268.3	45.1				ug/L	295	Standard
	Mo	98	7.3	42.6	**-0.0033**	0.002	59.0	ug/L	13	Standard
	Ag	107	32.0	25.6	**0.0037**	0.000	2.7	ug/L	64	Standard
	Cd	111	14.3	33.1	**-0.0169**	0.001	5.2	mg/L	53	Standard
	Cd	114	49.7	38.3	**-0.0131**	0.001	6.1	ug/L	150	Standard
>	**In**	115	579162.4	26.9				ug/L	644840	Standard
	Sn	118	272.0	23.6	**-0.0303**	0.001	4.9	ug/L	487	Standard
	Sb	123	33.6	31.0	**0.0023**	0.001	37.5	ug/L	126	Standard
	Ba	135	13.7	30.5	**-0.0075**	0.000	3.1	ug/L	25	Standard
	Ce	140	21.0	25.2				ug/L	22	Standard
>	**Tb**	159	918487.2	21.6				ug/L	958910	Standard
	Ho	165	12.0	44.1				ug/L	14	Standard
	Tl	203	12.0	14.4	**-0.0009**	0.000	28.1	ug/L	10	Standard
	Tl	205	25.0	22.3	**-0.0009**	0.000	33.1	ug/L	27	Standard
	Pb	206	306.7	10.1	**-0.0023**	0.002	65.9	ug/L	319	Standard
	Pb	207	242.3	25.6	**-0.0090**	0.003	33.2	ug/L	287	Standard
	Pb	208	1173.7	17.1	**-0.0051**	0.001	15.7	ug/L	1244	Standard
	U	238	2.3	49.5	**0.0007**	0.000	9.2	ug/L	5	Standard
>	**Bi**	209	493436.6	14.9				ug/L	497973	Standard

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Na	23	195.0	8.9	**-0.0151**	0.000	3.0	mg/L	237	Standard
Mg	24	40.0	12.5	**0.0000**	0.000	23.2	mg/L	60	Standard
K	39	60.0	28.9	**-0.0431**	0.018	42.0	mg/L	105	Standard
Ca	43	3.3	86.6	**-4.4879**	1.827	40.7	mg/L	7	Standard
Fe	54	347.3	25.0	**-0.0296**	0.036	122.3	mg/L	483	Standard
Fe	57	670.0	11.5	**-0.0194**	0.000	2.5	mg/L	2095	Standard
> **Sc-1**	45	261967.5	10.8				mg/L	272955	Standard
Cl	35	3.3	17.3				ug/L	9	Standard
Kr	83	111.0	25.3				ug/L	39	Standard
Br	81	227.5	8.6				ug/L	644	Standard
P	31	141.7	13.4				ug/L	324	Standard
S	34	1592.6	9.1				ug/L	5485	Standard
Sr	88	48.3	15.8				ug/L	28	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		94.745	
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	89.815
	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	99.089
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Lower	Cr	52	

Sample ID: L
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Method 6020 - Summary Report

Sample ID: L
Sample Date/Time: Thursday, July 19, 2012 19:11:31
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	5269.3	5.9	**-329.8633**	81.243	24.6	ug/L	6820	Standard
	Be	9	6.7	43.3	**0.0028**	0.003	103.4	ug/L	3	Standard
	Al	27	2595.2	5.8	**-0.2195**	0.034	15.5	ug/L	4266	Standard
>	**Sc**	45	263435.8	10.2				ug/L	272955	Standard
	Ti	47	31.0	11.6	**-0.0196**	0.003	13.5	ug/L	51	Standard
	V	51	796.2	0.3	**-0.1684**	0.009	5.3	ug/L	2088	Standard
	Cr	52	2532.9	0.1	**-0.6364**	0.033	5.2	ug/L	6617	Standard
	Cr	53	60.0	33.1	**-0.0859**	0.014	15.9	ug/L	166	Standard
	Mn	55	779.0	10.3	**-0.0232**	0.013	54.4	ug/L	940	Standard
	Co	59	56.3	13.4	**-0.0054**	0.001	20.2	ug/L	76	Standard
	Ni	60	39.0	27.1	**-0.0076**	0.004	52.8	ug/L	52	Standard
	Cu	65	31.0	19.6	**-0.0309**	0.005	15.9	ug/L	68	Standard
	Zn	66	72.0	33.1	**-0.0829**	0.024	29.1	ug/L	104	Standard
>	**Ge**	72	216758.3	8.4				ug/L	221790	Standard
	As	75	-137.6	17.4	**0.0102**	0.043	428.3	ug/L	-133	Standard
	Se	82	25.7	34.7	**0.1296**	0.130	100.6	ug/L	18	Standard
	Se-1	77	42.7	5.9	**-0.6715**	0.021	3.1	ug/L	70	Standard
>	**Ga**	71	415.0	10.5				mg/L	477	Standard
	Rb	85	13.3	43.3				ug/L	23	Standard
	Y	89	190061.6	5.0				ug/L	197249	Standard
>	**Rh**	103	271.7	18.9				ug/L	295	Standard
	Mo	98	7.3	51.4	**-0.0035**	0.002	44.0	ug/L	13	Standard
	Ag	107	35.3	19.9	**0.0044**	0.001	31.2	ug/L	64	Standard
	Cd	111	10.3	14.8	**-0.0182**	0.001	4.0	mg/L	53	Standard
	Cd	114	44.7	8.8	**-0.0135**	0.001	5.9	ug/L	150	Standard
>	**In**	115	571086.7	6.3				ug/L	644840	Standard
	Sn	118	260.7	10.2	**-0.0310**	0.001	3.8	ug/L	487	Standard
	Sb	123	27.0	24.1	**0.0015**	0.001	45.2	ug/L	126	Standard
	Ba	135	17.0	29.4	**-0.0064**	0.001	18.7	ug/L	25	Standard
	Ce	140	13.7	30.5				ug/L	22	Standard
>	**Tb**	159	1028280.8	11.0				ug/L	958910	Standard
	Ho	165	9.7	68.9				ug/L	14	Standard
	Tl	203	11.0	63.6	**-0.0011**	0.000	44.7	ug/L	10	Standard
	Tl	205	25.0	32.7	**-0.0009**	0.000	26.3	ug/L	27	Standard
	Pb	206	316.0	15.5	**-0.0032**	0.002	65.3	ug/L	319	Standard
	Pb	207	275.3	3.0	**-0.0067**	0.002	23.1	ug/L	287	Standard
	Pb	208	1269.7	8.1	**-0.0044**	0.000	5.4	ug/L	1244	Standard
	U	238	0.7	86.6	**0.0006**	0.000	6.9	ug/L	5	Standard
>	**Bi**	209	520351.6	8.0				ug/L	497973	Standard

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Na	23	195.0	12.8	**-0.0152**	0.001	9.7	mg/L	237	Standard
Mg	24	26.7	43.3	**0.0000**	0.000	131.0	mg/L	60	Standard
K	39	35.0	14.3	**-0.0701**	0.009	13.4	mg/L	105	Standard
Ca	43	0.0		**-6.5805**	0.000	0.0	mg/L	7	Standard
Fe	54	310.7	19.1	**-0.0412**	0.025	61.7	mg/L	483	Standard
Fe	57	638.3	10.2	**-0.0199**	0.001	6.1	mg/L	2095	Standard
> **Sc-1**	45	263435.8	10.2				mg/L	272955	Standard
Cl	35	4.0	66.1				ug/L	9	Standard
Kr	83	105.1	25.5				ug/L	39	Standard
Br	81	217.5	11.9				ug/L	644	Standard
P	31	95.8	37.7				ug/L	324	Standard
S	34	1623.4	7.1				ug/L	5485	Standard
Sr	88	40.0	12.5				ug/L	28	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		97.731	
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	88.562
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	104.494
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Lower	Cr	52	

Sample ID: L
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2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Login Number: L12070328
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: WG403372 - All acceptance criteria were met.

Matrix Spikes: WG403372 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 06(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 50021
Approved By: Sheri Pfalzgraf

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL05-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:50
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	HY.071612.155027
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL18-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:52
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	HY.071612.155216
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.

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL16-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:53
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	HY.071612.155356
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.

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-1	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:06
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 15:58
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.155859
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 #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-MS	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:05
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 16:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.160049
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00458		0.000222	0.000111

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	MPL17-0712-MSD	**Prep Method:**	7470A	**Prep Date:**	07/13/2012 09:05
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	07/16/2012 15:03
Workgroup #:	WG403372	**Analyst:**	PDM	**Run Date:**	07/16/2012 16:02
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	HY.071612.160226
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00456		0.000222	0.000111

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer

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

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

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

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

TCLP Non-Volatile

Analyst(s): CAH
Date: 7-12-12
Filter Lot #: 4693983
Microbac SOP: TCLP 01 Rev #: 09

Analyst / Date		Analyst / Date	
CAH 7-12-12		CAH 7-13-12	
Time On	Temp On °C	Time Off	Temp Off °C
14:30	23°	0800	22°

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	07-305-01	ME	1311	F1-871	S	100	7	2	100.02	2000	
	-02						7	2	100.05		
	-03						7	2	100.03		
	07-312-01			F2-292			11	9	100.08		
	-02			F1-871			10	1	100.07		
	-03			F2-292			11	5	100.06		
N/A	FBLK-1	ME	1311	F1-871	N/A	N/A	N/A	N/A	N/A	2000	N/A
	FBLK-2			F2-292							

CAH 7-12-12

*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: WG403272
Analyst: REK
Spike Analyst: REK
Method: 7470A
Run Date: 07/13/2012 09:06
Hotblock Start Temp: 94.2 @ 08:55
Hotblock End Temp: 93.6 @ 10:55

SOP: ME404 Revison 13
Spike Solution: STD52775
Spike Witness: VC
H2SO4 Lot #: COA16153
HNO3 Lot #: COA16174
Digestion Tubes Lot #: COA16262
K2S2O8 1:1 Lot #: RGT16987
KMnO4 1:1 Lot #: RGT17508
Mercury Water ICV Lot #: STD52777
HG H2O STDS 10PPM Lot #: STD52783

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG403272-02	BLANK	1	40 mL	40 mL		
2	WG403181-01	FBLK1	17	4 mL	40 mL		
3	WG403181-02	FBLK2	17	4 mL	40 mL		
4	WG403272-03	LCS	1	40 mL	40 mL	4 mL	
5	L12070305-01	SAMP	17	4 mL	40 mL		07/19/12
6	L12070305-02	SAMP	17	4 mL	40 mL		07/19/12
7	L12070305-03	SAMP	17	4 mL	40 mL		07/19/12
8	L12070308-01	SAMP	1	40 mL	40 mL		07/19/12
9	L12070308-03	SAMP	1	40 mL	40 mL		07/19/12
10	L12070312-01	SAMP	17	4 mL	40 mL		07/16/12
11	L12070312-02	SAMP	17	4 mL	40 mL		07/16/12
12	L12070312-03	SAMP	17	4 mL	40 mL		07/16/12
13	L12070327-01	SAMP	1	40 mL	40 mL		07/23/12
14	L12070327-02	SAMP	1	40 mL	40 mL		07/23/12
15	L12070327-03	SAMP	1	40 mL	40 mL		07/23/12
16	L12070328-01	SAMP	1	40 mL	40 mL		07/23/12
17	L12070328-02	SAMP	1	40 mL	40 mL		07/23/12
18	L12070328-03	SAMP	1	40 mL	40 mL		07/23/12
19	WG403272-01	REF	1	40 mL	40 mL		
20	L12070328-04	RS01	1	40 mL	40 mL		07/23/12
21	WG403272-04	MS	1	36 mL	40 mL	4 mL	
22	L12070328-05	MS01	1	36 mL	40 mL	4 mL	07/23/12
23	WG403272-05	MSD	1	36 mL	40 mL	4 mL	
24	L12070328-06	SD01	1	36 mL	40 mL	4 mL	07/23/12
25	L12070347-04	SAMP	1	40 mL	40 mL		07/26/12

Analyst: [signature]

Reviewer: [signature]

HB_DIG - Modified 09/30/2009
PDF ID: 2494946
Report generated: 07/13/2012 12:00

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA Dataset: 071612H.PRN
Analyst1: PDM Analyst2: LMK
Method: 7470 SOP: ME404 Rev: 13
Maintenance Log ID: 42489

Calibration Std: STD52777 ICV Std: STD52783 Post Spike: STD52777
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV:

Workgroups: WG403372

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.071612.145448	WG403548-01	Calibration Point		1		07/16/12 14:54
2	HY.071612.145627	WG403548-02	Calibration Point		1		07/16/12 14:56
3	HY.071612.145819	WG403548-03	Calibration Point		1		07/16/12 14:58
4	HY.071612.150017	WG403548-04	Calibration Point		1		07/16/12 15:00
5	HY.071612.150206	WG403548-05	Calibration Point		1		07/16/12 15:02
6	HY.071612.150343	WG403548-06	Calibration Point		1		07/16/12 15:03
7	HY.071612.150730	WG403548-07	Initial Calibration Verification		1		07/16/12 15:07
8	HY.071612.150931	WG403548-08	Ck3ICB		1		07/16/12 15:09
9	HY.071612.151158	WG403548-09	Initial Calib Blank		1		07/16/12 15:11
10	HY.071612.151336	WG403548-10	CCV		1		07/16/12 15:13
11	HY.071612.151515	WG403548-11	CCB		1		07/16/12 15:15
12	HY.071612.151651	WG403272-02	Method/Prep Blank	40/40	1		07/16/12 15:16
13	HY.071612.151839	WG403272-03	Laboratory Control S	40/40	1		07/16/12 15:18
14	HY.071612.152105	WG403181-01	TCLP Fluid Blank 1		1		07/16/12 15:21
15	HY.071612.152254	WG403181-02	TCLP Fluid Blank 2		1		07/16/12 15:22
16	HY.071612.152441	L12070305-01	SPENT FILTERBAG	4/40	1		07/16/12 15:24
17	HY.071612.152618	WG403372-01	Post Digestion Spike		1	L12070305-01	07/16/12 15:26
18	HY.071612.152756	L12070305-02	SPENT RESIIN	4/40	1		07/16/12 15:27
19	HY.071612.152934	L12070305-03	SPENT ACT. CARBON	4/40	1		07/16/12 15:29
20	HY.071612.153115	L12070308-01	JM29-3BMW08-071112	40/40	1		07/16/12 15:31
21	HY.071612.153252	WG403372-02	Post Digestion Spike		1	L12070308-01	07/16/12 15:32
22	HY.071612.153432	WG403548-12	CCV		1		07/16/12 15:34
23	HY.071612.153638	WG403548-13	CCB		1		07/16/12 15:36
24	HY.071612.153816	L12070308-03	JM29-3BEQB-071112	40/40	1		07/16/12 15:38
25	HY.071612.153956	L12070312-01	2070604-01	4/40	1		07/16/12 15:39
26	HY.071612.154134	L12070312-02	2070604-02	4/40	1		07/16/12 15:41
27	HY.071612.154311	L12070312-03	2070604-03	4/40	1		07/16/12 15:43
28	HY.071612.154500	L12070327-01	MPL10-0712-1	40/40	1		07/16/12 15:45
29	HY.071612.154638	L12070327-02	MPL13-0712-1	40/40	1		07/16/12 15:46
30	HY.071612.154818	L12070327-03	MPL13-0712-2	40/40	1		07/16/12 15:48
31	HY.071612.155027	L12070328-01	MPL05-0712-1	40/40	1		07/16/12 15:50
32	HY.071612.155216	L12070328-02	MPL18-0712-1	40/40	1		07/16/12 15:52
33	HY.071612.155356	L12070328-03	MPL16-0712-1	40/40	1		07/16/12 15:53
34	HY.071612.155533	WG403548-14	CCV		1		07/16/12 15:55

Page: 1 Approved: July 17, 2012

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA Dataset: 071612H.PRN
Analyst1: PDM Analyst2: LMK
Method: 7470 SOP: ME404 Rev: 13
Maintenance Log ID: 42489

Calibration Std: STD52777 ICV Std: STD52783 Post Spike: STD52777
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV:

Workgroups: WG403372

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	HY.071612.155720	WG403548-15	CCB		1		07/16/12 15:57
36	HY.071612.155859	WG403272-01	Reference Sample	40/40	1	L12070328-04	07/16/12 15:58
37	HY.071612.160049	L12070328-05	MPL17-0712-MS	36/40	1	WG403272-04	07/16/12 16:00
38	HY.071612.160226	L12070328-06	MPL17-0712-MSD	36/40	1	WG403272-05	07/16/12 16:02
39	HY.071612.160403	L12070347-04	EB-071112	40/40	1		07/16/12 16:04
40	HY.071612.160555	WG403548-16	CCV		1		07/16/12 16:05
41	HY.071612.160814	WG403548-17	CCB		1		07/16/12 16:08

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8			Reanalyzed due to noncompliant reading.	

Page: 2 Approved: July 17, 2012

Microbac Laboratories Inc.

Data Checklist

Date: 16-JUL-2012
Analyst: PDM
Analyst: LMK
Method: 7470
Instrument: HYDRA
Curve Workgroup: WG403548
Runlog ID: 47872
Analytical Workgroups: WG403372

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	305,308,327,328,347
Client Forms	X
Level X	
Level 3	347
Level 4	308,327,328
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	SLP
Comments	

Primary Reviewer: 17-JUL-2012 Pierce Morris

Secondary Reviewer: 17-JUL-2012 Sheri L. Pabgrat

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-17-2012 09:56:00

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A

AAB#: WG403372

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/13/2012	2	28		07/16/12	5.3	28	
MPL18-0712-1	02	07/11/12					07/13/2012	2	28		07/16/12	5.2	28	
MPL16-0712-1	03	07/11/12					07/13/2012	1.9	28		07/16/12	5.2	28	
MPL17-0712-1	04	07/11/12					07/13/2012	1.8	28		07/16/12	5.1	28	
MPL17-0712-MS	05	07/11/12					07/13/2012	1.8	28		07/16/12	5.1	28	
MPL17-0712-MSD	06	07/11/12					07/13/2012	1.8	28		07/16/12	5.1	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2498865
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: HY.071612.151651
Prep Date: 07/13/12 09:06
Analyzed Date: 07/16/12 15:16
Analyst: PDM

Work Group: WG403372
Blank Sample ID: WG403272-02
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	WG403272-03	HY.071612.151839	07/16/12 15:18	01
MPL05-0712-1	L12070328-01	HY.071612.155027	07/16/12 15:50	01
MPL18-0712-1	L12070328-02	HY.071612.155216	07/16/12 15:52	01
MPL16-0712-1	L12070328-03	HY.071612.155356	07/16/12 15:53	01
MPL17-0712-1	L12070328-04	HY.071612.155859	07/16/12 15:58	01
MPL17-0712-MS	L12070328-05	HY.071612.160049	07/16/12 16:00	01
MPL17-0712-MSD	L12070328-06	HY.071612.160226	07/16/12 16:02	01

Report Name: BLANK_SUMMARY
PDF File ID: 2498866
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/13/12 09:06 Sample ID: WG403272-02
Instrument ID: HYDRA Run Date: 07/16/12 15:16 Prep Method: 7470A
File ID: HY.071612.151651 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG403372 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-16-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: 2498867
17-JUL-2012 08:55

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/16/2012 Sample ID: WG403272-03
Instrument ID: HYDRA Run Time: 15:18 Prep Method: 7470A
File ID: HY.071612.151839 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG403372 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD52775 Cal ID: HYDRA-16-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00425	106	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2498868
Report generated: 07/17/2012 08:55

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: HYDRA- 16-JUL-12 Worknum: WG403372

Instrument ID: HYDRA Contract #: Prep Method: 7470A

Parent ID: L12070328-04 File ID: HY.071612.155859 Dil: 1 Method: 7470A

Sample ID: L12070328-05 MS File ID: HY.071612.160049 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: HY.071612.160226 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	U	0.00444	0.00458	103	0.00444	0.00456	103	0.487	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2498869
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L12070328 **Worknum:** WG403372
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG403372-02 **File ID:** HY.071612.153252 **Dil:** 1 **Units:** ug/L
Sample ID: L12070308-01 **File ID:** HY.071612.153115 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	0.932		0	U	1	93.2	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: 2498864
Report generated: 07/17/2012 08:55

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070328
Analytical Method: 7470A
ICAL Worknum: WG403548

Workgroup (AAB#): WG403372
Instrument ID: HYDRA
Initial Calibration Date: 07/16/2012 15:03

Analyte	WG403548-01		WG403548-02		WG403548-03		WG403548-04		WG403548-05		WG403548-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	504	0.200	14738	1.00	64290	2.00	125672	5.00	305622	10.0	576894

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: 2498870
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070328
Analytical Method: 7470A
ICAL Worknum: WG403548

Workgroup (AAB#): WG403372
Instrument ID: HYDRA
Initial Calibration Date: 07/16/2012 15:03

Analyte	R	Q
Mercury	0.9995	

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

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 2498870
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L12070328
Instrument ID: HYDRA
File ID: HY.071612.151158
Workgroup (AAB#): WG403372
Matrix: WATER

Run Date: 07/16/2012
Run Time: 15:11
Analyst: PDM
Cal ID: HYDRA - 16-JUL-12

Sample ID: WG403548-09
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: 2498872
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-11
Instrument ID: HYDRA
Run Time: 15:15
Method: 7470A
File ID: HY.071612.151515
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-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: 2498874
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328 Run Date: 07/16/2012 Sample ID: WG403548-13

Instrument ID: HYDRA Run Time: 15:36 Method: 7470A

File ID: HY.071612.153638 Analyst: PDM Units: ug/L

Workgroup (AAB#): WG403372 Cal ID: HYDRA - 16-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: 2498874
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-15
Instrument ID: HYDRA
Run Time: 15:57
Method: 7470A
File ID: HY.071612.155720
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-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: 2498874
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-17
Instrument ID: HYDRA
Run Time: 16:08
Method: 7470A
File ID: HY.071612.160814
Analyst: PDM
Units: ug/L
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-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: 2498874
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L12070328 Run Date: 07/16/2012 Sample ID: WG403548-07
Instrument ID: HYDRA Run Time: 15:07 Method: 7470A
File ID: HY.071612.150730 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG403372 Cal ID: HYDRA - 16-JUL-12
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.07	104	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 2498871
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-10
Instrument ID: HYDRA
Run Time: 15:13
Method: 7470A
File ID: HY.071612.151336
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00211	mg/L	106	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2498873
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-12
Instrument ID: HYDRA
Run Time: 15:34
Method: 7470A
File ID: HY.071612.153432
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00204	mg/L	102	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2498873
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-14
Instrument ID: HYDRA
Run Time: 15:55
Method: 7470A
File ID: HY.071612.155533
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00201	mg/L	101	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2498873
Report generated 07/17/2012 08:55

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/16/2012
Sample ID: WG403548-16
Instrument ID: HYDRA
Run Time: 16:05
Method: 7470A
File ID: HY.071612.160555
Analyst: PDM
QC Key: DOD4
Workgroup (AAB#): WG403372
Cal ID: HYDRA - 16-JUL-12
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00205	mg/L	103	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 2498873
Report generated 07/17/2012 08:55

2.1.3.3 Raw Data

```
HYDRA 245.1/7470A/7471A        Folder:   071612H                      Page    1
                               Protocol: standard
                              ***POST-RUN REPORT***
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  1       14:54:48 16 Jul 12   HG

Hg    .000    ppb      504
                                                                                =
*** Standard: 2 Rep: 1              Seq:  2       14:56:27 16 Jul 12   HG

Hg    .200    ppb      14738
                                                                                =
*** Standard: 3 Rep: 1              Seq:  3       14:58:19 16 Jul 12   HG

Hg    1.00    ppb      64290
                                                                                =
*** Standard: 4 Rep: 1              Seq:  4       15:00:17 16 Jul 12   HG

Hg    2.00    ppb      125672
                                                                                =
*** Standard: 5 Rep: 1              Seq:  5       15:02:06 16 Jul 12   HG

Hg    5.00    ppb      305622
                                                                                =
*** Standard: 6 Rep: 1              Seq:  6       15:03:43 16 Jul 12   HG

Hg    10.0    ppb      576894
                                                                                =
*** Check Standard: 2  Ck2ICV       Seq:  7       15:07:30 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     2.07    2.00  ppb         .000
                                                                                =
*** Check Standard: 3  Ck3ICB       Seq:  8       15:09:31 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -50.0    -.100    .200  ppb         .000
                                                                                =
*** Check Standard: 3  Ck3ICB       Seq:  9       15:11:58 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -29.9    -.060    .200  ppb         .000
                                                                                =
*** Check Standard: 4  Ck4CCV       Seq:  10      15:13:36 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          106.     2.11    2.00  ppb         .000
                                                                                =
*** Check Standard: 5  Ck5CCB       Seq:  11      15:15:15 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -44.1    -.088    .200  ppb         .000
                                                                                =
*** Sample ID: WG40327202            Seq:  12     15:16:51 16 Jul 12   HG
                           PBW 93
Hg   -.066    ppb       .000     -.066
                                                                                =
================================================================================
```

Approved: July 17, 2012

POST-RUN REPORT

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: WG40327203            Seq:  13     15:18:39 16 Jul 12   HG
                          LCSW 93
Hg    4.25    ppb       .000      4.25
                                                                                =
================================================================================
*** Sample ID: WG40318101            Seq:  14     15:21:05 16 Jul 12   HG
                          TCLP 93
Hg   -.078    ppb       .000     -.078
                                                                                =
================================================================================
*** Sample ID: WG40318102            Seq:  15     15:22:54 16 Jul 12   HG
                          TCLP 93
Hg   -.074    ppb       .000     -.074
                                                                                =
================================================================================
*** Sample ID: 1207030501            Seq:  16     15:24:41 16 Jul 12   HG

Hg   -.061    ppb       .000     -.061
                                                                                =
================================================================================
*** Sample ID: WG40337201            Seq:  17     15:26:18 16 Jul 12   HG
                          1207030501PS.9
Hg    .904    ppb       .000      .904
                                                                                =
================================================================================
*** Sample ID: 1207030502            Seq:  18     15:27:56 16 Jul 12   HG

Hg   -.080    ppb       .000     -.080
                                                                                =
================================================================================
*** Sample ID: 1207030503            Seq:  19     15:29:34 16 Jul 12   HG

Hg   -.058    ppb       .000     -.058
                                                                                =
================================================================================
*** Sample ID: 1207030801            Seq:  20     15:31:15 16 Jul 12   HG

Hg   -.045    ppb       .000     -.045
                                                                                =
================================================================================
*** Sample ID: WG40337202            Seq:  21     15:32:52 16 Jul 12   HG
                          1207030801PS.9
Hg    .932    ppb       .000      .932
                                                                                =
*** Check Standard: 4  Ck4CCV       Seq:  22     15:34:32 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     2.04    2.00   ppb        .000
                                                                                =
```

Approved: July 17, 2012

```
                          ***POST-RUN REPORT***
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Check Standard: 5  Ck5CCB       Seq:  23      15:36:38 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -36.7    -.073    .200   ppb        .000
                                                                                =
*** Sample ID: 1207030803            Seq:  24     15:38:16 16 Jul 12   HG

Hg   -.094    ppb       .000     -.094
                                                                                =
================================================================================
*** Sample ID: 1207031201            Seq:  25     15:39:56 16 Jul 12   HG

Hg   -.075    ppb       .000     -.075
                                                                                =
================================================================================
*** Sample ID: 1207031202            Seq:  26     15:41:34 16 Jul 12   HG

Hg   -.048    ppb       .000     -.048
                                                                                =
================================================================================
*** Sample ID: 1207031203            Seq:  27     15:43:11 16 Jul 12   HG

Hg   -.073    ppb       .000     -.073
                                                                                =
================================================================================
*** Sample ID: 1207032701            Seq:  28     15:45:00 16 Jul 12   HG

Hg   -.062    ppb       .000     -.062
                                                                                =
================================================================================
*** Sample ID: 1207032702            Seq:  29     15:46:38 16 Jul 12   HG

Hg   -.074    ppb       .000     -.074
                                                                                =
================================================================================
*** Sample ID: 1207032703            Seq:  30     15:48:18 16 Jul 12   HG

Hg   -.098    ppb       .000     -.098
                                                                                =
================================================================================
*** Sample ID: 1207032801            Seq:  31     15:50:27 16 Jul 12   HG

Hg   -.036    ppb       .000     -.036
                                                                                =
================================================================================
*** Sample ID: 1207032802            Seq:  32     15:52:16 16 Jul 12   HG

Hg   -.046    ppb       .000     -.046
                                                                                =
================================================================================
```

Approved: July 17, 2012

```
                          ***POST-RUN REPORT***
Line   Conc.  Units     SD/RSD      1       2       3       4       5
--------------------------------------------------------------------------------

*** Sample ID: 1207032803            Seq:  33     15:53:56 16 Jul 12   HG

Hg   -.010    ppb       .000     -.010
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  34      15:55:33 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          101.     2.01    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  35      15:57:20 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -41.5    -.083    .200   ppb        .000
                                                                              =
*** Sample ID: 1207032804            Seq:  36     15:58:59 16 Jul 12   HG
                          WG40327201
Hg   -.066    ppb       .000     -.066
                                                                              =
==============================================================================
*** Sample ID: WG40327204            Seq:  37     16:00:49 16 Jul 12   HG
                          1207032805S
Hg    4.12    ppb       .000      4.12
                                                                              =
==============================================================================
*** Sample ID: WG40327205            Seq:  38     16:02:26 16 Jul 12   HG
                          1207032806SD
Hg    4.10    ppb       .000      4.10
                                                                              =
==============================================================================
*** Sample ID: 1207034704            Seq:  39     16:04:03 16 Jul 12   HG

Hg   -.097    ppb       .000     -.097
                                                                              =
*** Check Standard: 4  Ck4CCV       Seq:  40      16:05:55 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     2.05    2.00   ppb        .000
                                                                              =
*** Check Standard: 5  Ck5CCB       Seq:  41      16:08:14 16 Jul 12   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg         -41.8    -.084    .200   ppb        .000
                                                                              =
```

Approved: July 17, 2012

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

Login Number: L12070328
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: Recoveries for chloride marginally exceeded the upper control limit (111% and 113%). The analytical result for the MS and MSD were greater than the calibration range resulting in biased recoveries.

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: 49941
Approved By: Mike Cochran

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL05-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 17:37
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	I10713121737.14
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.307		0.200	0.100
Sulfate	14808-79-8	58.7		1.00	0.500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL05-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 18:29
Collect Date:	07/11/2012 09:27	**Dilution:**	4	**File ID:**	I10713121829.17
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	51.8		0.800	0.400

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL18-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 18:46
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	I10713121846.18
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	14.2		0.200	0.100
Fluoride	16984-48-8	0.285		0.200	0.100
Sulfate	14808-79-8	36.9		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL16-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:04
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	I10713121904.19
Sample Tag:	01	**Units:**	mg/L		

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.260		0.200	0.100
Sulfate	14808-79-8	80.8		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL16-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:21
Collect Date:	07/11/2012 12:12	**Dilution:**	4	**File ID:**	I10713121921.20
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	45.0		0.800	0.400

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:39
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	I10713121939.21
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	0.231		0.200	0.100
Sulfate	14808-79-8	63.2		1.00	0.500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-1	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 19:56
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713121956.22
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	48.7		0.800	0.400

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-MS	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 20:31
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713122031.24
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	57.6		0.800	0.400
Fluoride	16984-48-8	8.38		0.800	0.400
Sulfate	14808-79-8	97.3		4.00	2.00

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	IC1
Client ID:	MPL17-0712-MSD	**Prep Method:**	300.0	**Prep Date:**	07/13/2012 14:25
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	04/26/2012 14:46
Workgroup #:	WG403368	**Analyst:**	JBK	**Run Date:**	07/13/2012 20:48
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	I10713122048.25
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	57.7		0.800	0.400
Fluoride	16984-48-8	8.39		0.800	0.400
Sulfate	14808-79-8	97.4		4.00	2.00

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: 071312 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 13

Maintenance Log ID: 42480 Syringe Filter Lot#: 00144403

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG403368
Internal STD: NA Surrogate STD: NA Calibration STD NA
CCV STD: STD48131 LCS STD: STD48131 MS/MSD STD: STD48131

Comments: L12070384 (ALL) and L12070373-04 were analyzed at dilutions only due to analyte concentrations (Cl and/or SO4) which were greater than 200 ppm.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I10713121350.01	ELUENT	1	1		07/13/12 13:50
2	I10713121408.02	DI WATER	1	1		07/13/12 14:08
3	I10713121425.03	WG403369-01 ANION CCV	1	1		07/13/12 14:25
4	I10713121443.04	WG403369-02 ANION CCB	1	1		07/13/12 14:43
5	I10713121500.05	WG403368-01 ANION BLANK	1	1		07/13/12 15:00
6	I10713121517.06	WG403368-02 ANION LCS	1	1		07/13/12 15:17
7	I10713121535.07	L12070379-01 (BR,SO4)	2	1		07/13/12 15:35
8	I10713121552.08	L12070384-02 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 15:52
9	I10713121610.09	L12070384-04 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 16:10
10	I10713121627.10	L12070384-06 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 16:27
11	I10713121644.11	L12070384-08 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 16:44
12	I10713121702.12	L12070384-10 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 17:02
13	I10713121719.13	L12070384-12 1/20 (F,CL,NO3,SO4)	1	20		07/13/12 17:19
14	I10713121737.14	L12070328-01 (F,CL,SO4)	1	1		07/13/12 17:37
15	I10713121754.15	WG403369-03 ANION CCV	1	1		07/13/12 17:54
16	I10713121812.16	WG403369-04 ANION CCB	1	1		07/13/12 18:12
17	I10713121829.17	L12070328-01 1/4 RR CL	1	4		07/13/12 18:29
18	I10713121846.18	L12070328-02 (F,CL,SO4)	1	1		07/13/12 18:46
19	I10713121904.19	L12070328-03 (F,CL,SO4)	1	1		07/13/12 19:04
20	I10713121921.20	L12070328-03 1/4 RR CL	1	4		07/13/12 19:21
21	I10713121939.21	L12070328-04 (F,CL,SO4)	1	1		07/13/12 19:39
22	I10713121956.22	L12070328-04 1/4 RR CL	1	4		07/13/12 19:56
23	I10713122013.23	WG403368-04 1/4 DUP 328-04	1	4		07/13/12 20:13
24	I10713122031.24	L12070328-05 1/4 MS	1	4		07/13/12 20:31
25	I10713122048.25	L12070328-06 1/4 SD	1	4		07/13/12 20:48
26	I10713122106.26	L12070373-01 (F,CL,SO4)	1	1		07/13/12 21:06
27	I10713122123.27	WG403369-05 ANION CCV	1	1		07/13/12 21:23
28	I10713122140.28	WG403369-06 ANION CCB	1	1		07/13/12 21:40
29	I10713122158.29	L12070373-01 1/2 RR CL	1	2		07/13/12 21:58
30	I10713122215.30	L12070373-02 (F,CL,SO4)	1	1		07/13/12 22:15
31	I10713122233.31	L12070373-02 1/10	1	10		07/13/12 22:33
32	I10713122250.32	L12070373-03 (F,CL,SO4)	1	1		07/13/12 22:50
33	I10713122307.33	L12070373-03 1/2 RR CL	1	2		07/13/12 23:07

Page: 1 Approved: 17-JUL-12

Hema Vilasagar

Microbac Laboratories Inc.

Instrument Run Log

Instrument: IC1 Dataset: 071312 IC1.SEQ
Analyst1: JBK Analyst2: NA
Method: 9056/300 SOP: IC01 Rev: 13

Maintenance Log ID: 42480 Syringe Filter Lot#: 00144403

Column 1 ID: AG14A-4MM Column 2 ID: AS14A-4MM
Workgroups: WG403368
Internal STD: NA Surrogate STD: NA NA
CCV STD: STD48131 LCS STD: STD48131 STD48131

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
34	I10713122325.34	L12070373-06 1/10 (F,CL,SO4)	1	10		07/13/12 23:25
35	I10713122342.35	L12070373-06 1/25 RR SO4 NR	1	25		07/13/12 23:42
36	I10714120000.36	WG403369-07 ANION CCV	1	1		07/14/12 00:00
37	I10714120017.37	WG403369-08 ANION CCB	1	1		07/14/12 00:17
38	I10714120035.38	END	1	1		07/14/12 00:35

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 2 Approved: 17-JUL-12

Hema Vilasagar

Microbac

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: 13-JUL-2012
Analyst: JBK
Analyst: NA
Method: 300/9056
Instrument: IC1
Curve Workgroup: NA
Runlog ID: 47852
Analytical Workgroups: WG403368 (07-328, 373, 379, 384)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JBK
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	HAV

Primary Reviewer:
14-JUL-2012

Secondary Reviewer:
17-JUL-2012

Hema Vilasagar

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-17-2012 12:48:13

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 300.0 AAB#: WG403368

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/13/2012	2.2	2	*	07/13/12	2.3	2	*
MPL05-0712-1	01	07/11/12					07/13/2012	2.2	2	*	07/13/12	2.4	2	*
MPL18-0712-1	02	07/11/12					07/13/2012	2.2	2	*	07/13/12	2.4	2	*
MPL16-0712-1	03	07/11/12					07/13/2012	2.1	2	*	07/13/12	2.3	2	*
MPL16-0712-1	03	07/11/12					07/13/2012	2.1	2	*	07/13/12	2.3	2	*
MPL17-0712-1	04	07/11/12					07/13/2012	2	2		07/13/12	2.2	2	*
MPL17-0712-1	04	07/11/12					07/13/2012	2	2		07/13/12	2.2	2	*
MPL17-0712-MS	05	07/11/12					07/13/2012	2	2		07/13/12	2.3	2	*
MPL17-0712-MSD	06	07/11/12					07/13/2012	2	2		07/13/12	2.3	2	*

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2496423
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: I10713121500.05
Prep Date: 07/13/12 14:25
Analyzed Date: 07/13/12 15:00
Analyst: JBK

Work Group: WG403368
Blank Sample ID: WG403368-01
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	WG403368-02	I10713121517.06	07/13/12 15:17	01
MPL05-0712-1	L12070328-01	I10713121737.14	07/13/12 17:37	01
MPL05-0712-1	L12070328-01	I10713121829.17	07/13/12 18:29	DL01
MPL18-0712-1	L12070328-02	I10713121846.18	07/13/12 18:46	01
MPL16-0712-1	L12070328-03	I10713121904.19	07/13/12 19:04	01
MPL16-0712-1	L12070328-03	I10713121921.20	07/13/12 19:21	DL01
MPL17-0712-1	L12070328-04	I10713121939.21	07/13/12 19:39	01
MPL17-0712-1	L12070328-04	I10713121956.22	07/13/12 19:56	DL01
DUP	WG403368-04	I10713122013.23	07/13/12 20:13	DL01
MPL17-0712-MS	L12070328-05	I10713122031.24	07/13/12 20:31	DL01
MPL17-0712-MSD	L12070328-06	I10713122048.25	07/13/12 20:48	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2496424
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/13/12 14:25 Sample ID: WG403368-01
Instrument ID: IC1 Run Date: 07/13/12 15:00 Prep Method: 300.0
File ID: I10713121500.05 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG403368 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: 2496425
19-JUL-2012 10:52

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/13/2012 Sample ID: WG403368-02
Instrument ID: IC1 Run Time: 15:17 Prep Method: 300.0
File ID: I10713121517.06 Analyst: JBK Method: 300.0
Workgroup (AAB#): WG403368 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	8.42	105	90 - 110	
Fluoride	8.00	8.34	104	90 - 110	
Sulfate	40.0	42.2	106	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2496426
Report generated: 07/19/2012 10:52

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: IC1- 26-APR-12 Worknum: WG403368

Instrument ID: IC1 Contract #: Prep Method: 300.0

Parent ID: L12070328-04 File ID: I10713121956.22 Dil: 4 Method: 300.0

Sample ID: L12070328-05 MS File ID: I10713122031.24 Dil: 4 Matrix: Water

Sample ID: L12070328-06 MSD File ID: I10713122048.25 Dil: 4 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Chloride	48.7	8.00	57.6	111	8.00	57.7	113	0.298	90 - 110	20	*
Fluoride	0.231	8.00	8.38	102	8.00	8.39	102	0.143	90 - 110	20	
Sulfate	63.2	40.0	97.3	85.3	40.0	97.4	85.7	0.164	90 - 110	20	*

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2496427
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L12070328
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: 2496428
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12070328

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: 2496428
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L12070328

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: 2496428
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L12070328 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: 2496429
Report generated 07/19/2012 10:52

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328 Run Date: 07/13/2012 Sample ID: WG403369-02

Instrument ID: IC1 Run Time: 14:43 Method: 300.0

File ID: I10713121443.04 Analyst: JBK Units: mg/L

Workgroup (AAB#): WG403368 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: 2496431
Report generated 07/19/2012 10:53

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/13/2012
Sample ID: WG403369-04
Instrument ID: IC1
Run Time: 18:12
Method: 300.0
File ID: I10713121812.16
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG403368
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: 2496431
Report generated 07/19/2012 10:53

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L12070328
Run Date: 07/13/2012
Sample ID: WG403369-06
Instrument ID: IC1
Run Time: 21:40
Method: 300.0
File ID: I10713122140.28
Analyst: JBK
Units: mg/L
Workgroup (AAB#): WG403368
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: 2496431
Report generated 07/19/2012 10:53

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/13/2012
Sample ID: WG403369-01
Instrument ID: IC1
Run Time: 14:25
Method: 300.0
File ID: I10713121425.03
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG403368
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.43	mg/L	5.77	5.36	10	
Fluoride		8.00	8.35	mg/L	3.95	4.39	10	
Sulfate		40.0	42.4	mg/L	7.47	5.92	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2496430
Report generated 07/19/2012 10:53

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/13/2012
Sample ID: WG403369-03
Instrument ID: IC1
Run Time: 17:54
Method: 300.0
File ID: I10713121754.15
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG403368
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.47	mg/L	5.75	5.81	10	
Fluoride		8.00	8.34	mg/L	3.95	4.28	10	
Sulfate		40.0	42.6	mg/L	7.43	6.46	10	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 2496430
Report generated 07/19/2012 10:53

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L12070328
Run Date: 07/13/2012
Sample ID: WG403369-05
Instrument ID: IC1
Run Time: 21:23
Method: 300.0
File ID: I10713122123.27
Analyst: JBK
QC Key: DOD4
Workgroup (AAB#): WG403368
Cal ID: IC1 - 26-APR-12
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloride		8.00	8.46	mg/L	5.76	5.69	10	
Fluoride		8.00	8.35	mg/L	3.95	4.31	10	
Sulfate		40.0	42.5	mg/L	7.44	6.37	10	

* Exceeds %D Criteria

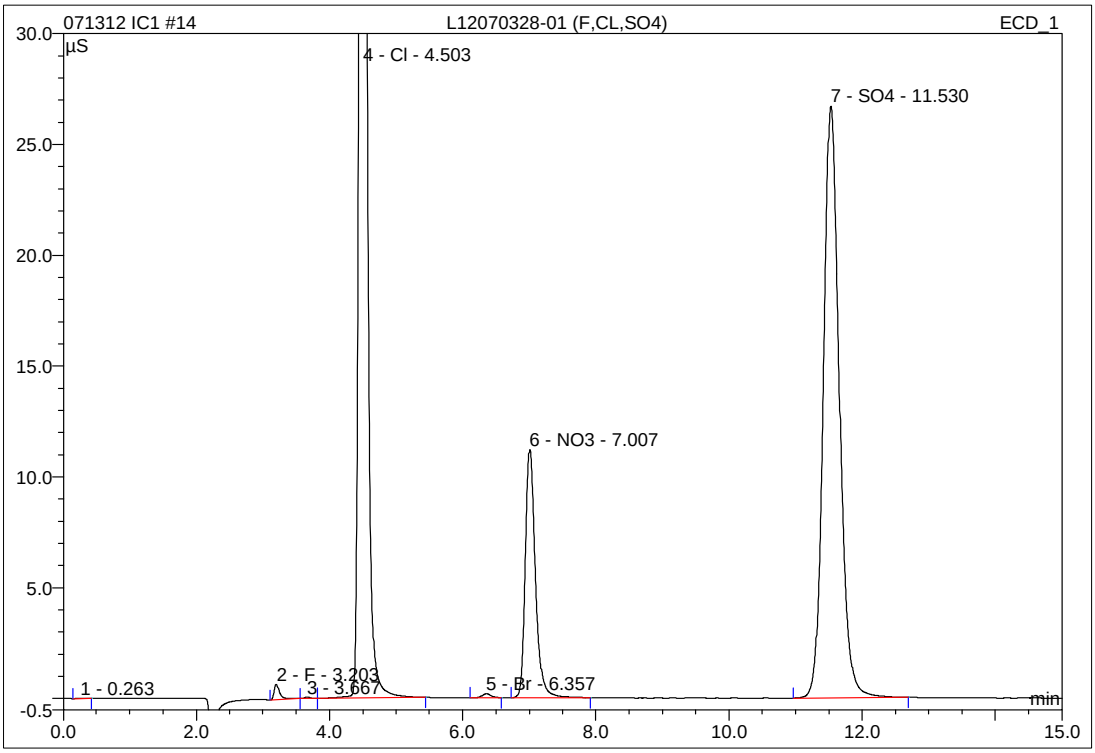
CCV - Modified 03/05/2008
PDF File ID: 2496430
Report generated 07/19/2012 10:53

2.2.1.3 Sample Data

14 L12070328-01 (F,CL,SO4)

1,1 JBK (CL>ICAL RR 1/4)

Sample Name:	**L12070328-01 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 17:37**	*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	0.26	n.a.	0.009	0.001	0.01	n.a.	BMB
2	3.20	F	0.703	0.069	0.35	0.307	BMb
3	3.67	n.a.	0.067	0.006	0.03	n.a.	bMB
4	4.50	Cl	87.153	9.998	51.29	61.488	BMB
5	6.36	Br	0.180	0.028	0.14	0.416	BMB
6	7.01	NO3	11.189	1.962	10.06	4.810	BMB
7	11.53	SO4	26.700	7.430	38.12	58.744	BMB
Total:			126.002	19.494	100.00	125.765	

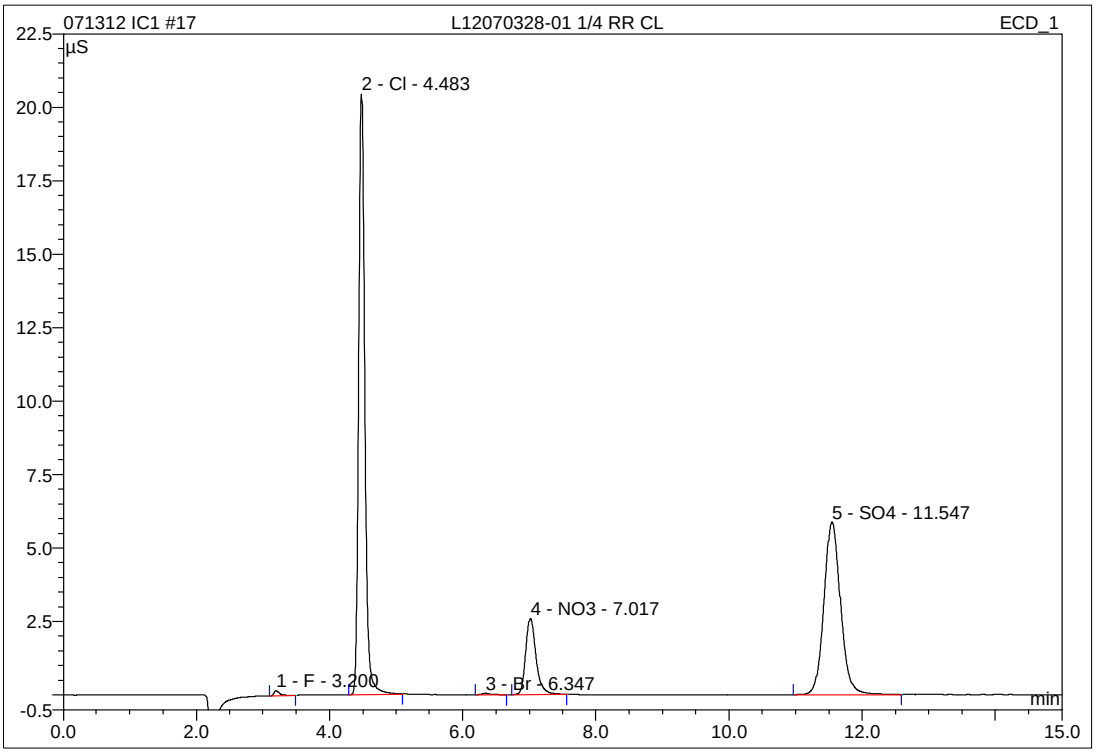
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

17 L12070328-01 1/4 RR CL

1,4 JBK

Sample Name:	**L12070328-01 1/4 RR CL**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 18:29**	*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	3.20	F	0.180	0.018	0.41	0.095	BMB
2	4.48	Cl	20.433	2.119	49.10	12.946	BMB
3	6.35	Br	0.051	0.008	0.19	0.115	BMB
4	7.02	NO3	2.589	0.468	10.85	1.156	BMB
5	11.55	SO4	5.880	1.703	39.46	13.518	BMB
Total:			29.133	4.316	100.00	27.830	

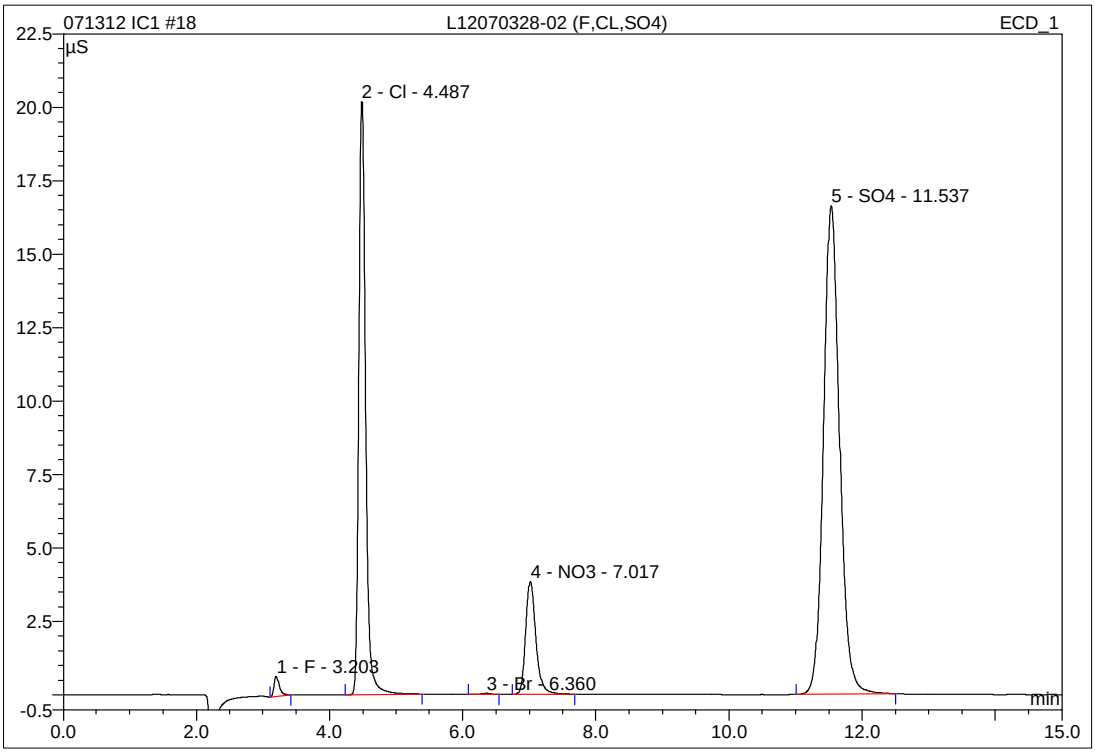
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

18 L12070328-02 (F,CL,SO4)

1,1 JBK

Sample Name:	**L12070328-02 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 18:46**	*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	3.20	F	0.692	0.064	0.82	0.285	BMB
2	4.49	Cl	20.176	2.330	30.05	14.244	BMB
3	6.36	Br	0.042	0.007	0.09	0.092	BMB
4	7.02	NO3	3.839	0.687	8.87	1.693	BMB
5	11.54	SO4	16.619	4.666	60.18	36.915	BMB
Total:			41.367	7.754	100.00	53.229	

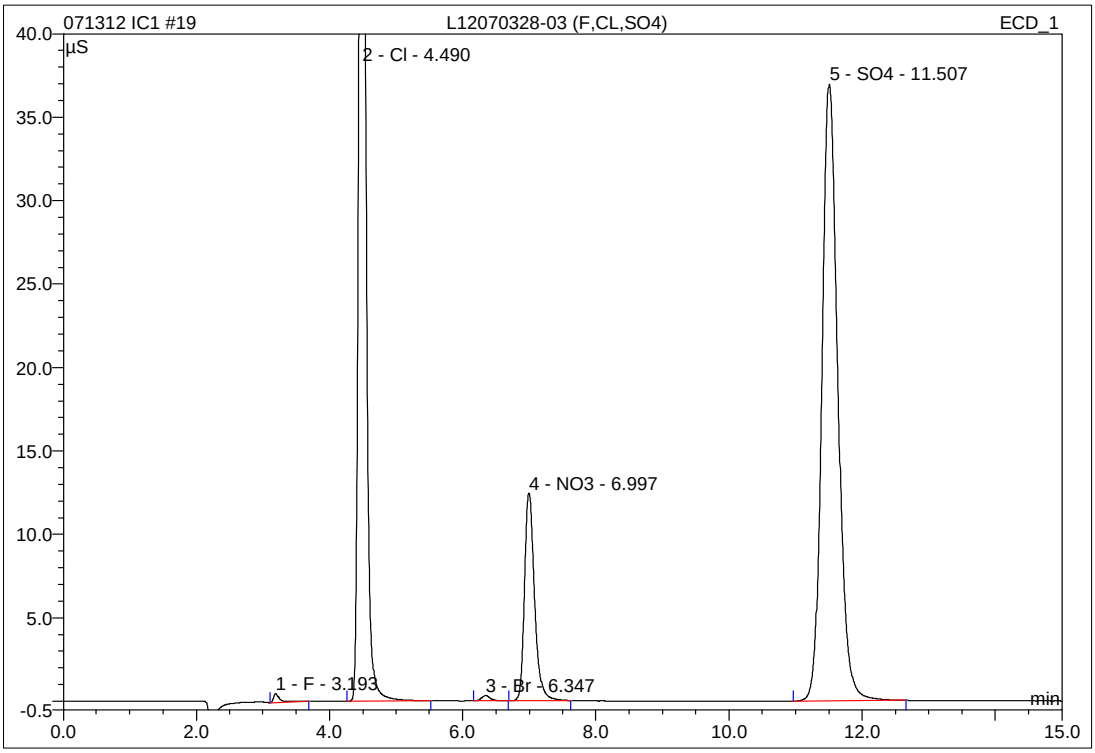
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

19 L12070328-03 (F,CL,SO4)

1,1 JBK (CL>ICAL RR 1/4)

Sample Name:	**L12070328-03 (F,CL,SO4)**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 19:04**	*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	3.19	F	0.533	0.058	0.27	0.260	BMB
2	4.49	Cl	77.167	8.733	41.17	53.698	BMB
3	6.35	Br	0.321	0.051	0.24	0.764	BMB
4	7.00	NO3	12.442	2.155	10.16	5.283	BMB
5	11.51	SO4	36.953	10.219	48.17	80.763	BMB
Total:			127.415	21.215	100.00	140.767	

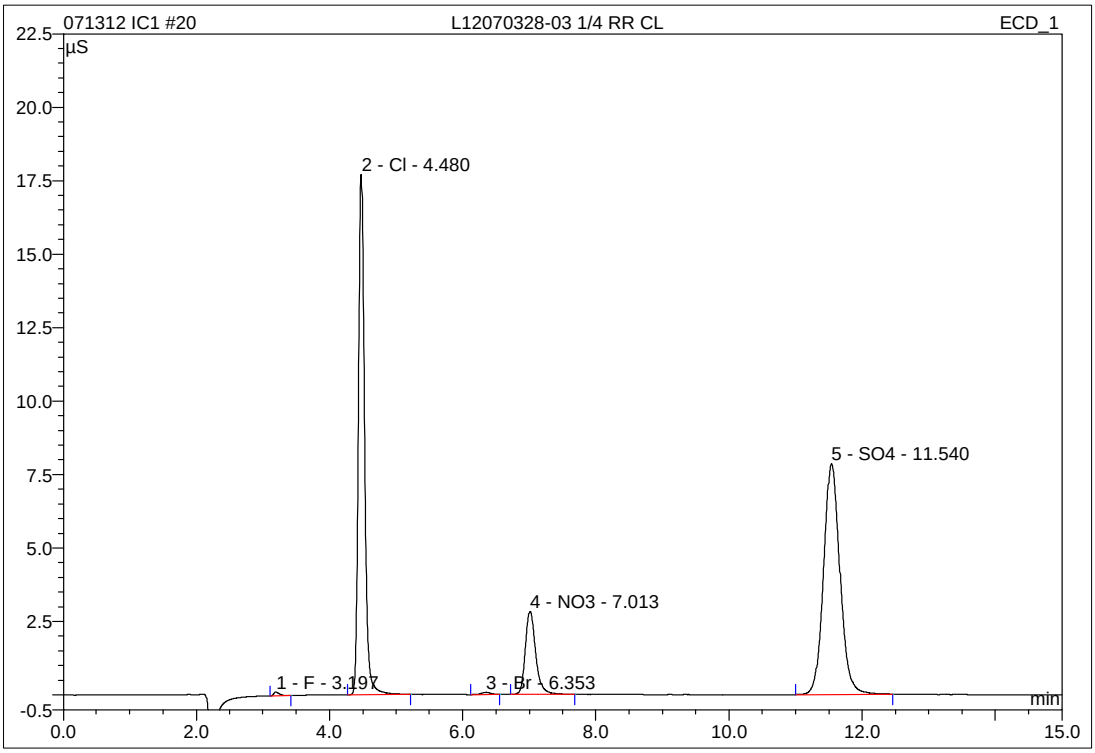
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

20 L12070328-03 1/4 RR CL

1,4 JBK

Sample Name:	**L12070328-03 1/4 RR CL**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 19:21**	*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	3.20	F	0.136	0.013	0.28	0.075	BMB
2	4.48	Cl	17.705	1.843	39.82	11.248	BMB
3	6.35	Br	0.078	0.012	0.27	0.176	BMB
4	7.01	NO3	2.822	0.512	11.06	1.264	BMB
5	11.54	SO4	7.846	2.248	48.57	17.824	BMB
Total:			28.588	4.629	100.00	30.587	

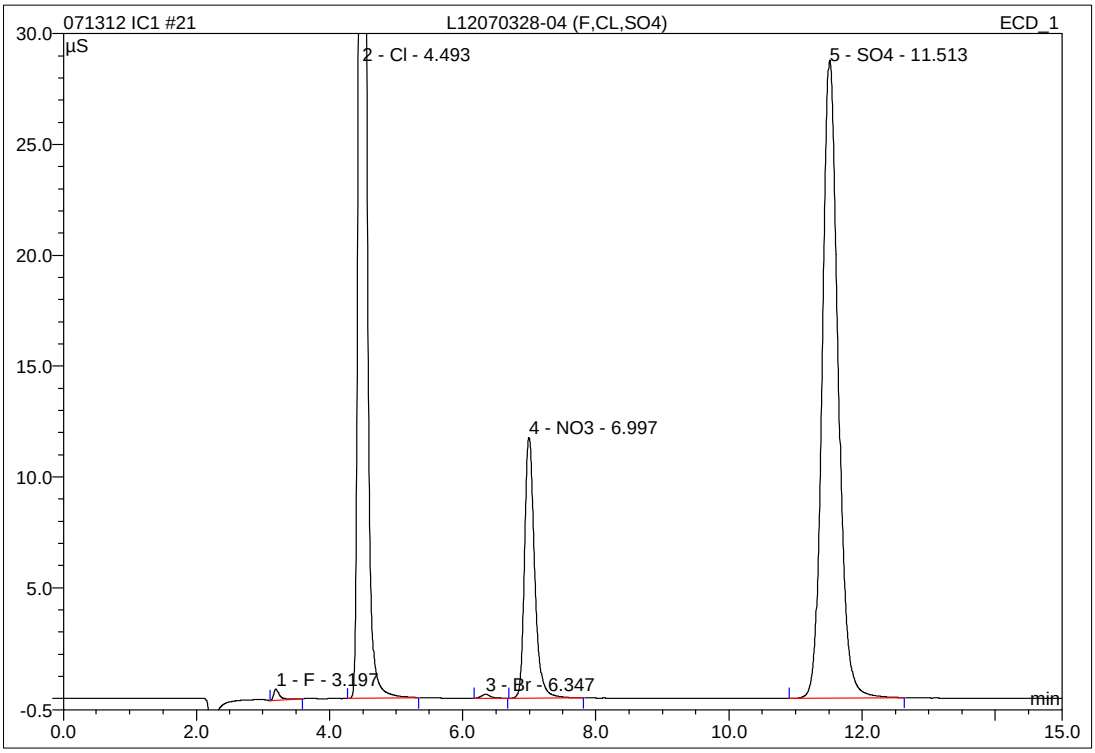
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

21 L12070328-04 (F,CL,SO4)

1,1 JBK (CL>ICAL RR 1/4)

Sample Name:	**L12070328-04 (F,CL,SO4)**	*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:	**7/13/2012 19:39**	*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	3.20	F	0.500	0.051	0.25	0.231	BMB
2	4.49	Cl	87.931	9.842	49.31	60.528	BMB
3	6.35	Br	0.176	0.027	0.14	0.402	BMB
4	7.00	NO3	11.755	2.051	10.27	5.028	BMB
5	11.51	SO4	28.806	7.990	40.03	63.164	BMB
Total:			129.168	19.960	100.00	129.353	

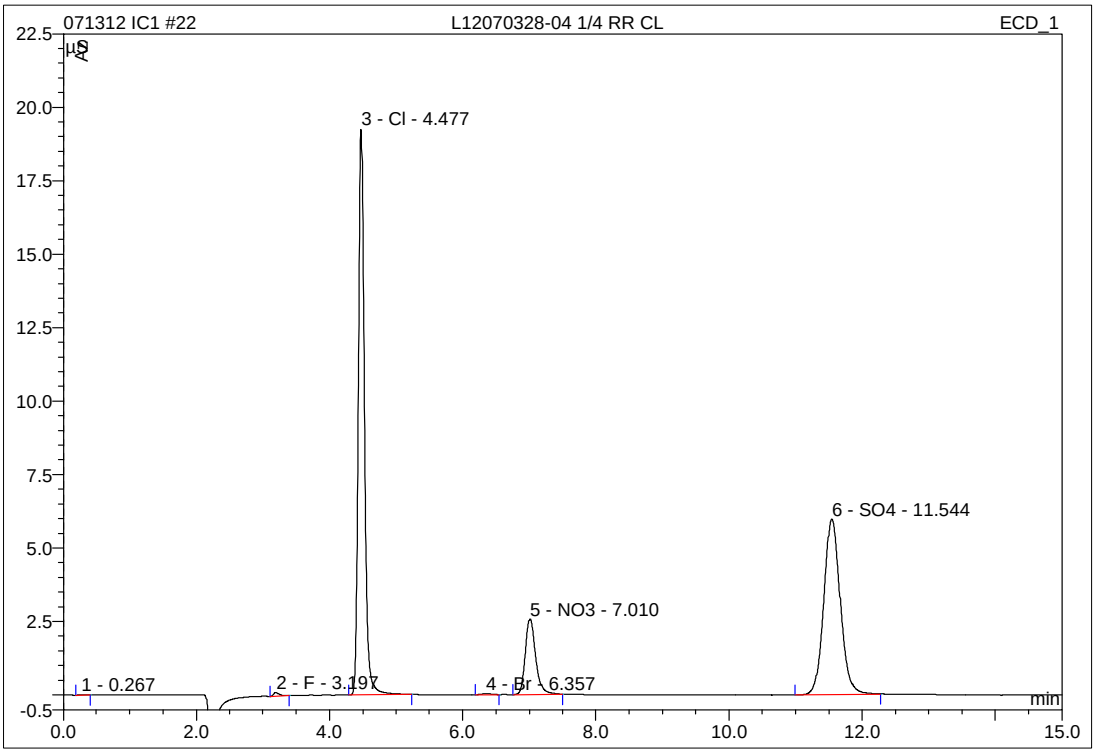
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

22 L12070328-04 1/4 RR CL

1,4 JBK WG403368-03 REF

Sample Name:	**L12070328-04 1/4 RR CL**	*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:	**7/13/2012 19:56**	*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	0.27	n.a.	0.010	0.001	0.03	n.a.	BMB
2	3.20	F	0.123	0.012	0.28	0.072	BMB
3	4.48	Cl	19.239	1.993	47.54	12.170	BMB
4	6.36	Br	0.041	0.006	0.15	0.084	BMB
5	7.01	NO3	2.573	0.463	11.03	1.143	BMB
6	11.54	SO4	5.980	1.718	40.97	13.634	BMB
Total:			27.966	4.192	100.00	27.102	

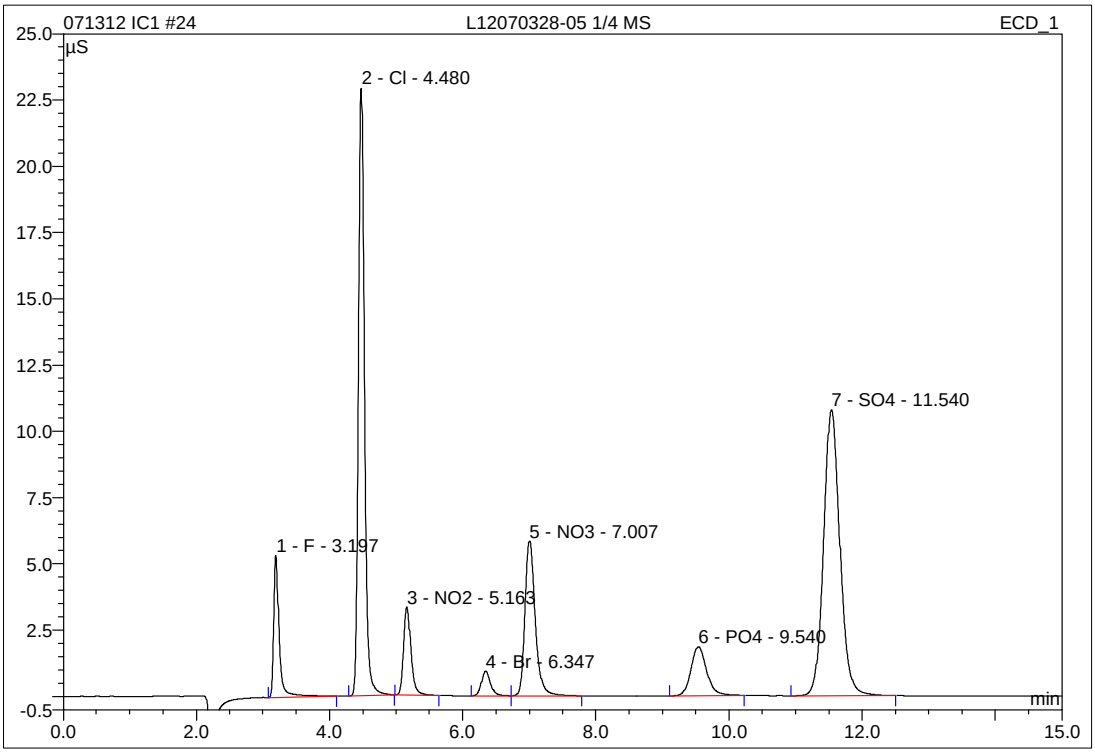
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

24 L12070328-05 1/4 MS

1,4 JBK WG403368-05 MS

Sample Name:	**L12070328-05 1/4 MS**	*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:	**7/13/2012 20:31**	*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	3.20	F	5.345	0.504	6.26	2.094	BMB
2	4.48	Cl	22.919	2.353	29.22	14.390	BMB
3	5.16	NO2	3.329	0.431	5.35	1.232	BMB
4	6.35	Br	0.939	0.147	1.83	2.257	BMB
5	7.01	NO3	5.833	1.040	12.91	2.554	BMB
6	9.54	PO4	1.847	0.507	6.30	3.473	BMB
7	11.54	SO4	10.797	3.070	38.13	24.316	BMB
Total:			51.008	8.052	100.00	50.315	

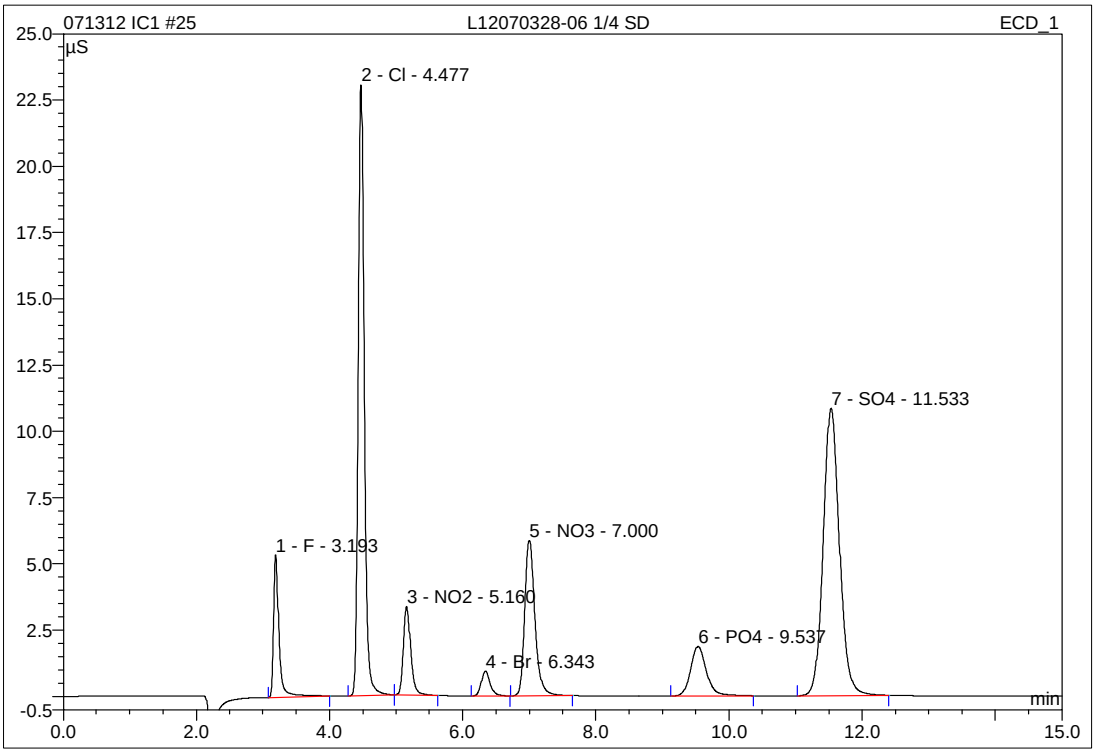
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

25 L12070328-06 1/4 SD

1,4 JBK WG403368-06 SD

Sample Name:	**L12070328-06 1/4 SD**	*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:	**7/13/2012 20:48**	*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	3.19	F	5.375	0.504	6.25	2.097	BMB
2	4.48	Cl	23.034	2.360	29.24	14.433	BMb
3	5.16	NO2	3.344	0.431	5.34	1.231	bMB
4	6.34	Br	0.945	0.147	1.83	2.256	BMB
5	7.00	NO3	5.866	1.039	12.88	2.554	BMB
6	9.54	PO4	1.865	0.515	6.37	3.522	BMB
7	11.53	SO4	10.845	3.075	38.10	24.356	BMB
Total:			51.274	8.072	100.00	50.449	

IC/Integration

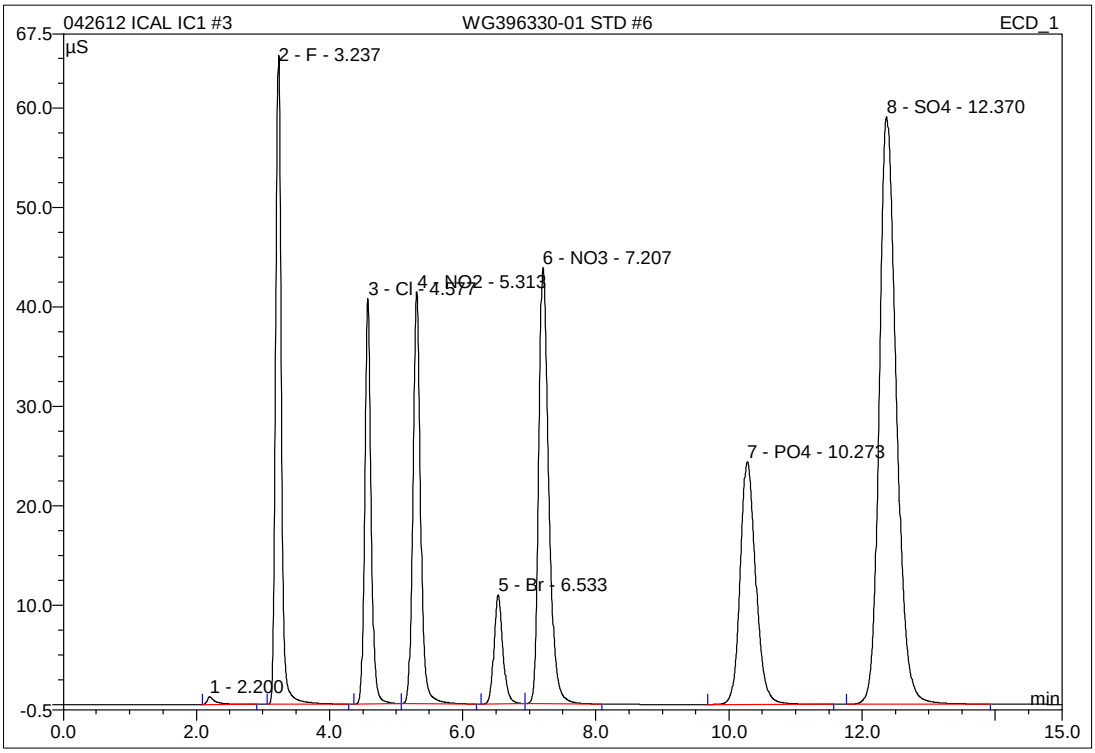
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

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	

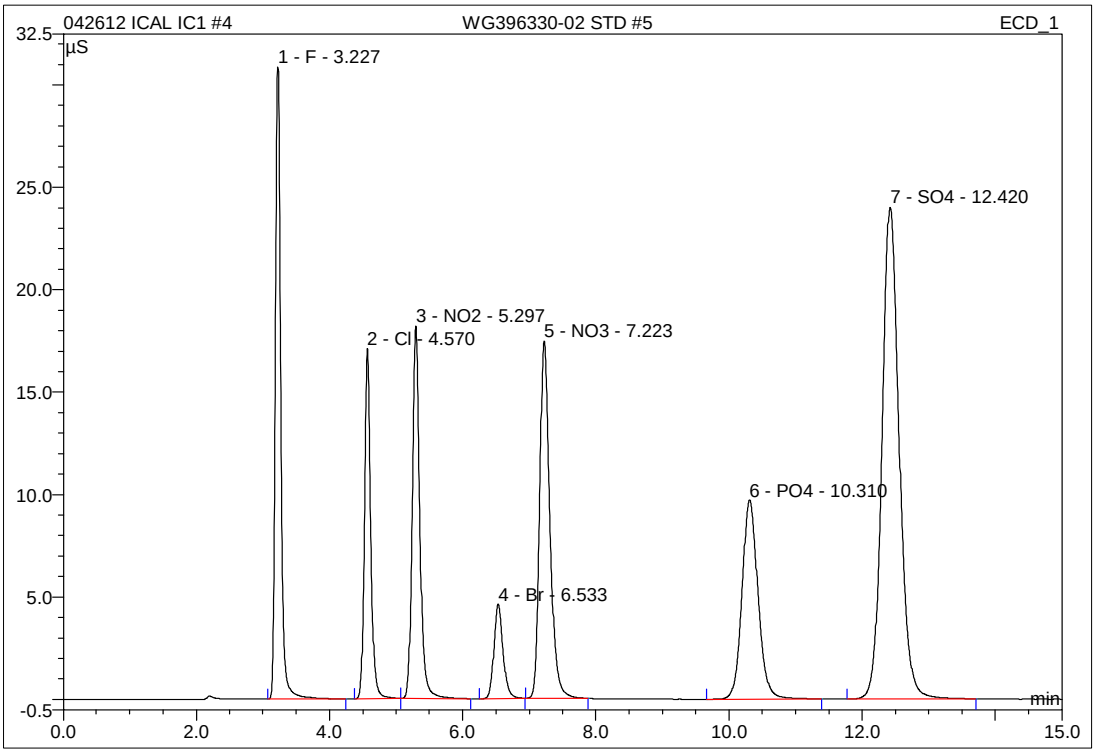
IC/Integration

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	

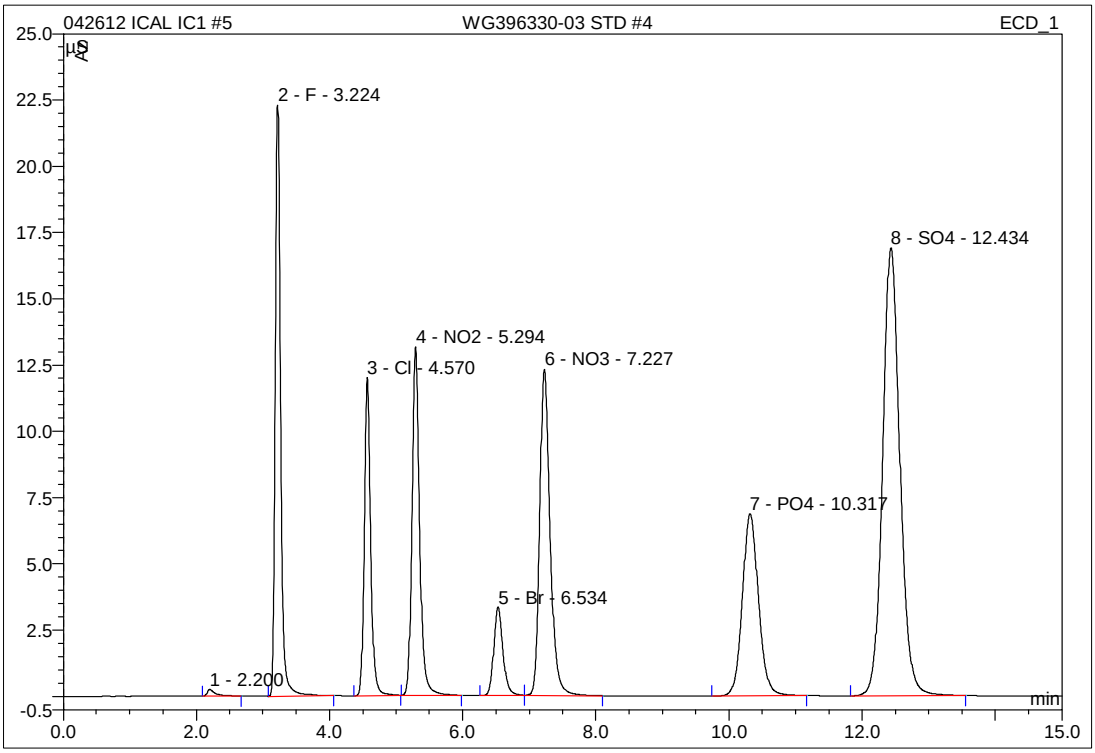
IC/Integration

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	

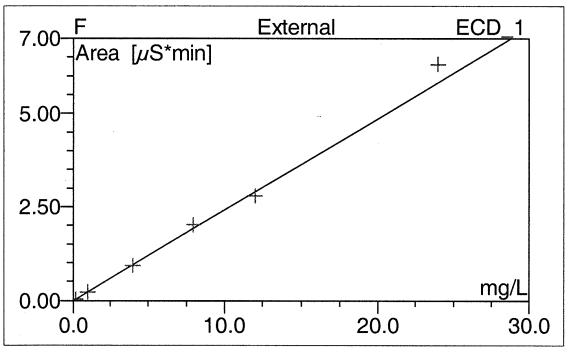
IC/Integration

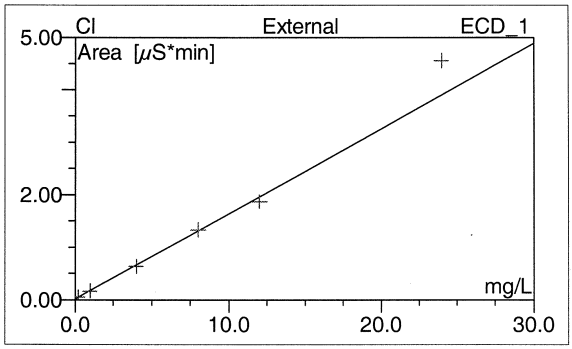
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

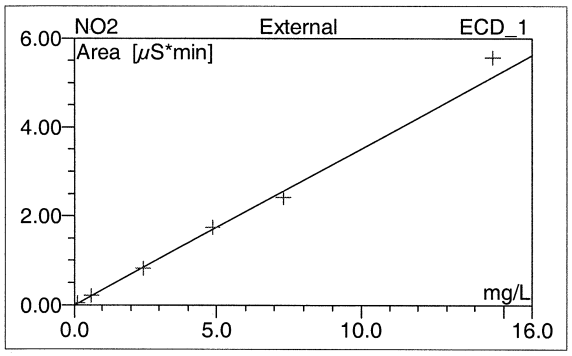
5 WG396330-03 STD #4

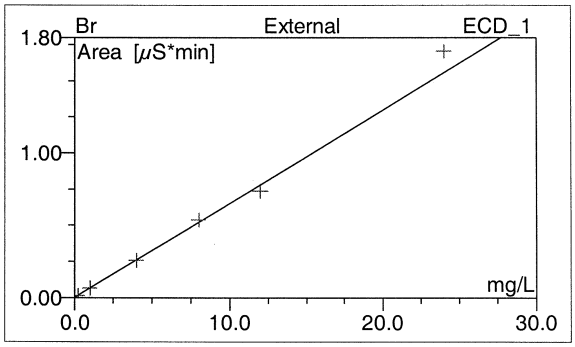
1,1 JBK STD48131

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

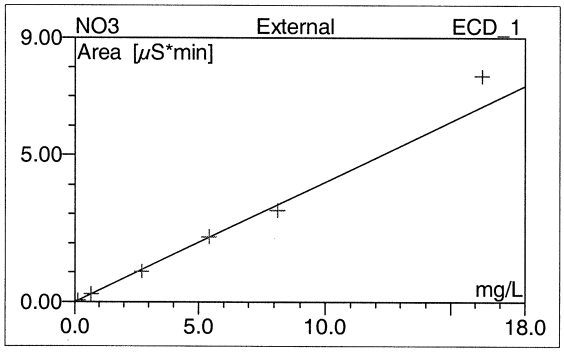
IC/Calibration(Batch)

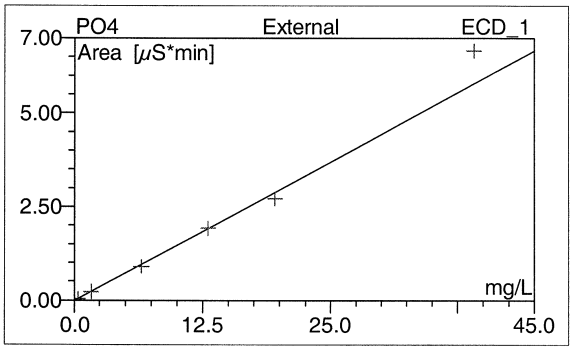
Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

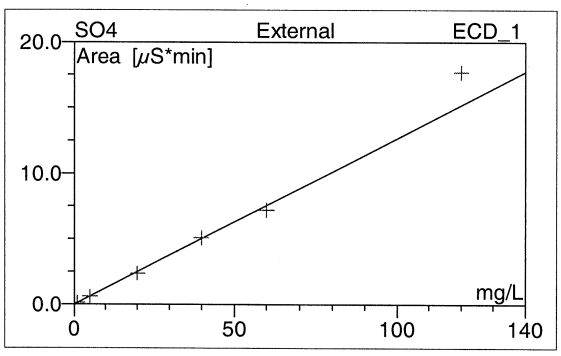
5 WG396330-03 STD #4

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**





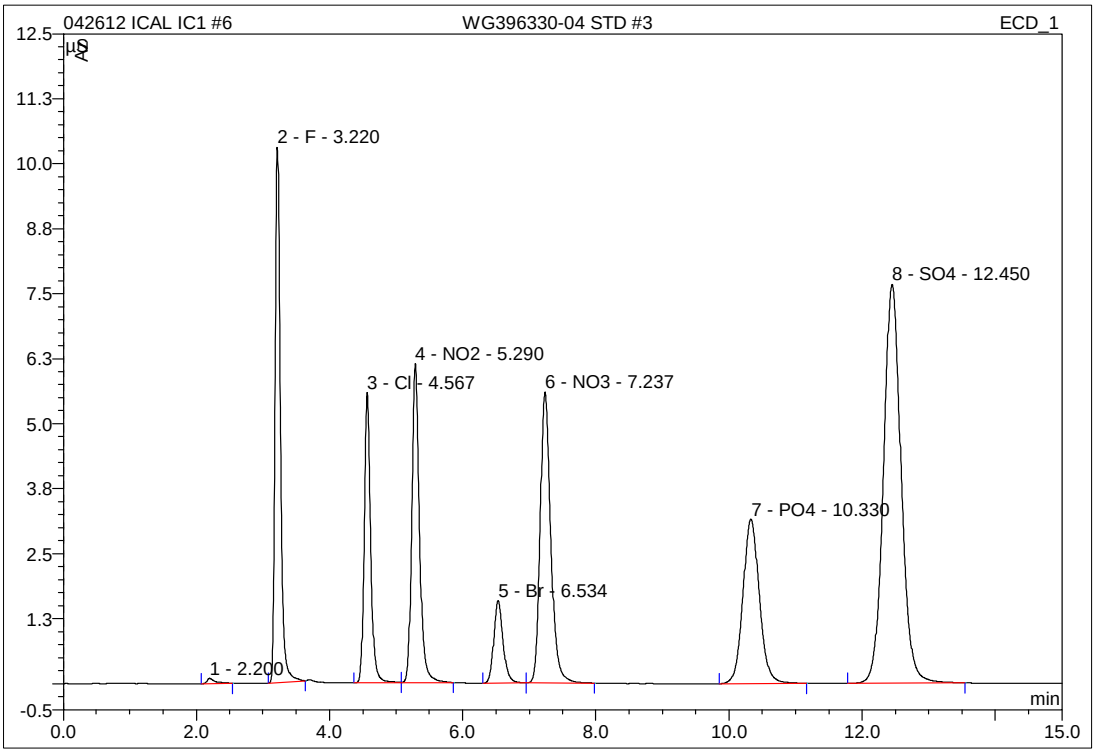


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	2.20	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.22	F	XXLOff	6	99.8400	-0.0056	0.2432	0.0000
3	4.57	Cl	XXLOff	6	99.5340	0.0176	0.1623	0.0000
4	5.29	NO2	XXLOff	6	99.8518	-0.0014	0.3509	0.0000
5	6.53	Br	XXLOff	6	99.8657	0.0010	0.0649	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	

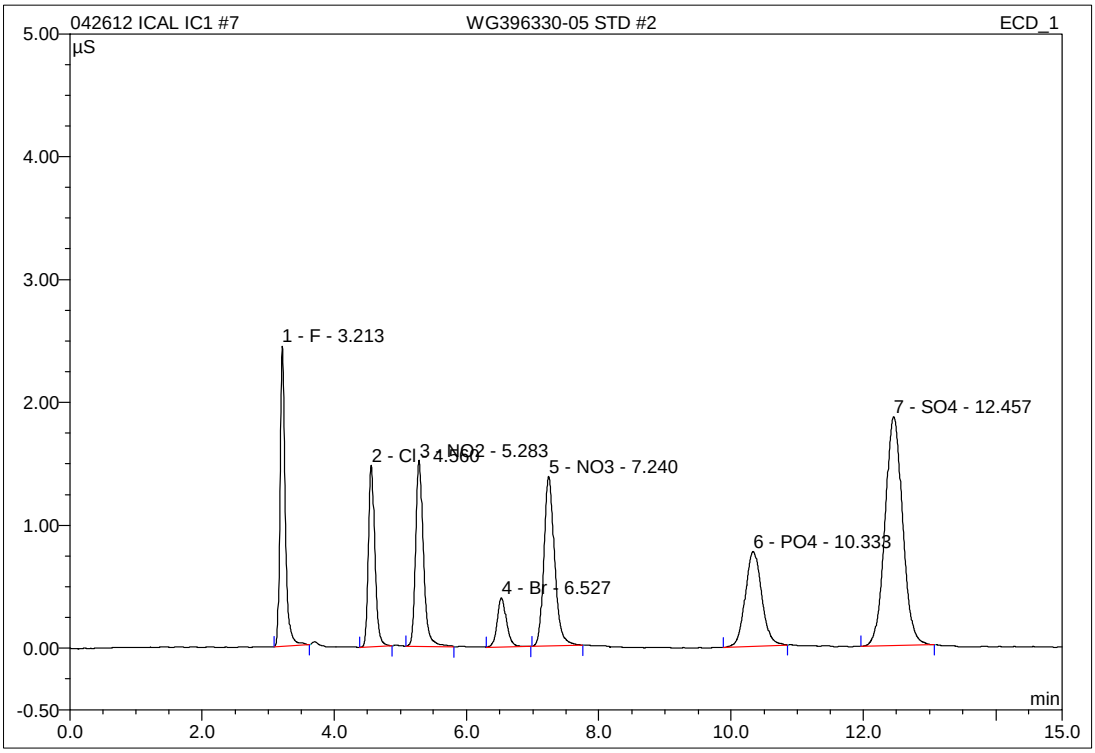
IC/Integration

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	

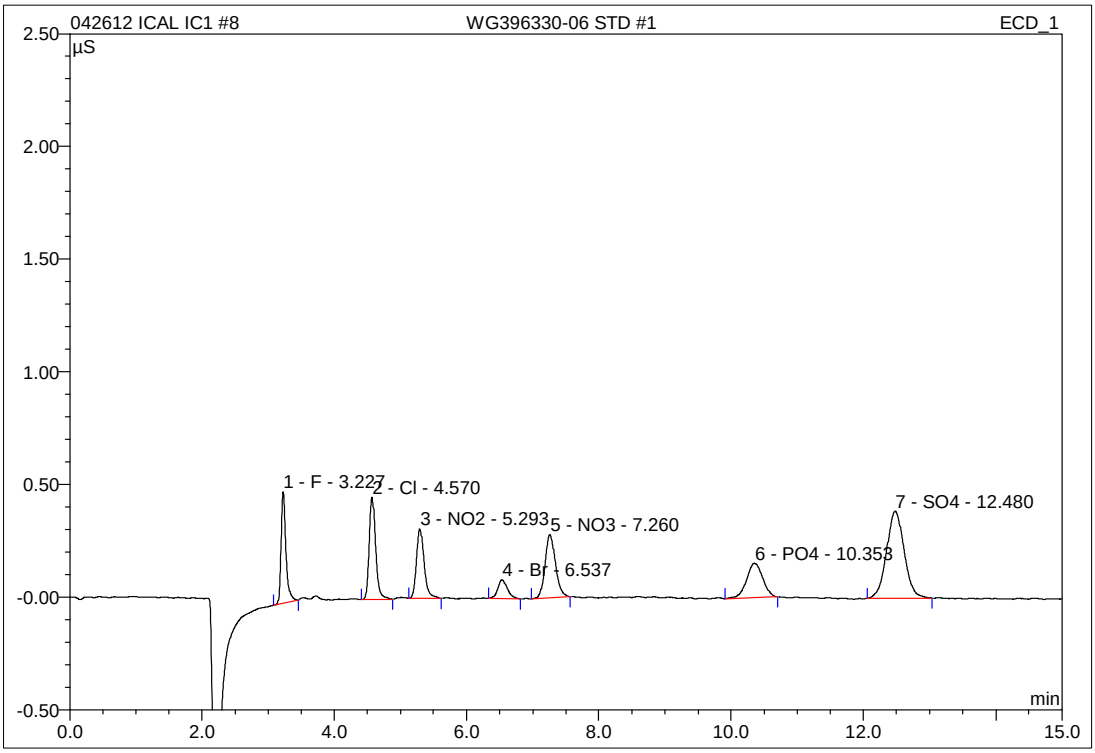
IC/Integration

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	

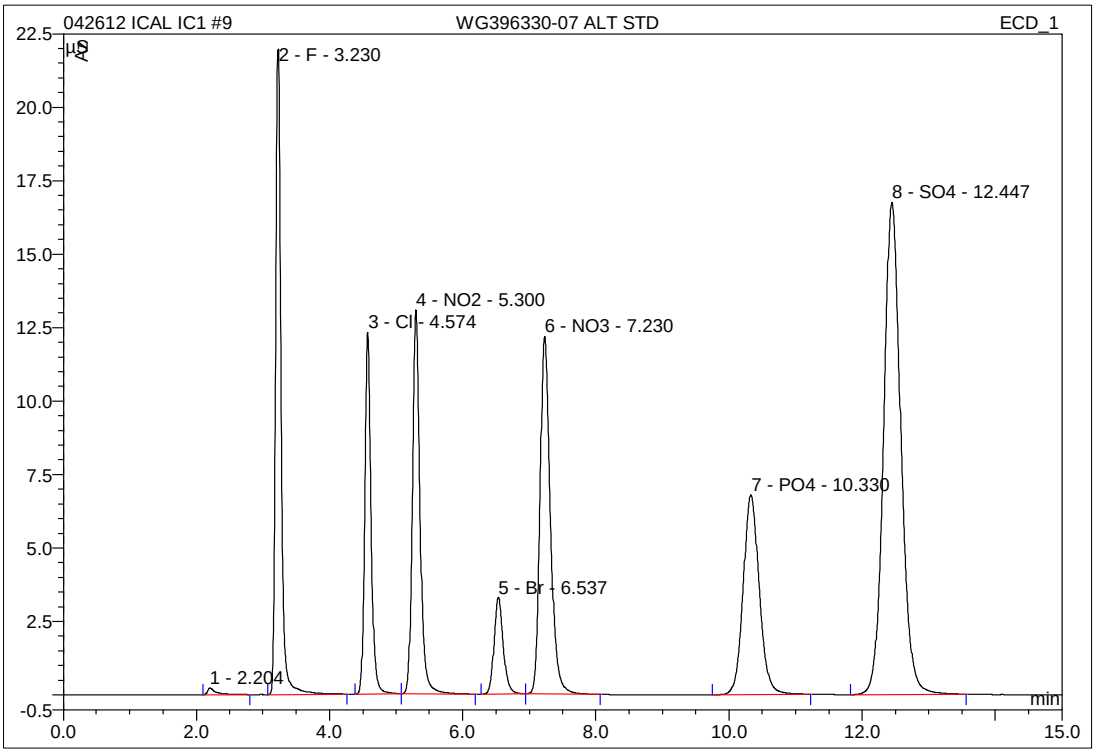
IC/Integration

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	

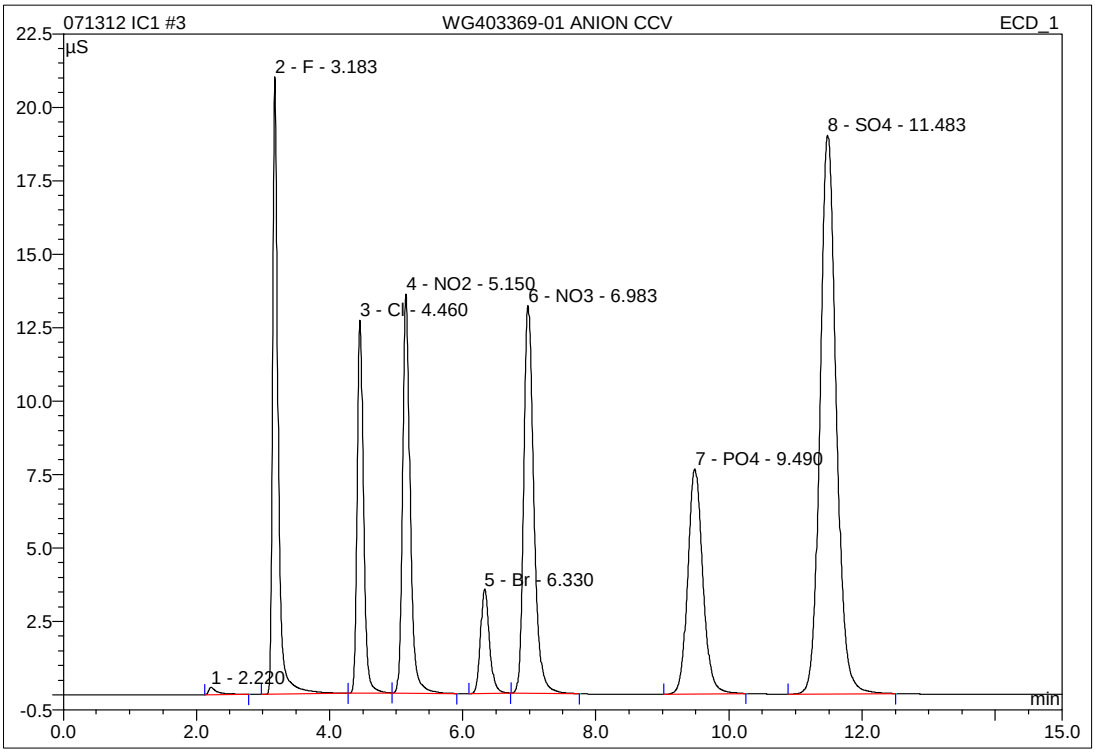
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 WG403369-01 ANION CCV

1,1 JBK STD48131 _____ psi @ _____

Sample Name:	**WG403369-01 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:	**7/13/2012 14:25**	*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.	0.253	0.039	0.25	n.a.	BMB
2	3.18	F	21.006	2.025	13.09	8.351	BMB
3	4.46	Cl	12.685	1.386	8.96	8.429	BMB
4	5.15	NO2	13.569	1.789	11.56	5.103	BMB
5	6.33	Br	3.559	0.556	3.59	8.546	BMB
6	6.98	NO3	13.178	2.313	14.95	5.670	BMB
7	9.49	PO4	7.655	2.008	12.98	13.629	BMB
8	11.48	SO4	19.015	5.356	34.62	42.366	BMB
Total:			90.920	15.472	100.00	92.095	

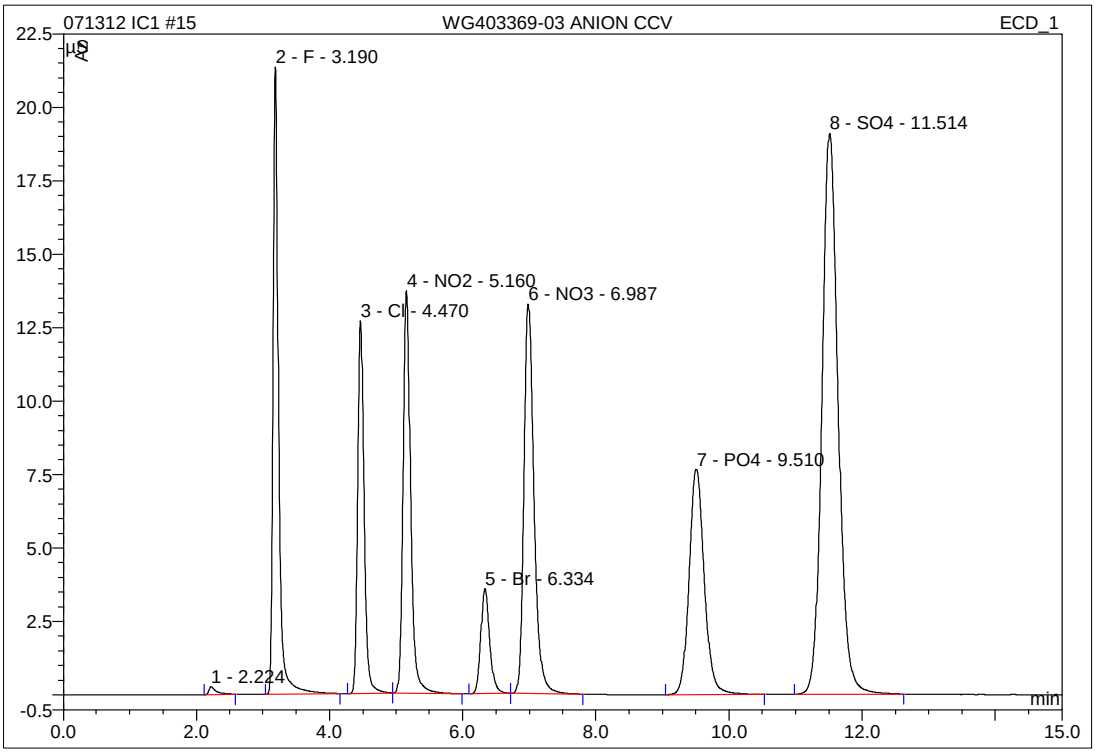
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 WG403369-03 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG403369-03 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:	**7/13/2012 17:54**	*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.	0.270	0.036	0.23	n.a.	BMB
2	3.19	F	21.342	2.023	13.04	8.342	BMB
3	4.47	Cl	12.672	1.391	8.97	8.465	BMb
4	5.16	NO2	13.687	1.795	11.57	5.119	bMB
5	6.33	Br	3.577	0.555	3.58	8.536	BMb
6	6.99	NO3	13.252	2.318	14.94	5.682	bMB
7	9.51	PO4	7.670	2.016	12.99	13.683	BMB
8	11.51	SO4	19.092	5.384	34.69	42.585	BMB
Total:			91.563	15.519	100.00	92.413	

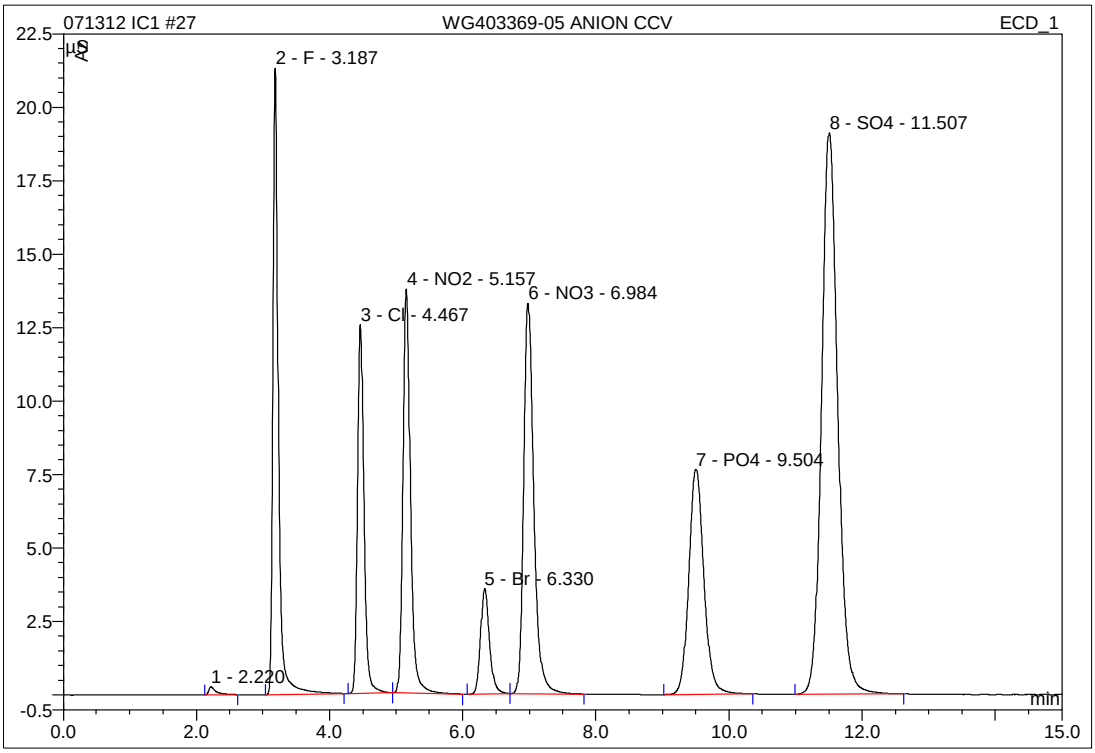
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

27 WG403369-05 ANION CCV

1,1 JBK STD48131

Sample Name:	**WG403369-05 ANION CCV**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 21:23**	*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	2.22	n.a.	0.279	0.037	0.24	n.a.	BMB
2	3.19	F	21.308	2.024	13.03	8.345	BMB
3	4.47	Cl	12.531	1.390	8.95	8.455	BMB
4	5.16	NO2	13.759	1.799	11.59	5.132	BMB
5	6.33	Br	3.582	0.556	3.58	8.556	BMB
6	6.98	NO3	13.281	2.334	15.03	5.721	BMB
7	9.50	PO4	7.664	2.009	12.94	13.637	BMB
8	11.51	SO4	19.103	5.379	34.64	42.549	BMB
Total:			91.507	15.529	100.00	92.396	

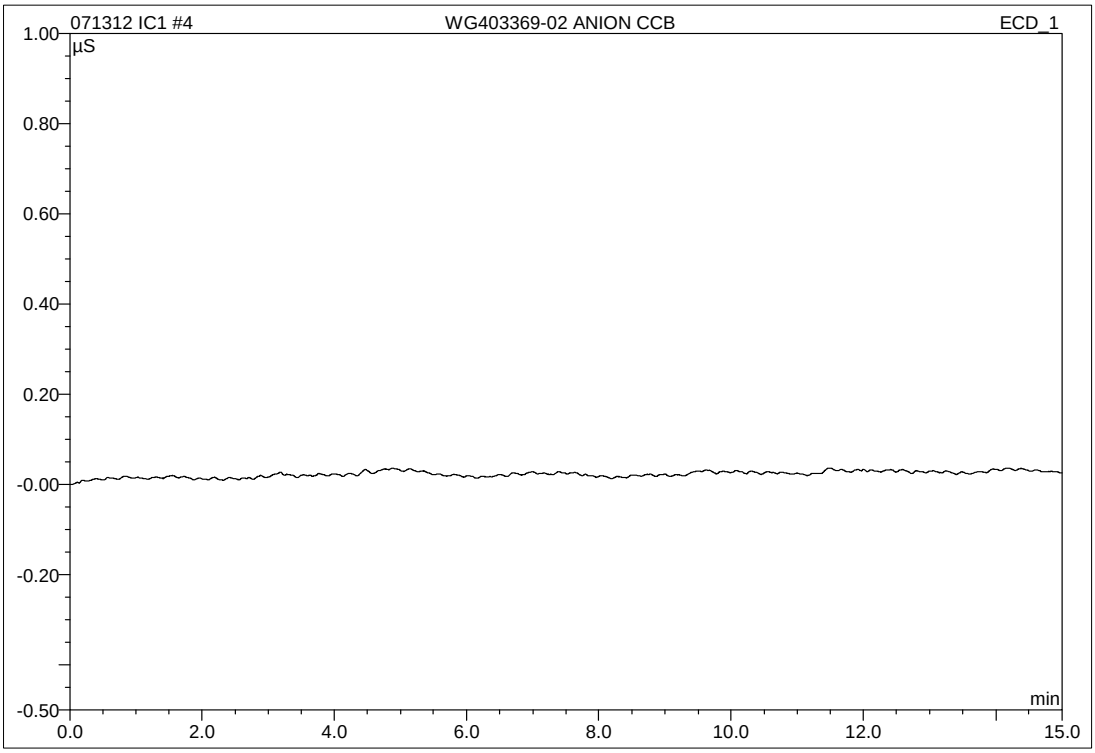
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 WG403369-02 ANION CCB

1,1 JBK

Sample Name:	**WG403369-02 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:	**7/13/2012 14:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

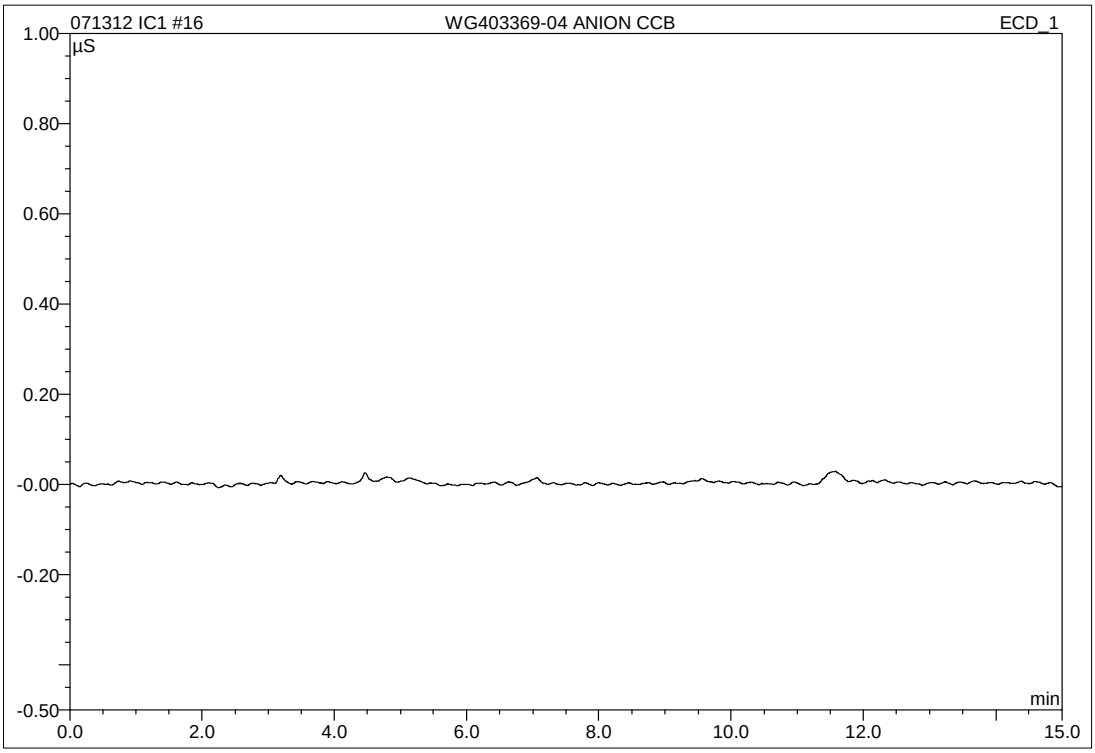


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

16 WG403369-04 ANION CCB

1,1 JBK

Sample Name:	**WG403369-04 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:	**7/13/2012 18:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

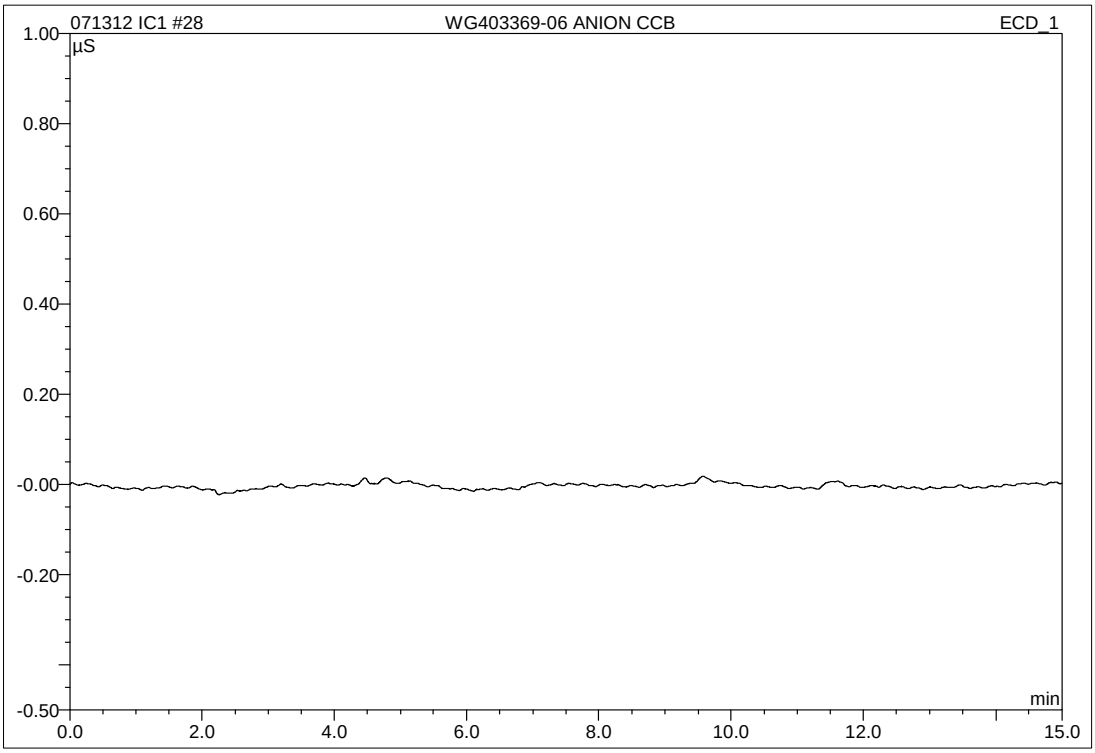


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

28 WG403369-06 ANION CCB

1,1 JBK

Sample Name:	**WG403369-06 ANION CCB**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/13/2012 21:40**	*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
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

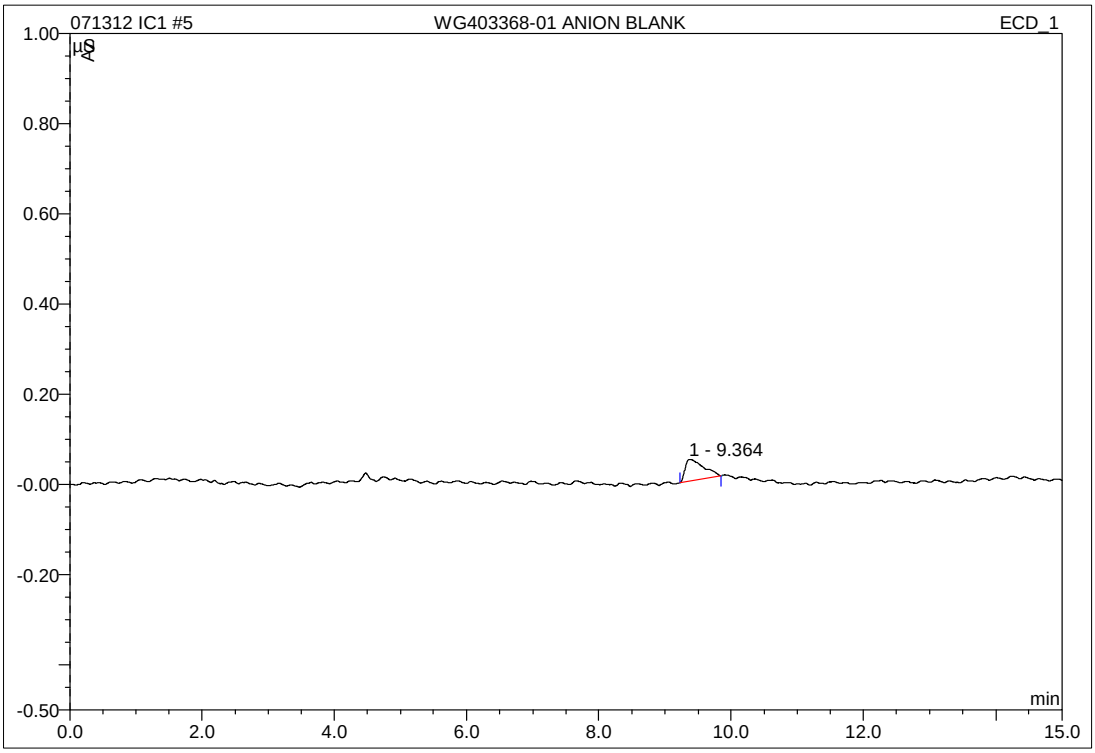
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	3.387	3.377	3.367	0.030
Cl	4.867	4.864	4.837	0.050
NO2-N	5.724	5.717	5.684	0.064
Br	7.174	7.160	7.117	0.089
NO3-N	8.020	8.007	7.954	0.105
PO4-P	10.640	10.607	10.580	0.090
SO4	12.580	12.574	12.507	0.122

2.2.1.5 Raw QC Data

5 WG403368-01 ANION BLANK

1,1 JBK

Sample Name:	**WG403368-01 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:	**7/13/2012 15:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

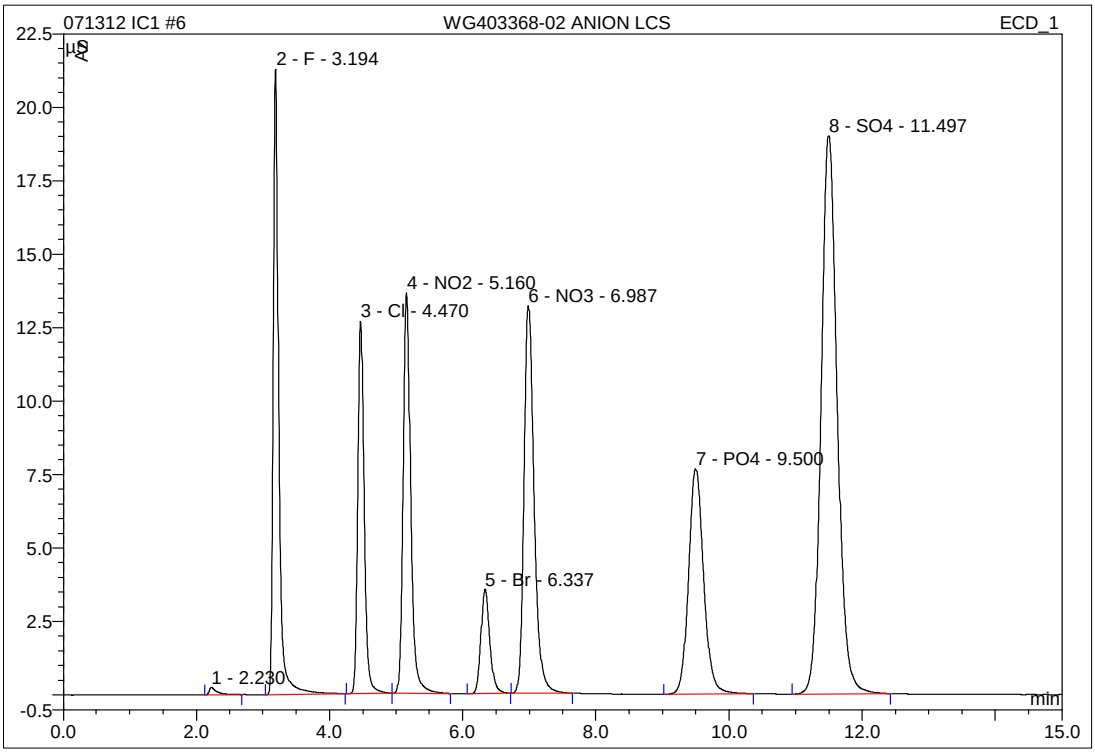


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.36	n.a.	0.049	0.016	100.00	n.a.	BMB
Total:			0.049	0.016	100.00	0.000	

6 WG403368-02 ANION LCS

1,1 JBK STD48131

Sample Name:	**WG403368-02 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:	**7/13/2012 15:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	2.23	n.a.	0.259	0.036	0.23	n.a.	BMB
2	3.19	F	21.288	2.024	13.10	8.344	BMB
3	4.47	Cl	12.669	1.383	8.96	8.415	BMB
4	5.16	NO2	13.620	1.789	11.58	5.102	BMB
5	6.34	Br	3.561	0.554	3.59	8.514	BMB
6	6.99	NO3	13.191	2.307	14.94	5.656	BMB
7	9.50	PO4	7.666	2.012	13.03	13.660	BMB
8	11.50	SO4	18.988	5.339	34.57	42.231	BMB
Total:			91.242	15.444	100.00	91.920	

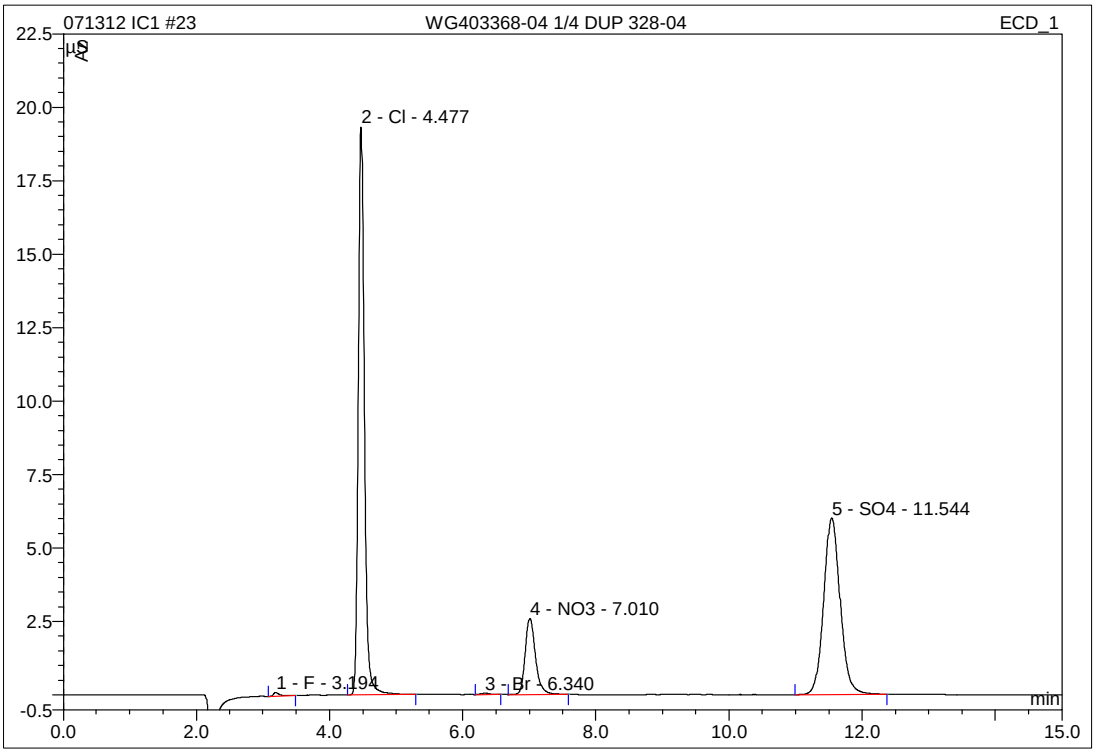
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

23 WG403368-04 1/4 DUP 328-04

1,4 JBK

Sample Name:	**WG403368-04 1/4 DUP 328-04**	*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:	**7/13/2012 20:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	3.19	F	0.126	0.013	0.30	0.076	BMB
2	4.48	Cl	19.322	2.002	47.47	12.229	BMB
3	6.34	Br	0.047	0.007	0.17	0.099	BMB
4	7.01	NO3	2.582	0.464	11.00	1.146	BMB
5	11.54	SO4	6.013	1.732	41.05	13.745	BMB
Total:			28.090	4.218	100.00	27.295	

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: L12070328
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.

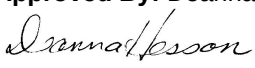
Duplicates: All acceptance criteria were met.

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: 50495
Approved By: Deanna Hesson



Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #: L12070328-01
Client ID: MPL05-0712-1
Matrix: Water
Workgroup #: WG403265
Collect Date: 07/11/2012 09:27
Sample Tag:

PrePrep Method: N/A
Prep Method: 9040C
Analytical Method: 9040C
Analyst: JDH
Dilution: 1
Units: UNITS

Instrument: ORION-4STAR
Prep Date: N/A
Cal Date:
Run Date: 07/13/2012 15:47
File ID: OS12071809281701

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.61		0.000	0.000

Sample #: L12070328-02
Client ID: MPL18-0712-1
Matrix: Water
Workgroup #: WG403265
Collect Date: 07/11/2012 10:14
Sample Tag:

PrePrep Method: N/A
Prep Method: 9040C
Analytical Method: 9040C
Analyst: JDH
Dilution: 1
Units: UNITS

Instrument: ORION-4STAR
Prep Date: N/A
Cal Date:
Run Date: 07/13/2012 15:47
File ID: OS12071809282401

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.43		0.000	0.000

Sample #: L12070328-03
Client ID: MPL16-0712-1
Matrix: Water
Workgroup #: WG403265
Collect Date: 07/11/2012 12:12
Sample Tag:

PrePrep Method: N/A
Prep Method: 9040C
Analytical Method: 9040C
Analyst: JDH
Dilution: 1
Units: UNITS

Instrument: ORION-4STAR
Prep Date: N/A
Cal Date:
Run Date: 07/13/2012 15:50
File ID: OS12071809285101

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.64		0.000	0.000

Sample #: L12070328-04
Client ID: MPL17-0712-1
Matrix: Water
Workgroup #: WG403265
Collect Date: 07/11/2012 14:00
Sample Tag:

PrePrep Method: N/A
Prep Method: 9040C
Analytical Method: 9040C
Analyst: JDH
Dilution: 1
Units: UNITS

Instrument: ORION-4STAR
Prep Date: N/A
Cal Date:
Run Date: 07/13/2012 15:53
File ID: OS12071809290301

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.83		0.000	0.000

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0712-MS	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:53
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	OS12071809294101
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.25		0.000	0.000

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	MPL17-0712-MSD	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG403265	**Analyst:**	JDH	**Run Date:**	07/13/2012 15:55
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	OS12071809295301
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.75		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: 12-JUL-2012
Analyst: JDH
Analyst: NA
Method: PH
Instrument: ORION 4 STAR
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403265

Calibration/Linearity	7-12-12
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	
LCS/LCS Dup	
MS/MSD	
Duplicate	X
Upload Results	
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:
13-JUL-2012

Secondary Reviewer:
21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 09:16:51

2.2.2.3 Raw Data

wg403265

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	1544	5.96			
L12070314-01			7.46			1545
CA 001 L12070315-01			7.74			↓
L12070327-01			7.67			↓
02			7.85			↓
03			7.87			1547
~~CA L12070315-01~~			~~7.08~~			~~1547~~
L12070328-01			7.61			1547
02			7.43			1550
03			7.64			1550
04			7.83			1553
05			7.~~84~~ 7.85			1553
06			7.75			1555
DUP L12070~~314~~ 327 03			7.87			1555
LCS 9 51846			9.01			1555

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: 7/12/12 1544

DCN#91535

2.2.3 Alkalinity Data

2.2.3.1 Summary Data

Login Number: L12070328
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: The blank result was greater than the absolute value of the LOD (MDL).

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Alkalinity, Total (as CaCO3), Alkalinity, Carbonate (as CaCO3), Alkalinity, Bicarbonate (as CaCO3). Please see the applicable QC report for a detailed presentation of the failures.

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: 50493
Approved By: Deanna Hesson

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	83.4		20.0	10.0

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	83.4		20.0	10.0

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120720004.014
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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	89.9		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	89.9		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:13
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120720004.015
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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	83.3		20.0	10.0

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	83.3		20.0	10.0

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120720004.016
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.

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	77.7		20.0	10.0

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:14
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	77.7		20.0	10.0

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	153		20.0	10.0

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	153		20.0	10.0

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:16
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.021
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 #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)	11-43-8	148		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)	13-00-3	148		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	07/20/2012 10:09
Workgroup #:	WG403877	**Analyst:**	DIH	**Run Date:**	07/20/2012 10:17
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120720004.022
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.

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: 20-JUL-2012
Analyst: DIH
Analyst: NA
Method: ALK
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403874 WG403876 WG403877

Calibration/Linearity	07/20/2012
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	JBK
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
20-JUL-2012

Secondary Reviewer:
21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 08:50:34

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG403877

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL18-0712-1	02	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL16-0712-1	03	07/11/12					07/20/2012	8.9	14		07/20/12	8.9	14	
MPL17-0712-1	04	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	
MPL17-0712-MS	05	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	
MPL17-0712-MSD	06	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2507604
Report generated 07/23/2012 10:40

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2 AAB#: WG403877

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL18-0712-1	02	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL16-0712-1	03	07/11/12					07/20/2012	8.9	14		07/20/12	8.9	14	
MPL17-0712-1	04	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	
MPL17-0712-MS	05	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	
MPL17-0712-MSD	06	07/11/12					07/20/2012	8.8	14		07/20/12	8.8	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2507598
Report generated 07/20/2012 13:47

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: SC120720004.010
Prep Date: 07/20/12 10:10
Analyzed Date: 07/20/12 10:10
Analyst: DIH

Work Group: WG403877
Blank Sample ID: WG403877-01
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	WG403877-02	SC120720004.011	07/20/12 10:10	01
LCS2	WG403877-03	SC120720004.012	07/20/12 10:11	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01

Report Name: BLANK_SUMMARY
PDF File ID: 2507605
Report generated 07/23/2012 10:40

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: SC120720004.010
Prep Date: 07/20/12 10:10
Analyzed Date: 07/20/12 10:10
Analyst: DIH

Work Group: WG403877
Blank Sample ID: WG403877-01
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	WG403877-02	SC120720004.011	07/20/12 10:10	01
LCS2	WG403877-03	SC120720004.012	07/20/12 10:11	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL05-0712-1	L12070328-01	SC120720004.014	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL18-0712-1	L12070328-02	SC120720004.015	07/20/12 10:13	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL16-0712-1	L12070328-03	SC120720004.016	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-1	L12070328-04	SC120720004.017	07/20/12 10:14	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MS	L12070328-05	SC120720004.021	07/20/12 10:16	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01
MPL17-0712-MSD	L12070328-06	SC120720004.022	07/20/12 10:17	01

Report Name: BLANK_SUMMARY
PDF File ID: 2507599
Report generated 07/20/2012 13:47

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 10:10 Sample ID: WG403877-01
Instrument ID: SMARTCHEM Run Date: 07/20/12 10:10 Prep Method: 310.2
File ID: SC120720004.010 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG403877 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-20-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Total (as CaCO3)	10.0	20.0	-11.5	1	*

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

Report Name: BLANK
PDF ID: 2507606
23-JUL-2012 10:40

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 10:10 Sample ID: WG403877-01
Instrument ID: SMARTCHEM Run Date: 07/20/12 10:10 Prep Method: 310.2
File ID: SC120720004.010 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG403877 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-20-JUL-12

Analytes	LOD	LOQ	Concentration	Dilution	Qualifier
Alkalinity, Bicarbonate (as CaCO3)	10.0	20.0	-11.5	1	*

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

Report Name: BLANK
PDF ID: 2507600
20-JUL-2012 13:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: DIH Prep Method: 310.2
Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
Workgroup (AAB#): WG403877 Units: mg/L
QC Key: DOD4 Lot #: STD51832

Sample ID: WG403877-02 LCS File ID: SC120720004.011 Run Date: 07/20/2012 10:10
Sample ID: WG403877-03 LCS2 File ID: SC120720004.012 Run Date: 07/20/2012 10:11

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total (as CaCO3)	200	200	99.8	200	198	98.8	1.00	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2507607
Report generated: 07/23/2012 10:40

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: DIH Prep Method: 310.2
Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
Workgroup (AAB#): WG403877 Units: mg/L
QC Key: DOD4 Lot #: STD51832

Sample ID: WG403877-02 LCS File ID: SC120720004.011 Run Date: 07/20/2012 10:10
Sample ID: WG403877-03 LCS2 File ID: SC120720004.012 Run Date: 07/20/2012 10:11

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Bicarbonate (as CaCO3)	200	200	99.8	200	198	98.8	1.00	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2507601
Report generated: 07/20/2012 13:47

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: SMARTCHEM- 20-JUL-12 Worknum: WG403877

Instrument ID: SMARTCHEM Contract #: Prep Method: 310.2

Parent ID: L12070328-04 File ID: SC120720004.017 Dil: 1 Method: 310.2

Sample ID: L12070328-05 MS File ID: SC120720004.021 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: SC120720004.022 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Alkalinity, Total (as CaCO3)	77.7	100	153	75.1	100	148	70.2	3.28	85 - 115	20	*

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2507608
Report generated 07/23/2012 10:40

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: SMARTCHEM- 20-JUL-12 Worknum: WG403877

Instrument ID: SMARTCHEM Contract #: Prep Method: 310.2

Parent ID: L12070328-04 File ID: SC120720004.017 Dil: 1 Method: SM2320B

Sample ID: L12070328-05 MS File ID: SC120720004.021 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: SC120720004.022 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Alkalinity, Bicarbonate (as CaCO3)	77.7	100	153	75.1	100	148	70.2	3.28	85 - 115	20	*

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2507602
Report generated 07/20/2012 13:47

2.2.3.3 Raw Data

WORKGROUP: WG403874 A

403876 B

403877 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 # 20120720002
2) **Workgroup** B
Plan # 20120720003
3) **Workgroup** C
Plan # 20120720004

Analyte		1	2	3
		ALK		
		Dilution		
SC Prepared Curve				
Position				
1-1	ICV 250			
1-2	BLK			
1-3	LCS 200			
1-4	LCS DUP			
1-5	07-217-01	1/2		
1-6	03	1/2		
1-7	05	1/2		
1-8	07	1/2		
1-9	10	1/2		
1-10	07-390-02	1/5		color
1-11	03	1/5		↓
1-12	05	1/5		
1-13	06	1/5		
1-14	08	1/5		
1-15	09	1/5		↓
1-16	07-245-01			
1-17	02			
1-18	07-246-01			
1-19	02			
1-20	03			
1-21	07-247-01			
1-22	07-248-01			
2-1	07-249-01			
2-2	07-250-01			
2-3	DUP ↓			

Position	Analyte	1	2	3
	Run 2			
2-4 1	ICV 250			
2-5 2	BLK			
2-6 3	LCS			
2-7 4	LCSDUP			
2-8 5	07-250-02			
2-9 6	07-251-01			
2-10 7	07-252-01			
2-11 8	07-253-01			
2-12 9	07-254-01			
2-13 10	07-255-01			
2-14 11	02			
2-15 12	07-263-01			
2-16 13	07-264-01			
2-17 14	07-265-01			
2-18 15	07-266-01			
2-19 16	07-267-01			
2-20 17	07-268-01			
2-21 18	07-269-01			
2-22 19	07-270-01			
2-23 20	07-272-01			
2-24 21	02			
2-25 22	07-272-01			
2-26 1	07-327-01			+BC
3-1 2	02			+BC
3-2 3	DUP ↓			
4				
5				

NOTES:
* Run NO2 std on NO3 runs
* LCS/LCS Dup all parameters
*MS(10% sample): NO3, TKN, NH3

DCN#91635

SMARTCHEM RUN LOG

Position	Analyte	1	2	3
	Run 3			
3-3 1	ICV 250			
3-4 2	BLK			
3-5 3	LCS 200			
3-6 4	LCSDUP			
3-7 5	07-327-03			+BC
3-8 6	07-328-01			+BC
3-9 7	02			↓
3-10 8	03			↓
3-11 9	04			↓
3-12 10	DUP 04			↓
3-13 11	MS 05			↓
3-14 12	MSD 06			↓
3-15 13	07-329-01			

Position	Analyte	1	2	3
3-16 14	07-329-02			
3-17 15	03			
3-18 16	04			
3-19 17	05			
3-20 18	06			
3-21 19	07			
3-22 20	08			
3-23 21	09			
3-24 22	10			
3-25 1	11			
3-26 2	12			
3-27 3	14			
3-28 4	15			

5 ~~07-329-01~~ 329-13 ~~Dup 3~~

- [ ] 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	ALK		Reagents
SOP & Revision	K 3102 R 14		RGt 17578
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: 07-327, 07-328 / all pH < 8.3

Analyst: Joann Gibson Date: 7/20/12

DCN#91635

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	0.8556	0.00	R	8:14:14 AM
DIL-1	RBL	0.0	0.8620	0.00	R	8:14:32 AM
DIL-1	RBL	0.0	0.8687	0.00	R	8:15:26 AM
DIL-1	Std-1	0.0	0.0143	0.00	INV	8:15:44 AM
SR5-1	Std-2	10.0	-0.0133	0.00		8:16:38 AM
SR5-2	Std-3	20.0	-0.0234	0.00		8:16:56 AM
SR5-3	Std-4	50.0	-0.0774	0.00		8:17:51 AM
SR5-4	Std-5	100.0	-0.1588	0.00		8:18:08 AM
SR5-5	Std-6	200.0	-0.3512	0.00		8:19:03 AM
SR5-6	Std-7	250.0	-0.4644	0.00		8:19:21 AM
SR5-7	Std-8	300.0	-0.5496	0.00		8:20:15 AM
1	ICV 250	249.6	-0.4520	0.00		8:20:33 AM
2	WG403874-01 BLK	-7.3	0.0230	0.00	INV,><,LL	8:21:27 AM
3	WG403874-02 LCS	199.6	-0.3526	0.00		8:21:45 AM
4	WG403874-03 LCSDUP	201.2	-0.3557	0.00		8:22:39 AM
5	L12070217-01 (2)	113.3	-0.1895	0.00		8:22:57 AM
6	L12070217-03 (2)	126.2	-0.2133	0.00		8:23:51 AM
7	L12070217-05 (2)	126.8	-0.2144	0.00		8:24:09 AM
8	L12070217-07 (2)	119.2	-0.2004	0.00		8:25:03 AM
9	L12070217-10 (2)	128.0	-0.2165	0.00		8:25:21 AM
10	L12070390-02 (5)	219.0	-0.3906	0.00		8:26:15 AM
ST-2	CCV (150 mg/L)	155.5	-0.2680	103.68		8:26:33 AM
ST-3	CCB (0 mg/L)	5.7	0.0008	0.00	INV	8:27:27 AM
11	L12070390-03 (5)	127.3	-0.2153	0.00		8:27:45 AM
12	L12070390-05 (5)	227.1	-0.4068	0.00		8:28:39 AM
13	L12070390-06 (5)	141.9	-0.2424	0.00		8:28:57 AM
14	L12070390-08 (5)	236.9	-0.4263	0.00		8:29:51 AM
15	L12070390-09 (5)	148.4	-0.2546	0.00		8:30:09 AM
16	L12070245-01	276.1	-0.5064	0.00		8:31:03 AM
17	L12070245-02	262.8	-0.4790	0.00		8:31:21 AM
18	L12070246-01	323.0X	-0.6061	0.00	><,LH	8:32:15 AM
19	L12070246-02	266.5	-0.4866	0.00		8:32:33 AM

Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720002**

Plan Description : ALK-A-DIH/7/20/2012

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	L12070246-03	110.5	-0.1844	0.00		8:33:27 AM
ST-2	CCV (150 mg/L)	162.5	-0.2812	108.33		8:33:45 AM
ST-3	CCB (0 mg/L)	17.4	-0.0192	0.00		8:34:39 AM
21	L12070247-01	304.5	-0.5663	0.00	>,LH	8:34:57 AM
22	L12070248-01	293.7	-0.5434	0.00		8:35:51 AM
23	L12070249-01	306.2	-0.5698	0.00	>,LH	8:36:09 AM
24	L12070250-01	217.7	-0.3880	0.00		8:37:03 AM
25	WG403874-05 DUP	213.5	-0.3798	0.00		8:37:21 AM
26	ID 26	13.5	-0.0125	0.00		8:38:15 AM
27	ID 27	12.4	-0.0106	0.00		8:38:33 AM
ST-2	CCV (150 mg/L)	162.2	-0.2806	108.12		8:39:27 AM
ST-3	CCB (0 mg/L)	17.3	-0.0191	0.00		8:39:45 AM
18-[1/2]	L12070246-01	384.4	-0.3382	0.00	LH	8:47:25 AM
21-[1/2]	L12070247-01	358.6	-0.3133	0.00	LH	8:48:37 AM
23-[1/2]	L12070249-01	360.9	-0.3155	0.00	LH	8:49:49 AM
ST-2	CCV (150 mg/L)	177.0	-0.3088	117.98		8:49:49 AM
ST-3	CCB (0 mg/L)	37.4	-0.0539	0.00		8:50:43 AM

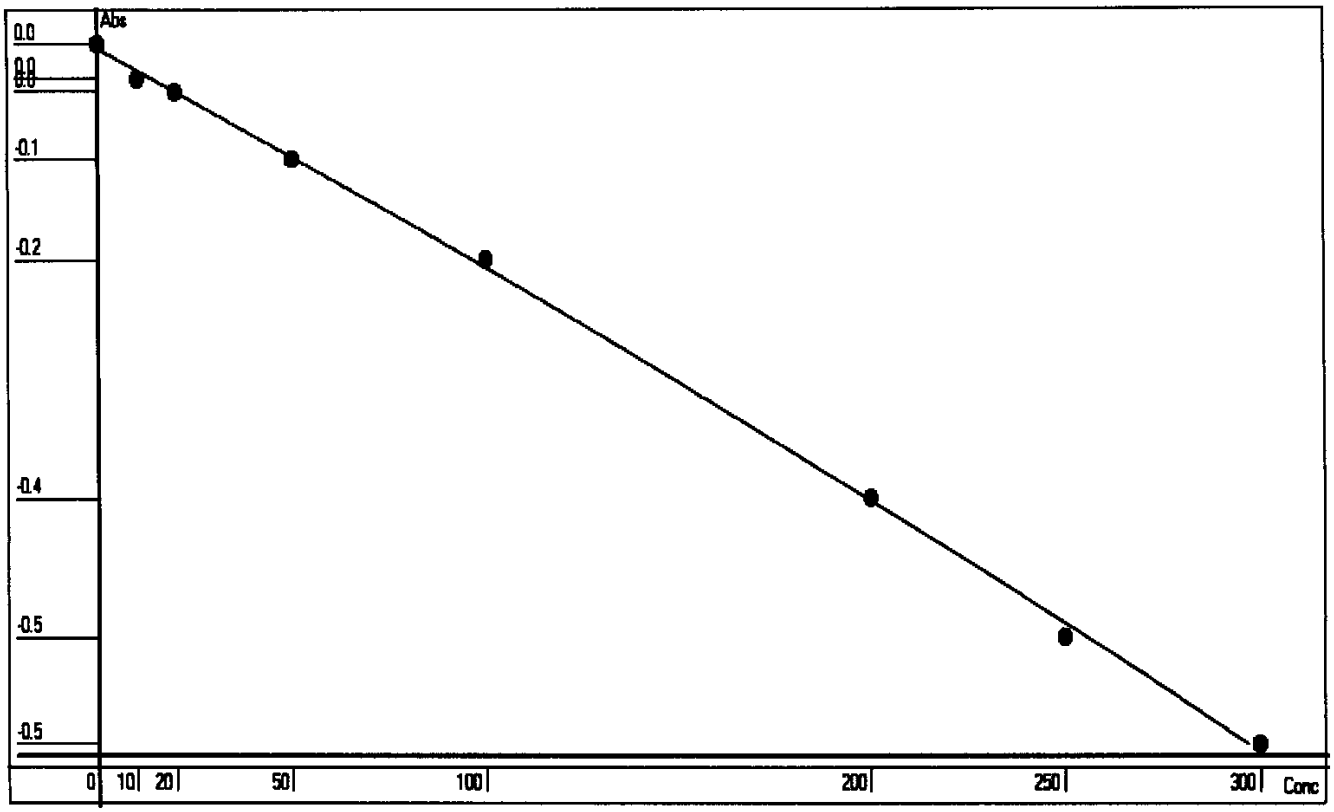
Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720002**

Plan Description : ALK-A-DIH/7/20/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120720002 Description : [ALK-A-DIH/7/20/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0143	0	-2.2143	-221.43
2	-0.0133	10	13.9242	39.24
3	-0.0234	20	19.7912	-1.04
4	-0.0774	50	50.8060	1.61
5	-0.1588	100	96.4341	-3.57
6	-0.3512	200	198.9101	-0.55
7	-0.4644	250	255.6747	2.27
8	-0.5496	300	296.6749	-1.11

Conc= -101.9785*Abso^2 -584.6285*Abso +6.1667 R^2=0.9992

RBL
0.8588
0

Report Date 7/20/2012 Run Date 7/20/2012

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	0.7506	0.00		9:08:46 AM
DIL-1	RBL	0.0	0.7272	0.00		9:09:04 AM
DIL-1	RBL	0.0	0.7238	0.00		9:09:58 AM
DIL-1	Std-1	0.0	-0.0107	0.00		9:10:16 AM
SR5-1	Std-2	10.0	-0.0335	0.00		9:11:10 AM
SR5-2	Std-3	20.0	-0.0351	0.00		9:11:28 AM
SR5-3	Std-4	50.0	-0.0699	0.00		9:12:22 AM
SR5-4	Std-5	100.0	-0.1315	0.00		9:12:40 AM
SR5-5	Std-6	200.0	-0.2994	0.00		9:13:34 AM
SR5-6	Std-7	250.0	-0.3767	0.00		9:13:52 AM
SR5-7	Std-8	300.0	-0.4591	0.00		9:14:47 AM
1	ICV 250	256.0	-0.3838	0.00		9:15:04 AM
2	WG403876-01 BLK	-33.1	0.0294	0.00	INV,><,LL	9:15:59 AM
3	WG403876-02 LCS	205.4	-0.2989	0.00		9:16:16 AM
4	WG403876-03 LCSDUP	198.5	-0.2878	0.00		9:17:11 AM
5	L12070250-02	243.1	-0.3614	0.00		9:17:29 AM
6	L12070251-01	209.6	-0.3057	0.00		9:18:23 AM
7	L12070252-01	195.4	-0.2829	0.00		9:18:41 AM
8	L12070253-01	212.4	-0.3102	0.00		9:19:35 AM
9	L12070254-01	308.2 X	-0.4809	0.00	><,LH	9:19:53 AM
10	L12070255-01	278.7	-0.4248	0.00		9:20:47 AM
ST-2	CCV (150 mg/L)	154.3	-0.2200	102.89		9:21:05 AM
ST-3	CCB (0 mg/L)	-25.3	0.0200	0.00	INV,><,LL	9:21:59 AM
11	L12070255-02	214.9	-0.3143	0.00		9:22:17 AM
12	L12070263-01	77.1	-0.1107	0.00		9:23:11 AM
13	L12070264-01	174.7	-0.2507	0.00		9:23:29 AM
14	L12070265-01	228.1	-0.3360	0.00		9:24:23 AM
15	L12070266-01	256.9	-0.3855	0.00		9:24:41 AM
16	L12070267-01	228.5	-0.3367	0.00		9:25:35 AM
17	L12070268-01	283.1	-0.4328	0.00		9:25:53 AM
18	L12070269-01	288.7	-0.4434	0.00		9:26:47 AM
19	L12070270-01	319.7 X	-0.5039	0.00	><,LH	9:27:05 AM

Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720003**

Plan Description : ALK-B-DIH/7/20/2012

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	L12070271-01	259.5	-0.3900	0.00		9:27:59 AM
ST-2	CCV (150 mg/L)	172.3	-0.2470	114.83		9:28:17 AM
ST-3	CCB (0 mg/L)	12.9	-0.0272	0.00		9:29:11 AM
21	L12070271-02	178.1	-0.2559	0.00		9:29:29 AM
22	L12070272-01	239.3	-0.3550	0.00		9:30:23 AM
23	L12070327-01	88.5	-0.1263	0.00		9:30:41 AM
24	L12070327-02 ref WG-04	83.3	-0.1191	0.00		9:31:35 AM
25	WG403876-05 DUP	83.3	-0.1191	0.00		9:31:53 AM
26	ID 26	-5.0	-0.0049	0.00	LL	9:32:47 AM
27	ID 27	-4.1	-0.0060	0.00	LL	9:33:05 AM
ST-2	CCV (150 mg/L)	183.9	-0.2650	122.63		9:33:59 AM
ST-3	CCB (0 mg/L)	0.6	-0.0118	0.00		9:34:17 AM
9-[1/2]	L12070254-01	372.8	-0.2688	0.00	LH	9:41:57 AM
19-[1/2]	L12070270-01	371.2	-0.2676	0.00	LH	9:43:09 AM
ST-2	CCV (150 mg/L)	178.4	-0.2565	118.96		9:43:09 AM
ST-3	CCB (0 mg/L)	10.4	-0.0240	0.00		9:44:03 AM

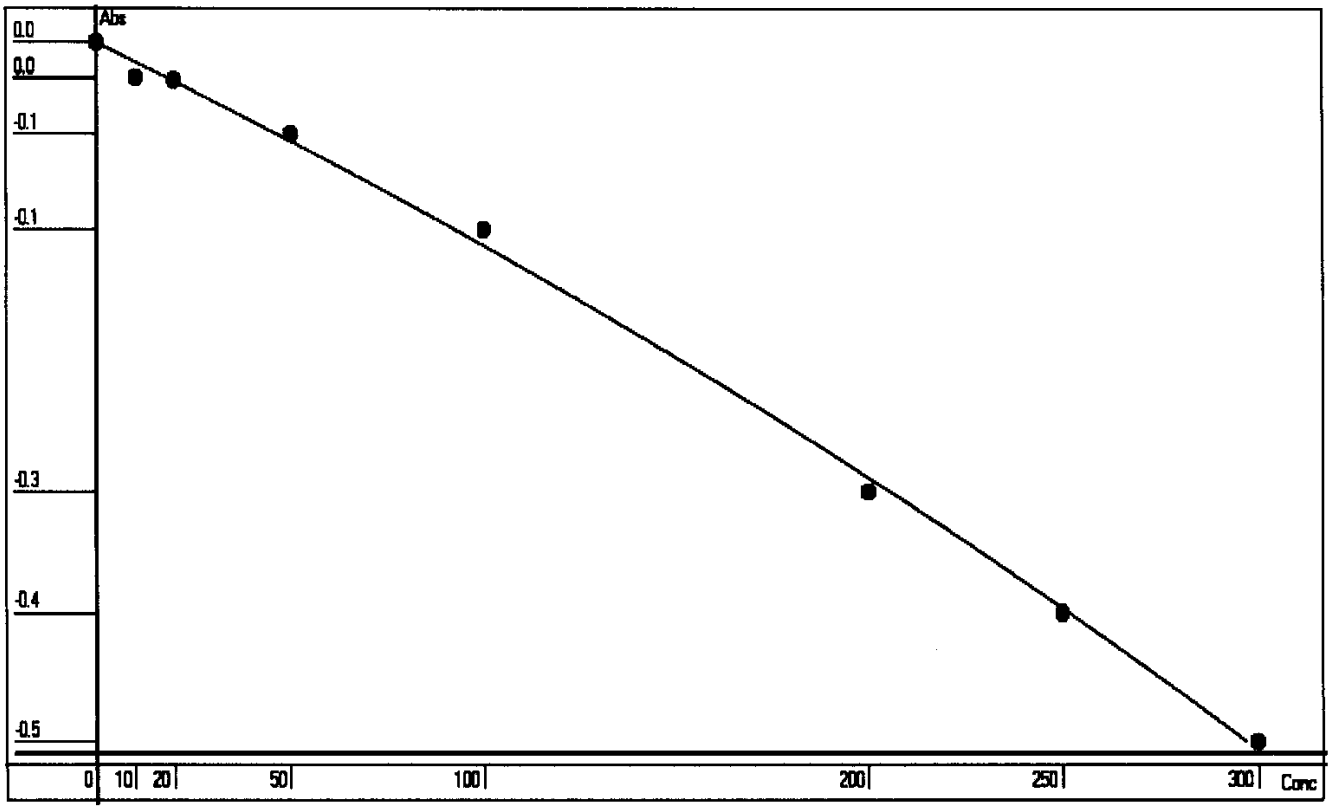
Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720003**

Plan Description : ALK-B-DIH/7/20/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120720003 Description : [ALK-B-DIH/7/20/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0107	0	-0.2788	-27.88
2	-0.0335	10	17.9109	79.11
3	-0.0351	20	19.1750	-4.13
4	-0.0699	50	46.2676	-7.46
5	-0.1315	100	92.3425	-7.66
6	-0.2994	200	205.7139	2.86
7	-0.3767	250	251.9021	0.76
8	-0.4591	300	296.9669	-1.01

Conc= -316.9401*Abso^2 -811.8015*Abso -8.9288 R^2=0.9981

RBL
0.7255
0

Report Date 7/20/2012 Run Date 7/20/2012

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	0.6450	0.00		10:03:29 AM
DIL-1	RBL	0.0	0.6429	0.00		10:03:47 AM
DIL-1	RBL	0.0	0.6437	0.00		10:04:41 AM
DIL-1	Std-1	0.0	-0.0112	0.00		10:04:59 AM
SR5-1	Std-2	10.0	-0.0238	0.00		10:05:53 AM
SR5-2	Std-3	20.0	-0.0322	0.00		10:06:11 AM
SR5-3	Std-4	50.0	-0.0685	0.00		10:07:05 AM
SR5-4	Std-5	100.0	-0.1374	0.00		10:07:23 AM
SR5-5	Std-6	200.0	-0.2817	0.00		10:08:17 AM
SR5-6	Std-7	250.0	-0.3563	0.00		10:08:35 AM
SR5-7	Std-8	300.0	-0.4281	0.00		10:09:29 AM
1	ICV 250	248.9	-0.3517	0.00		10:09:47 AM
2	WG403877-01 BLK	-11.5	0.0060	0.00	INV,><,LL	10:10:41 AM
3	WG403877-02 LCS	199.7	-0.2787	0.00		10:10:59 AM
4	WG403877-03 LCSDUP	197.7	-0.2758	0.00		10:11:53 AM
5	L12070327-03	70.9	-0.1003	0.00		10:12:11 AM
6	L12070328-01	83.4	-0.1169	0.00		10:13:05 AM
7	L12070328-02	89.9	-0.1256	0.00		10:13:23 AM
8	L12070328-03	83.3	-0.1167	0.00		10:14:17 AM
9	L12070328-04	77.7	-0.1093	0.00		10:14:35 AM
10	WG403874-05 DUP	83.1	-0.1164	0.00		10:15:29 AM
ST-2	CCV (150 mg/L)	154.0	-0.2134	102.64		10:15:47 AM
ST-3	CCB (0 mg/L)	-0.9	-0.0074	0.00	LL	10:16:41 AM
11	L12070328-05 MS	152.8	-0.2118	0.00		10:16:59 AM
12	L12070328-06 MSD	147.9	-0.2049	0.00		10:17:53 AM
13	L12070329-01	75.2	-0.1059	0.00		10:18:11 AM
14	L12070329-02	159.4	-0.2211	0.00		10:19:06 AM
15	L12070329-03	112.0	-0.1554	0.00		10:19:23 AM
16	L12070329-04	62.1	-0.0886	0.00		10:20:18 AM
17	L12070329-05	100.1	-0.1392	0.00		10:20:36 AM
18	L12070329-06	106.3	-0.1476	0.00		10:21:30 AM
19	L12070329-07	247.9	-0.3502	0.00		10:21:48 AM

Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720004**

Plan Description : ALK-C-DIH/7/20/2012

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	L12070329-08	67.8	-0.0961	0.00		10:22:42 AM
ST-2	CCV (150 mg/L)	161.9	-0.2246	107.95		10:23:00 AM
ST-3	CCB (0 mg/L)	6.1	-0.0163	0.00		10:23:54 AM
21	L12070329-09	178.8	-0.2486	0.00		10:24:12 AM
22	L12070329-10	238.5	-0.3361	0.00		10:25:06 AM
23	L12070329-11	89.2	-0.1246	0.00		10:25:24 AM
24	L12070329-12	206.2	-0.2882	0.00		10:26:18 AM
25	L12070329-14	95.6	-0.1332	0.00		10:26:36 AM
26	L12070329-15	235.7	-0.3319	0.00		10:27:30 AM
27	L12070329-13	62.4	-0.0890	0.00		10:27:48 AM
28	ID 28	22.9	-0.0377	0.00		10:28:42 AM
29	ID 29	22.8	-0.0376	0.00		10:29:00 AM
ST-2	CCV (150 mg/L)	168.3	-0.2337	112.23		10:29:54 AM
ST-3	CCB (0 mg/L)	16.3	-0.0292	0.00		10:30:12 AM

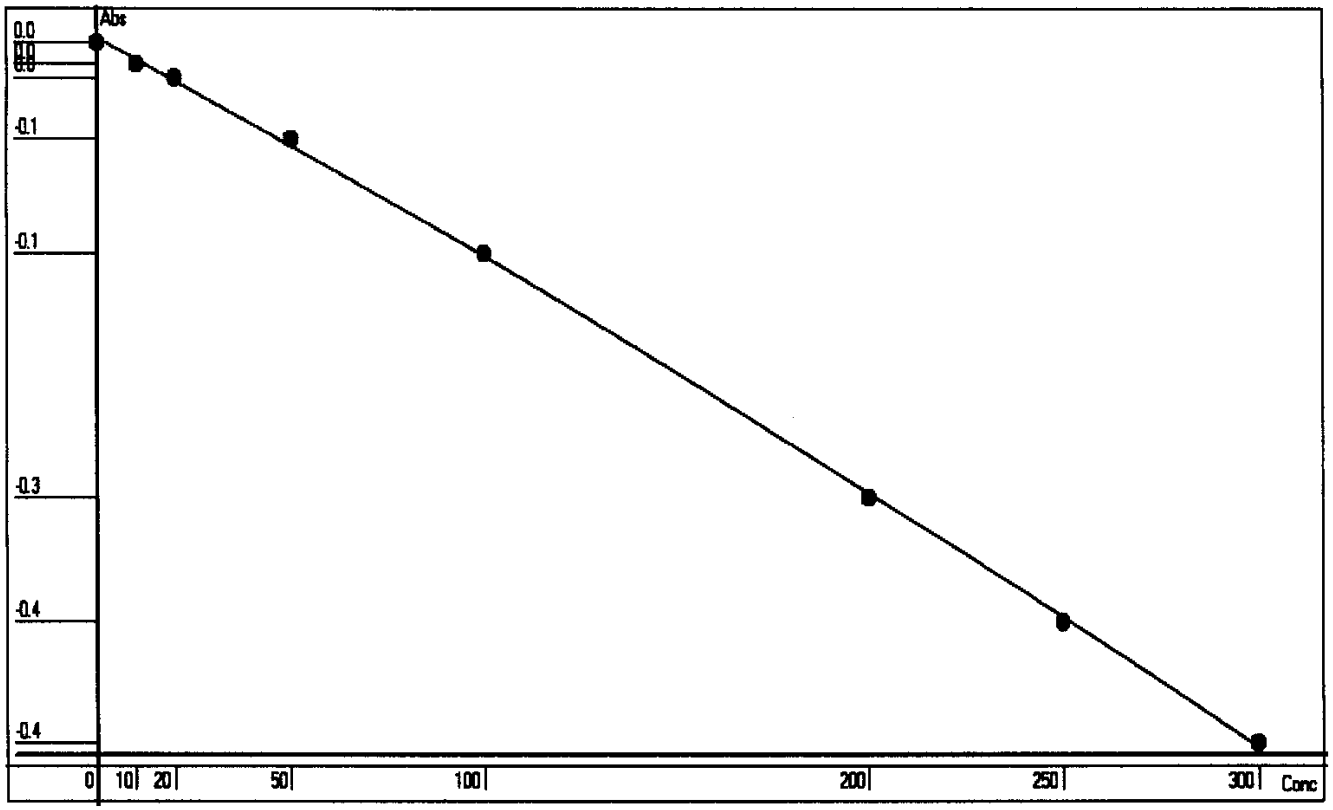
Report Date :07/20/2012 **Run Date :7/20/2012** **Operator : WESTCO** **Plan # :20120720004**

Plan Description : ALK-C-DIH/7/20/2012

Calibrant Report - WALK -

Calib Lot #:010104 Exp Date:6/21/2020 User:MICROBAC

Plan # : 20120720004 Description : [ALK-C-DIH/7/20/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0112	0	2.1200	212.00
2	-0.0238	10	12.0369	20.37
3	-0.0322	20	18.6145	-6.93
4	-0.0685	50	46.7305	-6.54
5	-0.1374	100	98.7168	-1.28
6	-0.2817	200	201.7373	0.87
7	-0.3563	250	251.8882	0.76
8	-0.4281	300	298.1557	-0.61

Conc= -190.3606*Abso^2 -793.7135*Abso -6.7457 R^2=0.9997

RBL
0.6433
0

Report Date 7/20/2012 Run Date 7/20/2012

2.2.4 Cyanide Data

2.2.4.1 Summary Data

Login Number: L12070328
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.

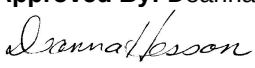
Duplicates: All acceptance criteria were met.

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: 50499
Approved By: Deanna Hesson



Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201400-09
Sample Tag:	4	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.181		0.0100	0.00500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201430-08
Sample Tag:	f	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.179		0.0100	0.00500

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207201545-09
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0135		0.0100	0.00500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201400-10
Sample Tag:	5	**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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201430-09
Sample Tag:	g	**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 #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207201545-10
Sample Tag:		**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 #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201400-11
Sample Tag:	6	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0927		0.0100	0.00500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201430-10
Sample Tag:	h	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0909		0.0100	0.00500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207201545-11
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0146		0.0100	0.00500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-12
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.0851		0.0100	0.00500

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-11
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.0829		0.0100	0.00500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-12
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0133		0.0100	0.00500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-13
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.293		0.0100	0.00500

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-12
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.291		0.0100	0.00500

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.225		0.0100	0.00500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	9014-9010C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9014-9010C	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403659	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:00
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201400-14
Sample Tag:	7	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.294		0.0100	0.00500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	SM4500-CN-C,G	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-C,G	**Cal Date:**	07/20/2012 09:30
Workgroup #:	WG403890	**Analyst:**	HJR	**Run Date:**	07/20/2012 14:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201430-13
Sample Tag:	H	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.292		0.0100	0.00500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**Prep Method:**	SM4500-CN-I	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	SM4500-CN-I	**Cal Date:**	07/20/2012 09:15
Workgroup #:	WG403660	**Analyst:**	HJR	**Run Date:**	07/20/2012 15:45
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207201545-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.223		0.0100	0.00500

2.2.4.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 20-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN-TOTAL
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403659

Calibration/Linearity	7/20/12
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:
23-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 15:27:40

Microbac Laboratories Inc.

Data Checklist

Date: 20-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN-WD
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403660

Calibration/Linearity	7/20/12
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:
23-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 15:27:38

Microbac Laboratories Inc.

Data Checklist

Date: 20-JUL-2012
Analyst: HJR
Analyst: NA
Method: CN-A
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403890

Calibration/Linearity	7/20/12
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:
23-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 15:27:37

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9014-9010C

AAB#: WG403659

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9.2	14		07/20/12	9.2	14	
MPL18-0712-1	02	07/11/12					07/20/2012	9.2	14		07/20/12	9.2	14	
MPL16-0712-1	03	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	
MPL17-0712-1	04	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL17-0712-MS	05	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL17-0712-MSD	06	07/11/12					07/20/2012	9	14		07/20/12	9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2512483
Report generated 07/24/2012 09:28

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-C,G

AAB#: WG403890

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9.2	14		07/20/12	9.2	14	
MPL18-0712-1	02	07/11/12					07/20/2012	9.2	14		07/20/12	9.2	14	
MPL16-0712-1	03	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	
MPL17-0712-1	04	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL17-0712-MS	05	07/11/12					07/20/2012	9	14		07/20/12	9	14	
MPL17-0712-MSD	06	07/11/12					07/20/2012	9	14		07/20/12	9	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2513505
Report generated 07/24/2012 14:05

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-CN-I

AAB#: WG403660

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9.3	14		07/20/12	9.3	14	
MPL18-0712-1	02	07/11/12					07/20/2012	9.2	14		07/20/12	9.2	14	
MPL16-0712-1	03	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	
MPL17-0712-1	04	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	
MPL17-0712-MS	05	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	
MPL17-0712-MSD	06	07/11/12					07/20/2012	9.1	14		07/20/12	9.1	14	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2512542
Report generated 07/24/2012 09:30

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: 1V.1207201400-03
Prep Date: 07/20/12 14:00
Analyzed Date: 07/20/12 14:00
Analyst: HJR

Work Group: WG403659
Blank Sample ID: WG403659-01
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	WG403659-02	1V.1207201400-04	07/20/12 14:00	
LCS	WG403659-03	1V.1207201400-05	07/20/12 14:00	
MPL05-0712-1	L12070328-01	1V.1207201400-09	07/20/12 14:00	4
MPL18-0712-1	L12070328-02	1V.1207201400-10	07/20/12 14:00	5
MPL16-0712-1	L12070328-03	1V.1207201400-11	07/20/12 14:00	6
MPL17-0712-1	L12070328-04	1V.1207201400-12	07/20/12 14:00	7
MPL17-0712-MS	L12070328-05	1V.1207201400-13	07/20/12 14:00	7
MPL17-0712-MSD	L12070328-06	1V.1207201400-14	07/20/12 14:00	7
DUP	WG403659-05	1V.1207201400-24	07/20/12 14:00	

Report Name: BLANK_SUMMARY
PDF File ID: 2512484
Report generated 07/24/2012 09:28

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: 1V.1207201430-03
Prep Date: 07/20/12 14:30
Analyzed Date: 07/20/12 14:30
Analyst: HJR

Work Group: WG403890
Blank Sample ID: WG403890-01
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	WG403890-02	1V.1207201430-04	07/20/12 14:30	b
MPL05-0712-1	L12070328-01	1V.1207201430-08	07/20/12 14:30	f
MPL18-0712-1	L12070328-02	1V.1207201430-09	07/20/12 14:30	g
MPL16-0712-1	L12070328-03	1V.1207201430-10	07/20/12 14:30	h
MPL17-0712-1	L12070328-04	1V.1207201430-11	07/20/12 14:30	H
MPL17-0712-MS	L12070328-05	1V.1207201430-12	07/20/12 14:30	H
MPL17-0712-MSD	L12070328-06	1V.1207201430-13	07/20/12 14:30	k
DUP	WG403890-04	1V.1207201430-22	07/20/12 14:30	Q

Report Name: BLANK_SUMMARY
PDF File ID: 2513506
Report generated 07/24/2012 14:05

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: 1V.1207201545-03
Prep Date: 07/20/12 15:45
Analyzed Date: 07/20/12 15:45
Analyst: HJR

Work Group: WG403660
Blank Sample ID: WG403660-01
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	WG403660-02	1V.1207201545-04	07/20/12 15:45	
LCS	WG403660-03	1V.1207201545-05	07/20/12 15:45	
MPL05-0712-1	L12070328-01	1V.1207201545-09	07/20/12 15:45	
MPL18-0712-1	L12070328-02	1V.1207201545-10	07/20/12 15:45	
MPL16-0712-1	L12070328-03	1V.1207201545-11	07/20/12 15:45	
MPL17-0712-1	L12070328-04	1V.1207201545-12	07/20/12 15:45	
MPL17-0712-MS	L12070328-05	1V.1207201545-13	07/20/12 15:45	
MPL17-0712-MSD	L12070328-06	1V.1207201545-14	07/20/12 15:45	
DUP	WG403660-05	1V.1207201545-24	07/20/12 15:45	

Report Name: BLANK_SUMMARY
PDF File ID: 2512543
Report generated 07/24/2012 09:30

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 14:00 Sample ID: WG403659-01
Instrument ID: UV-120-1V Run Date: 07/20/12 14:00 Prep Method: 9014-9010C
File ID: 1V.1207201400-03 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG403659 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-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: 2512485
24-JUL-2012 09:28

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 14:30 Sample ID: WG403890-01
Instrument ID: UV-120-1V Run Date: 07/20/12 14:30 Prep Method: SM4500-CN-C,G
File ID: 1V.1207201430-03 Analyst: HJR Method: SM4500-CN-C,G
Workgroup (AAB#): WG403890 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 20-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: 2513507
24-JUL-2012 14:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 15:45 Sample ID: WG403660-01
Instrument ID: UV-120-1V Run Date: 07/20/12 15:45 Prep Method: SM4500-CN-I
File ID: 1V.1207201545-03 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG403660 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 20-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: 2512544
24-JUL-2012 09:30

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/20/2012 Sample ID: WG403659-02
Instrument ID: UV-120-1V Run Time: 14:00 Prep Method: 9014-9010C
File ID: 1V.1207201400-04 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG403659 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-20-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.204	102	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2512486
Report generated: 07/24/2012 09:28

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/20/2012 Sample ID: WG403659-03
Instrument ID: UV-120-1V Run Time: 14:00 Prep Method: 9014-9010C
File ID: 1V.1207201400-05 Analyst: HJR Method: 9014-9010C
Workgroup (AAB#): WG403659 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-20-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0395	98.8	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2512486
Report generated: 07/24/2012 09:28

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/20/2012 Sample ID: WG403890-02
Instrument ID: UV-120-1V Run Time: 14:30 Prep Method: SM4500-CN-C,G
File ID: 1V.1207201430-04 Analyst: HJR Method: SM4500-CN-C,G
Workgroup (AAB#): WG403890 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-20-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.200	0.00126	0.630	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2513508
Report generated: 07/24/2012 14:05

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/20/2012 Sample ID: WG403660-02
Instrument ID: UV-120-1V Run Time: 15:45 Prep Method: SM4500-CN-I
File ID: 1V.1207201545-04 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG403660 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-20-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.200	0.206	103	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2512545
Report generated: 07/24/2012 09:30

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/20/2012 Sample ID: WG403660-03
Instrument ID: UV-120-1V Run Time: 15:45 Prep Method: SM4500-CN-I
File ID: 1V.1207201545-05 Analyst: HJR Method: SM4500-CN-I
Workgroup (AAB#): WG403660 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD48862 Cal ID: UV-120-20-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0399	99.8	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2512545
Report generated: 07/24/2012 09:30

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: UV-120-1V- 20-JUL-12 Worknum: WG403659

Instrument ID: UV-120-1V Contract #: Prep Method: 9014-9010C

Parent ID: L12070328-04 File ID: 1V.1207201400-12 Dil: 1 Method: 9014-9010C

Sample ID: L12070328-05 MS File ID: 1V.1207201400-13 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: 1V.1207201400-14 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Cyanide	0.0851	0.200	0.293	104	0.200	0.294	104	0.400	80 - 120	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2512487
Report generated 07/24/2012 09:28

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: UV-120-1V- 20-JUL-12 Worknum: WG403890

Instrument ID: UV-120-1V Contract #: Prep Method: SM4500-CN-C,G

Parent ID: L12070328-04 File ID: 1V.1207201430-11 Dil: 1 Method: SM4500-CN-C,G

Sample ID: L12070328-05 MS File ID: 1V.1207201430-12 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: 1V.1207201430-13 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Cyanide, Amenable to Chlor.	0.0829	0.200	0.291	104	0.200	0.292	105	0.343	80 - 120	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2513509
Report generated 07/24/2012 14:05

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: UV-120-1V- 20-JUL-12 Worknum: WG403660

Instrument ID: UV-120-1V Contract #: Prep Method: SM4500-CN-I

Parent ID: L12070328-04 File ID: 1V.1207201545-12 Dil: 1 Method: SM4500-CN-I

Sample ID: L12070328-05 MS File ID: 1V.1207201545-13 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: 1V.1207201545-14 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Cyanide, Weak/Dissociable	0.0133	0.200	0.225	106	0.200	0.223	105	0.786	90 - 110	15	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2512546
Report generated 07/24/2012 09:30

2.2.4.3 Raw Data

WG403957

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: K3354 Revision: 14 Page: 15

Second Source Stock: Std 48862 (concentration: 1000)

Daily Preparation: 5(1000)/250=20

10(20)/100=2

concentration = ~~1(2)/50=0.04~~

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.0495	50	5cm	578	0.365
0.0396	↓	↓	↓	0.295
0.0297	↓	↓	↓	0.221
0.0198	↓	↓	↓	0.149
0.0099	↓	↓	↓	0.073 7/20/12
0.00495	↓	↓	↓	~~0.365~~ 0.038
0.000	↓	↓	↓	0.002
ICV (0.04)	↓	↓	↓	0.296

Analyst: [signature] Date/Time: 7/20/12 0930

DCN#91643

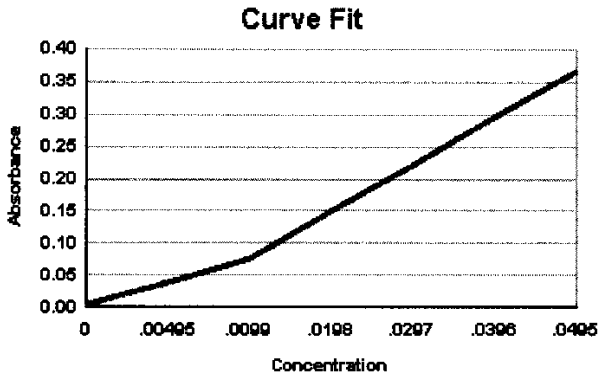
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG403957
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 07/20/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 7.37029
Y-Intercept: 0.00171843
Coef. Of Correlation (R^2): 0.999916
Coef. Of Correlation (R): 0.999958

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00200	0.00	0.00	0.00171843
0.00495	0.0380	0.0000245	0.000188	0.0382014
0.00990	0.0730	0.0000980	0.000723	0.0746843
0.0198	0.149	0.000392	0.00295	0.147650
0.0297	0.221	0.000882	0.00656	0.220616
0.0396	0.295	0.00157	0.0117	0.293582
0.0495	0.365	0.00245	0.0181	0.366548



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 07/20/2012 10:14

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG403957
File ID: 1V.1207200930-08
CCV ID: WG403957-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 09:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12 09:30:07

Analyte	Expected	Found	RF	%D	Q
Cyanide	.04	0.0399	7.40	0.3	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 07/20/2012 10:15

[redacted]

W6403956

Curves

Parameter: cyanide-High

Spectrophotometer: UV-120-1V

Calibration (Curve) standard stock: ~~SRD~~ 48861

Concentration: 990

Recipe for preparation of curve standards found in:

SOP: K3354 Revision: 14 Page: 15

Second Source Stock: ~~SRD~~ 48862 (concentration: 1000)

Daily Preparation: 5(1000)/250 = 20

10(20)/100 = 2

concentration = 5(2)/50 = 0.2

Calibration Standards (mg/L)	Volume (mL)	Cell Size (cm)	Wavelength (nm)	Absorbance
0.396	50	1cm	578	~~0.673~~ 0.673
0.292	↓	↓	↓	0.499
0.198				0.351
0.099				0.168
0.0396				0.068
0.0198				0.034
0.000				0.001
ICV (0.20)	↓	↓	↓	0.350

Analyst: Holly Reed Date/Time: 7/20/12 0915

DCN#91642

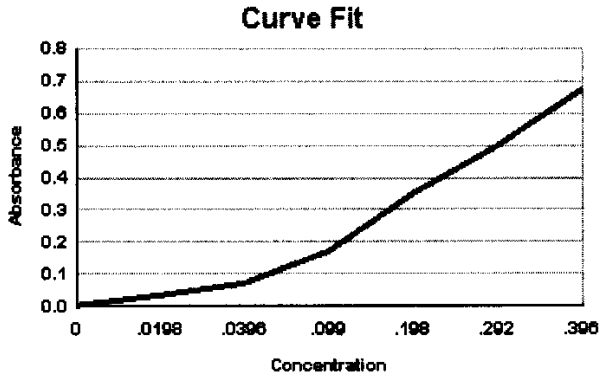
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG403956
Analytical Method: 300
Instrument ID: UV-120-1V

Analyst: HJR
Initial Calibration Date: 07/20/2012

Analyte: CYANIDE
Number of Points: 7
Slope: 1.70563
Y-Intercept: 0.00180635
Coef. Of Correlation (R^2): 0.999593
Coef. Of Correlation (R): 0.999797

Concentration X	Absorbance Y	X^2	X * Y	Y-Fitted (mX^2+B)
0.00	0.00100	0.00	0.00	0.00180635
0.0198	0.0340	0.000392	0.000673	0.0355777
0.0396	0.0680	0.00157	0.00269	0.0693491
0.0990	0.168	0.00980	0.0166	0.170663
0.198	0.351	0.0392	0.0695	0.339520
0.292	0.499	0.0853	0.146	0.499849
0.396	0.673	0.157	0.267	0.677234



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 07/20/2012 10:11

[redacted]

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG403956
File ID: 1V.1207200915-08
CCV ID: WG403956-08
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 09:15
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12 09:15:07

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 07/20/2012 10:12

[redacted]

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: 7/20/12

CCV: Std 48861

True Value: 990

Daily Dilution: 5(990)/250 = 19.8
10(19.8)/100 = 1.98 / 10(0.198)/100 = 0.0198
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: 1(2)/50 = 0.04
5(2)/50 = 0.2

Distillation Reagents
RGT17470
RGT17466
RGT17471

Colorimetric Reagents
RGT17570
RGT17569
RGT17548

DCN#91595

Cyanide

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	0.345
CCV(low): 0.0198 ppm	50		X		5cm	0.149
Blank	50	✓	X		5cm	0.003
LCS: 0.2 ppm	50	✓	X		1cm	0.349
LCS: 0.04 ppm	50	✓	X		5cm	0.293
07-0327-01	50	✓	X		1cm	0.412
-02	50	✓	X		1cm	0.190
-03	50	✓	X		1cm	0.205
07-0328-01	50	✓	X		1cm	0.311
-02	50	✓	X		5cm	0.019
-03	50	✓	X		1cm	0.160
-04 RS	50	✓	X		1cm	0.147
(0.2) -05 MS	50	✓	X		1cm	0.501
(0.2) -06 MSD	50	✓	X		1cm	0.503
07-0373-01	50	✓	X		5cm	0.020
-02	50	✓	X	1/2	1cm	0.338
-03	50	✓	X		5cm	0.069
-06	50	✓	X		5cm	0.010
07-0425-01	50	✓	X		1cm	0.484
-02	50	✓	X		1cm	0.498
07-0506-03	50	✓	X		5cm	0.006
distilled CCV(H) 0.198	50	✓	X		1cm	0.349
CCV(L) 0.0198	50	✓	X		5cm	0.149
Duplicate: ~~07-0425-02~~ 07-0506-03 1:4dil	50	✓	X		5cm	0.006
MS: (_____ppm)						
MSD: (_____ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.350
CCV low: (0.0198 ppm)	50		X		5cm	0.150

Analyst: [signature]

Date/Time (on) 7/18/12 1400
(off) 7/18/12 1530
(color) 7/20/12 1400

DCN#91595

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG403659 **Analyst:** HJR
Analyte: CYANIDE **Date:** 07/20/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG403659-01	50	50	0.00300	7.370	0.001718	0.00017388	0.00017388	1	mg/L
WG403659-02	50	50	0.349	1.706	0.001806	0.20356	0.20356	1	mg/L
WG403659-03	50	50	0.293	7.370	0.001718	0.039521	0.039521	1	mg/L
L12070327-01	50	50	0.412	1.706	0.001806	0.24049	0.24049	1	mg/L
L12070327-02	50	50	0.190	1.706	0.001806	0.11034	0.11034	1	mg/L
L12070327-03	50	50	0.205	1.706	0.001806	0.11913	0.11913	1	mg/L
L12070328-01	50	50	0.311	1.706	0.001806	0.18128	0.18128	1	mg/L
L12070328-02	50	50	0.0190	7.370	0.001718	0.0023448	ND	1	mg/L
L12070328-03	50	50	0.160	1.706	0.001806	0.092748	0.092748	1	mg/L
L12070328-04	50	50	0.147	1.706	0.001806	0.085126	0.085126	1	mg/L
WG403659-06	50	50	0.147	1.706	0.001806	0.085126	0.085126	1	mg/L
L12070328-05	50	50	0.501	1.706	0.001806	0.29267	0.29267	1	mg/L
WG403659-07	50	50	0.501	1.706	0.001806	0.29267	0.29267	1	mg/L
L12070328-06	50	50	0.503	1.706	0.001806	0.29385	0.29385	1	mg/L
WG403659-08	50	50	0.503	1.706	0.001806	0.29385	0.29385	1	mg/L
L12070373-01	50	50	0.0200	7.370	0.001718	0.0024804	ND	1	mg/L
L12070373-02	50	50	0.338	1.706	0.001806	0.19711	0.39422	2	mg/L
L12070373-03	50	50	0.0690	7.370	0.001718	0.0091288	0.0091288 F	1	mg/L
L12070373-06	50	50	0.0100	7.370	0.001718	0.0011236	ND	1	mg/L
L12070425-01	50	50	0.484	1.706	0.001806	0.28271	0.28271	1	mg/L
L12070425-02	50	50	0.498	1.706	0.001806	0.29092	0.29092	1	mg/L
L12070506-03	50	50	0.00600	7.370	0.001718	0.00058092	ND	1	mg/L
WG403659-04	50	50	0.00600	7.370	0.001718	0.00058092	0.00058092	1	mg/L
WG403659-05	50	50	0.00600	7.370	0.001718	0.00058092	0.00058092	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/23/2012 14:36

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-01
CCV ID: WG404201-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.201	1.74	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:32

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-02
CCV ID: WG404201-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0200	7.53	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:32

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-22
CCV ID: WG404201-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.204	1.76	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:37

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-23
CCV ID: WG404201-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0200	7.53	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:37

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-25
CCV ID: WG404201-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.204	1.77	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:32

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404201
File ID: 1V.1207201400-26
CCV ID: WG404201-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:00
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.58	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:32

[redacted]

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: 7/20/12

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:
1(2)/50 = 0.04
5(2)/50 = 0.2

Distillation Reagents
RGT 17466
RGT 17471
RGT 17470

Colorimetric Reagents
RGT 17570
RGT 17569
RGT 17548

DCN#91596

Cyanide

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	0.345
CCV(low): 0.0198 ppm	50		X		5cm	0.149
Blank	50	✓	X		5cm	0.0018
LCS: 0.2 ppm	50	✓	X		1cm	~~0.29~~ 0.354
LCS: 0.04 ppm	50	✓	X		5cm	0.296
07-0327-01	50	✓	X		5cm	0.275
-02	50	✓	X		5cm	0.131
-03	50	✓	X		5cm	0.155
07-0328-01	50	✓	X		5cm	0.101
-02	50	✓	X		5cm	0.019
-03	50	✓	X		5cm	0.109
(0.2) -04RS	50	✓	X		5cm	~~0.109~~ 0.100
(0.2) -05MS	50	✓	X	1cm	1cm	0.385
(0.2) -06MSD	50	✓	X	~~1cm~~	1cm	0.382
07-0373-01	50	✓	X		5cm	0.018
-02	50	✓	X		5cm	0.223
-03	50	✓	X		5cm	0.020
-04	50	✓	X		5cm	0.008
07-0425-01	50	✓	X		5cm	0.152
-02	50	✓	X		5cm	0.214
07-0500-02	50	✓	X		5cm	0.087
CCV H	50	✓	X		1cm	0.347
CCV L	50	✓	X		5cm	0.150
Duplicate: 07-0500-02	50	✓	X		5cm	0.086
MS: (_____ ppm)						
MSD: (_____ ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.346
CCV low: (0.0198 ppm)	50		X		5cm	0.150

Analyst: [signature]

Date/Time (on) 7/19/12 0900
(off) 7/19/12 1035
(color) 7/20/12 1545

DCN#91596

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG403660
Analyte: CYANIDE

Analyst: HJR
Date: 07/20/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG403660-01	50	50	0.00100	7.370	0.001718	-0.000097476	-0.000097476	1	mg/L
WG403660-02	50	50	0.354	1.706	0.001806	0.20649	0.20649	1	mg/L
WG403660-03	50	50	0.296	7.370	0.001718	0.039928	0.039928	1	mg/L
L12070327-01	50	50	0.275	7.370	0.001718	0.037079	0.037079	1	mg/L
L12070327-02	50	50	0.131	7.370	0.001718	0.017541	0.017541	1	mg/L
L12070327-03	50	50	0.155	7.370	0.001718	0.020797	0.020797	1	mg/L
L12070328-01	50	50	0.101	7.370	0.001718	0.013471	0.013471	1	mg/L
L12070328-02	50	50	0.0190	7.370	0.001718	0.0023448	ND	1	mg/L
L12070328-03	50	50	0.109	7.370	0.001718	0.014556	0.014556	1	mg/L
L12070328-04	50	50	0.100	7.370	0.001718	0.013335	0.013335	1	mg/L
WG403660-06	50	50	0.100	7.370	0.001718	0.013335	0.013335	1	mg/L
L12070328-05	50	50	0.385	1.706	0.001806	0.22466	0.22466	1	mg/L
WG403660-07	50	50	0.385	1.706	0.001806	0.22466	0.22466	1	mg/L
L12070328-06	50	50	0.382	1.706	0.001806	0.22291	0.22291	1	mg/L
WG403660-08	50	50	0.382	1.706	0.001806	0.22291	0.22291	1	mg/L
L12070373-01	50	50	0.0180	7.370	0.001718	0.0022091	ND	1	mg/L
L12070373-02	50	50	0.223	7.370	0.001718	0.030023	0.030023	1	mg/L
L12070373-03	50	50	0.0200	7.370	0.001718	0.0024804	ND	1	mg/L
L12070373-06	50	50	0.00800	7.370	0.001718	0.00085228	ND	1	mg/L
L12070425-01	50	50	0.152	7.370	0.001718	0.020390	0.020390	1	mg/L
L12070425-02	50	50	0.214	7.370	0.001718	0.028802	0.028802	1	mg/L
L12070500-02	50	50	0.0870	7.370	0.001718	0.011571	0.011571	1	mg/L
WG403660-04	50	50	0.0870	7.370	0.001718	0.011571	0.011571	1	mg/L
WG403660-05	50	50	0.0860	7.370	0.001718	0.011435	0.011435	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/23/2012 14:11

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-01
CCV ID: WG404189-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.201	1.74	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 13:39

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-02
CCV ID: WG404189-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0200	7.53	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 13:39

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-22
CCV ID: WG404189-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-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

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:12

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-23
CCV ID: WG404189-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.58	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:12

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-25
CCV ID: WG404189-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-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 07/23/2012 13:39

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404189
File ID: 1V.1207201545-26
CCV ID: WG404189-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 15:45
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.58	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 13:39

[redacted]

WORKGROUP: WG403890

Cyanide

☑ Total method 9010B/9014 Amenable
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: ~~Std~~ 7/20/12

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
RGT 17470
RGT 17466
RGT 17471

Colorimetric Reagents
RGT 17570
RGT 17569
RGT 17548

DCN#91637

Cyanide

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	0.349
CCV(low): 0.0198 ppm	50		X		5cm	0.150
Blank	50	✓	X		5cm	~~0.004~~ 0.005
LCS: 0.2 ppm	50	✓	X		5cm	~~0.005~~ 0.011
LCS: ppm						
07-0327-01	50	✓	X		5cm	0.005
-02	50	✓	X		5cm	0.003
-03	50	✓	X		5cm	0.006
07-0328-01	50	✓	X		5cm	0.007
-02	50	✓	X		5cm	0.006
-03	50	✓	X		5cm	0.005
-04 RS	50	✓	X		5cm	0.008
(0.2) -05 MS	50	✓	X		5cm	0.005
(0.2) -06 MSD	50	✓	X		5cm	0.006
07-0373-01	50	✓	X		5cm	0.004
-02	50	✓	X		5cm	0.005
-03	50	✓	X		5cm	0.005
-06	50	✓	X		5cm	0.006
07-0425-01	50	✓	X		5cm	0.004
-02	50	✓	X		5cm	0.007
Distilled CCV H (0.198)	50	✓	X		1cm	0.347
CCV L (0.0198)	50	✓	X		5cm	0.150
Duplicate: 07-0425-02	50	✓	X		5cm	0.006
MS: (ppm)						
MSD: (ppm)						
CCV high: (0.198 ppm)	50		X		1cm	0.350
CCV low: (0.0198 ppm)	50		X		5cm	0.149

Analyst: [signature] Date/Time (on) 7/19/12 1430
(off) 7/19/12 1600
(color) 7/20/12 ~~1400~~ 1430

Page 2 of 2

DCN#91637

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG403890 Treated
Analyte: CYANIDE

Analyst: HJR
Date: 07/20/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG403890-01	50	50	0.00500	7.370	0.001718	0.00044524	0.00044524	1	mg/L
WG403890-02	50	50	0.0110	7.370	0.001718	0.0012593	0.0012593	1	mg/L
L12070327-01	50	50	0.0150	7.370	0.001718	0.0018020	0.23900	1	mg/L
L12070327-02	50	50	0.0130	7.370	0.001718	0.0015307	0.10900	1	mg/L
L12070327-03	50	50	0.0160	7.370	0.001718	0.0019377	0.11700	1	mg/L
L12070328-01	50	50	0.0170	7.370	0.001718	0.0020734	0.17900	1	mg/L
L12070328-02	50	50	0.0160	7.370	0.001718	0.0019377	ND	1	mg/L
L12070328-03	50	50	0.0150	7.370	0.001718	0.0018020	0.090900	1	mg/L
L12070328-04	50	50	0.0180	7.370	0.001718	0.0022091	0.082900	1	mg/L
WG403890-05	50	50	0.0180	7.370	0.001718	0.0022091	0.082900	1	mg/L
L12070328-05	50	50	0.0150	7.370	0.001718	0.0018020	0.29090	1	mg/L
WG403890-06	50	50	0.0150	7.370	0.001718	0.0018020	0.29100	1	mg/L
WG403890-07	50	50	0.0160	7.370	0.001718	0.0019377	0.29200	1	mg/L
L12070328-06	50	50	0.0160	7.370	0.001718	0.0019377	0.29190	1	mg/L
L12070373-01	50	50	0.0140	7.370	0.001718	0.0016664	ND	1	mg/L
L12070373-02	50	50	0.0150	7.370	0.001718	0.0018020	0.19530	1	mg/L
L12070373-03	50	50	0.0150	7.370	0.001718	0.0018020	0.0073000	1	mg/L
L12070373-06	50	50	0.0160	7.370	0.001718	0.0019377	ND	1	mg/L
L12070425-01	50	50	0.0140	7.370	0.001718	0.0016664	0.28100	1	mg/L
L12070425-02	50	50	0.0170	7.370	0.001718	0.0020734	0.28880	1	mg/L
WG403890-03	50	50	0.0170	7.370	0.001718	0.0020734	0.28900	1	mg/L
WG403890-04	50	50	0.0160	7.370	0.001718	0.0019377	0.28900	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/24/2012 09:43

[redacted]

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG403659 **Analyst:** HJR
Analyte: CYANIDE (total) **Date:** 07/20/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG403659-01	50	50	0.00300	7.370	0.001718	0.00017388	0.00017388	1	mg/L
WG403659-02	50	50	0.349	1.706	0.001806	0.20356	0.20356	1	mg/L
WG403659-03	50	50	0.293	7.370	0.001718	0.039521	0.039521	1	mg/L
L12070327-01	50	50	0.412	1.706	0.001806	0.24049	0.24049	1	mg/L
L12070327-02	50	50	0.190	1.706	0.001806	0.11034	0.11034	1	mg/L
L12070327-03	50	50	0.205	1.706	0.001806	0.11913	0.11913	1	mg/L
L12070328-01	50	50	0.311	1.706	0.001806	0.18128	0.18128	1	mg/L
L12070328-02	50	50	0.0190	7.370	0.001718	0.0023448	ND	1	mg/L
L12070328-03	50	50	0.160	1.706	0.001806	0.092748	0.092748	1	mg/L
L12070328-04	50	50	0.147	1.706	0.001806	0.085126	0.085126	1	mg/L
WG403659-06	50	50	0.147	1.706	0.001806	0.085126	0.085126	1	mg/L
L12070328-05	50	50	0.501	1.706	0.001806	0.29267	0.29267	1	mg/L
WG403659-07	50	50	0.501	1.706	0.001806	0.29267	0.29267	1	mg/L
L12070328-06	50	50	0.503	1.706	0.001806	0.29385	0.29385	1	mg/L
WG403659-08	50	50	0.503	1.706	0.001806	0.29385	0.29385	1	mg/L
L12070373-01	50	50	0.0200	7.370	0.001718	0.0024804	ND	1	mg/L
L12070373-02	50	50	0.338	1.706	0.001806	0.19711	0.39422	2	mg/L
L12070373-03	50	50	0.0690	7.370	0.001718	0.0091288	0.0091288 F	1	mg/L
L12070373-06	50	50	0.0100	7.370	0.001718	0.0011236	ND	1	mg/L
L12070425-01	50	50	0.484	1.706	0.001806	0.28271	0.28271	1	mg/L
L12070425-02	50	50	0.498	1.706	0.001806	0.29092	0.29092	1	mg/L
L12070506-03	50	50	0.00600	7.370	0.001718	0.00058092	ND	1	mg/L
WG403659-04	50	50	0.00600	7.370	0.001718	0.00058092	0.00058092	1	mg/L
WG403659-05	50	50	0.00600	7.370	0.001718	0.00058092	0.00058092	1	mg/L

[redacted]

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/23/2012 14:56

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
L12070327-01	0.24049	0.001802	0.238688
l12070327-02	0.11034	0.0015307	0.108809
L12070327-03	0.11913	0.0019377	0.117192
L12070328-01	0.18128	0.0020734	0.179207
L12070328-02	0.0023448	0.0019377	0.000407
L12070328-03	0.09274	0.001802	0.090938
L12070328-04	0.085126	0.0022091	0.082917
L12070328-05	0.29267	0.001802	0.290868
L12070328-06	0.29385	0.0019377	0.291912
L12070373-01	0.002488	0.0016664	0.000822
L12070373-02	0.19711	0.001802	0.195308
L12070373-03	0.0091288	0.001802	0.007327
L12070373-06	0.0011236	0.0019377	-0.000814
L12070425-01	0.28271	0.00166664	0.281043
L12070425-02	0.29092	0.0020734	0.288847
dup	0.29092	0.0020734	0.288847
blank	0.0001739	0.00044524	-0.000271
lcs (0.2)	0.20356	0.0012593	0.202301
			0

Cyanide, Amenable to Chlorination (CN-A) is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to verify that all of the cyanide in the spike solution is amenable (the treated portion is ND)

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-20
CCV ID: WG404210-03
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-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

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:54

[redacted]

Microbac Laboratories Inc.
DISTILLED STANDARD REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-21
CCV ID: WG404210-04
Units: mg/L

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.58	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WG_CCV_LCS - Modified 03/06/2008
Report generated 07/23/2012 14:54

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-01
CCV ID: WG404210-01
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.204	1.76	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-02
CCV ID: WG404210-02
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0201	7.58	1.5	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-23
CCV ID: WG404210-05
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.198	0.204	1.77	3.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:45

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404210
File ID: 1V.1207201430-24
CCV ID: WG404210-06
Units: mg/L
Analyte: CYANIDE

Instrument ID: UV-120-1V
Run Date: 07/20/2012
Run Time: 14:30
Analyst: HJR
Cal ID: UV-120 - 20-JUL-12

Analyte	Expected	Found	RF	%D	Q
Cyanide	.0198	0.0200	7.53	1.0	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 14:45

[redacted]

2.2.5 Conductivity Data

2.2.5.1 Summary Data

Login Number: L12070328
Department: Conventionals
Analyst: Tammy Morris

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: Recoveries out of range were observed for the following analytes: Conductivity. Please see the applicable QC report for a detailed presentation of the failures.

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: 50494
Approved By: Deanna Hesson

2.2.5.2 QC Summary Data

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 20-JUL-2012
Analyst: TMM
Analyst: NA
Method: COND
Instrument: YSI-32
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404009

Calibration/Linearity	4/30
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	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	TMM
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
21-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 15:37:35

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 120.1 AAB#: WG404009

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/20/2012	9.2	28		07/20/12	9.2	28	
MPL18-0712-1	02	07/11/12					07/20/2012	9.2	28		07/20/12	9.2	28	
MPL16-0712-1	03	07/11/12					07/20/2012	9.1	28		07/20/12	9.1	28	
MPL17-0712-1	04	07/11/12					07/20/2012	9	28		07/20/12	9	28	
MPL17-0712-MS	05	07/11/12					07/20/2012	9	28		07/20/12	9	28	
MPL17-0712-MSD	06	07/11/12					07/20/2012	9	28		07/20/12	9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2508946
Report generated 07/22/2012 09:34

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: 32.1207201430-01
Prep Date: 07/20/12 14:30
Analyzed Date: 07/20/12 14:30
Analyst: TMM

Work Group: WG404009
Blank Sample ID: WG404009-01
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	WG404009-02	32.1207201430-02	07/20/12 14:30	
LCS2	WG404009-03	32.1207201430-03	07/20/12 14:30	
MPL05-0712-1	L12070328-01	32.1207201430-16	07/20/12 14:30	
MPL18-0712-1	L12070328-02	32.1207201430-17	07/20/12 14:30	
MPL16-0712-1	L12070328-03	32.1207201430-18	07/20/12 14:30	
MPL17-0712-1	L12070328-04	32.1207201430-19	07/20/12 14:30	
MPL17-0712-MS	L12070328-05	32.1207201430-20	07/20/12 14:30	
MPL17-0712-MSD	L12070328-06	32.1207201430-21	07/20/12 14:30	
DUP	WG404009-05	32.1207201430-24	07/20/12 14:30	
DUP	WG404009-07	32.1207201430-25	07/20/12 14:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2508947
Report generated 07/22/2012 09:34

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/20/12 14:30 Sample ID: WG404009-01
Instrument ID: YSI-32 Run Date: 07/20/12 14:30 Prep Method: 120.1
File ID: 32.1207201430-01 Analyst: TMM Method: 120.1
Workgroup (AAB#): WG404009 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: 2508948
22-JUL-2012 09:34

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: TMM Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG404009 Units: umhos/cm
QC Key: DOD4 Lot #: STD49788

Sample ID: WG404009-02 LCS File ID: 32.1207201430-02 Run Date: 07/20/2012 14:30
Sample ID: WG404009-03 LCS2 File ID: 32.1207201430-03 Run Date: 07/20/2012 14:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1430	101	1410	1430	101	0.00	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2508949
Report generated: 07/22/2012 09:34

2.2.5.3 Raw Data

CONDUCTIVITY

☑EPA 120.1/SM2510B SOP K1201 Revision#: B

LCS: Std 49788 4/30 ☑Cell Constants Determined
Daily Dilution: 10(0.1m)/100 ☑Cells Clean
= 1412

SAMPLE	DILUTION	CELL	MULTIPLIER	Direct Instrument READING
BLANK		0.1	US	3.31
LCS: (1412)		1.0	mS	1.327
07-264-01		1.0	mS	0.504
07-265-01		1.0	mS	0.549
07-266-01		1.0	mS	0.670
07-267-01		1.0	mS	0.462
07-268-01		1.0	mS	0.632
07-269-01		1.0	mS	0.647
07-270-01		1.0	mS	0.650
07-271-01		1.0	mS	0.621
02		1.0	mS	0.344
07-327-01		1.0	mS	0.505
02		1.0	mS	0.376
03		1.0	mS	0.373
07-328.01		1.0	mS	0.440
02		1.0	mS	0.299
03		1.0	mS	0.459
04		1.0	mS	0.434
05		1.0	mS	0.437
06		1.0	mS	0.382
07-373-01		1.0	mS	0.400
07-272-01		1.0	mS	0.416
DUP: 7-264-01		1.0	mS	0.510
DUP: 07-272-01		1.0	mS	0.420
LCS: 1412		1.0	mS	1.327

Analyst: Tammy Morse Date/Time: 7/20/12 @ 1430

*LCS/CCV required at end of run
* Duplicate required on 10% of samples

DCN#91655

Microbac Laboratories Inc.

TITRAMETRIC REPORT

Workgroup (AAB#): WG404009
Product: 120.1\
Analyte: Conductivity

Analyst: TMM
Run Date: 07/20/2012 14:30

SAMPLE NUMBER	Cell	Multiplier	Reading	Dil	Analytical	Reported	Units
WG404009-01	.1021	1	3.31	1	0.3380	0.3380	umhos/cm
WG404009-02	1.078	1000	1.327	1	1431	1431	umhos/cm
WG404009-03	1.078	1000	1.327	1	1431	1431	umhos/cm
L12070264-01	1.078	1000	.504	1	543.3	543.3	umhos/cm
WG404009-04	1.078	1000	.504	1	543.3	543.3	umhos/cm
L12070265-01	1.078	1000	.549	1	591.8	591.8	umhos/cm
L12070266-01	1.078	1000	.67	1	722.3	722.3	umhos/cm
L12070267-01	1.078	1000	.462	1	498.0	498.0	umhos/cm
L12070268-01	1.078	1000	.632	1	681.3	681.3	umhos/cm
L12070269-01	1.078	1000	.647	1	697.5	697.5	umhos/cm
L12070270-01	1.078	1000	.65	1	700.7	700.7	umhos/cm
L12070271-01	1.078	1000	.621	1	669.4	669.4	umhos/cm
L12070271-02	1.078	1000	.344	1	370.8	370.8	umhos/cm
L12070327-01	1.078	1000	.505	1	544.4	544.4	umhos/cm
L12070327-02	1.078	1000	.376	1	405.3	405.3	umhos/cm
L12070327-03	1.078	1000	.373	1	402.1	402.1	umhos/cm
L12070328-01	1.078	1000	.44	1	474.3	474.3	umhos/cm
L12070328-02	1.078	1000	.299	1	322.3	322.3	umhos/cm
L12070328-03	1.078	1000	.459	1	494.8	494.8	umhos/cm
L12070328-04	1.078	1000	.434	1	467.9	467.9	umhos/cm
L12070328-05	1.078	1000	.437	1	471.1	471.1	umhos/cm
L12070328-06	1.078	1000	.382	1	411.8	411.8	umhos/cm
L12070373-01	1.078	1000	.4	1	431.2	431.2	umhos/cm
L12070272-01	1.078	1000	.416	1	448.4	448.4	umhos/cm
WG404009-06	1.078	1000	.416	1	448.4	448.4	umhos/cm
WG404009-05	1.078	1000	.51	1	549.8	549.8	umhos/cm
WG404009-07	1.078	1000	.42	1	452.8	452.8	umhos/cm

COND_REPORT - Modified 03/05/2008
Report generated 07/21/2012 13:02

[redacted]

2.2.6 Ammonia Data

2.2.6.1 Summary Data

Login Number: L12070328
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: 50496
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL05-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:37
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	SC120723001.017
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.135		0.100	0.0500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL18-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:40
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	SC120723001.020
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.0814	J	0.100	0.0500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL16-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:41
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	SC120723001.021
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-1	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:42
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.022
Sample Tag:	01	**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 07:42
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.023
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.954		0.100	0.0500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	350.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	350.1	**Cal Date:**	07/23/2012 07:28
Workgroup #:	WG404088	**Analyst:**	DIH	**Run Date:**	07/23/2012 08:13
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	SC120723001.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	0.960		0.100	0.0500

2.2.6.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809
Value of b from plot:	0.0004135
Absorbance of unknown from quantitation report (y):	0.31
Calculated concentration (x):	0.03964483
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	0.0396 mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796
Value of B from plot:	318.9056
Value of C from plot:	-2.2712
Absorbance of unknown from quantitation report (x):	0.1583
Calculated concentration (y):	50.7495108
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	50.75 mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 23-JUL-2012
Analyst: DIH
Analyst: NA
Method: NH3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404089 WG404088

Calibration/Linearity	7/23/2012
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	
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:
24-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 17:14:07

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 350.1 AAB#: WG404088

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/23/2012	11.9	28		07/23/12	11.9	28	
MPL18-0712-1	02	07/11/12					07/23/2012	11.9	28		07/23/12	11.9	28	
MPL16-0712-1	03	07/11/12					07/23/2012	11.8	28		07/23/12	11.8	28	
MPL17-0712-1	04	07/11/12					07/23/2012	11.7	28		07/23/12	11.7	28	
MPL17-0712-MS	05	07/11/12					07/23/2012	11.7	28		07/23/12	11.7	28	
MPL17-0712-MSD	06	07/11/12					07/23/2012	11.8	28		07/23/12	11.8	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2511184
Report generated 07/23/2012 14:46

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: SC120723001.009
Prep Date: 07/23/12 07:30
Analyzed Date: 07/23/12 07:30
Analyst: DIH

Work Group: WG404088
Blank Sample ID: WG404088-01
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	WG404088-02	SC120723001.010	07/23/12 07:31	01
MPL05-0712-1	L12070328-01	SC120723001.017	07/23/12 07:37	01
MPL18-0712-1	L12070328-02	SC120723001.020	07/23/12 07:40	01
MPL16-0712-1	L12070328-03	SC120723001.021	07/23/12 07:41	01
MPL17-0712-1	L12070328-04	SC120723001.022	07/23/12 07:42	01
MPL17-0712-MS	L12070328-05	SC120723001.023	07/23/12 07:42	01
DUP	WG404088-05	SC120723001.029	07/23/12 07:48	01
MPL17-0712-MSD	L12070328-06	SC120723001.057	07/23/12 08:13	01

Report Name: BLANK_SUMMARY
PDF File ID: 2511185
Report generated 07/23/2012 14:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/23/12 07:30 Sample ID: WG404088-01
Instrument ID: SMARTCHEM Run Date: 07/23/12 07:30 Prep Method: 350.1
File ID: SC120723001.009 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG404088 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-23-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: 2511186
23-JUL-2012 14:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Run Date: 07/23/2012 Sample ID: WG404088-02
Instrument ID: SMARTCHEM Run Time: 07:31 Prep Method: 350.1
File ID: SC120723001.010 Analyst: DIH Method: 350.1
Workgroup (AAB#): WG404088 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD49779 Cal ID: SMARTC-23-JUL-12

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrogen, Ammonia	2.00	1.89	94.5	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2511187
Report generated: 07/23/2012 14:46

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: SMARTCHEM- 23-JUL-12 Worknum: WG404088

Instrument ID: SMARTCHEM Contract #: Prep Method: 350.1

Parent ID: L12070328-04 File ID: SC120723001.022 Dil: 1 Method: 350.1

Sample ID: L12070328-05 MS File ID: SC120723001.023 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: SC120723001.057 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Nitrogen, Ammonia	U	1.00	0.954	95.4	1.00	0.960	96	0.575	90 - 110	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2511257
Report generated 07/23/2012 14:50

2.2.6.3 Raw Data

WORKGROUP: WG404088

404089

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 # 20120723001
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	07-319-01			
1-5	02			
1-6	03			
1-7	07-327-01			
1-8	02			
1-9	03			
1-10	07-328-01			
1-11	02			
1-12	03			
1-13	04			
1-14	MS 06			
1-15	MSd 06			
1-16	07-373-01			
1-17	02			
1-18	03			
1-19	06			
1-20	DUP 373-06			
1-21	MS 319-01			
1-22	BLK			
2-1	LCS 2			
2-2	LCSDUP			
2-3	07-361-01			

Position	Analyte	1	2	3
2-4	07-361-02			
2-5	07-581-01			
2-6	07-512-01	5ml/50 * 1/30 = 1/300		
2-7	02	5ml/50 * 1/30 = 1/300		
2-8	03	2ml/50 * 1/10 = 1/250		
2-9	06	5ml/50 * 3/30 = 1/30		
2-10	07-519-02			
2-11	07-600-01			
2-12	02			
2-13	03			
2-14	07-425-01			
2-15	02			
2-16	07-480-01			
2-17	MS-02			
2-18	MS-03			
2-19	DUP ~~480-01~~ 425-01			
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#91671

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
- [ ] 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 R18		Rot 17292
Curve Stock (SC made)	std 52564		Rot 17446
Curve ID (user made)			Rot 17450
ICV	std 52567		
CCV	std 525660		
LCS			
MS	see dest log Dilution		

Comments: appears 319-01 was not spiked

Analyst: [signature] Date: 7/23/12

DCN#91671

AMMONIA DISTILLATION LOG

SOP K3501 Revision # 18

LCS: std 49779
10(100)/100 = 10
DAILY DIL. 10(10)/50 = 2.0

SPIKE: std 49779
10(100)/100 = 10
DAILY DIL. 5(10)/50 = 1.0

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	✓	✓	
LCS(2.0) ✓	50	✓	✓	
07-319-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
03 ✓	50	✓	✓	
07-327-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
03 ✓	50	✓	✓	
07-328-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
03 ✓	50	✓	✓	
04Rep ✓	50	✓	✓	
05MS ✓	50	✓	✓	
06MSD	50	✓	✓	
07-373-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
03 ✓	50	✓	✓	
04 ✓	50	✓	✓	
DUP 07-373-06	50	✓	✓	
MS 07-319-01	50	✓	✓	

Analyst: Tammy Morris Date/Time: 7/20/12 @ 1300

*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 SPIKE: Std 49779 10(100)/100=10 WATER (mg/L)

DAILY DIL. 10(100)/50 = 2.0 DAILY DIL. 5(10)/50 1.0 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	✓	✓	
LCS(2.0) ✓	50	✓	✓	
LCS Dup (2.0) ✓	50	✓	✓	
07-512-01 ✓	5	✓	✓	
02 ✓	5	✓	✓	
03 ✓	2	✓	✓	
06 ✓	5	✓	✓	
07-361-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
07-581-01 ✓	50	✓	✓	
07-519-02 ✓	50	✓	✓	
07-600-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
03 ✓	50	✓	✓	
07-425-01 ✓	50	✓	✓	
02 ✓	50	✓	✓	
07-480-01 Rx	50	✓	✓	
DUP 07-425-02	50	✓	✓	
MS 07-480-02	50	✓	✓	
MS D 07-480-03	50	✓	✓	

Analyst: Tammy Morris Date/Time: 7/21/12 @ 900

*MS required on 10% of samples (EPA 350.1)
*MS/MS required on each set of 20 samples (SM4500)

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNH3 - EPA 350.1/SM4500-NH3 AMMONIA

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0533	0.00		7:21:04 AM
DIL-1	RBL	0.000	0.0524	0.00		7:21:22 AM
DIL-1	RBL	0.000	0.0546	0.00		7:22:52 AM
DIL-1	Std-1	0.000	-0.0004	0.00	INV	7:23:10 AM
SR5-1	Std-2	0.030	0.0076	0.00		7:24:40 AM
SR5-2	Std-3	0.094	0.0234	0.00		7:24:58 AM
SR5-3	Std-4	0.600	0.1624	0.00		7:26:28 AM
SR5-4	Std-5	1.050	0.2934	0.00		7:26:46 AM
SR5-5	Std-6	2.100	0.5589	0.00		7:28:17 AM
ST-1	Std-7	3.000	0.8200	0.00		7:28:34 AM
1	ICV 1.5	1.457	0.3957	0.00		7:30:04 AM
2	WG404088-01 BLK	0.041	0.0107	0.00		7:30:22 AM
3	WG404088-02 LCS	1.891	0.5135	0.00		7:31:53 AM
4	L12070319-01	0.124	0.0332	0.00		7:32:11 AM
5	L12070319-02	0.091	0.0242	0.00		7:33:41 AM
6	L12070319-03	0.062	0.0163	0.00		7:33:59 AM
7	L12070327-01	0.061	0.0161	0.00		7:35:29 AM
8	L12070327-02	0.045	0.0118	0.00		7:35:47 AM
9	L12070327-03	0.089	0.0238	0.00		7:37:17 AM
10	L12070328-01	0.136	0.0364	0.00		7:37:35 AM
ST-2	CCV (1.5 mg/L)	1.469	0.3989	97.94		7:39:05 AM
ST-3	CCB (0 mg/L)	0.064	0.0170	0.00		7:39:23 AM
11	L12070328-02	0.081	0.0217	0.00		7:40:53 AM
12	L12070328-03	0.045	0.0117	0.00		7:41:11 AM
13	L12070328-04	0.049	0.0130	0.00		7:42:41 AM
14	L12070328-05 MS	0.954	0.2589	0.00		7:42:59 AM
15	L12070328-06 MSD	0.019	0.0045	0.00		7:44:29 AM
16	L12070373-01	0.022	0.0056	0.00		7:44:47 AM
17	L12070373-02	0.023	0.0058	0.00		7:46:17 AM
18	L12070373-03	0.049	0.0130	0.00		7:46:35 AM
19	L12070373-06	0.054	0.0142	0.00		7:48:05 AM
20	WG404088-05 DUP	0.080	0.0212	0.00		7:48:23 AM

Report Date :07/23/2012 **Run Date :7/23/2012** **Operator : WESTCO** **Plan # :20120723001**

Plan Description : NH3-A-DIH/7/23/2012

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)	1.462	0.3969	97.45		7:49:53 AM
ST-3	CCB (0 mg/L)	0.072	0.0191	0.00		7:50:11 AM
21	WG404088-06 MS	0.028	0.0073	0.00		7:51:41 AM
22	WG404089-01 BLK	0.017	0.0043	0.00		7:51:59 AM
23	WG404089-02 LCS	1.926	0.5231	0.00		7:53:29 AM
24	WG404089-03 LCSDUP	1.730 X	0.4698	0.00		7:53:47 AM
25	L12070361-01	0.199	0.0536	0.00		7:55:17 AM
26	L12070361-02	0.135	0.0362	0.00		7:55:35 AM
27	L12070581-01	0.041	0.0106	0.00		7:57:05 AM
28	L12070512-01 (300)	1.886	0.5122	0.00		7:57:23 AM
29	L12070512-02 (300)	2.068	0.5617	0.00		7:58:53 AM
30	L12070512-03 (250)	1.332	0.3616	0.00		7:59:11 AM
ST-2	CCV (1.5 mg/L)	1.446	0.3925	96.37		8:00:41 AM
ST-3	CCB (0 mg/L)	0.067	0.0177	0.00		8:00:59 AM
31	L12070512-06 (30)	2.379	0.6463	0.00		8:02:30 AM
32	L12070519-02	0.175	0.0472	0.00		8:02:47 AM
33	L12070600-01	0.083	0.0221	0.00		8:04:17 AM
34	L12070600-02	0.096	0.0257	0.00		8:04:36 AM
35	L12070600-03	0.090	0.0241	0.00		8:06:06 AM
36	L12070425-01	0.101	0.0270	0.00		8:06:24 AM
37	L12070425-02	0.041	0.0108	0.00		8:07:53 AM
38	L12070480-01	0.097	0.0258	0.00		8:08:11 AM
39	L12070480-02 MS	1.015	0.2754	0.00		8:09:41 AM
40	L12070480-03 MSD	0.991	0.2690	0.00		8:09:59 AM
ST-2	CCV (1.5 mg/L)	1.454	0.3949	96.96		8:11:30 AM
ST-3	CCB (0 mg/L)	0.072	0.0191	0.00		8:11:48 AM
41	WG404089-05 DUP	0.058	0.0152	0.00		8:13:18 AM
42	ID 42 07-328-06 MSD	0.960	0.2604	0.00		8:13:36 AM
43	ID 43 LCS	1.957 X	0.5316	0.00		8:15:06 AM
44	ID 44 LCSDUP wg 404089-03	1.975	0.5365	0.00		8:15:24 AM
ST-2	CCV (1.5 mg/L)	1.458	0.3958	97.18		8:16:54 AM
ST-3	CCB (0 mg/L)	0.074	0.0198	0.00		8:17:12 AM

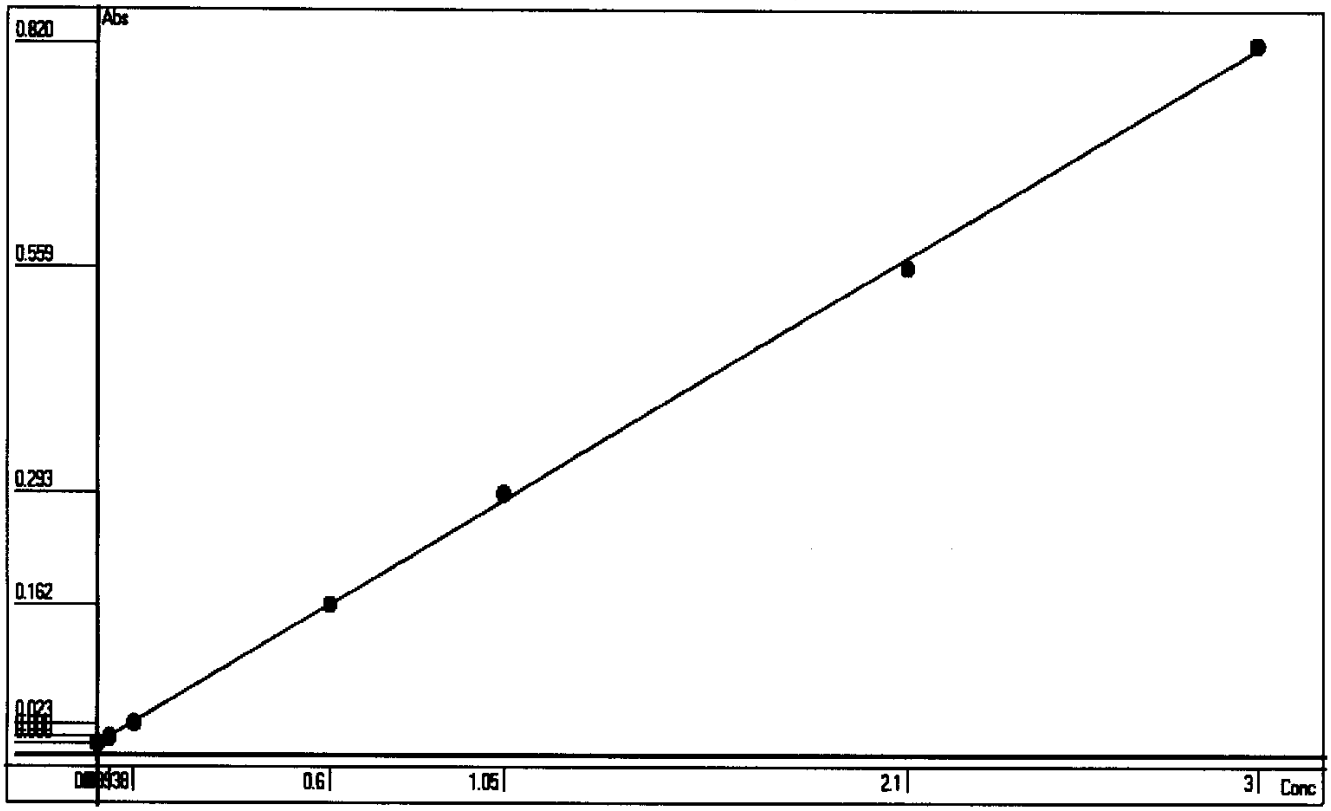
Report Date :07/23/2012 **Run Date :7/23/2012** **Operator : WESTCO** **Plan # :20120723001**

Plan Description : NH3-A-DIH/7/23/2012

Calibrant Report - WNH3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:Westco Scientific

Plan # : 20120723001 Description : [NH3-A-DIH/7/23/2012]



Point	OD	Conc	Recalc Conc	% Error
1	-0.0004	0	0.0003	0.03
2	0.0076	0.03	0.0298	-0.67
3	0.0234	0.0938	0.0879	-6.29
4	0.1624	0.6	0.5992	-0.13
5	0.2934	1.05	1.0812	2.97
6	0.5589	2.1	2.0579	-2.00
7	0.8200	3	3.0184	0.61

Conc= +3.6788*Abso +0.0018 R^2=0.9996

RBL
0.0529
0

Report Date 7/23/2012 Run Date 7/23/2012

2.2.7 Nitrate Data

2.2.7.1 Summary Data

Login Number: L12070328
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: Recoveries out of range were observed for the following analytes: Nitrate-Nitrite (as N). Please see the applicable QC report for a detailed presentation of the failures.

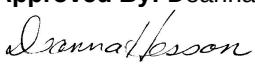
Duplicates: All acceptance criteria were met.

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: 50497
Approved By: Deanna Hesson



Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #: L12070328-01
Client ID: MPL05-0712-1
Matrix: Water
Workgroup #: WG403891
Collect Date: 07/11/2012 09:27
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: DIH
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 07/18/2012 07:55
Run Date: 07/18/2012 09:29
File ID: SC12072008134601

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.34		0.200	0.100

Sample #: L12070328-02
Client ID: MPL18-0712-1
Matrix: Water
Workgroup #: WG403891
Collect Date: 07/11/2012 10:14
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: DIH
Dilution: 1
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 07/18/2012 07:55
Run Date: 07/18/2012 09:29
File ID: SC12072008135101

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.67		0.0500	0.0250

Sample #: L12070328-03
Client ID: MPL16-0712-1
Matrix: Water
Workgroup #: WG403891
Collect Date: 07/11/2012 12:12
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: DIH
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 07/18/2012 07:55
Run Date: 07/18/2012 09:29
File ID: SC12072008140101

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.82		0.200	0.100

Sample #: L12070328-04
Client ID: MPL17-0712-1
Matrix: Water
Workgroup #: WG403891
Collect Date: 07/11/2012 14:00
Sample Tag:

PrePrep Method: N/A
Prep Method: 353.2
Analytical Method: 353.2
Analyst: DIH
Dilution: 4
Units: mg/L

Instrument: SMARTCHEM
Prep Date: N/A
Cal Date: 07/18/2012 07:55
Run Date: 07/18/2012 09:29
File ID: SC12072008140901

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.48		0.200	0.100

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MS	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	SC12072008143001
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.94		0.200	0.100

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	MPL17-0712-MSD	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	07/18/2012 07:55
Workgroup #:	WG403891	**Analyst:**	DIH	**Run Date:**	07/18/2012 09:29
Collect Date:	07/11/2012 14:00	**Dilution:**	4	**File ID:**	SC12072008143601
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.90		0.200	0.100

2.2.7.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
y = instrument response as absorbance or OD
x = concentration of analyte (mg/L)
y = mx + b

Step 2: Calculate the instrument concentration, x

Where:

x = (y - b)/m

Step 3: Solve for analyte concentration in sample, Cx

Cx = (x) (D)

Example Calculation (LCS):

Value of m from plot:	7.809	
Value of b from plot:	0.0004135	
Absorbance of unknown from quantitation report (y):	0.31	
Calculated concentration (x):	0.03964483	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	0.0396	mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression

x = instrument response as absorbance or OD

y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

y = Ax^2 + Bx + C

Step 3: Solve for analyte concentration in sample, Cy

Cy = (y) (D)

Example Calculation (LCS):

Value of A from plot:	101.2796	
Value of B from plot:	318.9056	
Value of C from plot:	-2.2712	
Absorbance of unknown from quantitation report (x):	0.1583	
Calculated concentration (y):	50.7495108	
Dilution factor (D):	1.00	
Concentration of analyte in sample, Cy:	50.75	mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 18-JUL-2012
Analyst: DIH
Analyst: NA
Method: NO3
Instrument: SC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403891

Calibration/Linearity	7/18/2012
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	
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:
21-JUL-2012

Secondary Reviewer:
21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 08:50:42

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 353.2 AAB#: WG403891

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/18/2012	7	28		07/18/12	7	28	
MPL18-0712-1	02	07/11/12					07/18/2012	7	28		07/18/12	7	28	
MPL16-0712-1	03	07/11/12					07/18/2012	6.9	28		07/18/12	6.9	28	
MPL17-0712-1	04	07/11/12					07/18/2012	6.8	28		07/18/12	6.8	28	
MPL17-0712-MS	05	07/11/12					07/18/2012	6.8	28		07/18/12	6.8	28	
MPL17-0712-MSD	06	07/11/12					07/18/2012	6.8	28		07/18/12	6.8	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2505984
Report generated 07/20/2012 08:48

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: SC12072008120001
Prep Date: 07/18/12 09:29
Analyzed Date: 07/18/12 09:29
Analyst: DIH

Work Group: WG403891
Blank Sample ID: WG403891-01
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
MPL17-0712-MSD	L12070328-06	SC12072008143601	07/18/12 09:29	
LCS	WG403891-02	SC12072008120901	07/18/12 09:29	
MPL16-0712-1	L12070328-03	SC12072008140101	07/18/12 09:29	
LCS2	WG403891-03	SC12072008121501	07/18/12 09:29	
MPL17-0712-1	L12070328-04	SC12072008140901	07/18/12 09:29	
DUP	WG403891-05	SC12072008122201	07/18/12 09:29	
MPL05-0712-1	L12070328-01	SC12072008134601	07/18/12 09:29	
MPL18-0712-1	L12070328-02	SC12072008135101	07/18/12 09:29	
MPL17-0712-MS	L12070328-05	SC12072008143001	07/18/12 09:29	

Report Name: BLANK_SUMMARY
PDF File ID: 2505985
Report generated 07/20/2012 08:48

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/18/12 09:29 Sample ID: WG403891-01
Instrument ID: SMARTCHEM Run Date: 07/18/12 09:29 Prep Method: 353.2
File ID: SC12072008120001 Analyst: DIH Method: 353.2
Workgroup (AAB#): WG403891 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-18-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: 2505986
20-JUL-2012 08:48

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: DIH Prep Method: 353.2
Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
Workgroup (AAB#): WG403891 Units: mg/L
QC Key: DOD4 Lot #: STD52750

Sample ID: WG403891-02 LCS File ID: SC12072008120901 Run Date: 07/18/2012 09:29
Sample ID: WG403891-03 LCS2 File ID: SC12072008121501 Run Date: 07/18/2012 09:29

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate-Nitrite (as N)	1.00	1.04	104	1.00	1.03	103	1.74	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2505987
Report generated: 07/20/2012 08:48

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: SMARTCHEM- 18-JUL-12 Worknum: WG403891

Instrument ID: SMARTCHEM Contract #: Prep Method: 353.2

Parent ID: L12070328-04 File ID: SC12072008140901 Dil: 4 Method: 353.2

Sample ID: L12070328-05 MS File ID: SC12072008143001 Dil: 4 Matrix: Water

Sample ID: L12070328-06 MSD File ID: SC12072008143601 Dil: 4 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Nitrate-Nitrite (as N)	5.48	0.500	5.94	92	0.500	5.90	82.4	0.811	90 - 110	15	*

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2506024
Report generated 07/20/2012 08:50

2.2.7.3 Raw Data

Wg 403891

SMARTCHEM RUN LOG

Daily Check

- ✓ Lamp On
- ✓ Probe Rinse Full
- ✓ DI Water > ½ Full
- ✓ Wash Solution > ½ Full
- ✓ NO3 Reagent bottle connected / purged
- ✓ NO3 pH adj to pH 5-9
- ✓ WBL Run
- ✓ Reagents Full
- ✓ Dilution H_2O Full
- ✓ Waste Container Check

Syringe filter lot # 144403

1) **Workgroup** _____
Plan # 20120718002
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			
1-4	LCSDUP			
1-5	NO2			
1-6	07-380-02	1/15		
1-7	07-355-01			
1-8	03			
1-9	05			
1-10	07			
1-11	07-354-01			
1-12	07-385-01		NH4 NO2	Avio 1/20
1-13	07-414-01			
1-14	07-319-01	1/5		color
1-15	02	1/5		↓
1-16	03	1/5		↓
1-17	07-327-01		NH4	
1-18	02		NH4	
1-19	03			
1-20	07-328-01			
1-21	02			
1-22	03			
2-1	04			
2-2	MS 05			
2-3	MSd 06			

Analyte		1	2	3
Position				
2-4	07-423-01			
2-5	07-424-01			
2-6	DUP			
2-7	MS ↓			
2-8 R	LCS 1			
3 1 2-9 R	LCSDUP 1			
3 2-10 R	NO2 1			
3 2-11	07-380-02			
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#91593

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
- ☑ 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 R		Rgt 17254
Curve Stock (SC made)	std 52843		Rgt 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: [signature] Date: 7/18/12

DCN#91593

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-Nitrlte

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag		Analysis Time
DIL-1	RBL	0.000	0.0222	0.00			9:16:46 AM
DIL-1	RBL	0.000	0.0187	0.00			9:17:58 AM
DIL-1	RBL	0.000	0.0183	0.00			9:19:10 AM
DIL-1	RBL	0.000	0.0205	0.00			9:20:22 AM
DIL-1	Std-1	0.000	0.0021	0.00			9:21:35 AM
SR5-1	Std-2	0.040	0.0183	0.00			9:22:46 AM
SR5-2	Std-3	0.100	0.0390	0.00			9:23:58 AM
SR5-3	Std-4	0.500	0.1923	0.00			9:25:11 AM
SR5-4	Std-5	1.000	0.4040	0.00			9:26:23 AM
ST-1	Std-6	2.000	0.7586	0.00			9:27:35 AM
1	ICV 1.5	1.449	0.5573	0.00			9:28:47 AM
2	BLANK	-0.014	-0.0012	0.00	INV,><,LL		9:29:59 AM
3	LCS	0.892 X	0.3445	0.00			9:31:11 AM
4	LCSDUP	0.883 X	0.3411	0.00			9:32:23 AM
5	NO2	1.178	0.4538	0.00			9:33:35 AM
6	L12070380-02 (15)	-0.008 X	0.0010	0.00	><,LL	NO2	9:34:47 AM
7	L12070355-01	-0.010	0.0004	0.00	><,LL	0	9:35:59 AM
8	L12070355-03	-0.013	-0.0009	0.00	INV,><,LL	0	9:37:11 AM
9	L12070355-05	0.100	0.0422	0.00		0	9:38:23 AM
10	L12070355-07	0.078	0.0340	0.00		0	9:39:35 AM
ST-2	CCV (1 mg/L)	0.989	0.3815	98.87			9:40:47 AM
ST-3	CCB (0 mg/L)	-0.015	-0.0016	0.00	INV,><,LL		9:41:59 AM
11	L12070354-01	0.019	0.0114	0.00		0	9:43:11 AM
12	L12070385-01	9.982 X	3.8131	0.00	EPL,><,LH		9:44:23 AM
13	L12070414-01	0.138	0.0568	0.00			9:45:35 AM
14	L12070319-01 (5)	-0.001	0.0039	0.00	LL		9:46:47 AM
15	L12070319-02 (5)	-0.004	0.0027	0.00	LL		9:47:59 AM
16	L12070319-03 (5)	-0.002	0.0033	0.00	LL		9:49:11 AM
17	L12070327-01	5.790 X	2.2135	0.00	><,LH		9:50:23 AM
18	L12070327-02	4.436 X	1.6971	0.00	><,LH		9:51:35 AM
19	L12070327-03	4.500 X	1.7212	0.00	><,LH		9:52:47 AM
20	L12070328-01	4.745 X	1.8148	0.00	><,LH		9:53:59 AM

Report Date :07/18/2012 **Run Date :7/18/2012** **Operator : WESTCO** **Plan # :20120718002**

Plan Description : NO3-A-DIH/7/18/2012

MICROBAC (OVD)

SMARTCHEM REPORT (VER3.0.53)

NH3, TKN, NO3NO2 (MG/L N)

ALK (MG/L CaCO3) CL, SO4 (MG/L)

Method : WNO3 - EPA 353.2 Nitrate-Nitrite

Smp#/[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag		Analysis Time
ST-2	CCV (1 mg/L)	0.966	0.3728	96.59			9:55:11 AM
ST-3	CCB (0 mg/L)	-0.014	-0.0012	0.00	INV,><,LL		9:56:29 AM
21	L12070328-02	1.673	0.6427	0.00			9:57:35 AM
22	L12070328-03	5.065 X	1.9370	0.00	><,LH		9:58:47 AM
23	L12070328-04	4.859 X	1.8583	0.00	><,LH		10:00:00 AM
24	L12070328-05 MS	5.287 X	2.0217	0.00	><,LH		10:01:11 AM
25	L12070328-06 MSD	5.498 X	2.1020	0.00	EPL,><,LH		10:02:24 AM
26	L12070423-01	0.629	0.2444	0.00		0.028	10:03:36 AM
27	L12070424-01	0.507	0.1976	0.00		0.039	10:04:48 AM
28	DUP 424-01	0.494	0.1927	0.00			10:06:00 AM
29	MS 424-01	0.965	0.3725	0.00			10:07:12 AM
30	ID 30 LCS	1.043	0.4021	0.00			10:08:24 AM
ST-2	CCV (1 mg/L)	0.969	0.3738	96.85			10:09:36 AM
ST-3	CCB (0 mg/L)	-0.011	0.0001	0.00	><,LL		10:10:48 AM
49	Add-ID 49 LCSDUP	1.025	0.3953	0.00			10:12:00 AM
50	Add-ID 50 NO2	0.982	0.3791	0.00			10:13:12 AM
51	Add-ID 51 07-380-02	0.875 X	0.3380	0.00		0.018	10:14:24 AM
ST-2	Add-CCV (1 mg/L)	0.987	0.3807	98.66			10:15:36 AM
ST-3	Add-CCB (0 mg/L)	-0.012	-0.0002	0.00	INV,><,LL		10:16:48 AM
12-[1/4]	L12070385-01 (2)	5.378	0.5173	0.00	LH	0.021	10:25:59 AM
17-[1/4]	L12070327-01	6.580	0.6319	0.00	LH		10:28:05 AM
18-[1/4]	L12070327-02	5.021	0.4832	0.00	LH		10:30:11 AM
19-[1/4]	L12070327-03	4.886	0.4703	0.00	LH		10:32:16 AM
20-[1/4]	L12070328-01	5.334	0.5131	0.00	LH		10:34:23 AM
22-[1/4]	L12070328-03	5.821	0.5595	0.00	LH		10:36:29 AM
23-[1/4]	L12070328-04	5.483	0.5273	0.00	LH		10:38:34 AM
ST-2	CCV (1 mg/L)	0.946	0.3651	94.57			10:39:30 AM
ST-3	CCB (0 mg/L)	-0.018	-0.0027	0.00	INV,><,LL		10:40:40 AM
24-[1/4]	L12070328-05 MS	5.943	0.5712	0.00	LH		10:43:04 AM
25-[1/4]	L12070328-06 MSD	5.894	0.5665	0.00	LH		10:45:10 AM
ST-2	CCV (1 mg/L)	0.994	0.3835	99.40			10:46:04 AM
ST-3	CCB (0 mg/L)	-0.015	-0.0013	0.00	INV,><,LL		10:47:16 AM

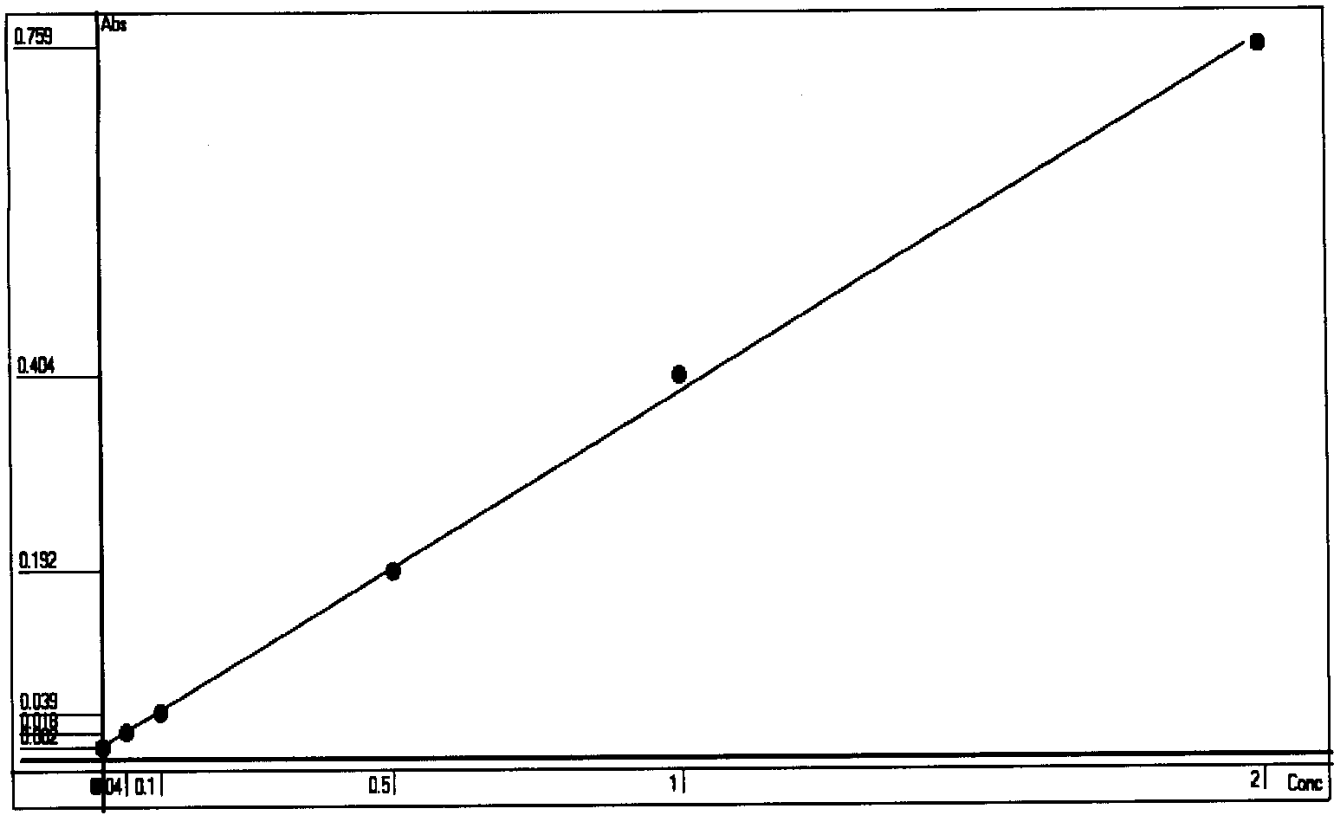
Report Date :07/18/2012 **Run Date :7/18/2012** **Operator : WESTCO** **Plan # :20120718002**

Plan Description : NO3-A-DIH/7/18/2012

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:6/17/2020 User:MICROBAC

Plan # : 20120718002 Description : [NO3-A-DIH/7/18/2012]



Point	OD	Conc	Recalc Conc	% Error
1	0.0021	0	-0.0056	-0.56
2	0.0183	0.04	0.0369	-7.75
3	0.0390	0.1	0.0911	-8.90
4	0.1923	0.5	0.4928	-1.44
5	0.4040	1	1.0476	4.76
6	0.7586	2	1.9769	-1.16

Conc= +2.6206*Abso -0.0111 R^2=0.9990

RBL
0.0196
0

Report Date 7/18/2012 Run Date 7/18/2012

2.2.8 Orthophosphate Data

2.2.8.1 Summary Data

Login Number: L12070328
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: 50498
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL05-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	1V.1207130825-05
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL18-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	1V.1207130825-06
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 #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL16-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	1V.1207130825-07
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 #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-1	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-08
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 #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MS	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-17
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.389		0.0500	0.0250

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	UV-120-1V
Client ID:	MPL17-0712-MSD	**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 #:	WG403262	**Analyst:**	HJR	**Run Date:**	07/13/2012 08:25
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	1V.1207130825-18
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.395		0.0500	0.0250

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: 13-JUL-2012
Analyst: HJR
Analyst: NA
Method: PO4
Instrument: UV-120-1V
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403262

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:
23-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 15:32:27

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: SM4500-P-E-20th

AAB#: WG403262

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/13/2012	2	2		07/13/12	2	2	
MPL18-0712-1	02	07/11/12					07/13/2012	1.9	2		07/13/12	1.9	2	
MPL16-0712-1	03	07/11/12					07/13/2012	1.8	2		07/13/12	1.8	2	
MPL17-0712-1	04	07/11/12					07/13/2012	1.8	2		07/13/12	1.8	2	
MPL17-0712-MS	05	07/11/12					07/13/2012	1.8	2		07/13/12	1.8	2	
MPL17-0712-MSD	06	07/11/12					07/13/2012	1.8	2		07/13/12	1.8	2	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2510759
Report generated 07/23/2012 13:52

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: 1V.1207130825-02
Prep Date: 07/13/12 08:25
Analyzed Date: 07/13/12 08:25
Analyst: HJR

Work Group: WG403262
Blank Sample ID: WG403262-01
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	WG403262-02	1V.1207130825-03	07/13/12 08:25	
LCS2	WG403262-03	1V.1207130825-04	07/13/12 08:25	
MPL05-0712-1	L12070328-01	1V.1207130825-05	07/13/12 08:25	
MPL18-0712-1	L12070328-02	1V.1207130825-06	07/13/12 08:25	
MPL16-0712-1	L12070328-03	1V.1207130825-07	07/13/12 08:25	
MPL17-0712-1	L12070328-04	1V.1207130825-08	07/13/12 08:25	
DUP	WG403262-05	1V.1207130825-16	07/13/12 08:25	
MPL17-0712-MS	L12070328-05	1V.1207130825-17	07/13/12 08:25	
MPL17-0712-MSD	L12070328-06	1V.1207130825-18	07/13/12 08:25	

Report Name: BLANK_SUMMARY
PDF File ID: 2510760
Report generated 07/23/2012 13:52

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/13/12 08:25 Sample ID: WG403262-01
Instrument ID: UV-120-1V Run Date: 07/13/12 08:25 Prep Method: SM4500-P-E-20th
File ID: 1V.1207130825-02 Analyst: HJR Method: SM4500-P-E-20th
Workgroup (AAB#): WG403262 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-10-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: 2510761
23-JUL-2012 13:52

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: HJR Prep Method: SM4500-P-E-20th
Instrument ID: UV-120-1V Matrix: Water Method: SM4500-P-E-20th
Workgroup (AAB#): WG403262 Units: mg/L
QC Key: DOD4 Lot #: STD52757

Sample ID: WG403262-02 LCS File ID: 1V.1207130825-03 Run Date: 07/13/2012 08:25
Sample ID: WG403262-03 LCS2 File ID: 1V.1207130825-04 Run Date: 07/13/2012 08:25

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Orthophosphate	1.00	0.999	99.9	1.00	0.994	99.4	0.462	90 - 110	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2510762
Report generated: 07/23/2012 13:52

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: UV-120-1V- 22-JUN-12 Worknum: WG403262

Instrument ID: UV-120-1V Contract #: Prep Method: SM4500-P-E-20th

Parent ID: L12070328-04 File ID: 1V.1207130825-08 Dil: 1 Method: SM4500-P-E-20th

Sample ID: L12070328-05 MS File ID: 1V.1207130825-17 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: 1V.1207130825-18 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Orthophosphate	U	0.400	0.389	97.3	0.400	0.395	98.9	1.57	90 - 110	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2510763
Report generated 07/23/2012 13:52

2.2.8.3 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

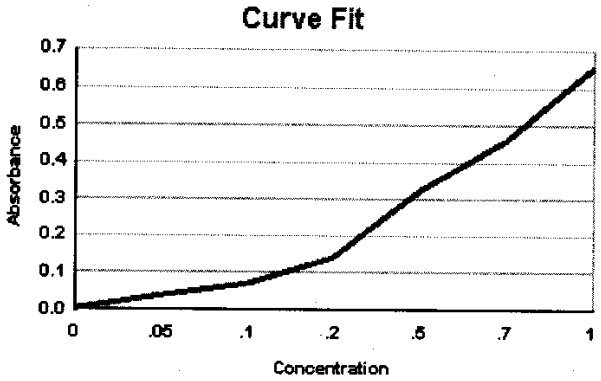
Microbac Laboratories Inc.
INITIAL CALIBRATION

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]

ORTHOPHOSPHATE

EPA 365.2/SM4500-P E
SOP K3653 Rev 13

Color Reagent Chemicals
GOA 13323
RGT 17074
RGT 17484
RGT 17320

CCV: Std 52756
Daily Dilution: 5(5)/50
Daily Dilution: 0.5
Spectrophotometer: UV-120-1V

LCS: Std 52757
Daily Dilution: 5(10)/50
Daily Dilution: 1.0
Curve ID: 3/21/12

Spike: Std 52757
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	✓		0.328
BLANK	50	✓		0.001
LCS: 1.0 ppm	50	✓		0.654
LCSDUP: 1.0 ppm	50	✓		0.651
07-0328-01	50	✓		0.007
-02	50	✓		0.005
-03	50	✓		0.002
RS -04	50	✓		0.006
MDL 0.025 - 07-0001-01	50	✓		~~0.019~~ 0.019
07-0003-01	50	✓		~~0.036~~ 0.036
RL 0.05	50			
	50			
L12070373-01	50	✓		0.059
02	50	✓		0.007
03	50	✓		0.010
06	50	✓		0.006
CCV	50	✓		0.327
	50			
	50			
	50			
	50			
DUP: ~~07-0328-04~~	50	✓		0.005
MS: (0.4) -05	50	✓		0.257
MSD: (0.4) -06	50	✓		0.261
CCV: (0.5)	50	✓		0.326

ANALYST: [signature] DATE / TIME: 7/13/12 0825

MDL = 1(5)/200 = 0.025 mg/L
RL = 1(5)/100 = 0.05 mg/L

DCN#91542

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG403262
Analyte: ORTHOPHOSPHATE

Analyst: HJR
Date: 07/13/2012

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG403262-01	50	50	0.00100	0.6513	0.003462	-0.0037795	-0.0037795	1	mg/L
WG403262-02	50	50	0.654	0.6513	0.003462	0.99886	0.99886	1	mg/L
WG403262-03	50	50	0.651	0.6513	0.003462	0.99425	0.99425	1	mg/L
L12070328-01	50	50	0.00700	0.6513	0.003462	0.0054331	ND	1	mg/L
L12070328-02	50	50	0.00500	0.6513	0.003462	0.0023622	ND	1	mg/L
L12070328-03	50	50	0.00200	0.6513	0.003462	-0.0022441	ND	1	mg/L
L12070328-04	50	50	0.00600	0.6513	0.003462	0.0038976	ND	1	mg/L
WG403262-04	50	50	0.00600	0.6513	0.003462	0.0038976	0.0038976	1	mg/L
L12070001-01	50	50	0.0190	0.6513	0.003462	0.023858	0.023858	1	mg/L
L12070003-01	50	50	0.0360	0.6513	0.003462	0.049961	0.049961	1	mg/L
L12070373-01	50	50	0.0590	0.6513	0.003462	0.085276	0.085276	1	mg/L
L12070373-02	50	50	0.00700	0.6513	0.003462	0.0054331	ND	1	mg/L
L12070373-03	50	50	0.0100	0.6513	0.003462	0.010039	ND	1	mg/L
L12070373-06	50	50	0.00600	0.6513	0.003462	0.0038976	ND	1	mg/L
WG403262-05	50	50	0.00500	0.6513	0.003462	0.0023622	0.0023622	1	mg/L
L12070328-05	50	50	0.257	0.6513	0.003462	0.38929	0.38929	1	mg/L
WG403262-06	50	50	0.257	0.6513	0.003462	0.38929	0.38929	1	mg/L
L12070328-06	50	50	0.261	0.6513	0.003462	0.39543	0.39543	1	mg/L
WG403262-07	50	50	0.261	0.6513	0.003462	0.39543	0.39543	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 07/23/2012 08:34

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404106
File ID: 1V.1207130825-01
CCV ID: WG404106-01
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 07/13/2012
Run Time: 08:25
Analyst: HJR
Cal ID: UV-120 - 10-JUL-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.498	0.656	0.4	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 08:25

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404106
File ID: 1V.1207130825-15
CCV ID: WG404106-02
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 07/13/2012
Run Time: 08:25
Analyst: HJR
Cal ID: UV-120 - 10-JUL-12

Analyte	Expected	Found	RF	%D	Q
Orthophosphate	.5	0.497	0.654	0.6	

* Exceeds %D Limit

CCC Calibrtion Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 07/23/2012 08:25

[redacted]

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG404106
File ID: 1V.1207130825-19
CCV ID: WG404106-03
Units: mg/L
Analyte: ORTHOPHOSPHATE

Instrument ID: UV-120-1V
Run Date: 07/13/2012
Run Time: 08:25
Analyst: HJR
Cal ID: UV-120 - 10-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 07/23/2012 08:25

[redacted]

2.2.9 Total Dissolved Solids Data

2.2.9.1 Summary Data

Login Number: L12070328
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: 50501
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL05-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	EN.1207131430-20
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		286		20.0	10.0

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	EN.1207131430-21
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		180		20.0	10.0

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL16-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403316	**Analyst:**	ERP	**Run Date:**	07/13/2012 14:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	EN.1207131430-22
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		296		20.0	10.0

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-1	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-05
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		312		20.0	10.0

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MS	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-06
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		774		20.0	10.0

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MSD	**Prep Method:**	160.1/SM2540C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.1	**Cal Date:**	
Workgroup #:	WG403480	**Analyst:**	ERP	**Run Date:**	07/16/2012 12:52
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161252-07
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		780		20.0	10.0

2.2.9.2 QC Summary Data

Example Total Dissolved Solids Calculations

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 13-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403316

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: 18-JUL-2012
Secondary Reviewer: 21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 09:07:50

Microbac Laboratories Inc.

Data Checklist

Date: 16-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TDS
Instrument: OVEN
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403480

Calibration/Linearity	
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
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: 17-JUL-2012

Secondary Reviewer: 21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 09:07:49

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG403316

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/13/2012	2.2	7		07/13/12	2.2	7	
MPL18-0712-1	02	07/11/12					07/13/2012	2.2	7		07/13/12	2.2	7	
MPL16-0712-1	03	07/11/12					07/13/2012	2.1	7		07/13/12	2.1	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2500546
Report generated 07/19/2012 12:17

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.1 AAB#: WG403480

Login Number: L12070328

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
MPL17-0712-1	04	07/11/12					07/16/2012	5	7		07/16/12	5	7	
MPL17-0712-MS	05	07/11/12					07/16/2012	5	7		07/16/12	5	7	
MPL17-0712-MSD	06	07/11/12					07/16/2012	5	7		07/16/12	5	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2500546
Report generated 07/19/2012 12:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: EN.1207131430-01
Prep Date: 07/13/12 14:30
Analyzed Date: 07/13/12 14:30
Analyst: ERP

Work Group: WG403316
Blank Sample ID: WG403316-01
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	WG403316-02	EN.1207131430-02	07/13/12 14:30	
LCS2	WG403316-03	EN.1207131430-03	07/13/12 14:30	
MPL05-0712-1	L12070328-01	EN.1207131430-20	07/13/12 14:30	
MPL18-0712-1	L12070328-02	EN.1207131430-21	07/13/12 14:30	
MPL16-0712-1	L12070328-03	EN.1207131430-22	07/13/12 14:30	
DUP	WG403316-05	EN.1207131430-24	07/13/12 14:30	
DUP	WG403316-07	EN.1207131430-25	07/13/12 14:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2500547
Report generated 07/19/2012 12:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: EN.1207161252-01
Prep Date: 07/16/12 12:52
Analyzed Date: 07/16/12 12:52
Analyst: ERP

Work Group: WG403480
Blank Sample ID: WG403480-01
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	WG403480-02	EN.1207161252-02	07/16/12 12:52	
LCS2	WG403480-03	EN.1207161252-03	07/16/12 12:52	
MPL17-0712-1	L12070328-04	EN.1207161252-05	07/16/12 12:52	
MPL17-0712-MS	L12070328-05	EN.1207161252-06	07/16/12 12:52	
MPL17-0712-MSD	L12070328-06	EN.1207161252-07	07/16/12 12:52	
DUP	WG403480-08	EN.1207161252-23	07/16/12 12:52	
DUP	WG403480-10	EN.1207161252-24	07/16/12 12:52	

Report Name: BLANK_SUMMARY
PDF File ID: 2500547
Report generated 07/19/2012 12:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/13/12 14:30 Sample ID: WG403316-01
Instrument ID: OVEN Run Date: 07/13/12 14:30 Prep Method: 160.1/SM2540C
File ID: EN.1207131430-01 Analyst: ERP Method: 160.1
Workgroup (AAB#): WG403316 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: 2500548
19-JUL-2012 12:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/16/12 12:52 Sample ID: WG403480-01
Instrument ID: OVEN Run Date: 07/16/12 12:52 Prep Method: 160.1/SM2540C
File ID: EN.1207161252-01 Analyst: ERP Method: 160.1
Workgroup (AAB#): WG403480 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: 2500548
19-JUL-2012 12:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: ERP Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG403316 Units: mg/L
QC Key: DOD4 Lot #: STD50945

Sample ID: WG403316-02 LCS File ID: EN.1207131430-02 Run Date: 07/13/2012 14:30
Sample ID: WG403316-03 LCS2 File ID: EN.1207131430-03 Run Date: 07/13/2012 14:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	476	95.2	500	478	95.6	0.419	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2500549
Report generated: 07/19/2012 12:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: ERP Prep Method: 160.1/SM2540C
Instrument ID: OVEN Matrix: Water Method: 160.1
Workgroup (AAB#): WG403480 Units: mg/L
QC Key: DOD4 Lot #: STD50945

Sample ID: WG403480-02 LCS File ID: EN.1207161252-02 Run Date: 07/16/2012 12:52
Sample ID: WG403480-03 LCS2 File ID: EN.1207161252-03 Run Date: 07/16/2012 12:52

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Dissolved Solids	500	450	90.0	500	444	88.8	1.34	80 - 120	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2500549
Report generated: 07/19/2012 12:17

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: OVEN- Worknum: WG403480

Instrument ID: OVEN Contract #: Prep Method: 160.1/SM2540

Parent ID: L12070328-04 File ID: EN.1207161252-05 Dil: 1 Method: C

Sample ID: L12070328-05 MS File ID: EN.1207161252-06 Dil: 1 Matrix: 160.1

Sample ID: L12070328-06 MSD File ID: EN.1207161252-07 Dil: 1 Units: Water

mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Total Dissolved Solids	312	500	774	92.4	500	780	93.6	0.772	80 - 120	10	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 2500550

Report generated 07/17/2012 16:32

2.2.9.3 Raw Data

TOTAL DISSOLVED SOLIDS

Oven: TDS1/MISC1
Balance: AND GR-202 / Other
Matrix Spike:
Daily Dilution:
Filter Lot #:

SOP K1601 Revision #:
☐ EPA 160.1/ SM2540C
LCS: 5405945
Daily Dilution:
On Temp: 103 1410 181 0730 181 1300

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	W9	100				
LCS: ____mg/L	AA	50				
LCSDUP: ____mg/L	K8	50				
24 hr → 7-421-1	W7	50				
7-328-4 P	L7	50				
5 MS	7	50				
6 MSD	B8	50				
7-349-1	B4	50				
7-353-1	W1	50				
7-355-1	W5	50				
3	P4	50				
5	X	50				
7	5	50				
7-373-1	L	50				
2	Q	50				
3	W3	50				
6	K	50				
7-379-1	K7	50				
7-384-2	R	50				
4	D2	50				
6	D1	50				
8	SM	50				
10	11T	50				
DUP: ~~7-384-8~~	D7	50				
DUP: ~~7-384-10~~	D3	50				

Off Temp: 103 0740 180 1200 181 1430

ANALYST: [signature]

DATE/TIME: (on) 7-16-12 1416
DATE/TIME: (off)
DATE/TIME: (off)
DATE/TIME: (off)

* Duplicate required on 10% of samples

7-384-12	Q	50
7-422-1	K6	50

DCN#91565

TOTAL DISSOLVED SOLIDS

Oven: TDS1 MISC1

Balance: AND GR-202 / Other

SOP K1601 Revision #: _____

☐ EPA 160.1/ SM2540C

LCS: STDS0945

Daily Dilution: _____

Matrix Spike: _____

Daily Dilution: _____

Filter Lot #: 42742

On Temp: 103 1500 179 0740 180 1430 181 1430

SAMPLE	#	VOLUME (mL)	INITIAL WEIGHT WT1 (g)	DRY WEIGHT WT2A (g)	DRY WEIGHT WT2B (g)	DRY WEIGHT WT2C (g)
BLANK	W2	100				
LCS: _____mg/L	E	50				
LCSDUP: _____mg/L	P5	50				
7-264-1	Y5	50				
7-265-1	L17	50				
7-266-1	B	50				
7-267-1	P3	50				
7-268-1	P2	50				
7-269-1	W4	50				
7-270-1	K9	50				
7-271-1	F	50				
2	B7	50				
7-272-1	K4	50				
7-282-1	L14	50				
EW 7-~~23~~ 327-1	J4	50				
2	7	50				
3	A	50				
7-295-2	9	50				
7-296-1	23	50				
7-328-1	12X	50				
2	C12	50				
3	X	50				
7-318-1	C	50				
DUP: ~~7-264-1~~	N1	50				
DUP: ~~7-265-2~~	N2	50				

Off Temp: 103 0740 180 1530 181 1300 181 1535

ANALYST: Ew Por

DATE/TIME: (on) 7-13-12 1500 103

DATE/TIME: (off) _____

DATE/TIME: (off) _____

DATE/TIME: (off) _____

* Duplicate required on 10% of samples

DCN#91547

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG403316
Analyst: ERP
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD50945
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG403316-01	W2	100	77.9695	77.9696	77.9693			-2.000	mg/L
WG403316-02	E	50	69.3945	69.4181	69.4183			476.0	mg/L
WG403316-03	P5	50	75.5608	75.5846	75.5847			478.0	mg/L
L12070264-01	K5	50	79.537	79.552	79.5522			304.0	mg/L
WG403316-04	K5	50	79.537	79.552	79.5522			304.0	mg/L
L12070265-01	L17	50	77.9656	77.9827	77.9826			340.0	mg/L
WG403316-06	L17	50	77.9656	77.9827	77.9826			340.0	mg/L
L12070266-01	B	50	73.7671	73.786	73.7861			380.0	mg/L
L12070267-01	P3	50	75.3136	75.3287	75.3282			292.0	mg/L
L12070268-01	P2	50	80.676	80.6953	80.6954			388.0	mg/L
L12070269-01	W4	50	81.622	81.6418	81.6421			402.0	mg/L
L12070270-01	K9	50	83.7911	83.8108	83.8107			392.0	mg/L
L12070271-01	F	50	70.0742	70.0933	70.0933			382.0	mg/L
L12070271-02	B7	50	64.6007	64.6096	64.6097			180.0	mg/L
L12070272-01	K4	50	82.2025	82.2151	82.215			250.0	mg/L
L12070282-01	L14	50	77.7238	77.9384	77.9323	77.9325	4174	4174	mg/L
L12070327-01	J4	50	58.0471	58.0654	58.065			358.0	mg/L
L12070327-02	7	50	55.6517	55.6635	55.664			246.0	mg/L
L12070327-03	A	50	51.4411	51.4598	51.4602			382.0	mg/L
L12070295-02	9	50	51.6499	51.7124	51.7125			1252	mg/L
L12070296-01	23	50	49.8725	49.958	49.9575			1700	mg/L
L12070328-01	12X	50	55.1365	55.1506	55.1508			286.0	mg/L
L12070328-02	C12	50	69.4605	69.469	69.4695			180.0	mg/L
L12070328-03	X	50	61.4007	61.416	61.4155			296.0	mg/L
L12070318-01	C1	50	64.524	64.6986	64.6988			3496	mg/L
WG403316-05	N1	50	51.5653	51.5803	51.58			294.0	mg/L
WG403316-07	N2	50	48.7552	48.7726	48.7724			344.0	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/13/2012 14:30
Date/Time (off): 07/16/2012 14:23
Date/Time (off): 07/17/2012 14:18
Date/Time (off): 07/17/2012 15:00

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2495411
Report generated: 07/19/2012 14:20

Microbac

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG403480
Analyst: ERP
Analyte: TOTAL DISSOLVED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.1/SM2540C
SOP: Revison
Spike Solution: STD50945
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG403480-01	W9	100	75.8897	75.8896	75.8898		1.000	1.000	mg/L
WG403480-02	AA	50	67.9123	67.9347	67.9348		450.0	450.0	mg/L
WG403480-03	K8	50	73.456	73.4782	73.4782		444.0	444.0	mg/L
L12070421-01	W7	50	82.1251	82.2846	82.2847		3192	3192	mg/L
L12070328-04	L7	50	80.5691	80.5852	80.5847		312.0	312.0	mg/L
WG403480-04	L7	50	80.5691	80.5852	80.5847		312.0	312.0	mg/L
L12070328-05	7	50	66.2881	66.3273	66.3268		774.0	774.0	mg/L
WG403480-05	7	50	66.2881	66.3273	66.3268		774.0	774.0	mg/L
L12070328-06	B8	50	67.2899	67.3285	67.3289		780.0	780.0	mg/L
WG403480-06	B8	50	67.2899	67.3285	67.3289		780.0	780.0	mg/L
L12070349-01	B4	50	66.9567	67.0304	67.0304		1474	1474	mg/L
L12070353-01	W1	50	76.486	76.4946	76.4951		182.0	182.0	mg/L
L12070355-01	W5	50	76.7926	76.8002	76.8006		160.0	160.0	mg/L
L12070355-05	X	50	76.885	76.9168	76.9166		632.0	632.0	mg/L
L12070355-07	S	50	66.8907	66.891	66.8911		8.000	ND	mg/L
L12070373-01	L	50	66.0146	66.0284	66.0279		266.0	266.0	mg/L
L12070373-02	O	50	67.3261	67.3573	67.357		618.0	618.0	mg/L
L12070373-03	W3	50	75.272	75.2818	75.2818		196.0	196.0	mg/L
L12070373-06	K	50	66.9942	67.0512	67.0511		1138	1138	mg/L
L12070379-01	K7	50	76.4474	76.4631	76.4626		304.0	304.0	mg/L
L12070384-02	R	50	71.2368	71.3637	71.3638		2540	2540	mg/L
L12070384-04	D2	50	75.6116	75.7405	75.7401		2570	2570	mg/L
L12070384-06	D1	50	74.9887	75.1139	75.1136		2498	2498	mg/L
L12070384-08	SM	50	45.7108	45.8408	45.8408		2600	2600	mg/L
WG403480-07	SM	50	45.7108	45.8408	45.8408		2600	2600	mg/L
L12070384-10	11T	50	51.0775	51.2057	51.2061		2572	2572	mg/L
WG403480-09	11T	50	51.0775	51.2057	51.2061		2572	2572	mg/L
WG403480-08	P7	50	75.6125	75.7462	75.7467		2684	2684	mg/L
WG403480-10	D3	50	80.9358	81.0569	81.0567		2418	2418	mg/L
L12070384-12	Q	50	64.2062	64.3295	64.33		2476	2476	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/16/2012 12:52
Date/Time (off): 07/17/2012 12:51
Date/Time (off): 07/17/2012 15:37
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2497701
Report generated: 07/17/2012 16:30

Microbac

2.2.10 Total Organic Carbon Data

2.2.10.1 Summary Data

Login Number: L12070328
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: 50500
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL05-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:18
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	TC07212012.006
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.30		1.00	0.500

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL18-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	TC07212012.007
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.16		1.00	0.500

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL16-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG404037	**Analyst:**	DIH	**Run Date:**	07/21/2012 09:43
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	TC07212012.008
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.32		1.00	0.500

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-1	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 02:36
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.054
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		0.630	J	1.00	0.500
J	Estimated value ; the analyte concentration was less than the LOQ.				

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-MS	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 02:59
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.056
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		10.4		1.00	0.500

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	TOC-VWP
Client ID:	MPL17-0712-MSD	**Prep Method:**	415.1	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	415.1	**Cal Date:**	12/06/2011 09:40
Workgroup #:	WG403689	**Analyst:**	DIH	**Run Date:**	07/19/2012 03:12
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	TC07182012.057
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		10.5		1.00	0.500

2.2.10.2 QC Summary Data

Total Organic Carbon Example Calculations
(Direct Readout Parameter)

(Readout)/(dilution) = mg/L

where:

Readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 18-JUL-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403689 WG403685

Calibration/Linearity	12/06/2011
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	
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	JBK
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
19-JUL-2012

Secondary Reviewer:
21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 08:57:14

Microbac Laboratories Inc.

Data Checklist

Date: 21-JUL-2012
Analyst: DIH
Analyst: NA
Method: TOC
Instrument: TOC
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG404038 WG404037

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	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:
24-JUL-2012

Secondary Reviewer:
24-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-24-2012 17:15:41

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG403689

Login Number: L12070328

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
MPL17-0712-1	04	07/11/12					07/19/2012	7.5	28		07/19/12	7.5	28	
MPL17-0712-MS	05	07/11/12					07/19/2012	7.5	28		07/19/12	7.5	28	
MPL17-0712-MSD	06	07/11/12					07/19/2012	7.6	28		07/19/12	7.6	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2505417
Report generated 07/23/2012 14:23

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1 AAB#: WG404037

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/21/2012	10	28		07/21/12	10	28	
MPL18-0712-1	02	07/11/12					07/21/2012	10	28		07/21/12	10	28	
MPL16-0712-1	03	07/11/12					07/21/2012	9.9	28		07/21/12	9.9	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2505417
Report generated 07/23/2012 14:23

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: TC07182012.028
Prep Date: 07/18/12 21:20
Analyzed Date: 07/18/12 21:20
Analyst: DIH

Work Group: WG403689
Blank Sample ID: WG403689-01
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	WG403689-02	TC07182012.029	07/18/12 21:32	01
LCS2	WG403689-03	TC07182012.030	07/18/12 21:44	01
MPL17-0712-1	L12070328-04	TC07182012.054	07/19/12 02:36	01
DUP	WG403689-05	TC07182012.055	07/19/12 02:47	01
MPL17-0712-MS	L12070328-05	TC07182012.056	07/19/12 02:59	01
MPL17-0712-MSD	L12070328-06	TC07182012.057	07/19/12 03:12	01

Report Name: BLANK_SUMMARY
PDF File ID: 2505418
Report generated 07/23/2012 14:23

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: TC07212012.003
Prep Date: 07/21/12 08:42
Analyzed Date: 07/21/12 08:42
Analyst: DIH

Work Group: WG404037
Blank Sample ID: WG404037-01
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	WG404037-02	TC07212012.004	07/21/12 08:54	01
LCS2	WG404037-03	TC07212012.005	07/21/12 09:06	01
MPL05-0712-1	L12070328-01	TC07212012.006	07/21/12 09:18	01
MPL18-0712-1	L12070328-02	TC07212012.007	07/21/12 09:30	01
MPL16-0712-1	L12070328-03	TC07212012.008	07/21/12 09:43	01
DUP	WG404037-05	TC07212012.030	07/21/12 14:58	01

Report Name: BLANK_SUMMARY
PDF File ID: 2505418
Report generated 07/23/2012 14:23

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/18/12 21:20 Sample ID: WG403689-01
Instrument ID: TOC-VWP Run Date: 07/18/12 21:20 Prep Method: 415.1
File ID: TC07182012.028 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG403689 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: 2505420
23-JUL-2012 14:23

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/21/12 08:42 Sample ID: WG404037-01
Instrument ID: TOC-VWP Run Date: 07/21/12 08:42 Prep Method: 415.1
File ID: TC07212012.003 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG404037 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: 2505420
23-JUL-2012 14:23

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG404037 Units: mg/L
QC Key: DOD4 Lot #: STD50986

Sample ID: WG404037-02 LCS File ID: TC07212012.004 Run Date: 07/21/2012 08:54
Sample ID: WG404037-03 LCS2 File ID: TC07212012.005 Run Date: 07/21/2012 09:06

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	23.6	94.4	25.0	25.0	99.9	5.68	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2505421
Report generated: 07/23/2012 14:23

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: DIH Prep Method: 415.1
Instrument ID: TOC-VWP Matrix: Water Method: 415.1
Workgroup (AAB#): WG403689 Units: mg/L
QC Key: DOD4 Lot #: STD50986

Sample ID: WG403689-02 LCS File ID: TC07182012.029 Run Date: 07/18/2012 21:32
Sample ID: WG403689-03 LCS2 File ID: TC07182012.030 Run Date: 07/18/2012 21:44

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	25.9	104	25.0	26.2	105	0.998	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2505421
Report generated: 07/23/2012 14:23

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: TOC-VWP- 06-DEC-11 Worknum: WG403689

Instrument ID: TOC-VWP Contract #: Prep Method: 415.1

Parent ID: L12070328-04 File ID: TC07182012.054 Dil: 1 Method: 415.1

Sample ID: L12070328-05 MS File ID: TC07182012.056 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: TC07182012.057 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Total Organic Carbon	0.630	10.0	10.4	97.9	10.0	10.5	98.3	0.383	85 - 115	15	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2505422
Report generated 07/23/2012 14:23

2.2.10.3 Raw Data

WG384145

TC/TIC CURVES

Total Organic Carbon

MAKE DAILY

CCV (TOC): _____ (5/200)(1000) = 25mg/L

LCS (TOC): _____ (5/200)(1000) = 25mg/L

CCV (TIC): _____ (5/200)(1000) = 25mg/L

See Below

MS (TOC): _____

Calibration Curve Date: _____

Reagent: RGT 16590 RGT 16642

☑ SM5310-C : Matrix 2 WG_____

☐ EPA 415.1/9060A(mod): Matrix 1 WG_____ WG_____

SOP: K 4151 Rev. 13

Instrument: Shimadza TOC-VWP/ASI

DAILY CHECK

☑ drain reservoir filled
☑ ASI water bottle full
☑ dilution water bottle full
☑ 3rd bottle full
☑ sufficient gas
☑ sufficient persulfate
☑ sufficient acid
☑ waste container

Position	Sample ID	Dilution	Position	Sample ID	Dilution	Position	Sample ID	Dilution
1	TC Curve		26	TC Curve		51		
2	TIC Curve		27	STD 47222		52		
3	TC ICV		28			53	See SOP for	
4	TIC ICV		29	TIC Curve		54	Curve points	
5			30	STD 47189		55		
6			31			56		
7			32			57		
8			33			58		
9			34			59		
10			35			60		
11			36			61		
12			37	TC ICV		62		
13			38	STD 47544		63	5/200(1000)	
14			39			64	= 25 mg/L	
15			40	TIC ICV		65		
16			41	STD 47190		66		
17			42			67		
18			43			68		
19	All points analyzed		44			69		
20	in duplicate		45			70		
21			46			71		
22			47			72		
23			48			73		
24			49			74		
25			50			75		

Analyst: _____ Date/Time: 12/04/2011

DCN#89227

C:\TOC3201\Data\CURVES-12-06-2011.t32

	Analyst	Sample Name	Result	Status	Date / Time	Vial
1	TC	TC CURVE		Complet	12/06/2011 09:46:27 AM	0, 1, 2, 3, 4, 5
2	IC	TIC CURVE		Complet	12/06/2011 05:00:56 PM	0, 6, 7, 8, 9, 10
3	TC	TC ICV	✓ 93.08% TC:23.27mg/L	Complet	12/06/2011 05:13:38 PM	11
4	IC	TIC ICV	✓ 104.24% IC:26.21mg/L	Complet	12/06/2011 05:25:50 PM	12

12/07/2011 08:14:31 AM 1/1

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Cal. Curve

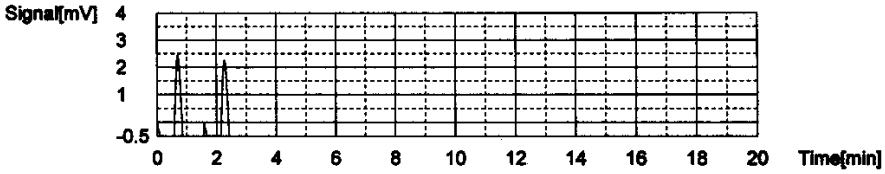
Sample Name: TC CURVE
Sample ID: Untitled
Cal. Curve: TCCURVE-12-06-2011.2011_12_06_08_40_57.cal
Status Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	6.123	500uL	1	*******		12/06/2011 08:44:40 AM
2	5.308	500uL	1	*******		12/06/2011 08:48:33 AM

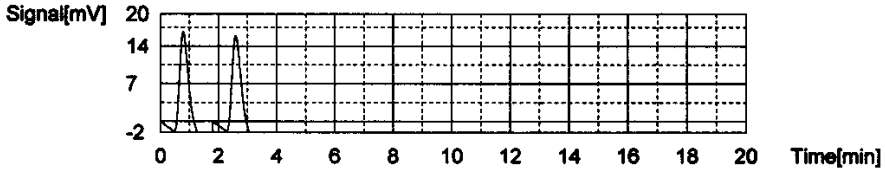
Acid Add. 0.000%
Mean Area 5.716



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	39.77	500uL	1	*******		12/06/2011 08:54:04 AM
2	39.18	500uL	1	*******		12/06/2011 08:58:10 AM

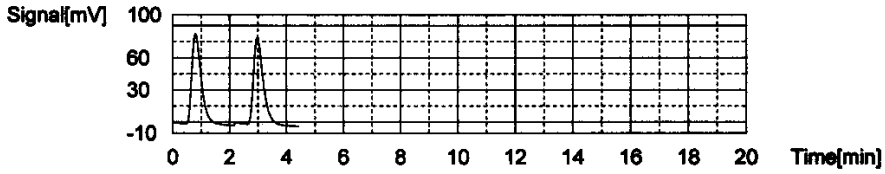
Acid Add. 0.000%
Mean Area 39.48



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	191.7	500uL	1	*******		12/06/2011 09:04:17 AM
2	189.4	500uL	1	*******		12/06/2011 09:08:49 AM

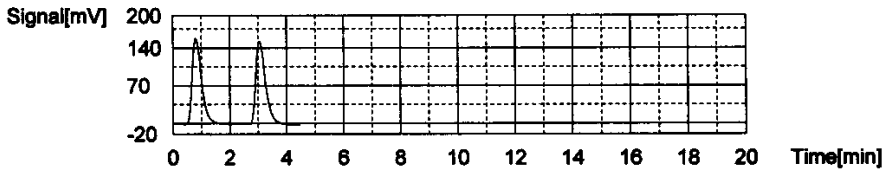
Acid Add. 0.000%
Mean Area 190.6



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	367.0	500uL	1	*******		12/06/2011 09:15:00 AM
2	367.7	500uL	1	*******		12/06/2011 09:20:26 AM

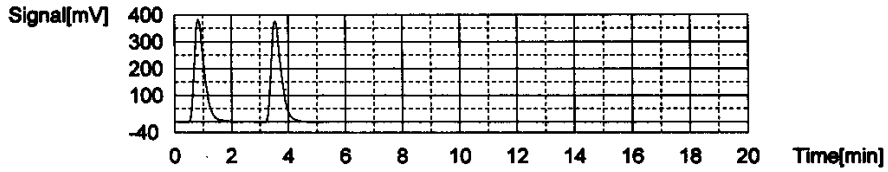
Acid Add. 0.000%
Mean Area 367.4



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	938.7	500uL	1	*******		12/06/2011 09:27:05 AM
2	928.1	500uL	1	*******		12/06/2011 09:31:51 AM

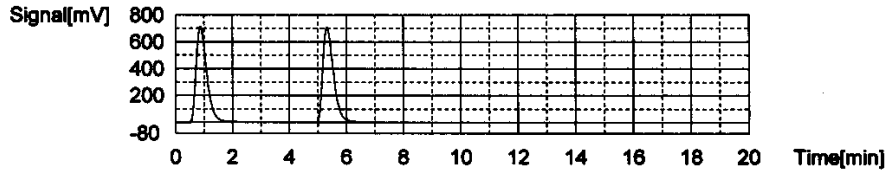
Acid Add. 0.000%
Mean Area 933.4



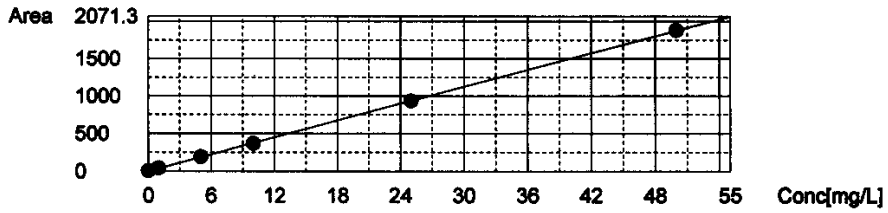
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1902	500uL	1	*******		12/06/2011 09:40:15 AM
2	1864	500uL	1	*******		12/06/2011 09:46:27 AM

Acid Add. 0.000%
Mean Area 1883



Slope: 37.57
Intercept 0.09333
r^2 0.999936 ✓
Zero Shift No



Cal. Curve

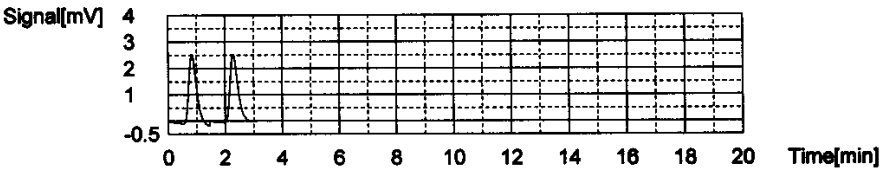
Sample Name: TIC CURVE
Sample ID: Untitled
Cal. Curve: TICCURVE-12-06-2011B.2011_12_06_15_47_44.cal
Status Completed

Type	Anal.
Standard	IC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	5.003	500uL	1	*******		12/06/2011 03:51:39 PM
2	4.762	500uL	1	*******		12/06/2011 03:55:32 PM

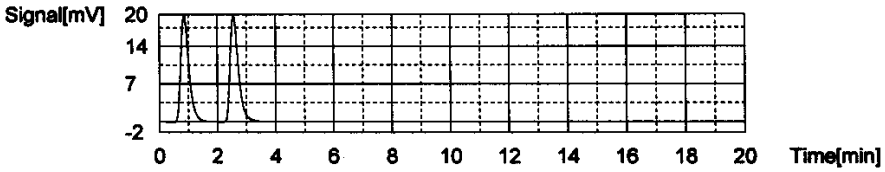
Acid Add. 10.00%
Mean Area 4.883



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	38.88	500uL	1	*******		12/06/2011 04:02:55 PM
2	38.91	500uL	1	*******		12/06/2011 04:07:20 PM

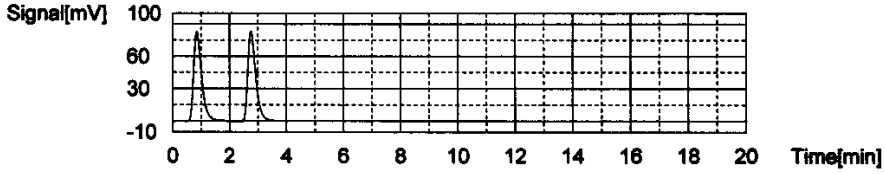
Acid Add. 10.00%
Mean Area 38.90



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.3	500uL	1	*******		12/06/2011 04:15:09 PM
2	162.3	500uL	1	*******		12/06/2011 04:19:53 PM

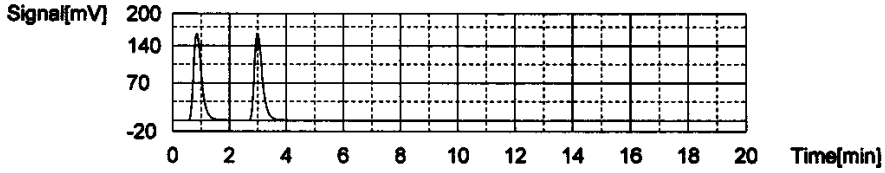
Acid Add. 10.00%
Mean Area 161.3



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	317.9	500uL	1	*******		12/06/2011 04:28:01 PM
2	319.9	500uL	1	*******		12/06/2011 04:33:00 PM

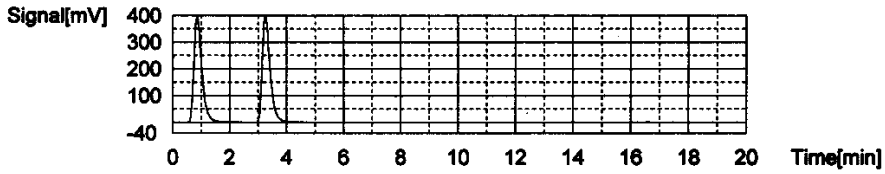
Acid Add. 10.00%
Mean Area 318.9



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	765.1	500uL	1	*******		12/06/2011 04:41:31 PM
2	765.8	500uL	1	*******		12/06/2011 04:46:44 PM

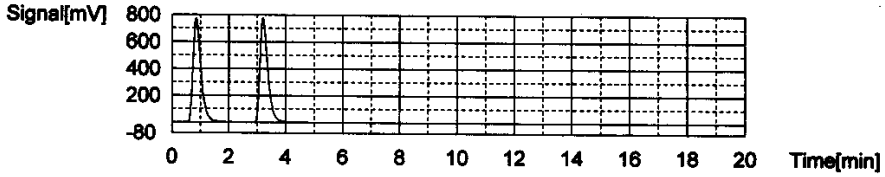
Acid Add. 10.00%
Mean Area 765.5



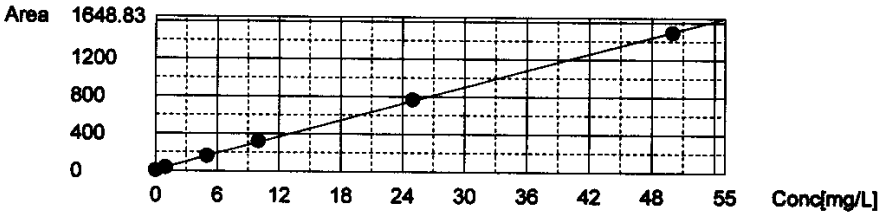
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1490	500uL	1	*******		12/06/2011 04:55:30 PM
2	1495	500uL	1	*******		12/06/2011 05:00:56 PM

Acid Add. 10.00%
Mean Area 1493



Slope: 29.72
Intercept 12.89
r^2 0.999826 ✓
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: Untitled
Origin: TCCURVE-12-06-2011.cal
Status Completed
Chk. Result

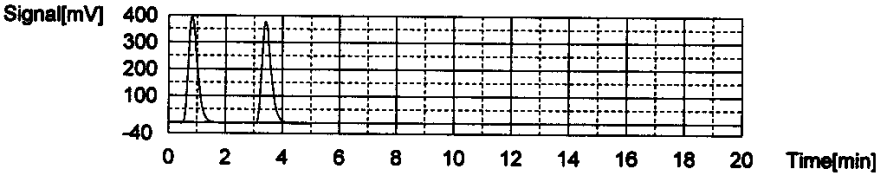
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:23.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	889.3	23.67mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:08:57 PM
2	859.5	22.87mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	12/06/2011 05:13:38 PM

Mean Area 874.4
Mean Conc. 23.27mg/L



Sample

Sample Name: TIC ICV
Sample ID: Untitled
Origin: TICCURVE-12-06-2011B.cal
Status Completed
Chk. Result

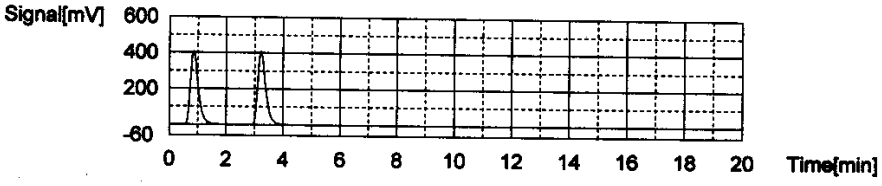
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:26.21mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	788.9	26.11mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:20:43 PM
2	794.9	26.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	12/06/2011 05:25:50 PM

Mean Area 791.9
Mean Conc. 26.21mg/L



WG 403685
403689

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: RGF 17495 RGF 17290

☑ SM5310-C: Matrix 2 WG 403685

☑ EPA 415.1/9060A(mod): Matrix 1 WG 403689 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	~~BLK~~ CCV25	
3	~~LCS 2BLK~~	
4	LCS 25	
5	LCSDUP	
6	07-235-07	1/2
7	09	1/2
8	11	1/2
9	13	1/2
10	17	1/2
11	19	
12	07-317-01	
13	07-385-01	
14	CCB	
15	CCB	
16	07-355-01	
17	03	1/2 CL
18	05	
19	07	
20	07-465-01	
21	07-466-01	
22	07-467-01	
23	07-493-01	1/10
24	DUP ~~445-01~~ 385-01	
25	MS	

Position	Sample ID	Dilution
26	CCV	
27	CCB	
28	~~07-286-07~~ BLK	
29	LCS 25	
30	LCSDUP	
31	07-286-07	1/10
32	07-383-01	
33	02	
34	03	
35	04	
36	05	
37	06	
38	CCV	
39	CCB	
40	07-383-07	
41	08	
42	09	
43	10	
44	11	
45	12	
46	13	
47	14	
48	15	
49	07-327-01	
50	CCV	

Position	Sample ID	Dilution
51	CCB	
52	07-327-02	
53	03	
54	07-328-04	
55	DUP 04	
56	MS 05	
57	MSD 06	
58	07-235-15	1/2
59	07-495-09	
60		
61 R	07-286-07	1/30
62	CCV	
63	CCB	
64	07-355-05	1/2
65	CCV	
66	CCB	
67		
68		
69		
70		
71		
72		
73		
74		
75		

Analyst: Joanna Jesson Date/Time: 7/18/12

DCN#91592

	Analysi	Sample Name	Result	Status	Date / Time	Vial
1	TOC	TIC 25	TOC:1.078mg/L TC:25.51mg/L IC:24.43mg/L	Completed	7/18/2012 10:53:15 A	1
2	TOC	CCV 25	!!Error!! TOC:26.29mg/L TC:26.06mg/L IC:-0.2306mg/L	Completed	7/18/2012 11:05:30 A	2
3	TOC	WG403685-01 BLK	!!Error!! TOC:0.4570mg/L TC:0.2772mg/L IC:-0.1798mg/	Completed	7/18/2012 11:22:05 A	0
4	TOC	WG403685-02 LCS	!!Error!! TOC:26.02mg/L TC:25.74mg/L IC:-0.2755mg/L	Completed	7/18/2012 11:43:39 A	4
5	TOC	WG403685-03 LCSDUP	!!Error!! TOC:25.84mg/L TC:25.58mg/L IC:-0.2669mg/L	Completed	7/18/2012 12:04:26 P	5
6	TOC	L12070235-07 (2)	TOC:10.49mg/L TC:20.42mg/L IC:9.926mg/L	Completed	7/18/2012 2:09:16 PM	6
7	TOC	L12070235-09 (2)	TOC:15.85mg/L TC:27.48mg/L IC:11.63mg/L	Completed	7/18/2012 2:31:53 PM	7
8	TOC	L12070235-11 (2)	TOC:5.759mg/L TC:12.35mg/L IC:6.595mg/L	Completed	7/18/2012 2:53:46 PM	8
9	TOC	L12070235-13 (2)	TOC:8.790mg/L TC:17.89mg/L IC:9.097mg/L	Completed	7/18/2012 3:16:39 PM	9
10	TOC	L12070235-17 (2)	TOC:7.859mg/L TC:16.07mg/L IC:8.207mg/L	Completed	7/18/2012 3:38:18 PM	10
11	TOC	L12070235-19	!!Error!! TOC:0.6811mg/L TC:0.5039mg/L IC:-0.1772mg/	Completed	7/18/2012 3:57:36 PM	11
12	TOC	L12070317-01	TOC:5.964mg/L TC:20.46mg/L IC:14.50mg/L	Completed	7/18/2012 4:21:15 PM	12
13	TOC	L12070385-01	TOC:5.242mg/L TC:12.90mg/L IC:7.658mg/L	Completed	7/18/2012 4:44:05 PM	13
14	TOC	CCV	!!Error!! TOC:25.93mg/L TC:25.73mg/L IC:-0.1965mg/L	Completed	7/18/2012 4:56:46 PM	14
15	TOC	CCB	!!Error!! TOC:0.4108mg/L TC:0.2260mg/L IC:-0.1848mg/	Completed	7/18/2012 5:05:47 PM	0
16	TOC	L12070355-01	TOC:3.573mg/L TC:20.59mg/L IC:17.01mg/L	Completed	7/18/2012 5:29:04 PM	16
17	TOC	L12070355-03 (2)	TOC:0.8754mg/L TC:9.341mg/L IC:8.466mg/L	Completed	7/18/2012 5:51:05 PM	17
18	TOC		TOC:7.218mg/L TC:58.38mg/L IC:51.16mg/L	Completed	7/18/2012 6:18:47 PM	18
19	TOC	L12070355-07	!!Error!! TOC:0.6831mg/L TC:0.6182mg/L IC:-0.06484m	Completed	7/18/2012 6:38:23 PM	19
20	TOC	L12070465-01	TOC:4.466mg/L TC:27.96mg/L IC:23.49mg/L	Completed	7/18/2012 7:01:56 PM	20
21	TOC	L12070466-01	TOC:3.885mg/L TC:15.15mg/L IC:11.27mg/L	Completed	7/18/2012 7:23:50 PM	21
22	TOC	L12070467-01	TOC:5.539mg/L TC:20.79mg/L IC:15.25mg/L	Completed	7/18/2012 7:47:21 PM	22
23	TOC	L12070493-01 (10)	TOC:3.659mg/L TC:16.50mg/L IC:12.84mg/L	Completed	7/18/2012 8:09:31 PM	23
24	TOC	WG403685-05 DUP	TOC:5.313mg/L TC:9.344mg/L IC:4.031mg/L	Completed	7/18/2012 8:31:28 PM	24
25	TOC	WG403685-06 MS	TOC:15.32mg/L TC:22.65mg/L IC:7.330mg/L	Completed	7/18/2012 8:54:30 PM	25
26	TOC	CCV	!!Error!! TOC:26.04mg/L TC:25.85mg/L IC:-0.1960mg/L	Completed	7/18/2012 9:06:49 PM	26
27	TOC	CCB	!!Error!! TOC:0.4128mg/L TC:0.2224mg/L IC:-0.1905mg/	Completed	7/18/2012 9:15:46 PM	0
28	TOC	WG403689-01 BLK	!!Error!! TOC:0.3853mg/L TC:0.1914mg/L IC:-0.1939mg/	Completed	7/18/2012 9:24:44 PM	0
29	TOC	WG403689-02 LCS	!!Error!! TOC:25.92mg/L TC:25.68mg/L IC:-0.2334mg/L	Completed	7/18/2012 9:37:02 PM	29
30	TOC	WG403689-03 LCSDUP	!!Error!! TOC:26.18mg/L TC:25.95mg/L IC:-0.2311mg/L	Completed	7/18/2012 9:49:21 PM	30
31	TOC	X	TOC:135.3mg/L TC:140.5mg/L IC:5.145mg/L	Completed	7/18/2012 10:04:32 P	31
32	TOC	L12070383-01	TOC:1.603mg/L TC:5.662mg/L IC:4.058mg/L	Completed	7/18/2012 10:16:34 P	32
33	TOC	L12070383-02	TOC:1.645mg/L TC:5.145mg/L IC:3.500mg/L	Completed	7/18/2012 10:28:39 P	33
34	TOC	L12070383-03	TOC:1.554mg/L TC:5.044mg/L IC:3.490mg/L	Completed	7/18/2012 10:40:49 P	34
35	TOC	L12070383-04	TOC:1.539mg/L TC:4.951mg/L IC:3.412mg/L	Completed	7/18/2012 10:52:55 P	35
36	TOC	L12070383-05	TOC:2.142mg/L TC:6.130mg/L IC:3.988mg/L	Completed	7/18/2012 11:05:08 P	36
37	TOC	L12070383-06	TOC:1.876mg/L TC:5.547mg/L IC:3.671mg/L	Completed	7/18/2012 11:17:19 P	37
38	TOC	CCV	!!Error!! TOC:26.31mg/L TC:26.10mg/L IC:-0.2166mg/L	Completed	7/18/2012 11:29:46 P	38
39	TOC	CCB	!!Error!! TOC:0.4110mg/L TC:0.2177mg/L IC:-0.1933mg/	Completed	7/18/2012 11:38:43 P	0
40	TOC	L12070383-07	TOC:1.635mg/L TC:4.325mg/L IC:2.690mg/L	Completed	7/18/2012 11:50:46 P	40
41	TOC	L12070383-08	TOC:1.527mg/L TC:3.719mg/L IC:2.192mg/L	Completed	7/19/2012 12:02:42 A	41
42	TOC	L12070383-09	TOC:1.558mg/L TC:4.395mg/L IC:2.837mg/L	Completed	7/19/2012 12:14:46 A	42
43	TOC	L12070383-10	TOC:9.212mg/L TC:10.29mg/L IC:1.076mg/L	Completed	7/19/2012 12:27:58 A	43
44	TOC	L12070383-11	TOC:9.230mg/L TC:10.47mg/L IC:1.241mg/L	Completed	7/19/2012 12:40:58 A	44
45	TOC	L12070383-12	TOC:9.574mg/L TC:11.11mg/L IC:1.533mg/L	Completed	7/19/2012 12:54:14 A	45
46	TOC	L12070383-13	TOC:9.141mg/L TC:11.75mg/L IC:2.605mg/L	Completed	7/19/2012 1:07:06 AM	46
47	TOC	L12070383-14	TOC:9.236mg/L TC:11.33mg/L IC:2.092mg/L	Completed	7/19/2012 1:19:53 AM	47
48	TOC	L12070383-15	TOC:9.838mg/L TC:11.72mg/L IC:1.884mg/L	Completed	7/19/2012 1:32:49 AM	48
49	TOC	L12070327-01	TOC:0.8902mg/L TC:1.531mg/L IC:0.6404mg/L	Completed	7/19/2012 1:44:27 AM	49
50	TOC	CCV	!!Error!! TOC:26.25mg/L TC:26.03mg/L IC:-0.2210mg/L	Completed	7/19/2012 1:56:41 AM	50
51	TOC	CCB	!!Error!! TOC:0.4160mg/L TC:0.2202mg/L IC:-0.1958mg/	Completed	7/19/2012 2:05:41 AM	0
52	TOC	L12070327-02	TOC:0.7161mg/L TC:1.513mg/L IC:0.7972mg/L	Completed	7/19/2012 2:17:22 AM	52
53	TOC	L12070327-03	TOC:0.6857mg/L TC:1.432mg/L IC:0.7464mg/L	Completed	7/19/2012 2:29:02 AM	53
54	TOC	L12070328-04	TOC:0.6304mg/L TC:1.369mg/L IC:0.7387mg/L	Completed	7/19/2012 2:40:40 AM	54
55	TOC	WG403689-05 DUP	TOC:0.6403mg/L TC:1.140mg/L IC:0.5001mg/L	Completed	7/19/2012 2:52:12 AM	55
56	TOC	L12070328-05 MS	TOC:10.42mg/L TC:10.50mg/L IC:0.08056mg/L	Completed	7/19/2012 3:04:18 AM	56
57	TOC	L12070328-06 MSD	TOC:10.46mg/L TC:10.53mg/L IC:0.07080mg/L	Completed	7/19/2012 3:16:33 AM	57
58	TOC	L12070235-15	TOC:1.117mg/L TC:1.348mg/L IC:0.2311mg/L	Completed	7/19/2012 3:36:15 AM	58
59	TOC	L12070495-09	TOC:4.021mg/L TC:5.382mg/L IC:1.361mg/L	Completed	7/19/2012 3:56:59 AM	59
60	TOC	<Untitled>	!!Error!! TOC:0.5303mg/L TC:0.3230mg/L IC:-0.2073mg/	Completed	7/19/2012 4:16:11 AM	60
61	TOC	L12070286-07 (30)	TOC:48.98mg/L TC:49.32mg/L IC:0.3423mg/L	Completed	7/19/2012 4:30:45 AM	61
62	TOC	CCV	!!Error!! TOC:26.15mg/L TC:25.93mg/L IC:-0.2185mg/L	Completed	7/19/2012 4:42:56 AM	62
63	TOC	CCB	!!Error!! TOC:0.4018mg/L TC:0.2108mg/L IC:-0.1909mg/	Completed	7/19/2012 4:51:59 AM	0
64	TOC	L12070355-05 (2)	TOC:0.7234mg/L TC:0.8132mg/L IC:0.08981mg/L	Completed	7/19/2012 7:02:08 AM	64
65	TOC	CCV	!!Error!! TOC:26.27mg/L TC:26.07mg/L IC:-0.1986mg/L	Completed	7/19/2012 7:15:09 AM	2
66	TOC	CCB	!!Error!! TOC:0.4143mg/L TC:0.2219mg/L IC:-0.1923mg/	Completed	7/19/2012 7:24:11 AM	0

Instr.Information

System TOCVW ASI
Detector Wet Chemical

Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

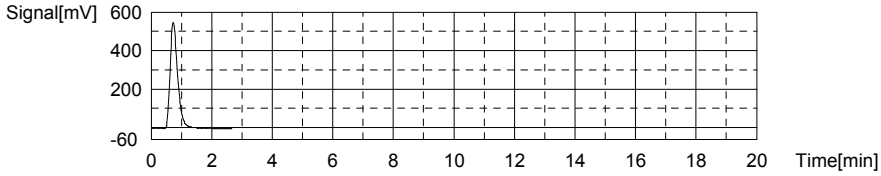
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.078mg/L TC:25.51mg/L IC:24.43mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	958.6	25.51mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 10:47:42 AM

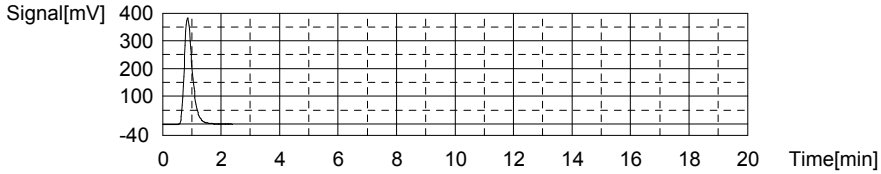
Mean Area 958.6
Mean Conc. 25.51mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	739.1	24.43mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 10:53:15 AM

Mean Area 739.1
Mean Conc. 24.43mg/L



Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

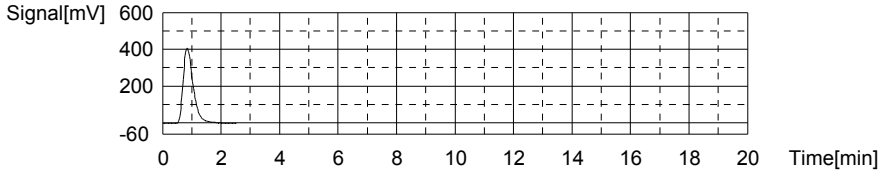
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.29mg/L TC:26.06mg/L IC:-0.2306mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	979.1	26.06mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:01:11 AM

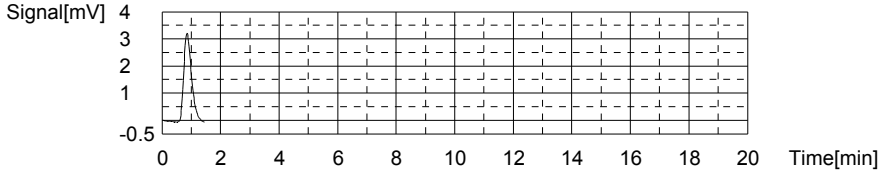
Mean Area 979.1
Mean Conc. 26.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.032	-0.2306mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:05:30 AM

Mean Area 6.032
Mean Conc. -0.2306mg/L



Sample

Sample Name: WG403685-01 BLK
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

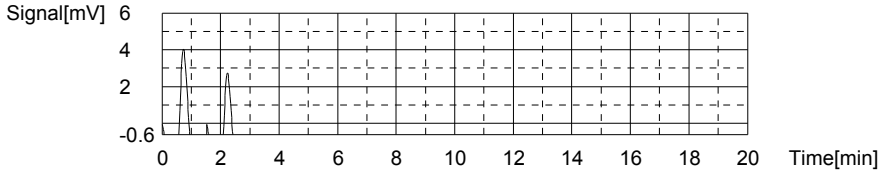
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4570mg/L TC:0.2772mg/L IC:-0.1798mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.21	0.3225mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:10:39 AM
2	8.806	0.2319mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:14:17 AM

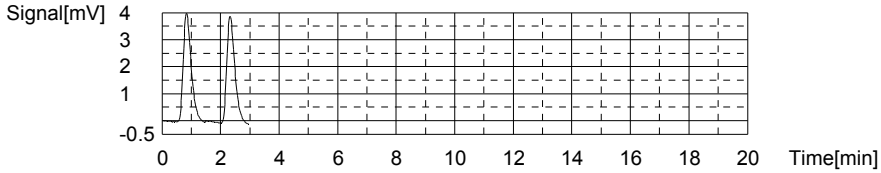
Mean Area 10.51
Mean Conc. 0.2772mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.547	-0.1796mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:18:12 AM
2	7.536	-0.1800mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:22:05 AM

Mean Area 7.542
Mean Conc. -0.1798mg/L



Sample

Sample Name: WG403685-02 LCS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

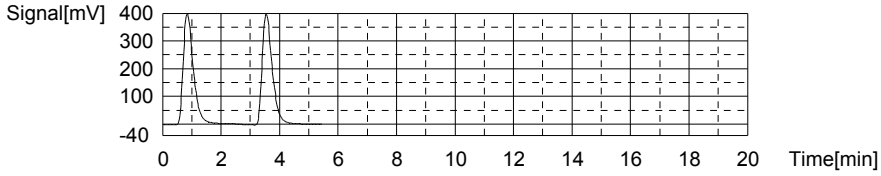
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.02mg/L TC:25.74mg/L IC:-0.2755mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	966.8	25.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:30:13 AM
2	967.5	25.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:35:18 AM

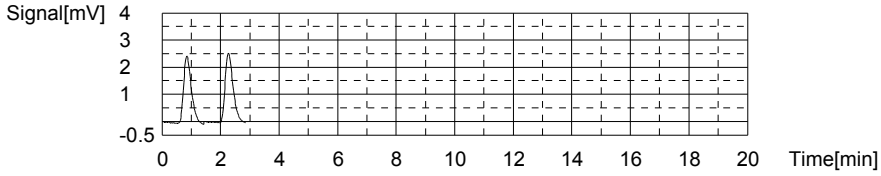
Mean Area 967.2
Mean Conc. 25.74mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.591	-0.2791mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 11:39:36 AM
2	4.802	-0.2720mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 11:43:39 AM

Mean Area 4.697
Mean Conc. -0.2755mg/L



Sample

Sample Name: WG403685-03 LCSDUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

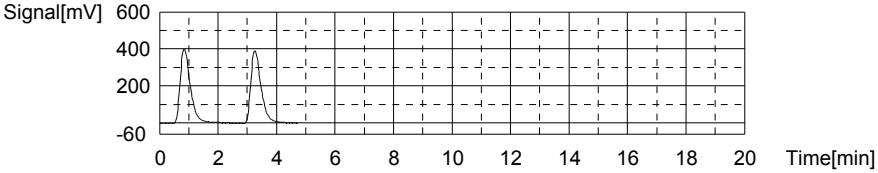
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.84mg/L TC:25.58mg/L IC:-0.2669mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	969.0	25.79mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:51:31 AM
2	953.0	25.36mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:56:07 AM

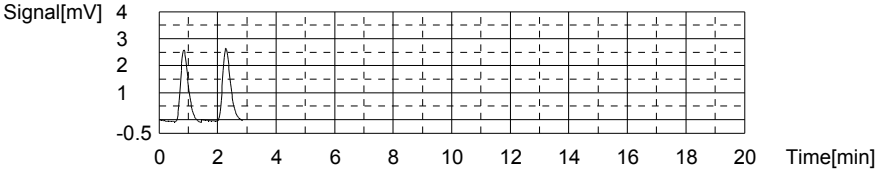
Mean Area 961.0
Mean Conc. 25.58mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.948	-0.2671mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 12:00:23 PM
2	4.958	-0.2667mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 12:04:26 PM

Mean Area 4.953
Mean Conc. -0.2669mg/L



Sample

Sample Name: L12070235-07 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

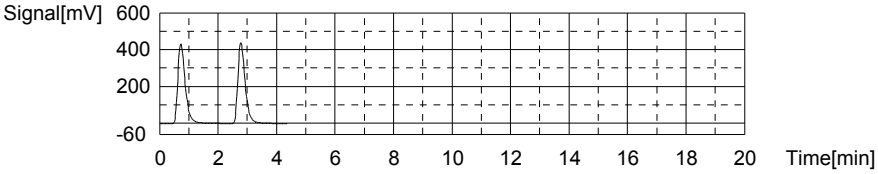
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.49mg/L TC:20.42mg/L IC:9.926mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	763.6	20.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 1:53:47 PM
2	770.7	20.51mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 1:59:10 PM

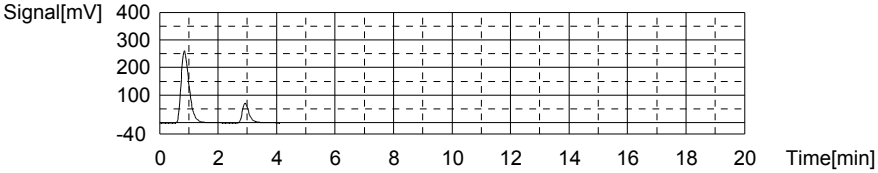
Mean Area 767.2
Mean Conc. 20.42mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	497.1	16.29mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:04:27 PM
2	118.7	3.560mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:09:16 PM

Mean Area 307.9
Mean Conc. 9.926mg/L



Sample

Sample Name: L12070235-09 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

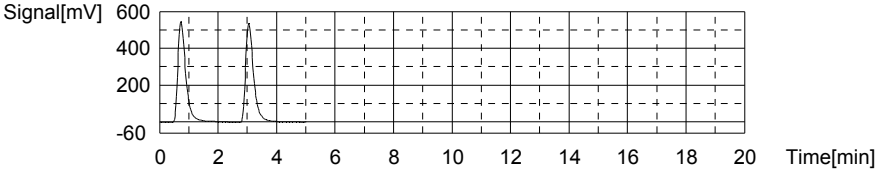
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.85mg/L TC:27.48mg/L IC:11.63mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1035	27.55mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 2:17:01 PM
2	1030	27.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 2:22:03 PM

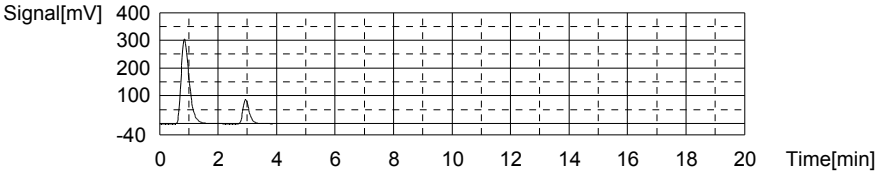
Mean Area 1033
Mean Conc. 27.48mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	583.7	19.21mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:27:19 PM
2	133.1	4.045mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:31:53 PM

Mean Area 358.4
Mean Conc. 11.63mg/L



Sample

Sample Name: L12070235-11 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

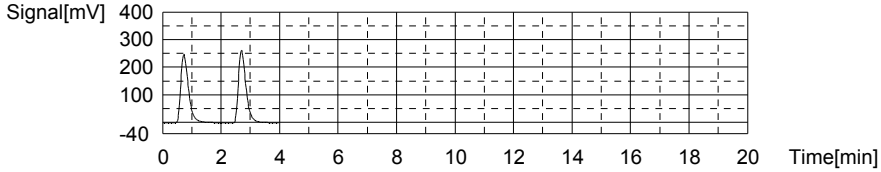
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.759mg/L TC:12.35mg/L IC:6.595mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	451.6	12.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 2:39:17 PM
2	476.9	12.69mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 2:44:21 PM

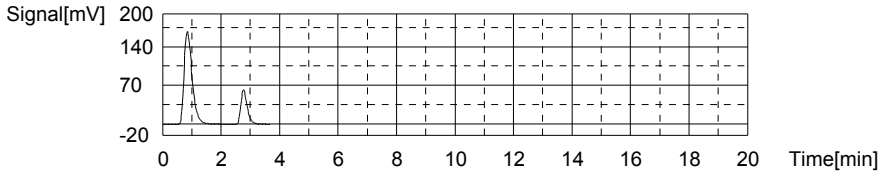
Mean Area 464.3
Mean Conc. 12.35mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	321.7	10.39mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:49:23 PM
2	96.09	2.800mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 2:53:46 PM

Mean Area 208.9
Mean Conc. 6.595mg/L



Sample

Sample Name: L12070235-13 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

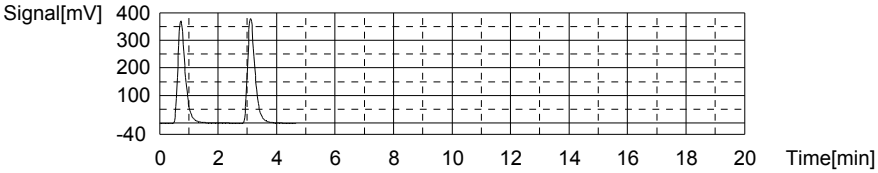
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.790mg/L TC:17.89mg/L IC:9.097mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	663.4	17.65mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:01:35 PM
2	680.8	18.12mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:06:07 PM

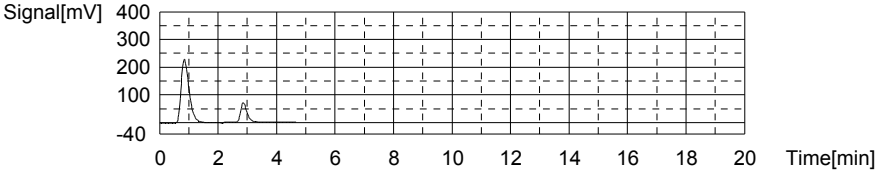
Mean Area 672.1
Mean Conc. 17.89mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	438.1	14.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:11:17 PM
2	128.4	3.887mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:16:39 PM

Mean Area 283.3
Mean Conc. 9.097mg/L



Sample

Sample Name: L12070235-17 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

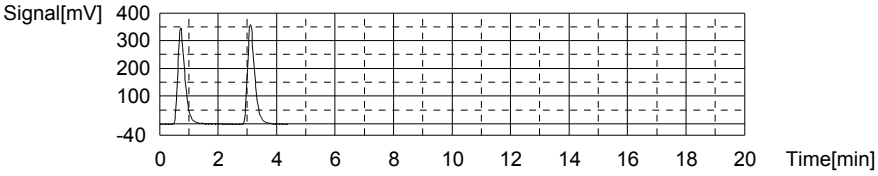
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.859mg/L TC:16.07mg/L IC:8.207mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	588.6	15.66mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:24:28 PM
2	618.8	16.47mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:28:44 PM

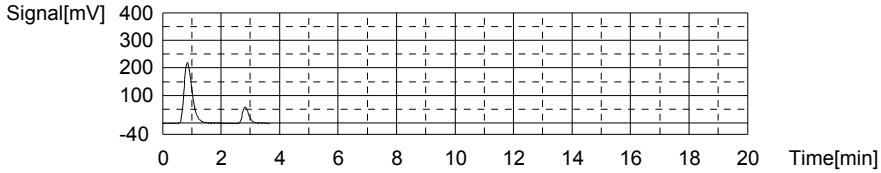
Mean Area 603.7
Mean Conc. 16.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	423.0	13.80mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:33:53 PM
2	90.60	2.615mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:38:18 PM

Mean Area 256.8
Mean Conc. 8.207mg/L



Sample

Sample Name: L12070235-19
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

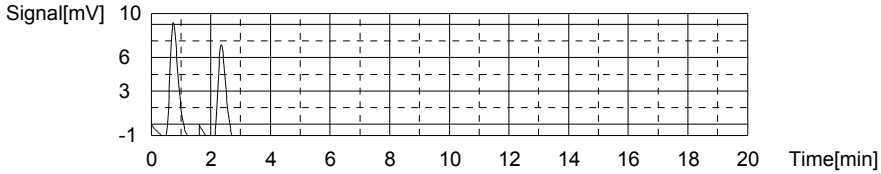
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.6811mg/L TC:0.5039mg/L IC:-0.1772mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20.47	0.5424mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:45:20 PM
2	17.58	0.4654mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 3:49:09 PM

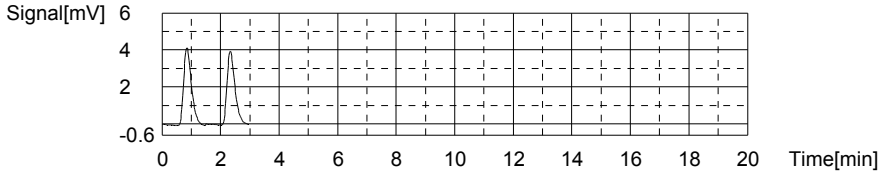
Mean Area 19.03
Mean Conc. 0.5039mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.838	-0.1698mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:53:29 PM
2	7.400	-0.1846mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 3:57:36 PM

Mean Area 7.619
Mean Conc. -0.1772mg/L



Sample

Sample Name: L12070317-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

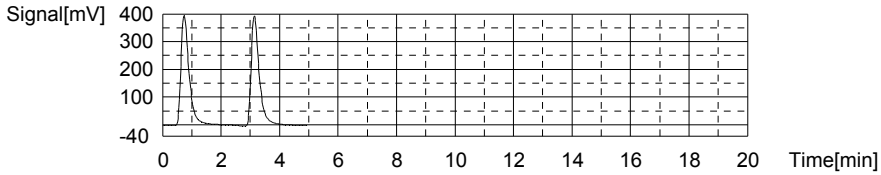
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.964mg/L TC:20.46mg/L IC:14.50mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	771.0	20.52mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 4:05:30 PM
2	766.8	20.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 4:11:11 PM

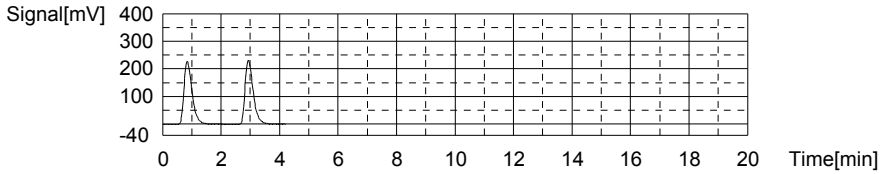
Mean Area 768.9
Mean Conc. 20.46mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	438.1	14.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 4:16:20 PM
2	449.5	14.69mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 4:21:15 PM

Mean Area 443.8
Mean Conc. 14.50mg/L



Sample

Sample Name: L12070385-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

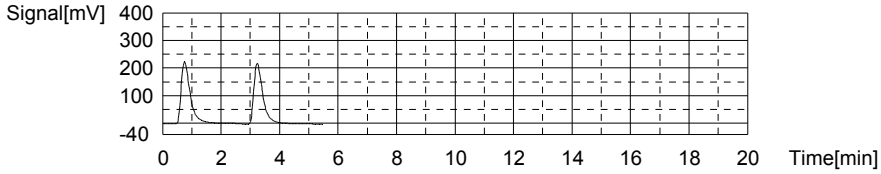
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.242mg/L TC:12.90mg/L IC:7.658mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	489.1	13.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 4:29:10 PM
2	480.4	12.78mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 4:34:25 PM

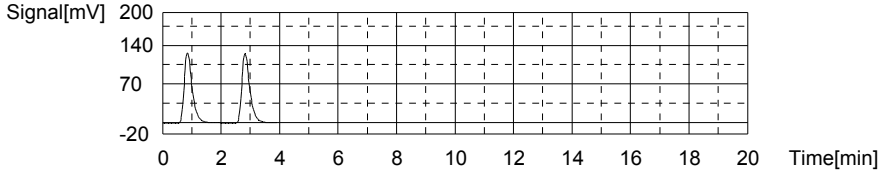
Mean Area 484.8
Mean Conc. 12.90mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	240.9	7.672mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 4:39:23 PM
2	240.1	7.645mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 4:44:05 PM

Mean Area 240.5
Mean Conc. 7.658mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

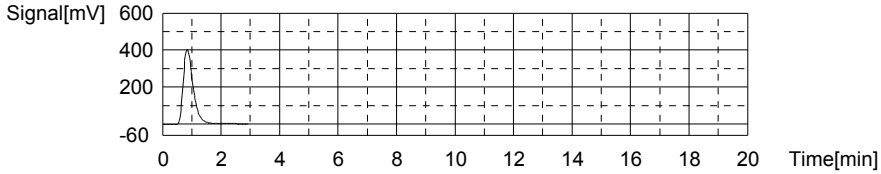
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.93mg/L TC:25.73mg/L IC:-0.1965mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	966.9	25.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 4:52:26 PM

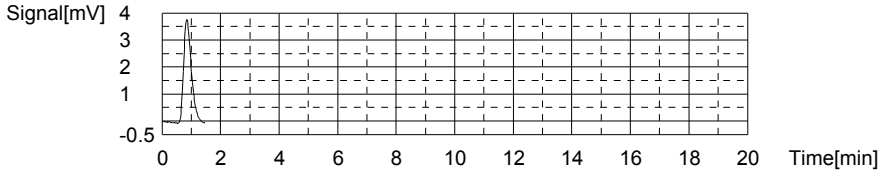
Mean Area 966.9
Mean Conc. 25.73mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.046	-0.1965mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 4:56:46 PM

Mean Area 7.046
Mean Conc. -0.1965mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

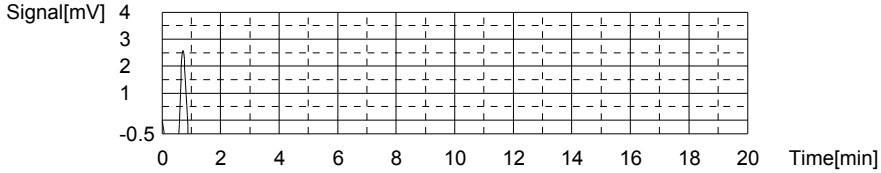
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4108mg/L TC:0.2260mg/L IC:-0.1848mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.584	0.2260mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 5:01:53 PM

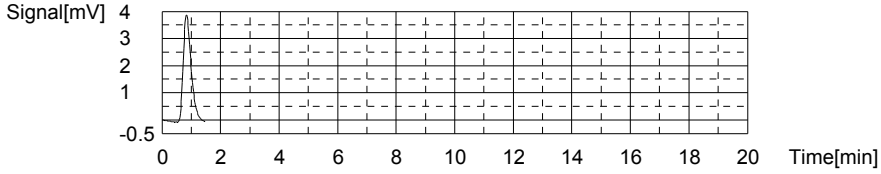
Mean Area 8.584
Mean Conc. 0.2260mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.394	-0.1848mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 5:05:47 PM

Mean Area 7.394
Mean Conc. -0.1848mg/L



Sample

Sample Name: L12070355-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

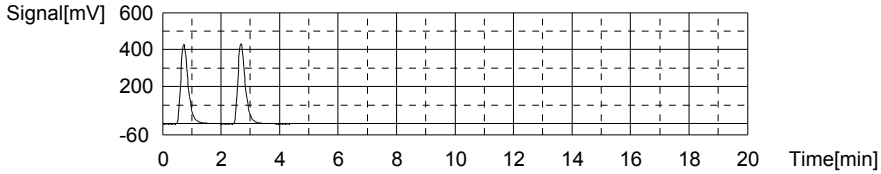
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.573mg/L TC:20.59mg/L IC:17.01mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	765.1	20.36mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 5:13:10 PM
2	781.9	20.81mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 5:18:42 PM

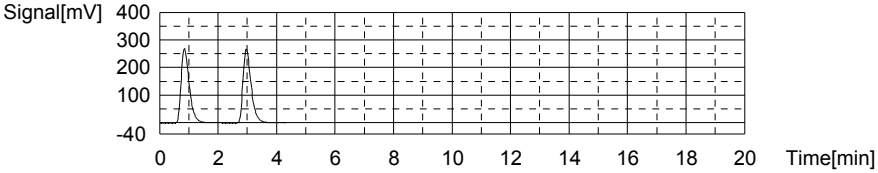
Mean Area 773.5
Mean Conc. 20.59mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	519.9	17.06mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 5:24:01 PM
2	517.1	16.96mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 5:29:04 PM

Mean Area 518.5
Mean Conc. 17.01mg/L



Sample

Sample Name: L12070355-03 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

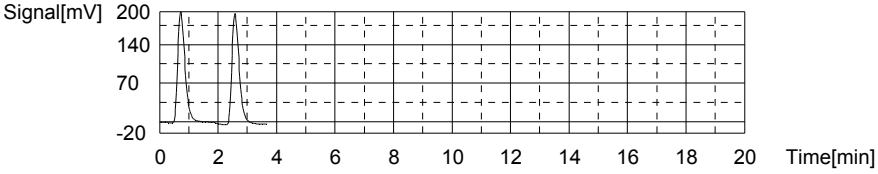
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8754mg/L TC:9.341mg/L IC:8.466mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	351.5	9.353mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 5:36:21 PM
2	350.6	9.329mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 5:41:22 PM

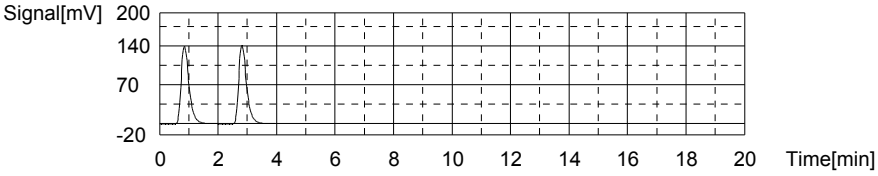
Mean Area 351.1
Mean Conc. 9.341mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	262.9	8.412mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 5:46:23 PM
2	266.1	8.520mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 5:51:05 PM

Mean Area 264.5
Mean Conc. 8.466mg/L



Sample

Sample Name:
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

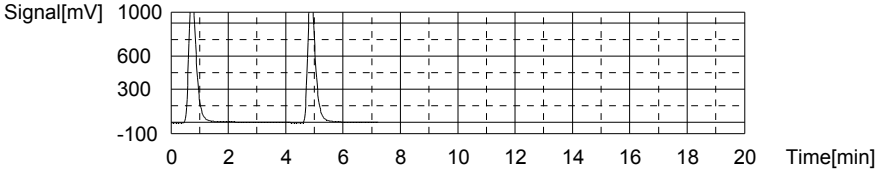
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.218mg/L TC:58.38mg/L IC:51.16mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2198	58.50mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:00:40 PM
2	2189	58.26mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:06:58 PM

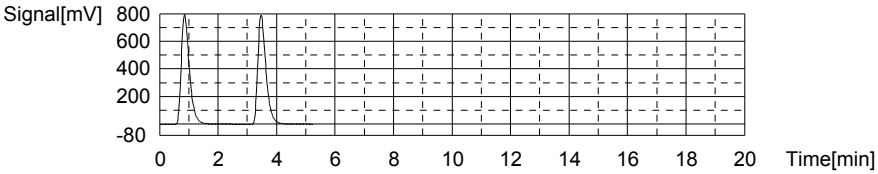
Mean Area 2194
Mean Conc. 58.38mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1536	51.25mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 6:13:02 PM
2	1531	51.08mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 6:18:47 PM

Mean Area 1534
Mean Conc. 51.16mg/L



Sample

Sample Name: L12070355-07
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

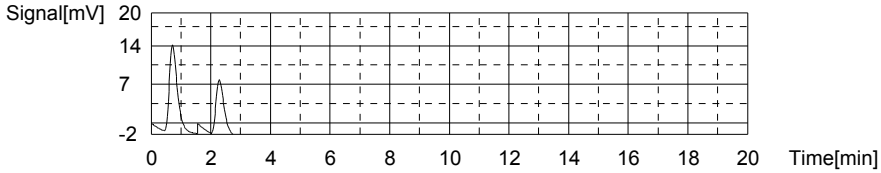
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.6831mg/L TC:0.6182mg/L IC:-0.06484mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.70	0.7614mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:25:47 PM
2	17.94	0.4750mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:29:38 PM

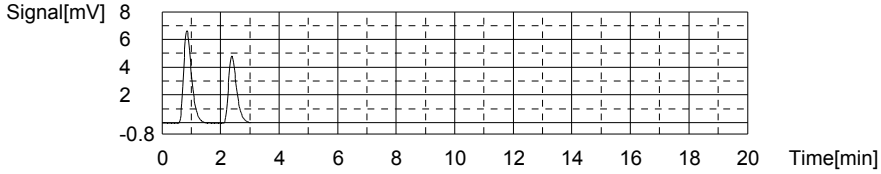
Mean Area 23.32
Mean Conc. 0.6182mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.69	-0.00659mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 6:34:13 PM
2	9.227	-0.1231mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 6:38:23 PM

Mean Area 10.96
Mean Conc. -0.06484mg/L



Sample

Sample Name: L12070465-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

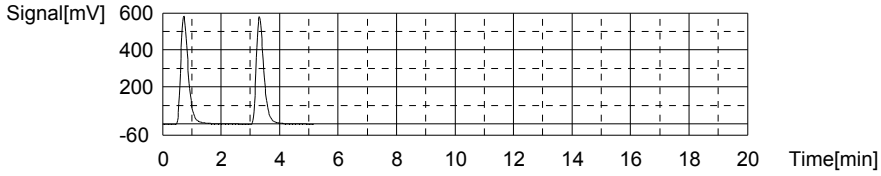
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.466mg/L TC:27.96mg/L IC:23.49mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1050	27.94mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:46:31 PM
2	1051	27.97mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 6:51:22 PM

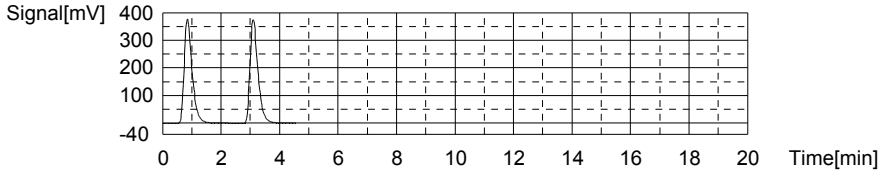
Mean Area 1051
Mean Conc. 27.96mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	712.8	23.55mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 6:56:46 PM
2	709.4	23.44mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 7:01:56 PM

Mean Area 711.1
Mean Conc. 23.49mg/L



Sample

Sample Name: L12070466-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

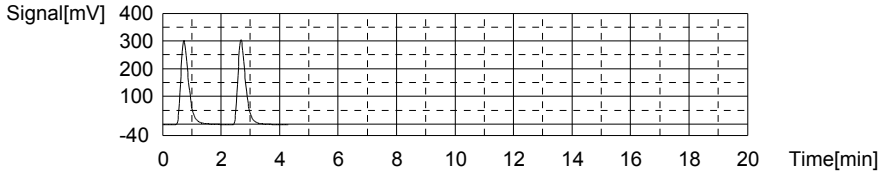
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.885mg/L TC:15.15mg/L IC:11.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	565.6	15.05mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:09:19 PM
2	573.0	15.25mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:13:55 PM

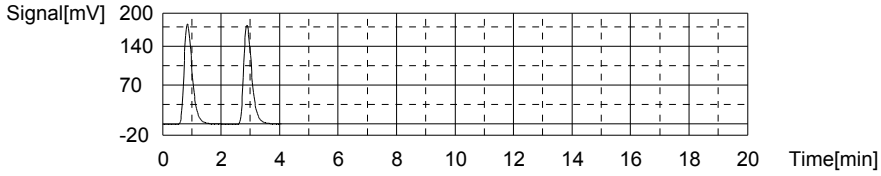
Mean Area 569.3
Mean Conc. 15.15mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	350.1	11.35mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 7:19:04 PM
2	345.3	11.18mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 7:23:50 PM

Mean Area 347.7
Mean Conc. 11.27mg/L



Sample

Sample Name: L12070467-01
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

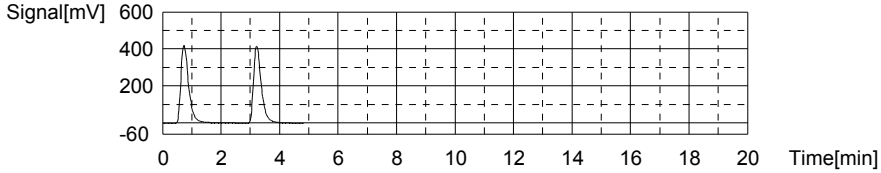
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.539mg/L TC:20.79mg/L IC:15.25mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	784.1	20.87mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:31:46 PM
2	777.9	20.70mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:37:13 PM

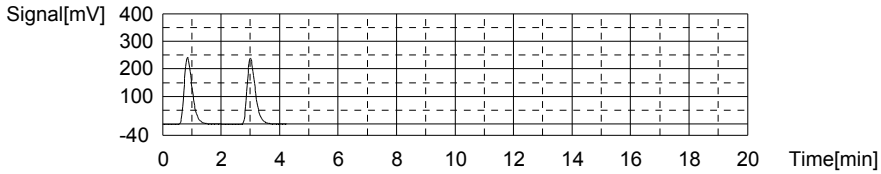
Mean Area 781.0
Mean Conc. 20.79mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	466.9	15.28mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 7:42:25 PM
2	465.1	15.22mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 7:47:21 PM

Mean Area 466.0
Mean Conc. 15.25mg/L



Sample

Sample Name: L12070493-01 (10)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

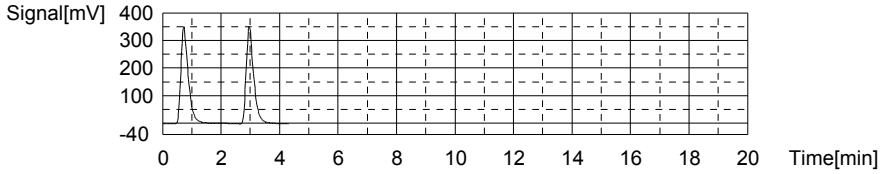
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.659mg/L TC:16.50mg/L IC:12.84mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	616.6	16.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:55:01 PM
2	623.7	16.60mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 7:59:21 PM

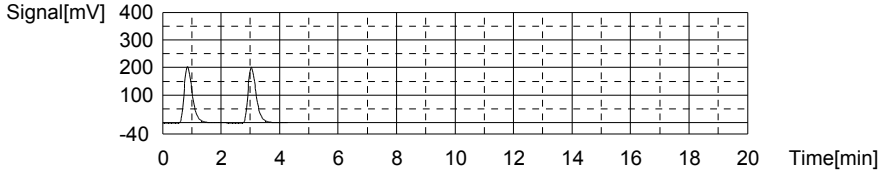
Mean Area 620.2
Mean Conc. 16.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	397.6	12.94mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:04:38 PM
2	391.7	12.75mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:09:31 PM

Mean Area 394.7
Mean Conc. 12.84mg/L



Sample

Sample Name: WG403685-05 DUP
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

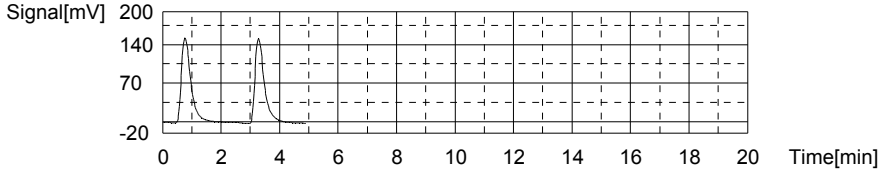
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.313mg/L TC:9.344mg/L IC:4.031mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	353.0	9.393mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 8:17:28 PM
2	349.3	9.295mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 8:22:06 PM

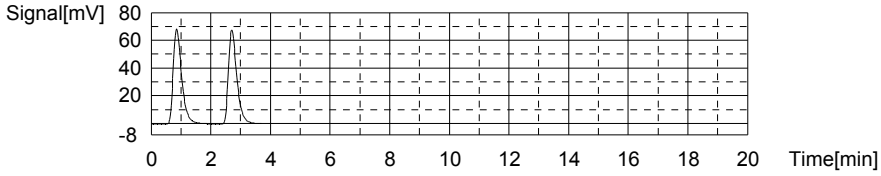
Mean Area 351.1
Mean Conc. 9.344mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	133.9	4.072mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:26:56 PM
2	131.5	3.991mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:31:28 PM

Mean Area 132.7
Mean Conc. 4.031mg/L



Sample

Sample Name: WG403685-06 MS
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

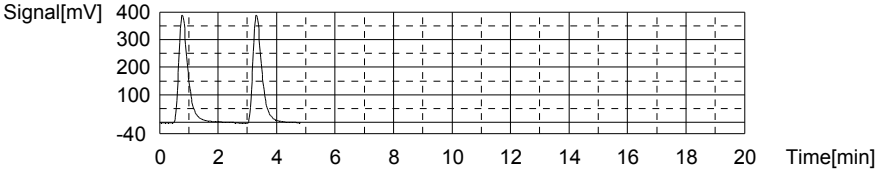
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.32mg/L TC:22.65mg/L IC:7.330mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	857.2	22.81mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 8:39:26 PM
2	844.7	22.48mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 8:44:51 PM

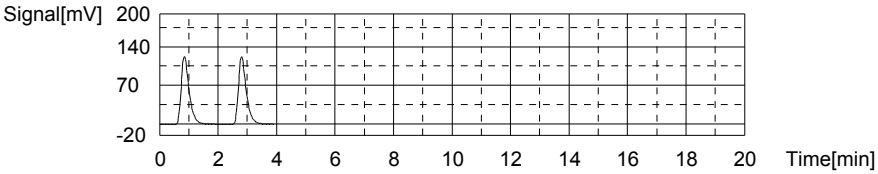
Mean Area 851.0
Mean Conc. 22.65mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	230.9	7.335mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:49:48 PM
2	230.6	7.325mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/18/2012 8:54:30 PM

Mean Area 230.8
Mean Conc. 7.330mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

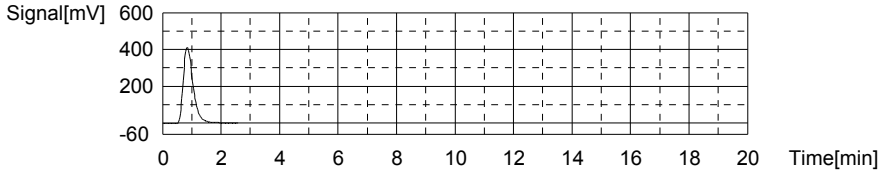
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.04mg/L TC:25.85mg/L IC:-0.1960mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	971.2	25.85mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:02:30 PM

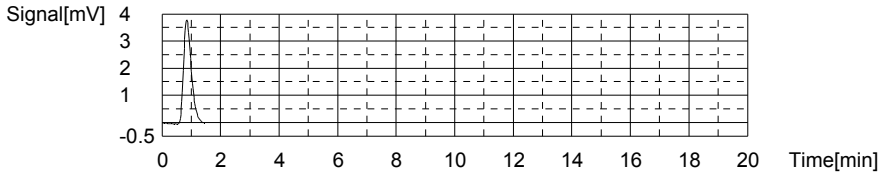
Mean Area 971.2
Mean Conc. 25.85mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.060	-0.1960mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 9:06:49 PM

Mean Area 7.060
Mean Conc. -0.1960mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

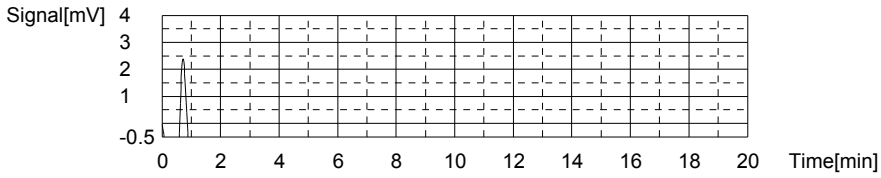
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4128mg/L TC:0.2224mg/L IC:-0.1905mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.448	0.2224mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:11:56 PM

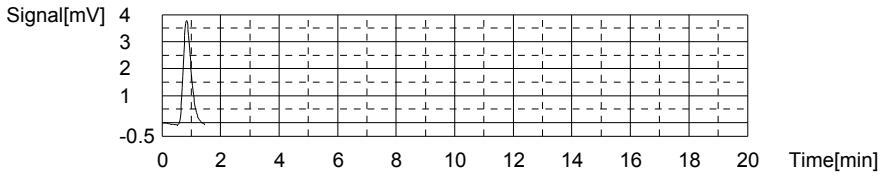
Mean Area 8.448
Mean Conc. 0.2224mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.225	-0.1905mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 9:15:46 PM

Mean Area 7.225
Mean Conc. -0.1905mg/L



Sample

Sample Name: WG403689-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

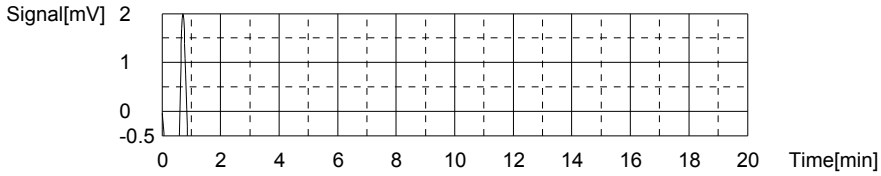
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3853mg/L TC:0.1914mg/L IC:-0.1939mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.285	0.1914mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:20:50 PM

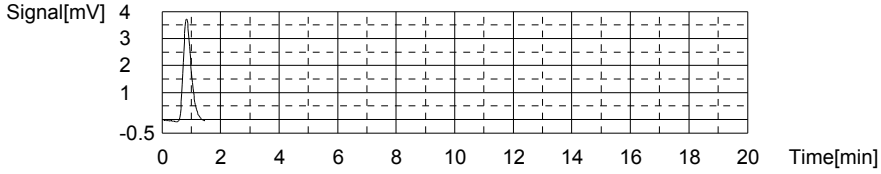
Mean Area 7.285
Mean Conc. 0.1914mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.124	-0.1939mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 9:24:44 PM

Mean Area 7.124
Mean Conc. -0.1939mg/L



Sample

Sample Name: WG403689-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

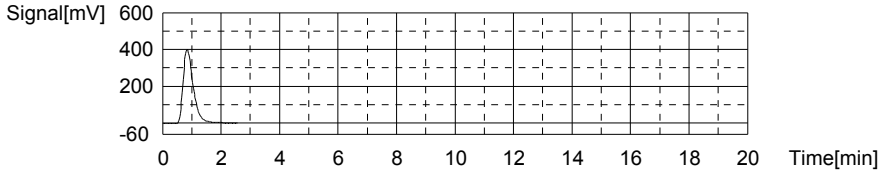
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.92mg/L TC:25.68mg/L IC:-0.2334mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	965.0	25.68mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:32:44 PM

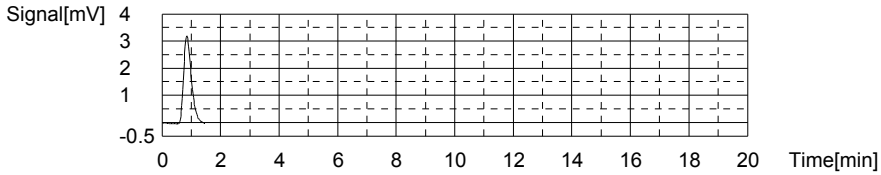
Mean Area 965.0
Mean Conc. 25.68mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.948	-0.2334mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 9:37:02 PM

Mean Area 5.948
Mean Conc. -0.2334mg/L



Sample

Sample Name: WG403689-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

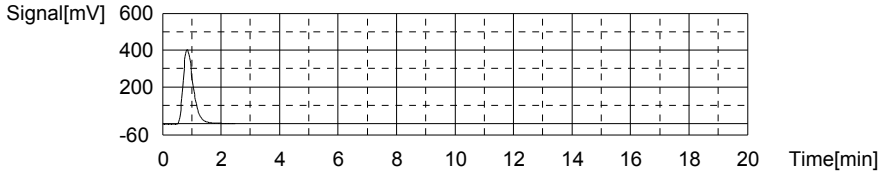
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.18mg/L TC:25.95mg/L IC:-0.2311mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	975.0	25.95mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:44:57 PM

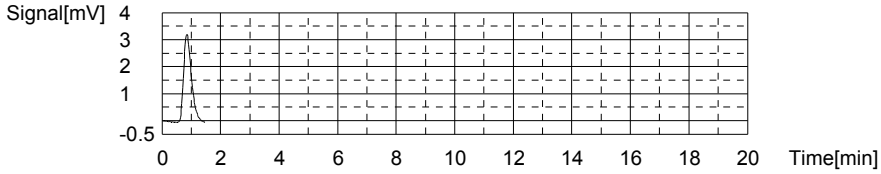
Mean Area 975.0
Mean Conc. 25.95mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.017	-0.2311mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 9:49:21 PM

Mean Area 6.017
Mean Conc. -0.2311mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

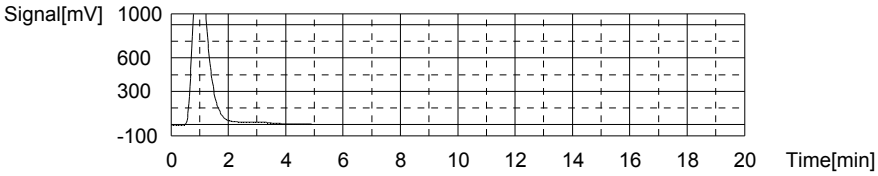
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:135.3mg/L TC:140.5mg/L IC:5.145mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5278	140.5mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 9:59:42 PM

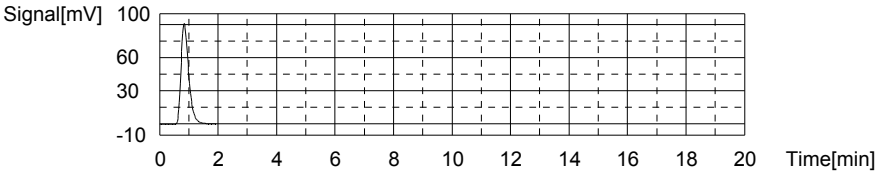
Mean Area 5278
Mean Conc. 140.5mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	165.8	5.145mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 10:04:32 PM

Mean Area 165.8
Mean Conc. 5.145mg/L



Sample

Sample Name: L12070383-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

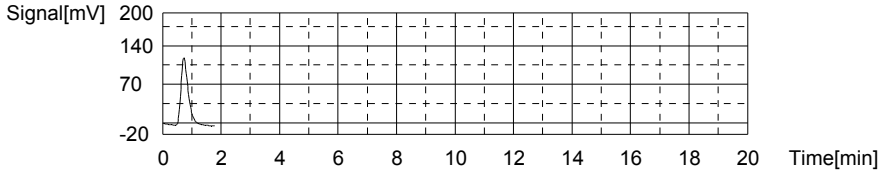
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.603mg/L TC:5.662mg/L IC:4.058mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	212.8	5.662mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 10:11:45 PM

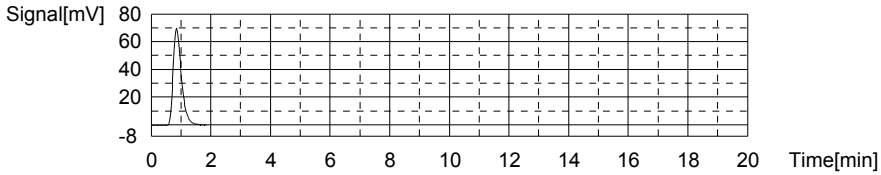
Mean Area 212.8
Mean Conc. 5.662mg/L



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_	7/18/2012 10:16:34 PM

Mean Area 133.5
Mean Conc. 4.058mg/L



Sample

Sample Name: L12070383-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

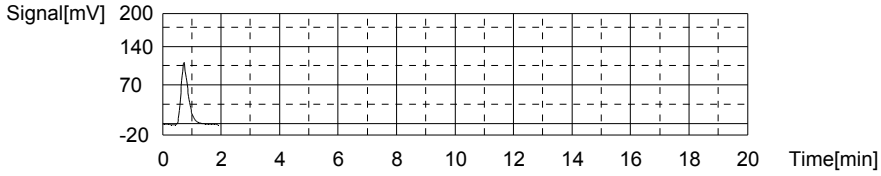
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.645mg/L TC:5.145mg/L IC:3.500mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	193.4	5.145mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 10:23:55 PM

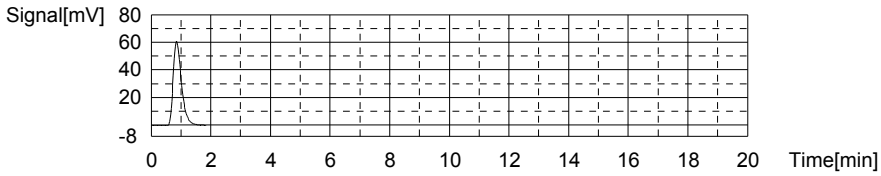
Mean Area 193.4
Mean Conc. 5.145mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	116.9	3.500mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 10:28:39 PM

Mean Area 116.9
Mean Conc. 3.500mg/L



Sample

Sample Name: L12070383-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

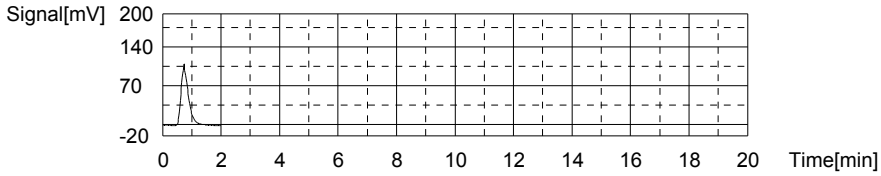
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.554mg/L TC:5.044mg/L IC:3.490mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	189.6	5.044mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 10:36:05 PM

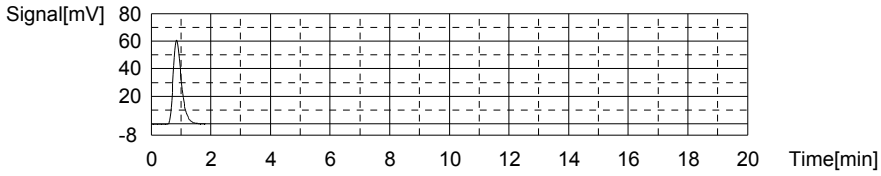
Mean Area 189.6
Mean Conc. 5.044mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	116.6	3.490mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 10:40:49 PM

Mean Area 116.6
Mean Conc. 3.490mg/L



Sample

Sample Name: L12070383-04
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

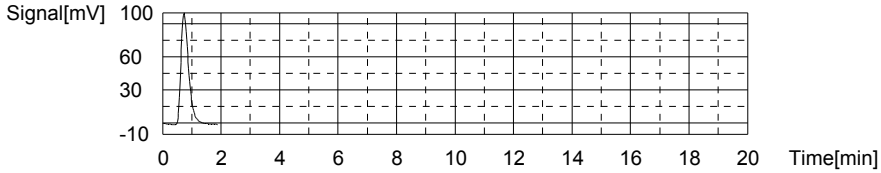
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.539mg/L TC:4.951mg/L IC:3.412mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	186.1	4.951mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 10:48:09 PM

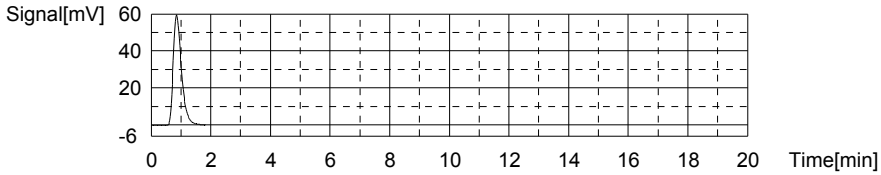
Mean Area 186.1
Mean Conc. 4.951mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	114.3	3.412mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 10:52:55 PM

Mean Area 114.3
Mean Conc. 3.412mg/L



Sample

Sample Name: L12070383-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

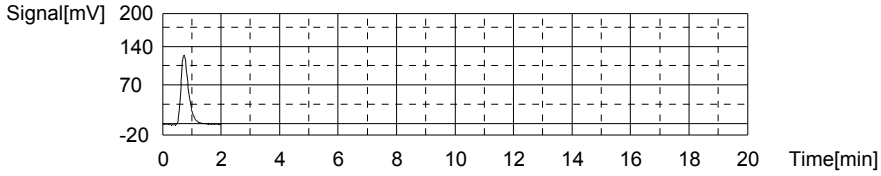
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.142mg/L TC:6.130mg/L IC:3.988mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	230.4	6.130mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:00:21 PM

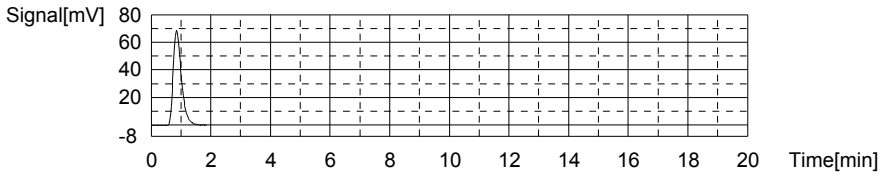
Mean Area 230.4
Mean Conc. 6.130mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	131.4	3.988mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:05:08 PM

Mean Area 131.4
Mean Conc. 3.988mg/L



Sample

Sample Name: L12070383-06
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

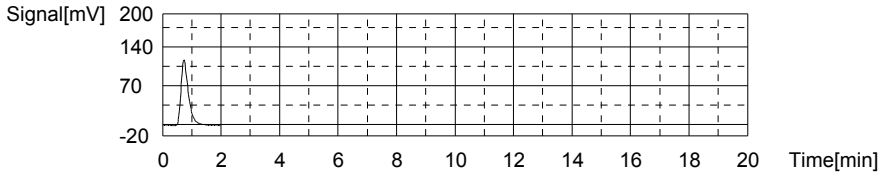
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.876mg/L TC:5.547mg/L IC:3.671mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	208.5	5.547mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:12:33 PM

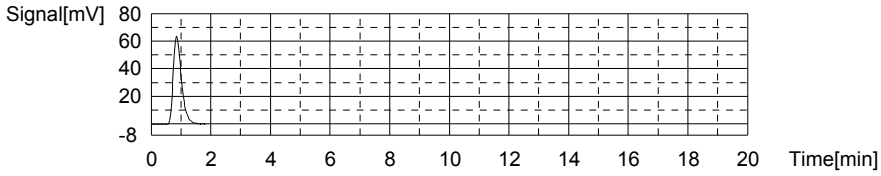
Mean Area 208.5
Mean Conc. 5.547mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	122.0	3.671mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:17:19 PM

Mean Area 122.0
Mean Conc. 3.671mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

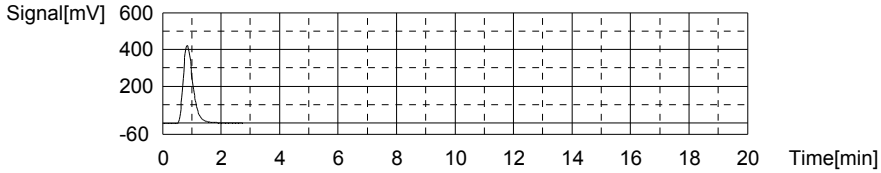
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.31mg/L TC:26.10mg/L IC:-0.2166mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	980.6	26.10mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:25:30 PM

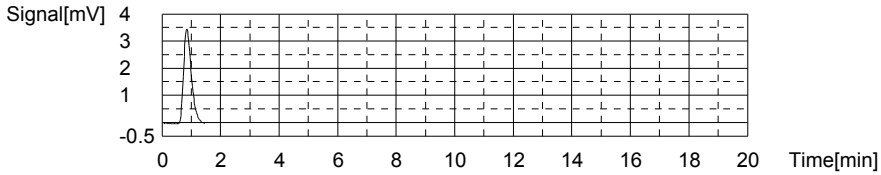
Mean Area 980.6
Mean Conc. 26.10mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.448	-0.2166mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:29:46 PM

Mean Area 6.448
Mean Conc. -0.2166mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

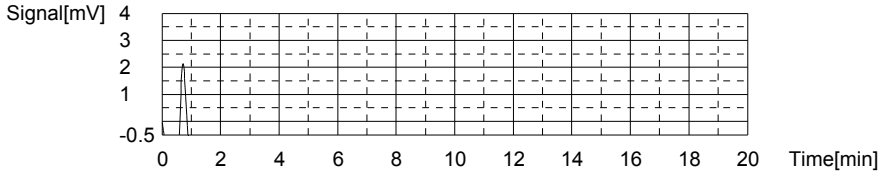
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4110mg/L TC:0.2177mg/L IC:-0.1933mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.274	0.2177mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:34:53 PM

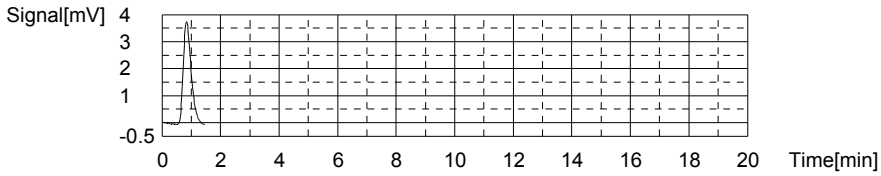
Mean Area 8.274
Mean Conc. 0.2177mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.141	-0.1933mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:38:43 PM

Mean Area 7.141
Mean Conc. -0.1933mg/L



Sample

Sample Name: L12070383-07
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

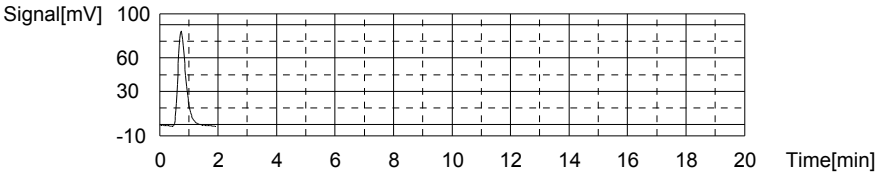
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.635mg/L TC:4.325mg/L IC:2.690mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	162.6	4.325mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:46:04 PM

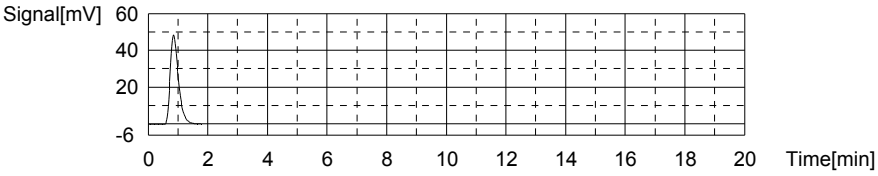
Mean Area 162.6
Mean Conc. 4.325mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	92.85	2.690mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/18/2012 11:50:46 PM

Mean Area 92.85
Mean Conc. 2.690mg/L



Sample

Sample Name: L12070383-08
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

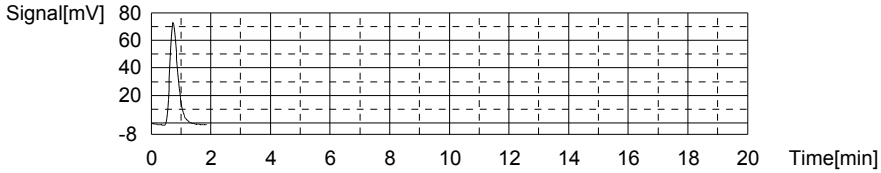
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.527mg/L TC:3.719mg/L IC:2.192mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	139.8	3.719mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/18/2012 11:58:04 PM

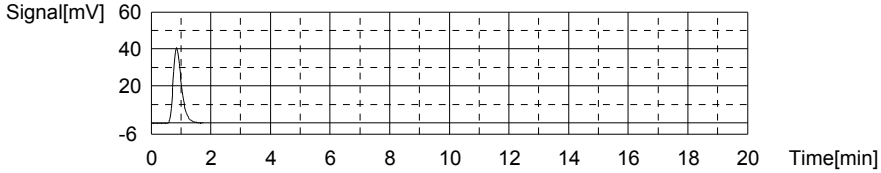
Mean Area 139.8
Mean Conc. 3.719mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	78.02	2.192mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 12:02:42 AM

Mean Area 78.02
Mean Conc. 2.192mg/L



Sample

Sample Name: L12070383-09
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

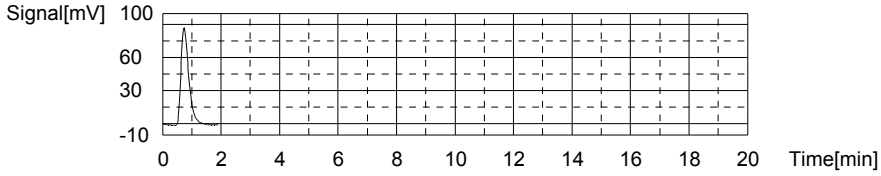
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.558mg/L TC:4.395mg/L IC:2.837mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	165.2	4.395mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 12:10:02 AM

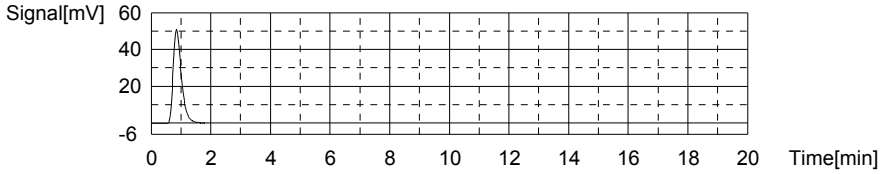
Mean Area 165.2
Mean Conc. 4.395mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	97.19	2.837mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 12:14:46 AM

Mean Area 97.19
Mean Conc. 2.837mg/L



Sample

Sample Name: L12070383-10
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

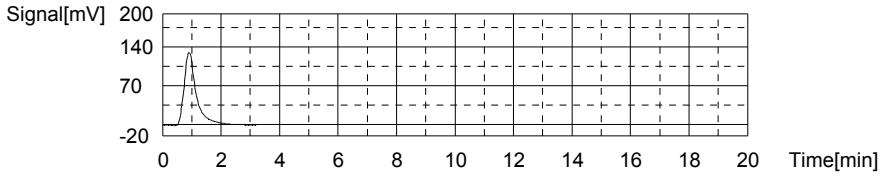
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.212mg/L TC:10.29mg/L IC:1.076mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	386.6	10.29mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 12:23:25 AM

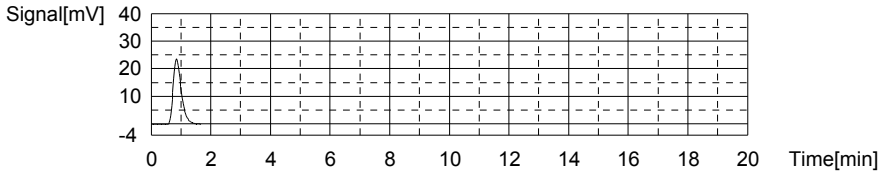
Mean Area 386.6
Mean Conc. 10.29mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	44.86	1.076mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 12:27:58 AM

Mean Area 44.86
Mean Conc. 1.076mg/L



Sample

Sample Name: L12070383-11
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

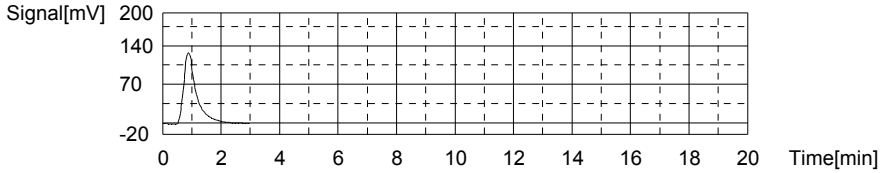
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.230mg/L TC:10.47mg/L IC:1.241mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	393.5	10.47mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 12:36:23 AM

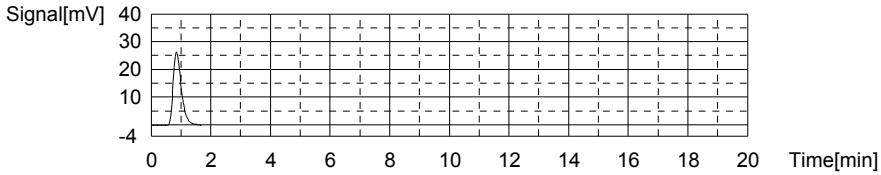
Mean Area 393.5
Mean Conc. 10.47mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	49.76	1.241mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 12:40:58 AM

Mean Area 49.76
Mean Conc. 1.241mg/L



Sample

Sample Name: L12070383-12
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

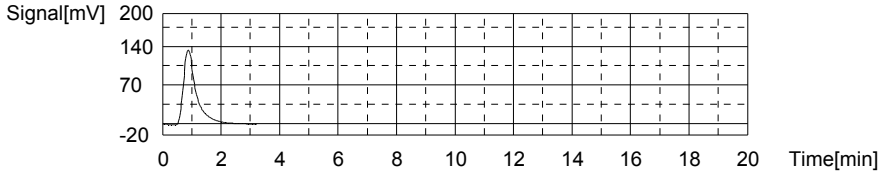
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.574mg/L TC:11.11mg/L IC:1.533mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	417.4	11.11mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 12:49:38 AM

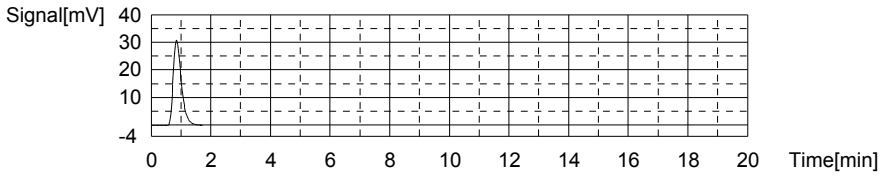
Mean Area 417.4
Mean Conc. 11.11mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	58.45	1.533mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 12:54:14 AM

Mean Area 58.45
Mean Conc. 1.533mg/L



Sample

Sample Name: L12070383-13
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

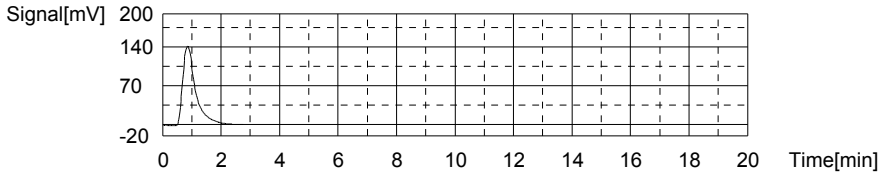
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.141mg/L TC:11.75mg/L IC:2.605mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	441.4	11.75mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 1:02:26 AM

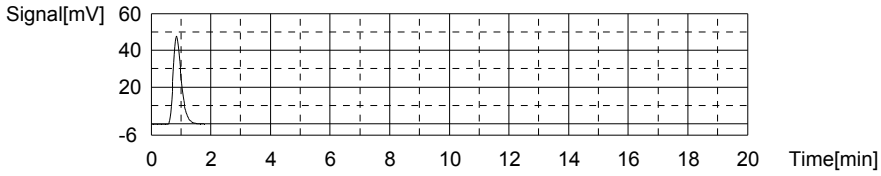
Mean Area 441.4
Mean Conc. 11.75mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	90.31	2.605mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 1:07:06 AM

Mean Area 90.31
Mean Conc. 2.605mg/L



Sample

Sample Name: L12070383-14
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

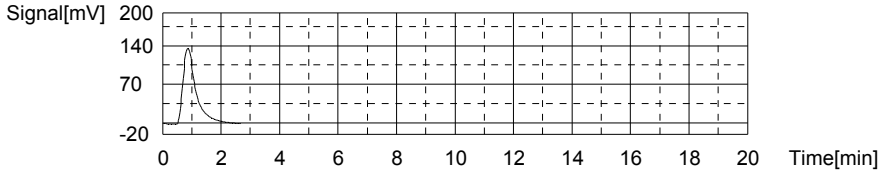
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.236mg/L TC:11.33mg/L IC:2.092mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	425.7	11.33mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 1:15:13 AM

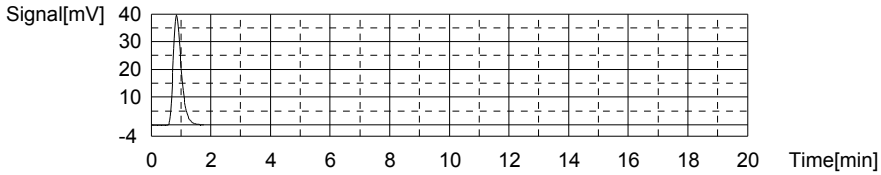
Mean Area 425.7
Mean Conc. 11.33mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	75.07	2.092mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 1:19:53 AM

Mean Area 75.07
Mean Conc. 2.092mg/L



Sample

Sample Name: L12070383-15
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

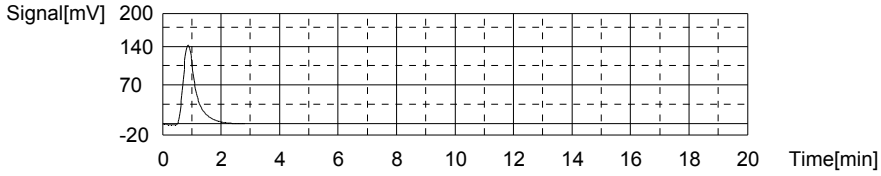
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.838mg/L TC:11.72mg/L IC:1.884mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	440.5	11.72mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 1:28:09 AM

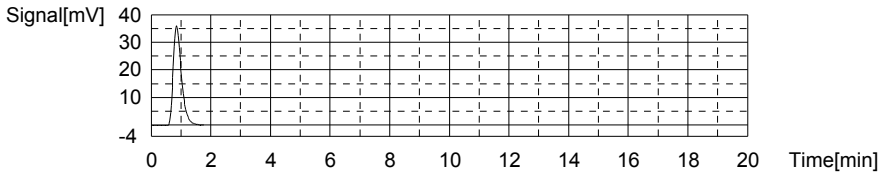
Mean Area 440.5
Mean Conc. 11.72mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	68.88	1.884mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 1:32:49 AM

Mean Area 68.88
Mean Conc. 1.884mg/L



Sample

Sample Name: L12070327-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

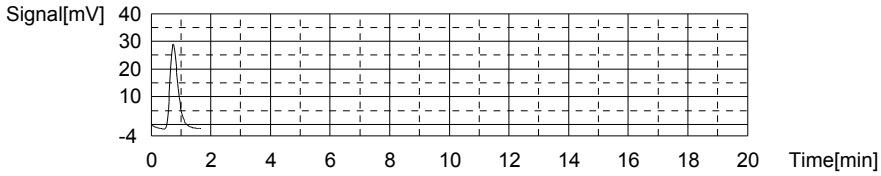
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8902mg/L TC:1.531mg/L IC:0.6404mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	57.60	1.531mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 1:39:55 AM

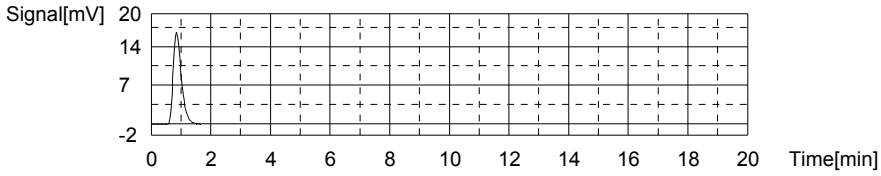
Mean Area 57.60
Mean Conc. 1.531mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.92	0.6404mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 1:44:27 AM

Mean Area 31.92
Mean Conc. 0.6404mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

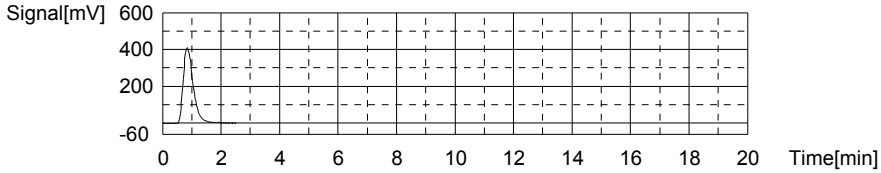
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.25mg/L TC:26.03mg/L IC:-0.2210mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	978.1	26.03mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 1:52:25 AM

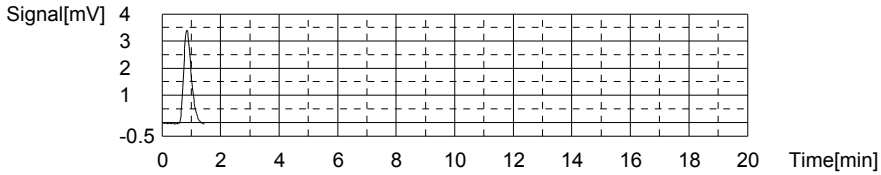
Mean Area 978.1
Mean Conc. 26.03mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.317	-0.2210mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 1:56:41 AM

Mean Area 6.317
Mean Conc. -0.2210mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

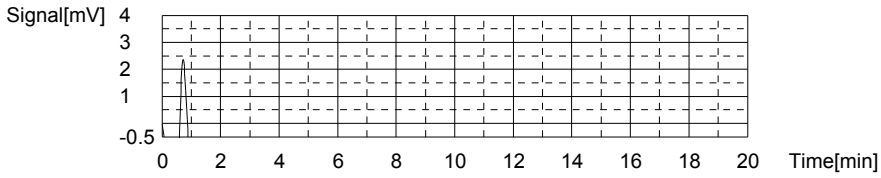
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4160mg/L TC:0.2202mg/L IC:-0.1958mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.366	0.2202mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:01:49 AM

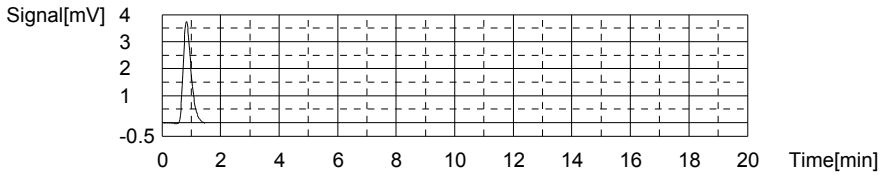
Mean Area 8.366
Mean Conc. 0.2202mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.065	-0.1958mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 2:05:41 AM

Mean Area 7.065
Mean Conc. -0.1958mg/L



Sample

Sample Name: L12070327-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

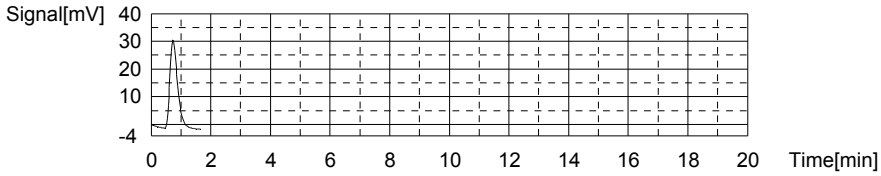
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7161mg/L TC:1.513mg/L IC:0.7972mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.95	1.513mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:12:49 AM

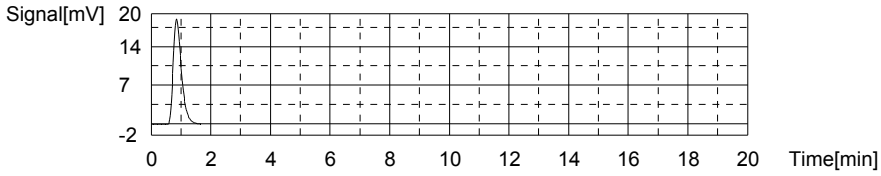
Mean Area 56.95
Mean Conc. 1.513mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	36.58	0.7972mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 2:17:22 AM

Mean Area 36.58
Mean Conc. 0.7972mg/L



Sample

Sample Name: L12070327-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

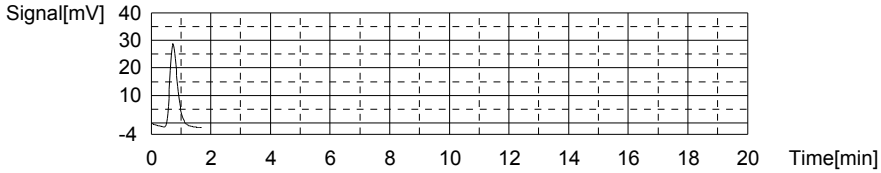
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6857mg/L TC:1.432mg/L IC:0.7464mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.90	1.432mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:24:31 AM

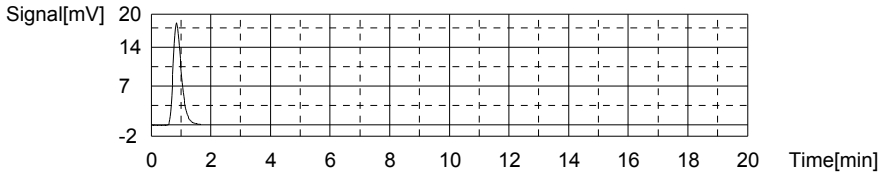
Mean Area 53.90
Mean Conc. 1.432mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	35.07	0.7464mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 2:29:02 AM

Mean Area 35.07
Mean Conc. 0.7464mg/L



Sample

Sample Name: L12070328-04
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

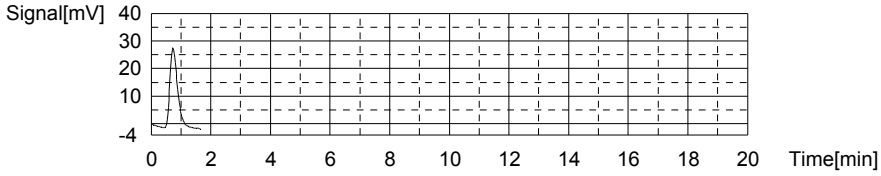
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6304mg/L TC:1.369mg/L IC:0.7387mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.53	1.369mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:36:09 AM

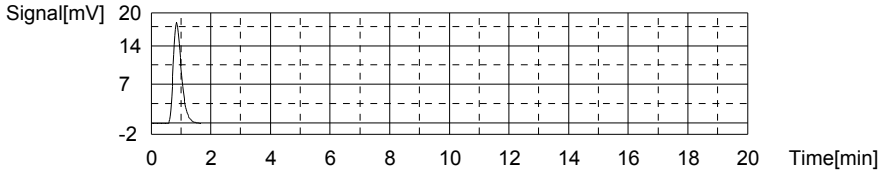
Mean Area 51.53
Mean Conc. 1.369mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	34.84	0.7387mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 2:40:40 AM

Mean Area 34.84
Mean Conc. 0.7387mg/L



Sample

Sample Name: WG403689-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

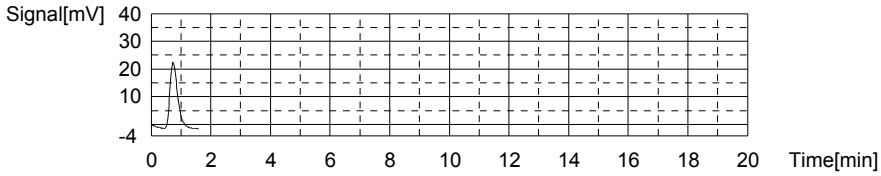
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6403mg/L TC:1.140mg/L IC:0.5001mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	42.94	1.140mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:47:43 AM

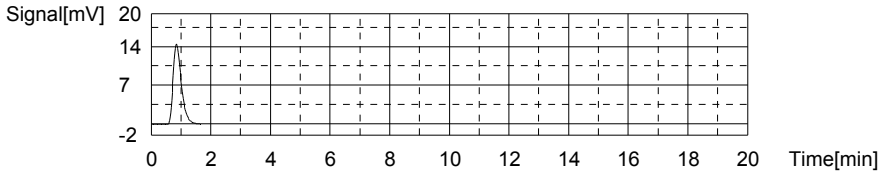
Mean Area 42.94
Mean Conc. 1.140mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27.75	0.5001mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 2:52:12 AM

Mean Area 27.75
Mean Conc. 0.5001mg/L



Sample

Sample Name: L12070328-05 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

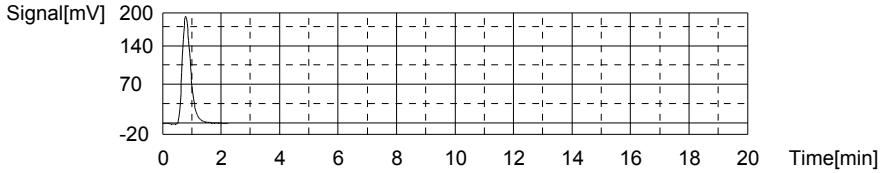
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.42mg/L TC:10.50mg/L IC:0.08056mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	394.5	10.50mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 2:59:54 AM

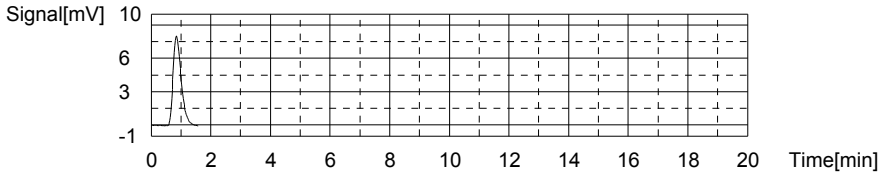
Mean Area 394.5
Mean Conc. 10.50mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.28	0.08056mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 3:04:18 AM

Mean Area 15.28
Mean Conc. 0.08056mg/L



Sample

Sample Name: L12070328-06 MSD
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

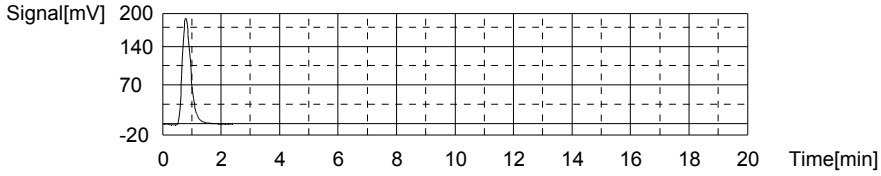
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.46mg/L TC:10.53mg/L IC:0.07080mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	395.8	10.53mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 3:12:08 AM

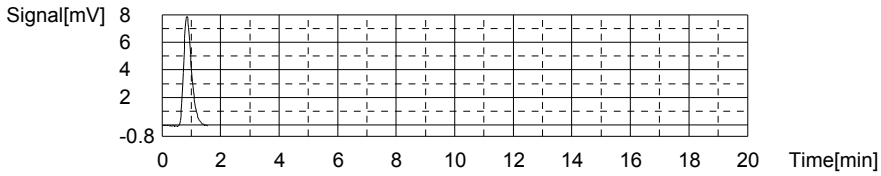
Mean Area 395.8
Mean Conc. 10.53mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.99	0.07080mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 3:16:33 AM

Mean Area 14.99
Mean Conc. 0.07080mg/L



Sample

Sample Name: L12070235-15
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

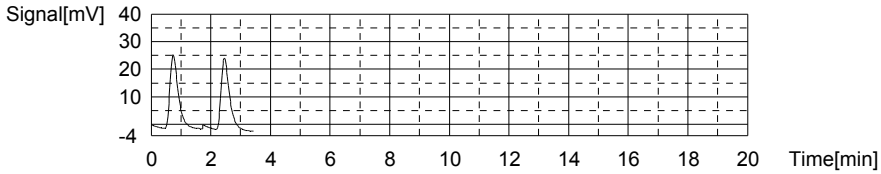
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.117mg/L TC:1.348mg/L IC:0.2311mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.29	1.363mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 3:23:44 AM
2	50.22	1.334mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 3:27:42 AM

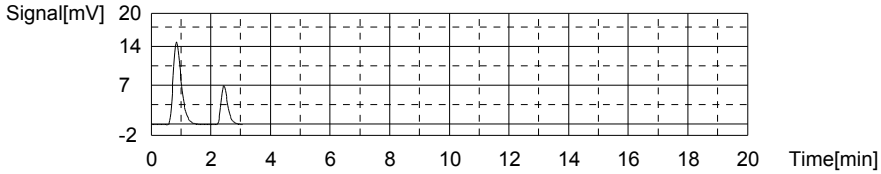
Mean Area 50.75
Mean Conc. 1.348mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.42	0.5227mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 3:32:12 AM
2	11.09	-0.06042mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 3:36:15 AM

Mean Area 19.76
Mean Conc. 0.2311mg/L



Sample

Sample Name: L12070495-09
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

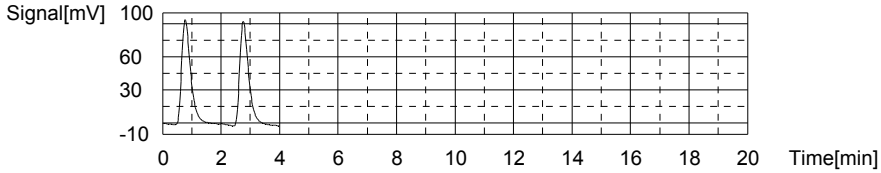
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.021mg/L TC:5.382mg/L IC:1.361mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	203.5	5.414mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 3:43:42 AM
2	201.1	5.350mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 3:48:01 AM

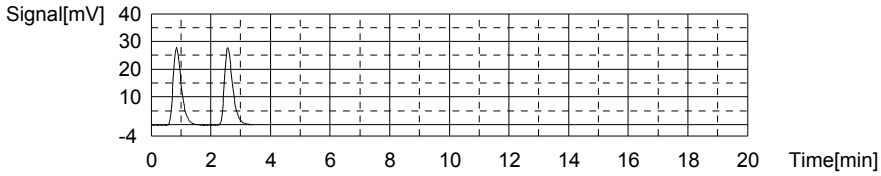
Mean Area 202.3
Mean Conc. 5.382mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.50	1.367mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 3:52:38 AM
2	53.15	1.355mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 3:56:59 AM

Mean Area 53.33
Mean Conc. 1.361mg/L



Sample

Sample Name: <Untitled>
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

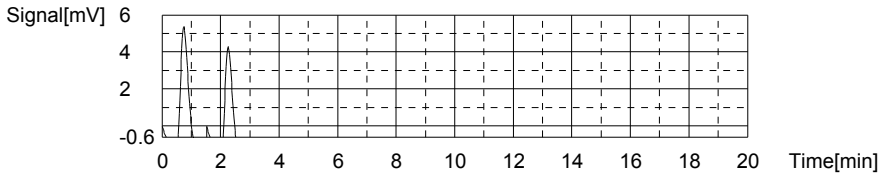
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.5303mg/L TC:0.3230mg/L IC:-0.2073mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.19	0.3486mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 4:03:58 AM
2	11.27	0.2975mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 4:07:44 AM

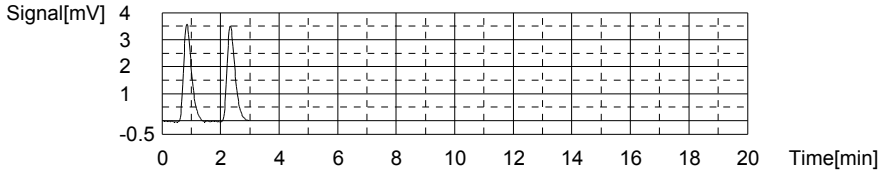
Mean Area 12.23
Mean Conc. 0.3230mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.798	-0.2048mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 4:12:05 AM
2	6.654	-0.2097mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 4:16:11 AM

Mean Area 6.726
Mean Conc. -0.2073mg/L



Sample

Sample Name: L12070286-07 (30)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

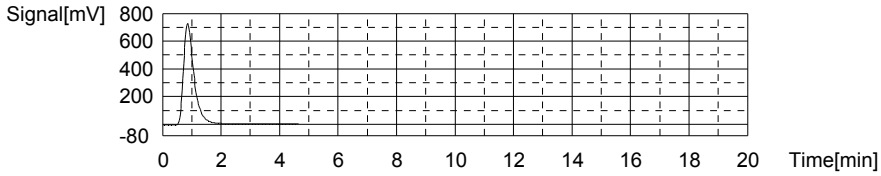
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:48.98mg/L TC:49.32mg/L IC:0.3423mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1853	49.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 4:26:17 AM

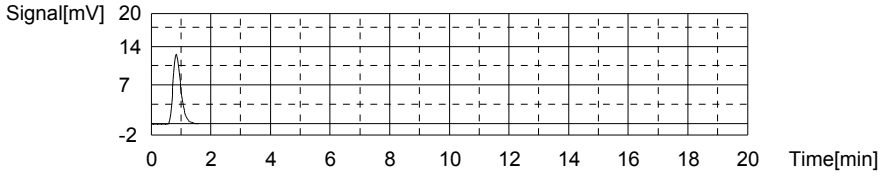
Mean Area 1853
Mean Conc. 49.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	23.06	0.3423mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 4:30:45 AM

Mean Area 23.06
Mean Conc. 0.3423mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

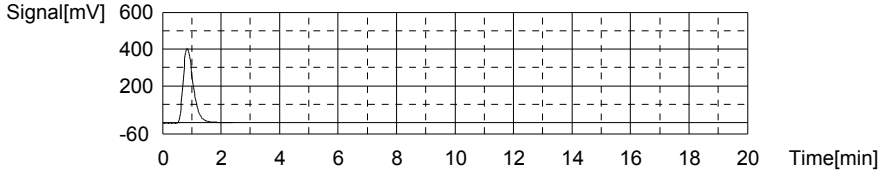
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.15mg/L TC:25.93mg/L IC:-0.2185mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	974.2	25.93mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 4:38:37 AM

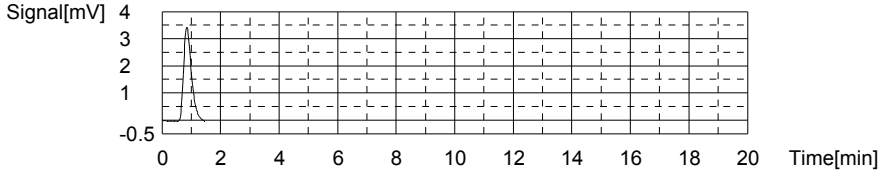
Mean Area 974.2
Mean Conc. 25.93mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.391	-0.2185mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 4:42:56 AM

Mean Area 6.391
Mean Conc. -0.2185mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

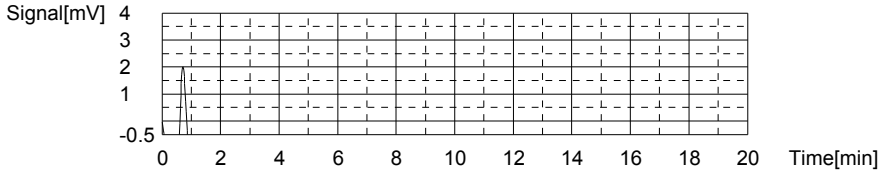
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4018mg/L TC:0.2108mg/L IC:-0.1909mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.014	0.2108mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 4:48:05 AM

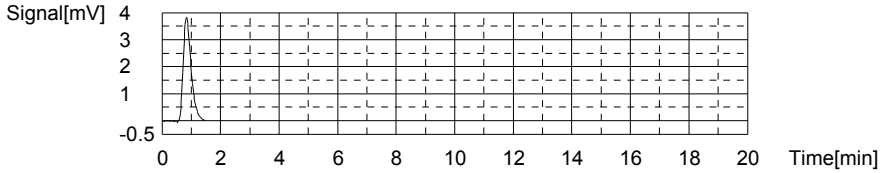
Mean Area 8.014
Mean Conc. 0.2108mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.211	-0.1909mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 4:51:59 AM

Mean Area 7.211
Mean Conc. -0.1909mg/L



Sample

Sample Name: L12070355-05 (2)
Sample ID: <Untitled>
Origin: TOC-12-06-2011A.met
Status Completed
Chk. Result

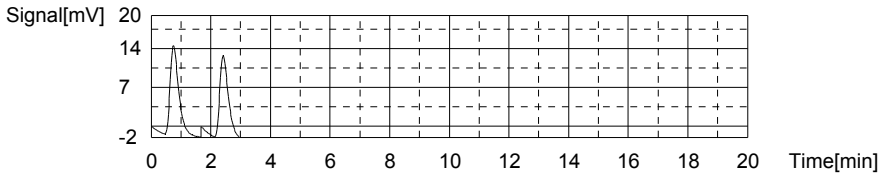
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.7234mg/L TC:0.8132mg/L IC:0.08981mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	31.84	0.8450mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 6:49:33 AM
2	29.45	0.7814mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 6:53:29 AM

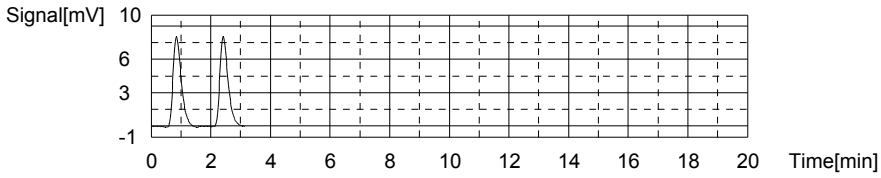
Mean Area 30.65
Mean Conc. 0.8132mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.64	0.09267mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 6:57:55 AM
2	15.47	0.08695mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 7:02:08 AM

Mean Area 15.56
Mean Conc. 0.08981mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

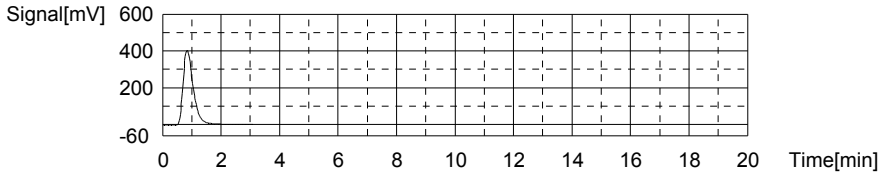
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.27mg/L TC:26.07mg/L IC:-0.1986mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	979.7	26.07mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 7:10:51 AM

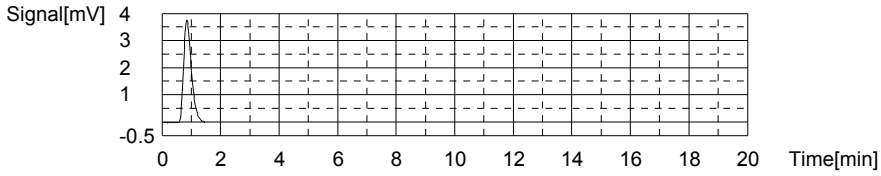
Mean Area 979.7
Mean Conc. 26.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.984	-0.1986mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/19/2012 7:15:09 AM

Mean Area 6.984
Mean Conc. -0.1986mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

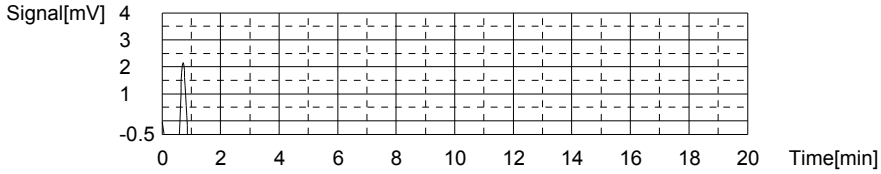
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4143mg/L TC:0.2219mg/L IC:-0.1923mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.432	0.2219mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/19/2012 7:20:15 AM

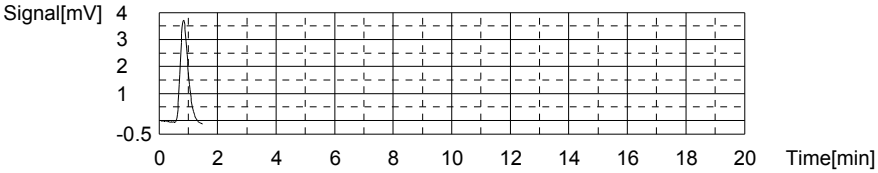
Mean Area 8.432
Mean Conc. 0.2219mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.169	-0.1923mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/19/2012 7:24:11 AM

Mean Area 7.169
Mean Conc. -0.1923mg/L



WORKGROUP: WG404037

404038

Total Organic Carbon

MAKE DAILY

CCV (TOC): std52104 (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_____

☑ EPA 415.1/9060A(mod): Matrix 1 WG_____ 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	LCS	
5	LCSDUP	
6	07-328-01	
7	02	
8	03	
9	07-329-01	
10	2	1/2
11	3	1/2
12	4	
13	5	
14	CCV	
15	CCB	
16	07-329-6	
17	7	
18	8	
19	9	
20	10	
21	11	
22	12	
23	13	
24	14	
25	15	

Position	Sample ID	Dilution
26	CCV	
27	CCB	
28	07-373-01	
29	02	
30	DUP 329-09	
31	MS ↓	
32	BLK	
33	LCS	
34	LCSDUP	
35	07-373-03	
36	06	
37	07-384-01	1/3
38	CCV	
39	CCB	
40	07-384-03	1/3
41	05	1/3
42	07	1/3
43	09	1/3
44	11	1/3
45	07-401-01	
46	03	
47	05	
48	07	
49	09	
50	CCV	

Position	Sample ID	Dilution
51	CCB	
52	07-401-11	
53	13	
54	07-509-01	
55	07-516-01	1/4
56	02	
57	07-538-01	~~1/100~~ 1/250 Brine
58	07-526-01	1/3
59	DUP 401-05	
60	MS ↓	
61		
62	CCV	
63	CCB	
64	07-329-07	1/5
65	10	1/2
66	15	1/2
67	07-516-d	
68	07-538-01	~~1/50~~ 1/20
69	07-526-01	
70	CCV	
71	CCB	
72		
73		
74		
75		

Analyst: Deanna Hasson Date/Time: 7/21/12

DCN#91662

	Analysi	Sample Name	Result	Status	Date / Time
1	TOC	TIC 25	TOC:0.8985mg/L TC:25.48mg/L IC:24.58mg/L	Completed	7/21/2012 8:24:37 AM
2	TOC	CCV 25	!!Error!! TOC:23.82mg/L TC:23.60mg/L IC:-0.2139mg/L	Completed	7/21/2012 8:36:59 AM
3	TOC	WG404037-01 BLK	!!Error!! TOC:0.4554mg/L TC:0.2781mg/L IC:-0.1773mg/	Completed	7/21/2012 8:46:03 AM
4	TOC	WG404037-02 LCS	!!Error!! TOC:23.59mg/L TC:23.32mg/L IC:-0.2740mg/L	Completed	7/21/2012 8:58:21 AM
5	TOC	WG404037-03 LCSDUP	!!Error!! TOC:24.97mg/L TC:24.70mg/L IC:-0.2704mg/L	Completed	7/21/2012 9:10:33 AM
6	TOC	L12070327-01 328-01	TOC:1.295mg/L TC:11.59mg/L IC:10.30mg/L	Completed	7/21/2012 9:23:13 AM
7	TOC	L12070327-02 328-02	TOC:1.162mg/L TC:9.816mg/L IC:8.654mg/L	Completed	7/21/2012 9:35:49 AM
8	TOC	L12070327-03 328-03	TOC:1.322mg/L TC:7.658mg/L IC:6.336mg/L	Completed	7/21/2012 9:48:14 AM
9	TOC	L12070329-01	TOC:5.007mg/L TC:36.38mg/L IC:31.38mg/L	Completed	7/21/2012 10:01:56 A
10	TOC	L12070329-02 (2)	TOC:5.030mg/L TC:27.73mg/L IC:22.70mg/L	Completed	7/21/2012 10:41:14 A
11	TOC	L12070329-03 (2)	TOC:5.769mg/L TC:33.83mg/L IC:28.06mg/L	Completed	7/21/2012 10:54:52 A
12	TOC	L12070329-04	TOC:4.850mg/L TC:35.02mg/L IC:30.17mg/L	Completed	7/21/2012 11:08:27 A
13	TOC	L12070329-05	TOC:5.964mg/L TC:44.02mg/L IC:38.06mg/L	Completed	7/21/2012 11:22:21 A
14	TOC	CCV	!!Error!! TOC:26.38mg/L TC:26.32mg/L IC:-0.06311mg/L	Completed	7/21/2012 11:35:06 A
15	TOC	CCB	!!Error!! TOC:0.4144mg/L TC:0.2584mg/L IC:-0.1560mg/	Completed	7/21/2012 11:44:10 A
16	TOC	L12070329-06	TOC:9.344mg/L TC:41.41mg/L IC:32.07mg/L	Completed	7/21/2012 11:58:13 A
17	TOC		TOC:126.5mg/L TC:134.3mg/L IC:7.739mg/L	Completed	7/21/2012 12:13:49 P
18	TOC	L12070329-08	TOC:5.655mg/L TC:37.07mg/L IC:31.42mg/L	Completed	7/21/2012 12:27:19 P
19	TOC	L12070329-09	TOC:3.746mg/L TC:30.07mg/L IC:26.33mg/L	Completed	7/21/2012 12:40:40 P
20	TOC		TOC:7.834mg/L TC:52.99mg/L IC:45.16mg/L	Completed	7/21/2012 12:56:20 P
21	TOC	L12070329-11	TOC:2.232mg/L TC:21.14mg/L IC:18.91mg/L	Completed	7/21/2012 1:09:15 PM
22	TOC	L12070329-12	TOC:2.761mg/L TC:35.32mg/L IC:32.56mg/L	Completed	7/21/2012 1:23:01 PM
23	TOC	L12070329-13	TOC:4.740mg/L TC:20.83mg/L IC:16.09mg/L	Completed	7/21/2012 1:35:43 PM
24	TOC	L12070329-14	TOC:4.214mg/L TC:41.60mg/L IC:37.38mg/L	Completed	7/21/2012 1:49:55 PM
25	TOC		TOC:24.79mg/L TC:54.64mg/L IC:29.85mg/L	Completed	7/21/2012 2:04:36 PM
26	TOC	CCV	!!Error!! TOC:25.91mg/L TC:25.82mg/L IC:-0.09137mg/L	Completed	7/21/2012 2:16:48 PM
27	TOC	CCB	!!Error!! TOC:0.4232mg/L TC:0.2685mg/L IC:-0.1548mg/	Completed	7/21/2012 2:25:54 PM
28	TOC	L12070373-01	TOC:1.031mg/L TC:10.20mg/L IC:9.169mg/L	Completed	7/21/2012 2:38:21 PM
29	TOC	L12070373-02	TOC:1.206mg/L TC:10.01mg/L IC:8.799mg/L	Completed	7/21/2012 2:51:03 PM
30	TOC	WG404037-05 DUP	TOC:2.787mg/L TC:20.45mg/L IC:17.67mg/L	Completed	7/21/2012 3:04:09 PM
31	TOC	WG404037-06 MS	TOC:12.68mg/L TC:35.24mg/L IC:22.56mg/L	Completed	7/21/2012 3:18:11 PM
32	TOC	WG404038-01 BLK	!!Error!! TOC:0.3985mg/L TC:0.3044mg/L IC:-0.09407m	Completed	7/21/2012 3:27:18 PM
33	TOC	WG404038-02 LCS	!!Error!! TOC:25.55mg/L TC:25.35mg/L IC:-0.2074mg/L	Completed	7/21/2012 3:39:24 PM
34	TOC	WG404038-03 LCSDUP	!!Error!! TOC:25.63mg/L TC:25.39mg/L IC:-0.2337mg/L	Completed	7/21/2012 3:51:37 PM
35	TOC	L12070373-03	TOC:1.098mg/L TC:5.206mg/L IC:4.109mg/L	Completed	7/21/2012 4:03:48 PM
36	TOC	L12070373-06	TOC:0.9523mg/L TC:2.702mg/L IC:1.749mg/L	Completed	7/21/2012 4:15:43 PM
37	TOC	L12070384-01 (3)	TOC:7.489mg/L TC:17.40mg/L IC:9.913mg/L	Completed	7/21/2012 4:29:43 PM
38	TOC	CCV	!!Error!! TOC:25.70mg/L TC:25.51mg/L IC:-0.1858mg/L	Completed	7/21/2012 4:41:42 PM
39	TOC	CCB	!!Error!! TOC:0.4188mg/L TC:0.2415mg/L IC:-0.1773mg/	Completed	7/21/2012 4:50:45 PM
40	TOC	L12070384-03 (3)	TOC:3.810mg/L TC:9.803mg/L IC:5.993mg/L	Completed	7/21/2012 5:03:28 PM
41	TOC	L12070384-05 (3)	TOC:3.371mg/L TC:16.20mg/L IC:12.83mg/L	Completed	7/21/2012 5:16:21 PM
42	TOC	L12070384-07 (3)	TOC:2.589mg/L TC:6.771mg/L IC:4.183mg/L	Completed	7/21/2012 5:28:33 PM
43	TOC	L12070384-09 (3)	TOC:2.167mg/L TC:9.055mg/L IC:6.888mg/L	Completed	7/21/2012 5:40:42 PM
44	TOC	L12070384-11 (3)	TOC:2.928mg/L TC:8.150mg/L IC:5.222mg/L	Completed	7/21/2012 5:53:04 PM
45	TOC	L12070401-01	TOC:3.463mg/L TC:21.31mg/L IC:17.85mg/L	Completed	7/21/2012 6:06:09 PM
46	TOC	L12070401-03	TOC:1.964mg/L TC:21.29mg/L IC:19.33mg/L	Completed	7/21/2012 6:18:46 PM
47	TOC	L12070401-05	TOC:2.047mg/L TC:16.72mg/L IC:14.67mg/L	Completed	7/21/2012 6:31:24 PM
48	TOC	L12070401-07	TOC:1.516mg/L TC:6.452mg/L IC:4.936mg/L	Completed	7/21/2012 6:43:38 PM
49	TOC	L12070401-09	TOC:1.645mg/L TC:5.286mg/L IC:3.641mg/L	Completed	7/21/2012 6:55:59 PM
50	TOC	CCV	!!Error!! TOC:26.01mg/L TC:25.80mg/L IC:-0.2121mg/L	Completed	7/21/2012 7:08:13 PM
51	TOC	CCB	!!Error!! TOC:0.4138mg/L TC:0.2361mg/L IC:-0.1777mg/	Completed	7/21/2012 7:17:18 PM
52	TOC	L12070401-11	TOC:3.664mg/L TC:17.32mg/L IC:13.66mg/L	Completed	7/21/2012 7:30:30 PM
53	TOC	L12070401-13	TOC:3.442mg/L TC:14.73mg/L IC:11.29mg/L	Completed	7/21/2012 7:43:34 PM
54	TOC	L12070509-01	TOC:2.179mg/L TC:10.58mg/L IC:8.399mg/L	Completed	7/21/2012 7:56:12 PM
55	TOC	L12070516-01 (4)	TOC:0.9257mg/L TC:3.663mg/L IC:2.737mg/L	Completed	7/21/2012 8:08:23 PM
56	TOC	L12070516-02	!!Error!! TOC:0.5694mg/L TC:0.3704mg/L IC:-0.1989mg/	Completed	7/21/2012 8:19:45 PM
57	TOC		!!Error!! TOC:0.4187mg/L TC:0.1940mg/L IC:-0.2247mg/	Completed	7/21/2012 8:31:05 PM
58	TOC		TOC:2.295mg/L TC:2.822mg/L IC:0.5260mg/L	Completed	7/21/2012 8:42:57 PM
59	TOC	WG404038-05 DUP	TOC:1.213mg/L TC:10.04mg/L IC:8.829mg/L	Completed	7/21/2012 8:55:21 PM
60	TOC	WG404038-06 MS	TOC:11.90mg/L TC:21.56mg/L IC:9.667mg/L	Completed	7/21/2012 9:08:07 PM
61	TOC		!!Error!! TOC:26.03mg/L TC:25.83mg/L IC:-0.2001mg/L	Completed	7/21/2012 9:20:40 PM
62	TOC	CCV	!!Error!! TOC:25.76mg/L TC:25.54mg/L IC:-0.2234mg/L	Completed	7/21/2012 9:32:52 PM
63	TOC	CCB	!!Error!! TOC:0.3966mg/L TC:0.2172mg/L IC:-0.1795mg/	Completed	7/21/2012 9:41:53 PM
64	TOC	CCV	!!Error!! TOC:23.84mg/L TC:23.67mg/L IC:-0.1744mg/L	Completed	7/22/2012 10:14:59 A
65	TOC	CCB	!!Error!! TOC:0.4038mg/L TC:0.2494mg/L IC:-0.1544mg/	Completed	7/22/2012 10:24:07 A
66	TOC	L12070329-07 (5)	TOC:28.82mg/L TC:30.63mg/L IC:1.811mg/L	Completed	7/22/2012 10:37:01 A
67	TOC	L12070329-10 (2)	TOC:4.415mg/L TC:25.45mg/L IC:21.04mg/L	Completed	7/22/2012 10:50:13 A

	Analysi	Sample Name	Result	Status	Date / Time
68	TOC	L12070329-15 (2)	TOC:11.77mg/L TC:26.99mg/L IC:15.22mg/L	Completed	7/22/2012 11:03:09 A
69	TOC		!!Error!! TOC:-8.287mg/L TC:86.13mg/L IC:94.42mg/L	Completed	7/22/2012 11:19:08 A
70	TOC	L12070538-01 (20)	TOC:0.6112mg/L TC:1.028mg/L IC:0.4163mg/L	Completed	7/22/2012 11:30:39 A
71	TOC	L12070526-01	TOC:5.751mg/L TC:16.06mg/L IC:10.31mg/L	Completed	7/22/2012 11:43:57 A
72	TOC	CCV	!!Error!! TOC:25.82mg/L TC:25.68mg/L IC:-0.1346mg/L	Completed	7/22/2012 11:55:49 A
73	TOC	CCB	!!Error!! TOC:0.3687mg/L TC:0.2271mg/L IC:-0.1416mg/	Completed	7/22/2012 12:04:56 P

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

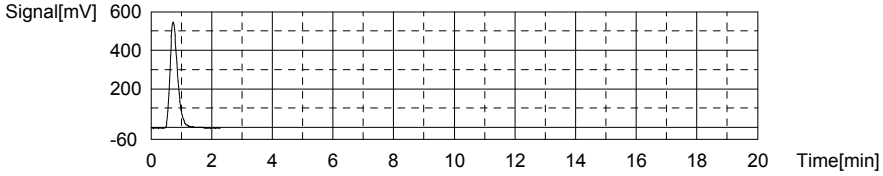
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.8985mg/L TC:25.48mg/L IC:24.58mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	957.3	25.48mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:19:01 AM

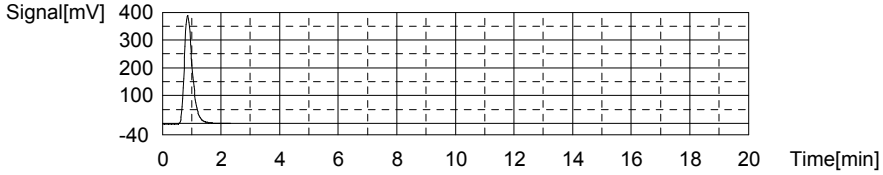
Mean Area 957.3
Mean Conc. 25.48mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	743.4	24.58mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 8:24:37 AM

Mean Area 743.4
Mean Conc. 24.58mg/L



Sample

Sample Name: CCV 25
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

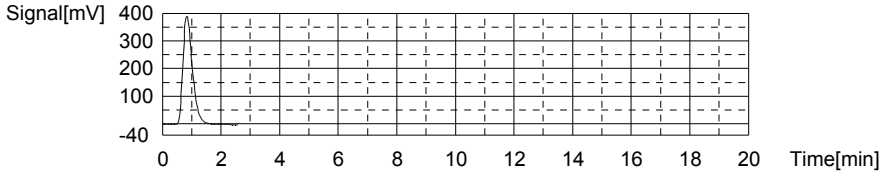
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.82mg/L TC:23.60mg/L IC:-0.2139mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	886.9	23.60mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:32:38 AM

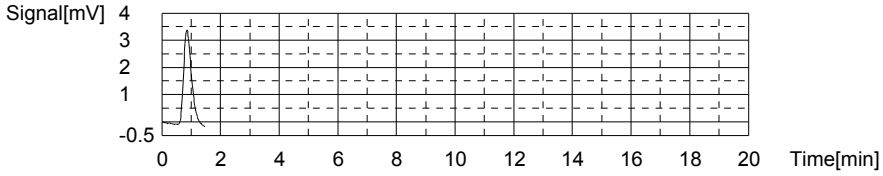
Mean Area 886.9
Mean Conc. 23.60mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.528	-0.2139mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 8:36:59 AM

Mean Area 6.528
Mean Conc. -0.2139mg/L



Sample

Sample Name: WG404037-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

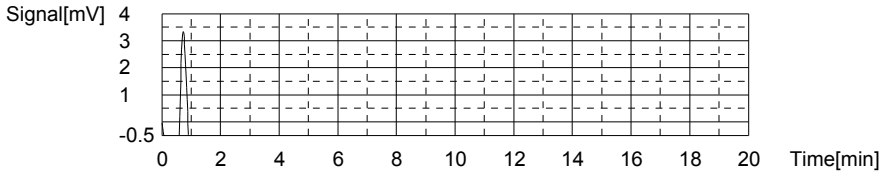
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4554mg/L TC:0.2781mg/L IC:-0.1773mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.54	0.2781mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:42:10 AM

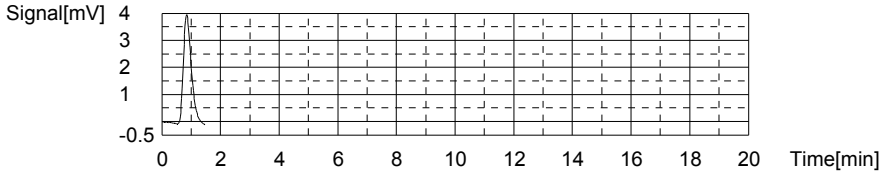
Mean Area 10.54
Mean Conc. 0.2781mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.616	-0.1773mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 8:46:03 AM

Mean Area 7.616
Mean Conc. -0.1773mg/L



Sample

Sample Name: WG404037-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

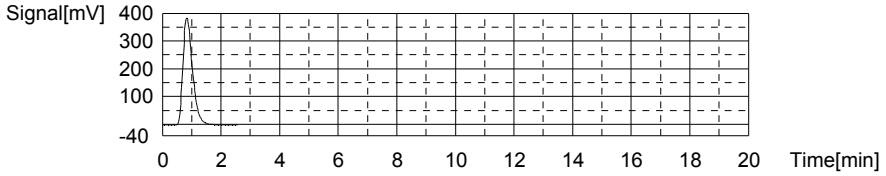
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.59mg/L TC:23.32mg/L IC:-0.2740mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	876.2	23.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:54:03 AM

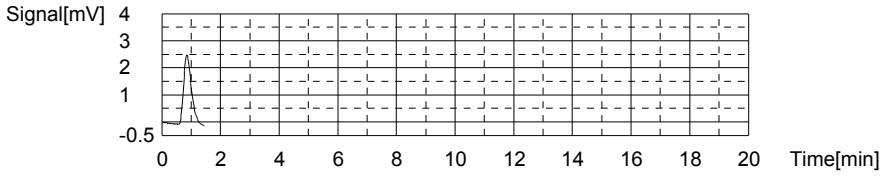
Mean Area 876.2
Mean Conc. 23.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.741	-0.2740mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 8:58:21 AM

Mean Area 4.741
Mean Conc. -0.2740mg/L



Sample

Sample Name: WG404037-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

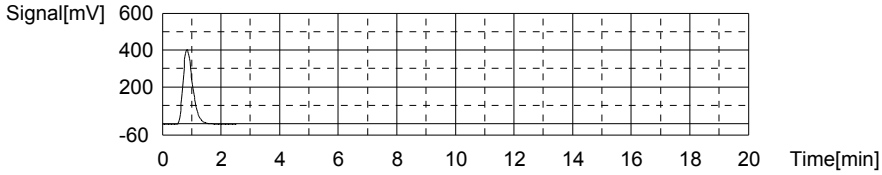
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.97mg/L TC:24.70mg/L IC:-0.2704mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	928.2	24.70mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:06:18 AM

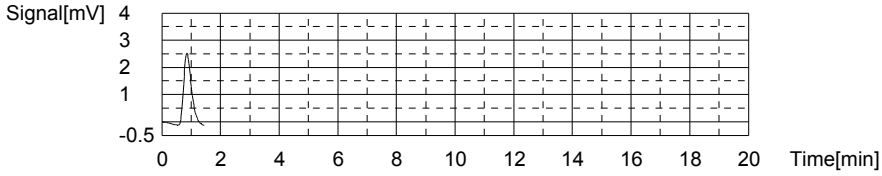
Mean Area 928.2
Mean Conc. 24.70mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.850	-0.2704mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:10:33 AM

Mean Area 4.850
Mean Conc. -0.2704mg/L



Sample

Sample Name: L12070327-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

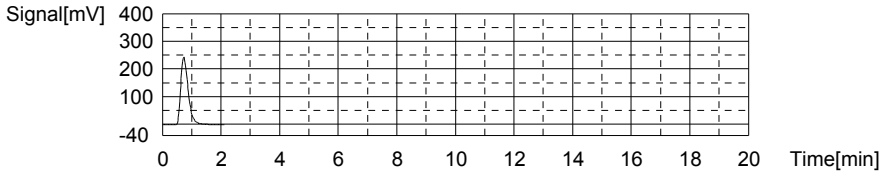
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.295mg/L TC:11.59mg/L IC:10.30mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	435.7	11.59mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:18:05 AM

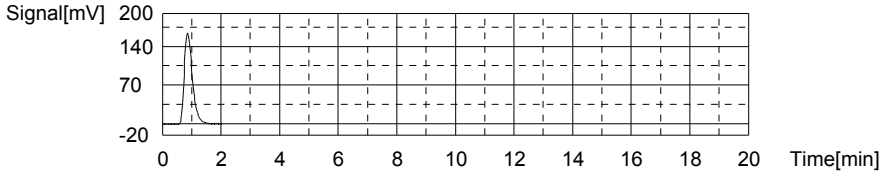
Mean Area 435.7
Mean Conc. 11.59mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	319.0	10.30mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:23:13 AM

Mean Area 319.0
Mean Conc. 10.30mg/L



Sample

Sample Name: L12070327-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

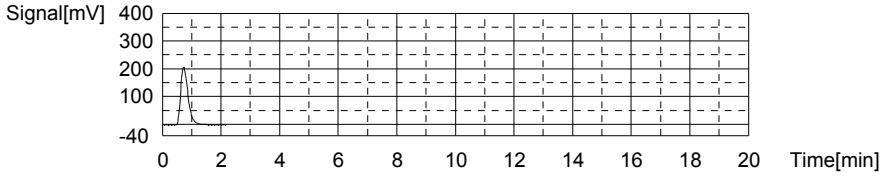
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.162mg/L TC:9.816mg/L IC:8.654mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	368.9	9.816mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:30:49 AM

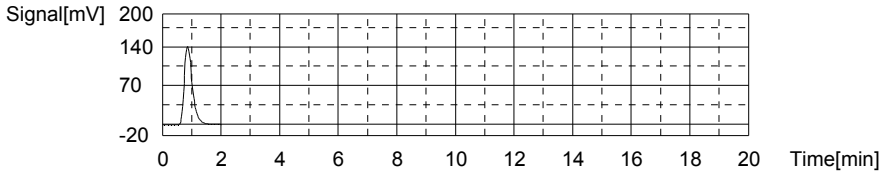
Mean Area 368.9
Mean Conc. 9.816mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	270.1	8.654mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:35:49 AM

Mean Area 270.1
Mean Conc. 8.654mg/L



Sample

Sample Name: L12070327-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

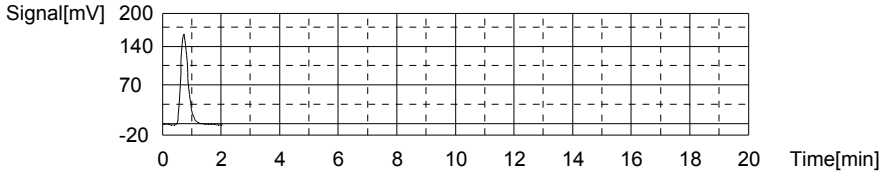
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.322mg/L TC:7.658mg/L IC:6.336mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	287.8	7.658mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:43:19 AM

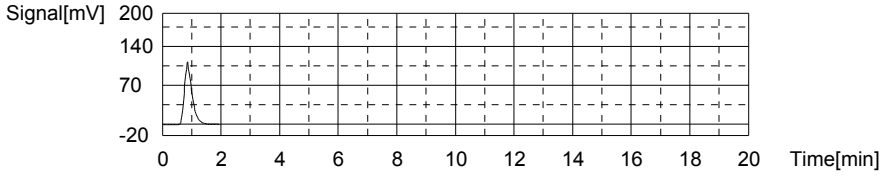
Mean Area 287.8
Mean Conc. 7.658mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	201.2	6.336mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 9:48:14 AM

Mean Area 201.2
Mean Conc. 6.336mg/L



Sample

Sample Name: L12070329-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

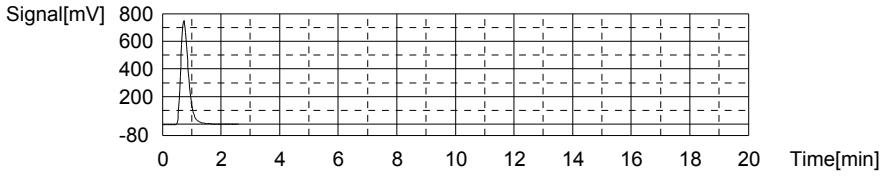
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.007mg/L TC:36.38mg/L IC:31.38mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1367	36.38mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:56:15 AM

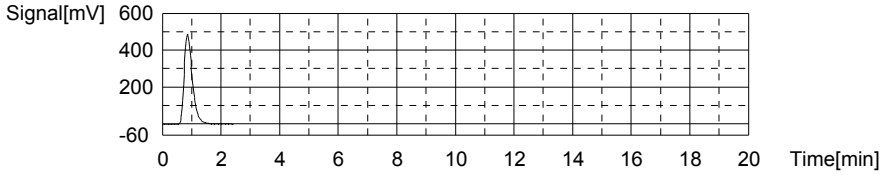
Mean Area 1367
Mean Conc. 36.38mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	945.4	31.38mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 10:01:56 AM

Mean Area 945.4
Mean Conc. 31.38mg/L



Sample

Sample Name: L12070329-02 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

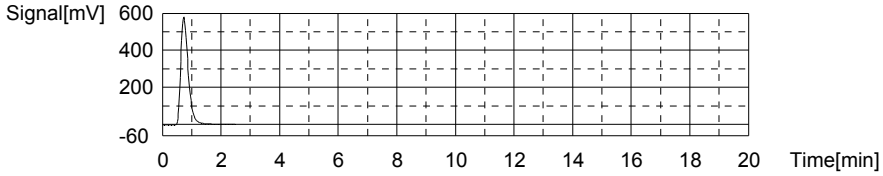
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.030mg/L TC:27.73mg/L IC:22.70mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1042	27.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 10:35:45 AM

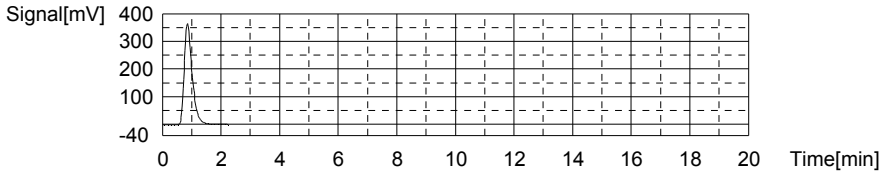
Mean Area 1042
Mean Conc. 27.73mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	687.6	22.70mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 10:41:14 AM

Mean Area 687.6
Mean Conc. 22.70mg/L



Sample

Sample Name: L12070329-03 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

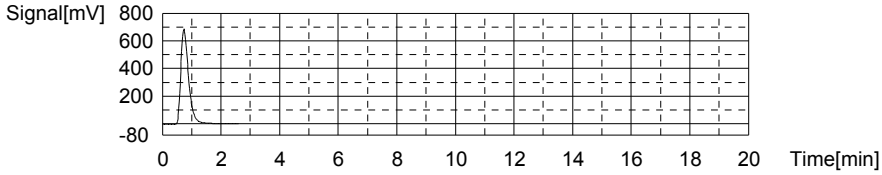
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.769mg/L TC:33.83mg/L IC:28.06mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1271	33.83mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 10:49:15 AM

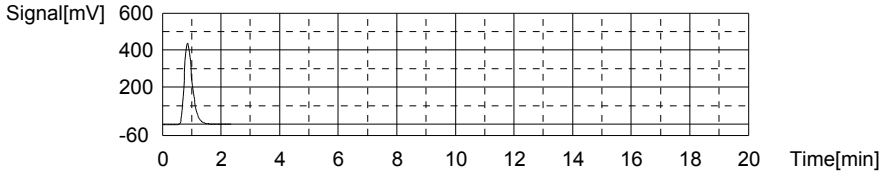
Mean Area 1271
Mean Conc. 33.83mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	846.8	28.06mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 10:54:52 AM

Mean Area 846.8
Mean Conc. 28.06mg/L



Sample

Sample Name: L12070329-04
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

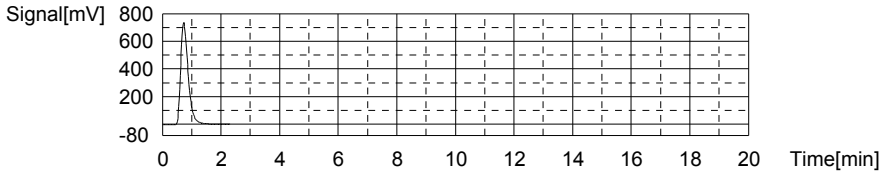
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.850mg/L TC:35.02mg/L IC:30.17mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1316	35.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 11:02:36 AM

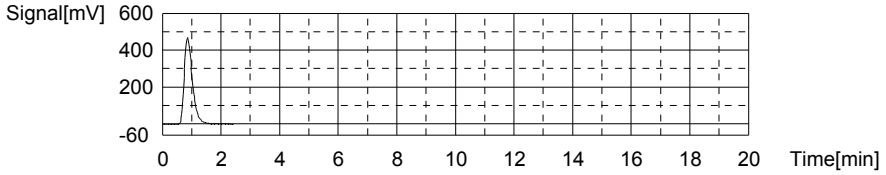
Mean Area 1316
Mean Conc. 35.02mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	909.7	30.17mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 11:08:27 AM

Mean Area 909.7
Mean Conc. 30.17mg/L



Sample

Sample Name: L12070329-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

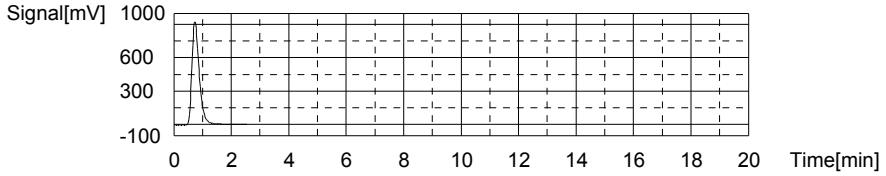
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.964mg/L TC:44.02mg/L IC:38.06mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1654	44.02mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 11:16:26 AM

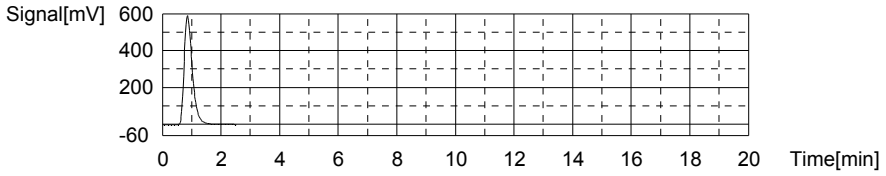
Mean Area 1654
Mean Conc. 44.02mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1144	38.06mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 11:22:21 AM

Mean Area 1144
Mean Conc. 38.06mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

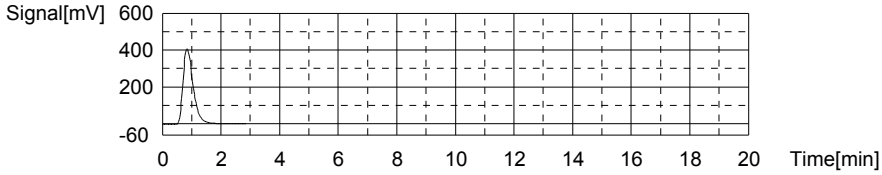
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.38mg/L TC:26.32mg/L IC:-0.06311mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	988.9	26.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 11:30:38 AM

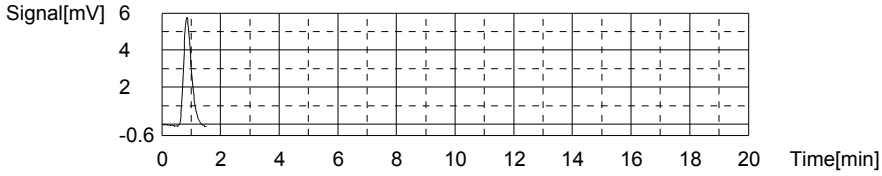
Mean Area 988.9
Mean Conc. 26.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.01	-0.06311mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 11:35:06 AM

Mean Area 11.01
Mean Conc. -0.06311mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

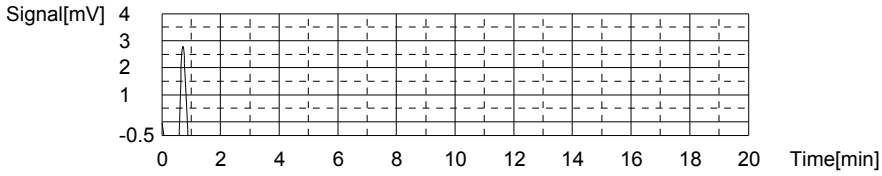
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4144mg/L TC:0.2584mg/L IC:-0.1560mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.803	0.2584mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 11:40:16 AM

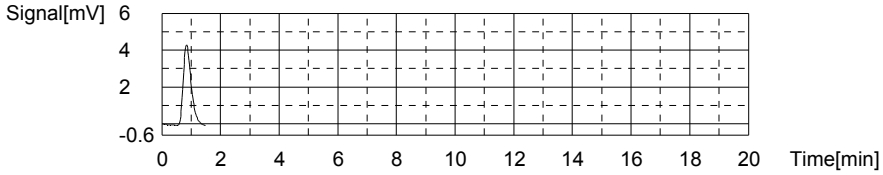
Mean Area 9.803
Mean Conc. 0.2584mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.250	-0.1560mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 11:44:10 AM

Mean Area 8.250
Mean Conc. -0.1560mg/L



Sample

Sample Name: L12070329-06
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

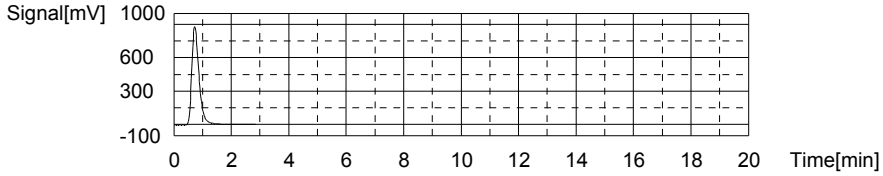
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.344mg/L TC:41.41mg/L IC:32.07mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1556	41.41mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 11:52:27 AM

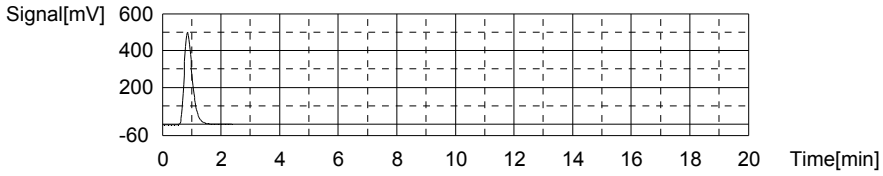
Mean Area 1556
Mean Conc. 41.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	966.0	32.07mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 11:58:13 AM

Mean Area 966.0
Mean Conc. 32.07mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

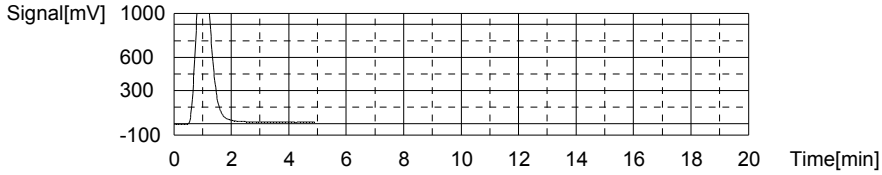
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:126.5mg/L TC:134.3mg/L IC:7.739mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5045	134.3mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 12:08:34 PM

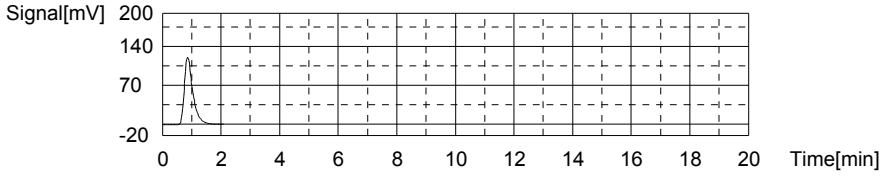
Mean Area 5045
Mean Conc. 134.3mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	242.9	7.739mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 12:13:49 PM

Mean Area 242.9
Mean Conc. 7.739mg/L



Sample

Sample Name: L12070329-08
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

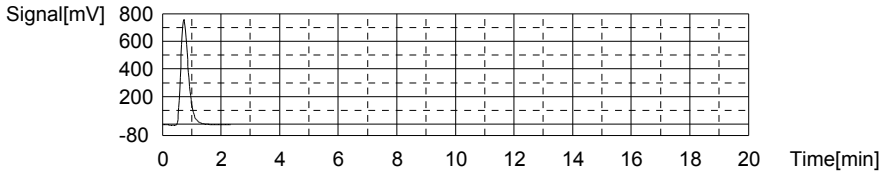
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.655mg/L TC:37.07mg/L IC:31.42mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1393	37.07mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 12:21:35 PM

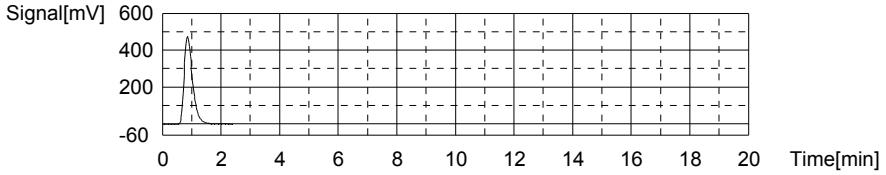
Mean Area 1393
Mean Conc. 37.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	946.7	31.42mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 12:27:19 PM

Mean Area 946.7
Mean Conc. 31.42mg/L



Sample

Sample Name: L12070329-09
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

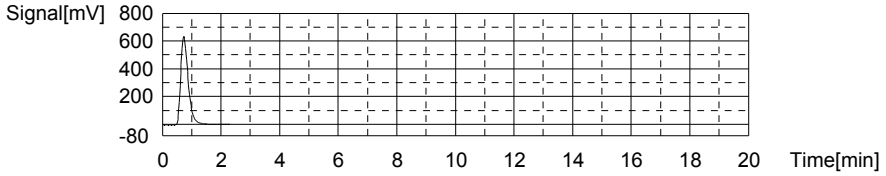
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.746mg/L TC:30.07mg/L IC:26.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1130	30.07mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 12:35:04 PM

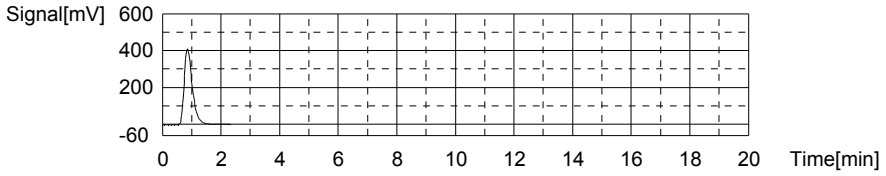
Mean Area 1130
Mean Conc. 30.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	795.4	26.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 12:40:40 PM

Mean Area 795.4
Mean Conc. 26.33mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

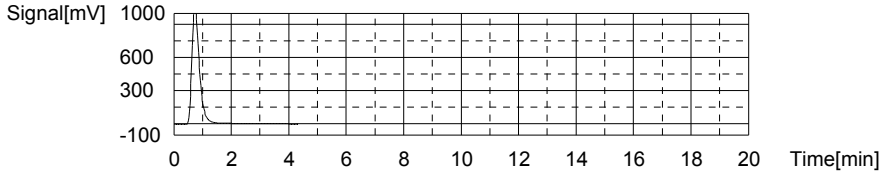
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.834mg/L TC:52.99mg/L IC:45.16mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1991	52.99mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 12:50:26 PM

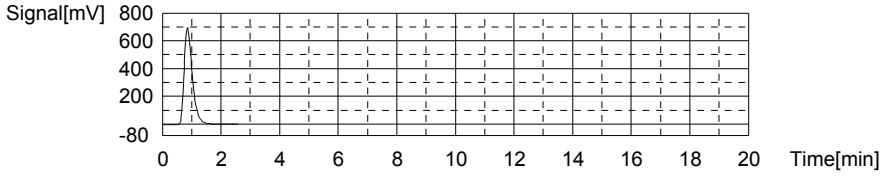
Mean Area 1991
Mean Conc. 52.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1355	45.16mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 12:56:20 PM

Mean Area 1355
Mean Conc. 45.16mg/L



Sample

Sample Name: L12070329-11
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

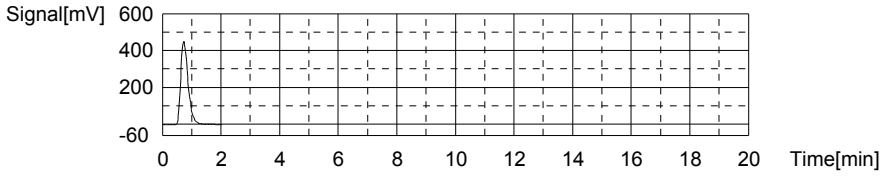
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.232mg/L TC:21.14mg/L IC:18.91mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	794.4	21.14mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 1:03:47 PM

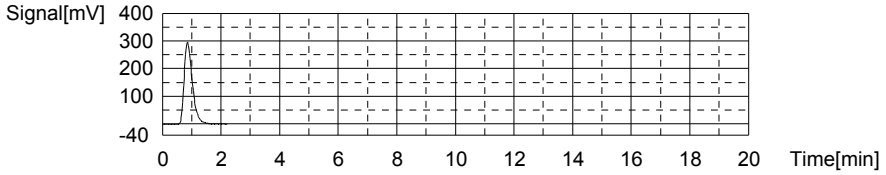
Mean Area 794.4
Mean Conc. 21.14mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	574.9	18.91mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 1:09:15 PM

Mean Area 574.9
Mean Conc. 18.91mg/L



Sample

Sample Name: L12070329-12
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

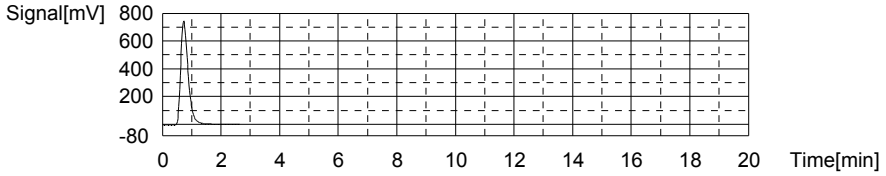
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.761mg/L TC:35.32mg/L IC:32.56mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1327	35.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 1:17:19 PM

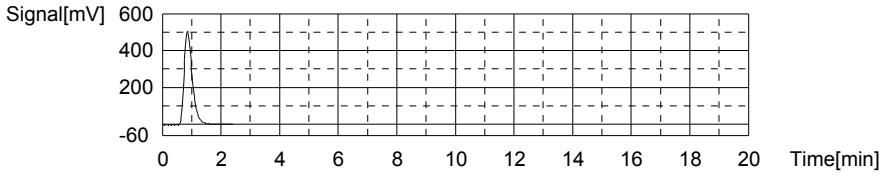
Mean Area 1327
Mean Conc. 35.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	980.5	32.56mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 1:23:01 PM

Mean Area 980.5
Mean Conc. 32.56mg/L



Sample

Sample Name: L12070329-13
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

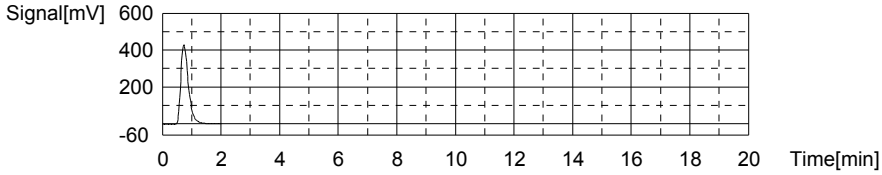
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.740mg/L TC:20.83mg/L IC:16.09mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	782.7	20.83mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 1:30:28 PM

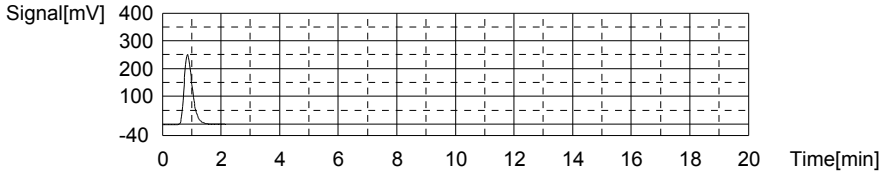
Mean Area 782.7
Mean Conc. 20.83mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	491.1	16.09mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 1:35:43 PM

Mean Area 491.1
Mean Conc. 16.09mg/L



Sample

Sample Name: L12070329-14
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

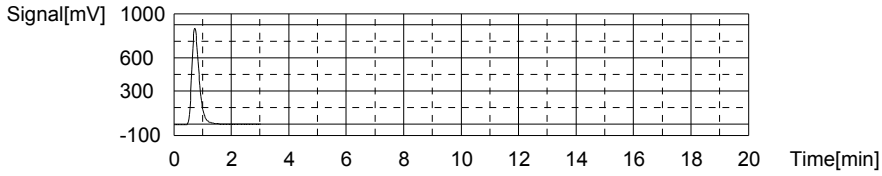
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.214mg/L TC:41.60mg/L IC:37.38mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1563	41.60mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 1:44:11 PM

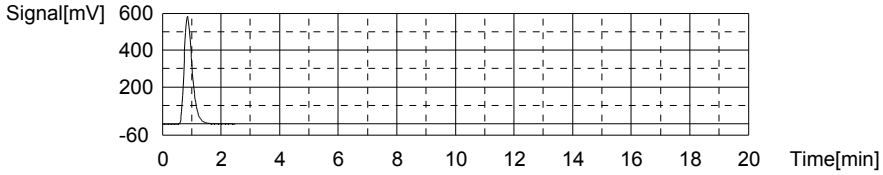
Mean Area 1563
Mean Conc. 41.60mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1124	37.38mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 1:49:55 PM

Mean Area 1124
Mean Conc. 37.38mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

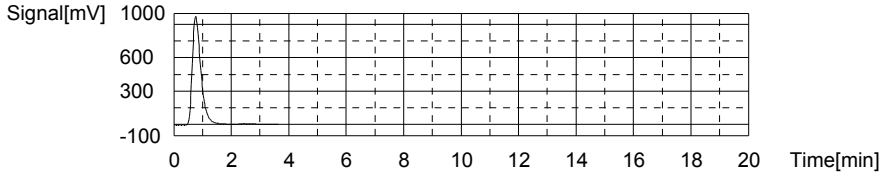
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:24.79mg/L TC:54.64mg/L IC:29.85mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2053	54.64mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 1:58:59 PM

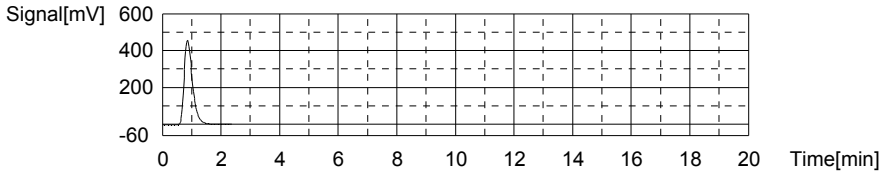
Mean Area 2053
Mean Conc. 54.64mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	900.2	29.85mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 2:04:36 PM

Mean Area 900.2
Mean Conc. 29.85mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

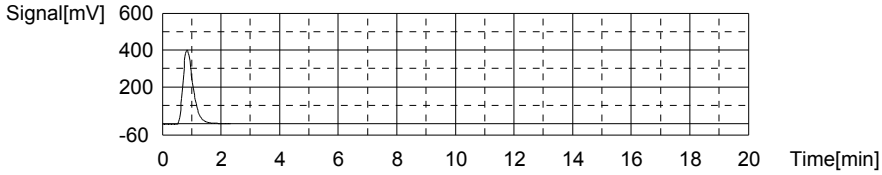
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.91mg/L TC:25.82mg/L IC:-0.09137mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	970.3	25.82mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 2:12:21 PM

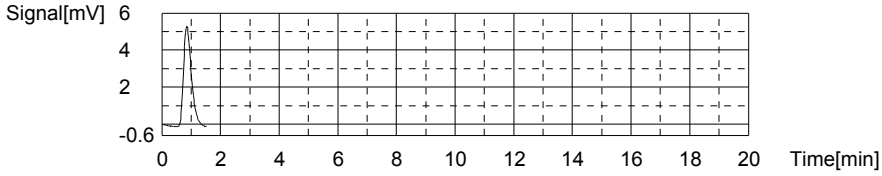
Mean Area 970.3
Mean Conc. 25.82mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.17	-0.09137mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 2:16:48 PM

Mean Area 10.17
Mean Conc. -0.09137mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

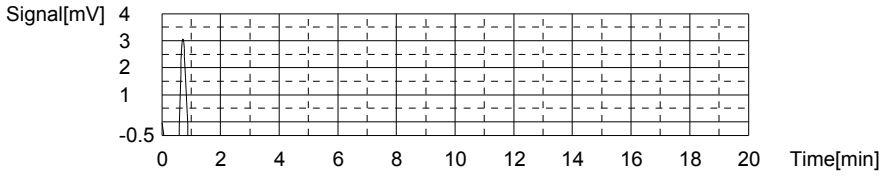
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4232mg/L TC:0.2685mg/L IC:-0.1548mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.18	0.2685mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 2:21:59 PM

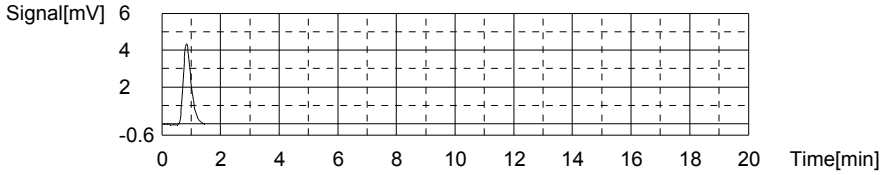
Mean Area 10.18
Mean Conc. 0.2685mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.286	-0.1548mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 2:25:54 PM

Mean Area 8.286
Mean Conc. -0.1548mg/L



Sample

Sample Name: L12070373-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

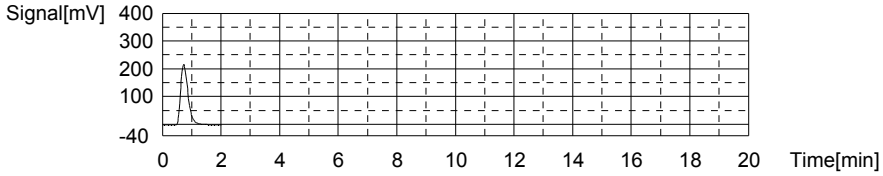
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.031mg/L TC:10.20mg/L IC:9.169mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	383.3	10.20mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 2:33:21 PM

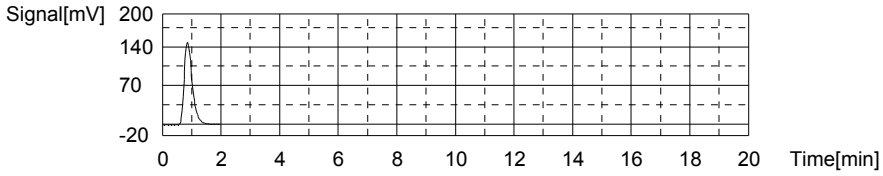
Mean Area 383.3
Mean Conc. 10.20mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	285.4	9.169mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 2:38:21 PM

Mean Area 285.4
Mean Conc. 9.169mg/L



Sample

Sample Name: L12070373-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

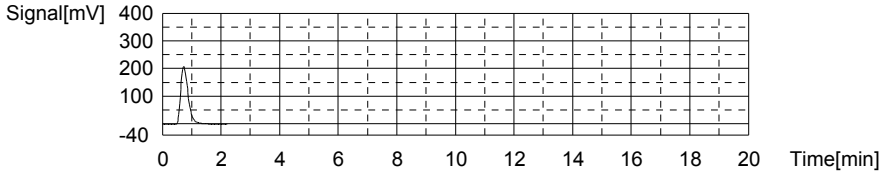
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.206mg/L TC:10.01mg/L IC:8.799mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	376.0	10.01mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 2:46:01 PM

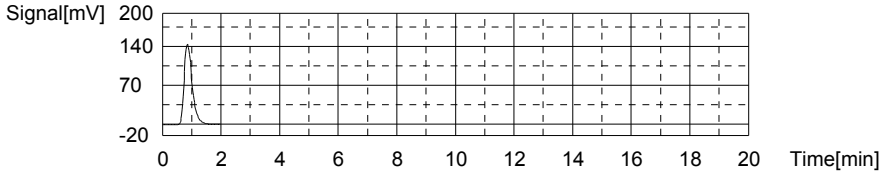
Mean Area 376.0
Mean Conc. 10.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	274.4	8.799mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 2:51:03 PM

Mean Area 274.4
Mean Conc. 8.799mg/L



Sample

Sample Name: WG404037-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

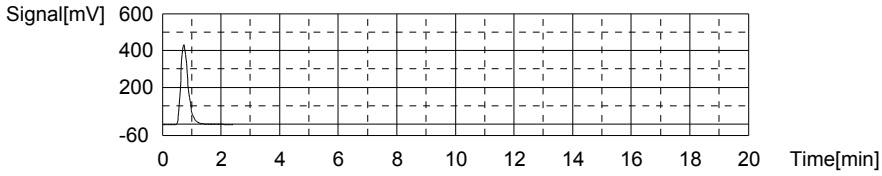
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.787mg/L TC:20.45mg/L IC:17.67mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	768.6	20.45mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 2:58:53 PM

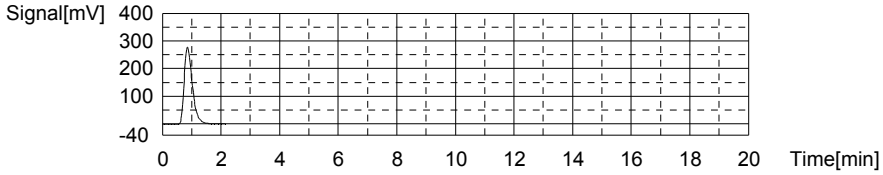
Mean Area 768.6
Mean Conc. 20.45mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	538.0	17.67mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 3:04:09 PM

Mean Area 538.0
Mean Conc. 17.67mg/L



Sample

Sample Name: WG404037-06 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

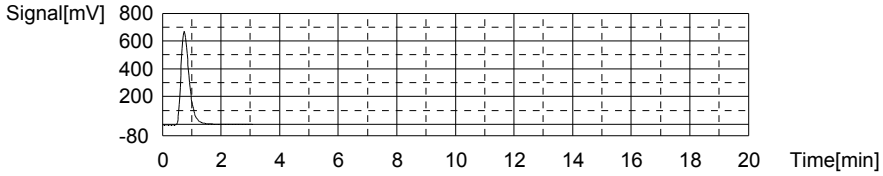
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.68mg/L TC:35.24mg/L IC:22.56mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1324	35.24mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 3:12:41 PM

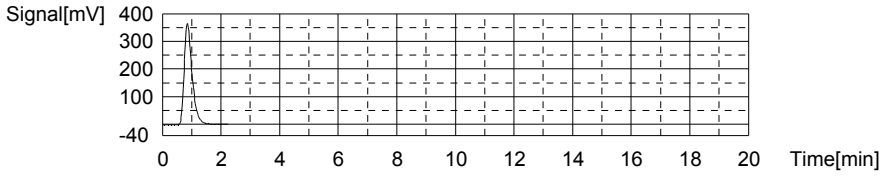
Mean Area 1324
Mean Conc. 35.24mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	683.4	22.56mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 3:18:11 PM

Mean Area 683.4
Mean Conc. 22.56mg/L



Sample

Sample Name: WG404038-01 BLK
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

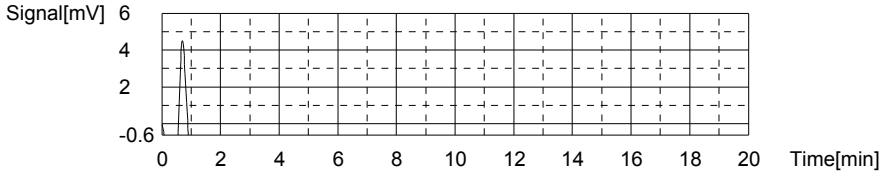
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3985mg/L TC:0.3044mg/L IC:-0.09407mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.53	0.3044mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 3:23:20 PM

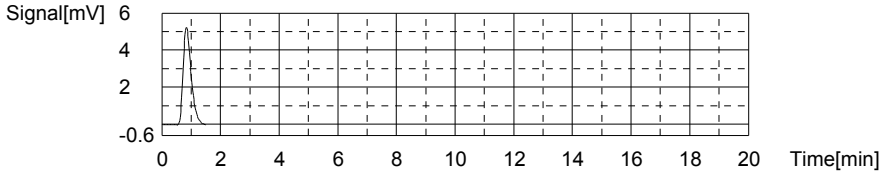
Mean Area 11.53
Mean Conc. 0.3044mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.09	-0.09407mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 3:27:18 PM

Mean Area 10.09
Mean Conc. -0.09407mg/L



Sample

Sample Name: WG404038-02 LCS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

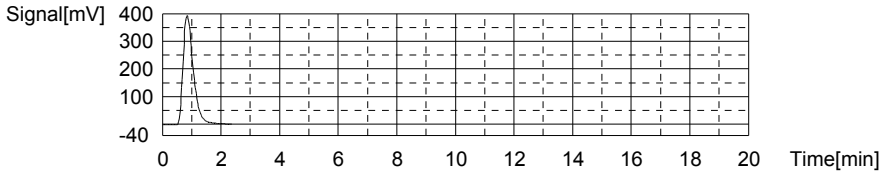
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.55mg/L TC:25.35mg/L IC:-0.2074mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	952.4	25.35mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 3:35:06 PM

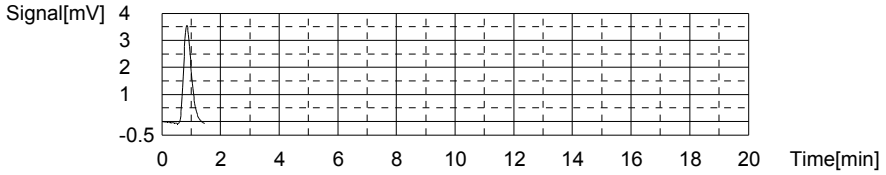
Mean Area 952.4
Mean Conc. 25.35mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.722	-0.2074mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 3:39:24 PM

Mean Area 6.722
Mean Conc. -0.2074mg/L



Sample

Sample Name: WG404038-03 LCSDUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

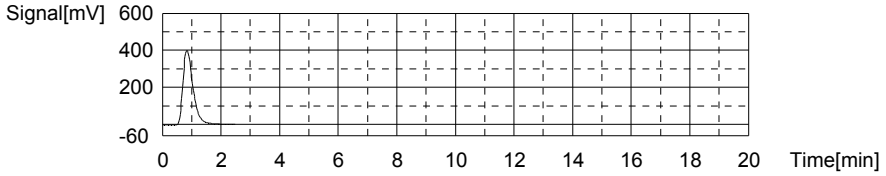
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.63mg/L TC:25.39mg/L IC:-0.2337mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	954.1	25.39mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 3:47:20 PM

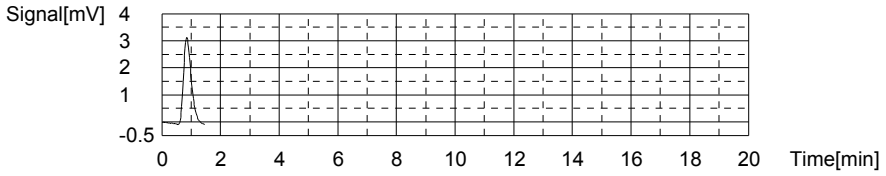
Mean Area 954.1
Mean Conc. 25.39mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.939	-0.2337mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 3:51:37 PM

Mean Area 5.939
Mean Conc. -0.2337mg/L



Sample

Sample Name: L12070373-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

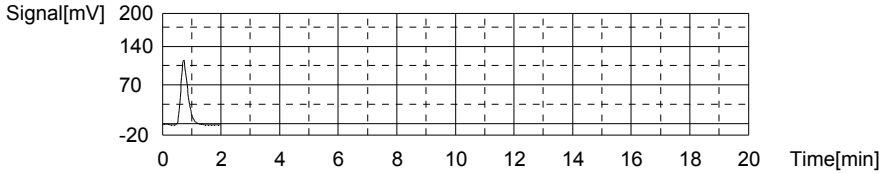
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.098mg/L TC:5.206mg/L IC:4.109mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	195.7	5.206mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 3:59:02 PM

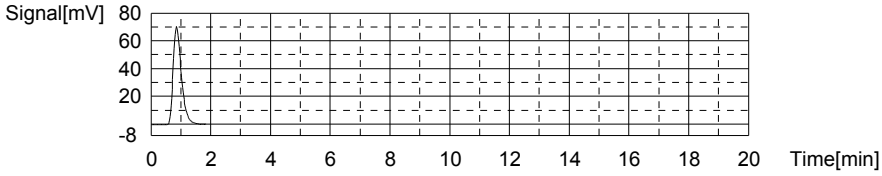
Mean Area 195.7
Mean Conc. 5.206mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	135.0	4.109mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 4:03:48 PM

Mean Area 135.0
Mean Conc. 4.109mg/L



Sample

Sample Name: L12070373-06
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

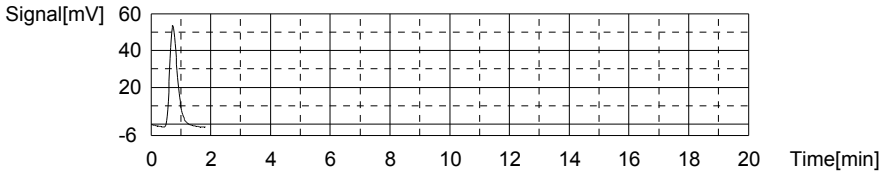
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9523mg/L TC:2.702mg/L IC:1.749mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	101.6	2.702mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 4:11:05 PM

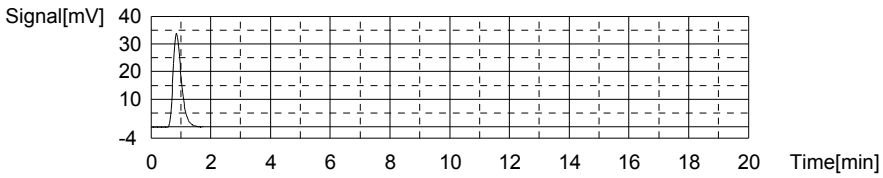
Mean Area 101.6
Mean Conc. 2.702mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.88	1.749mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 4:15:43 PM

Mean Area 64.88
Mean Conc. 1.749mg/L



Sample

Sample Name: L12070384-01 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

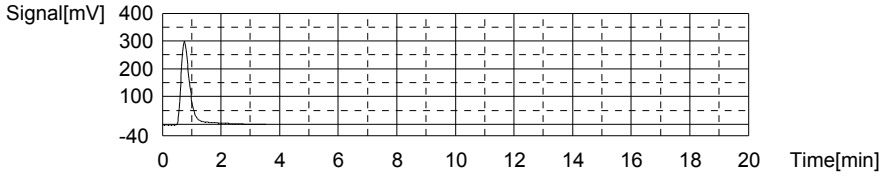
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.489mg/L TC:17.40mg/L IC:9.913mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	653.9	17.40mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 4:24:43 PM

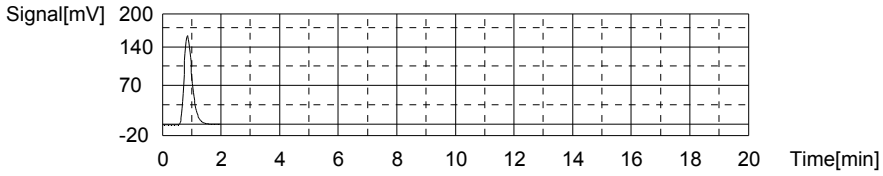
Mean Area 653.9
Mean Conc. 17.40mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	307.5	9.913mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 4:29:43 PM

Mean Area 307.5
Mean Conc. 9.913mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

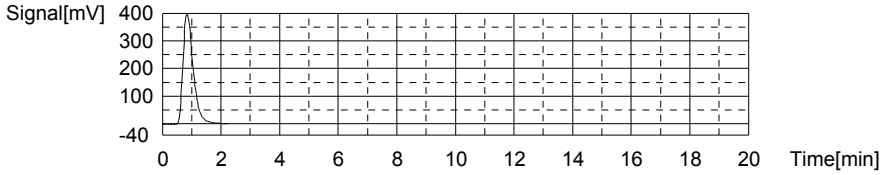
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.70mg/L TC:25.51mg/L IC:-0.1858mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	958.5	25.51mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 4:37:24 PM

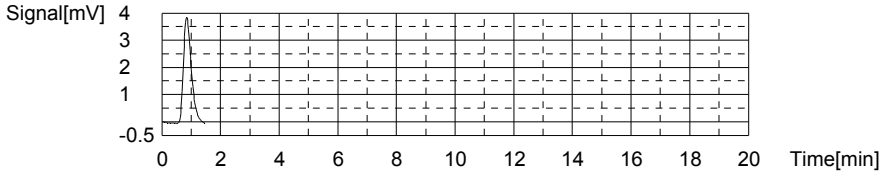
Mean Area 958.5
Mean Conc. 25.51mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.365	-0.1858mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 4:41:42 PM

Mean Area 7.365
Mean Conc. -0.1858mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

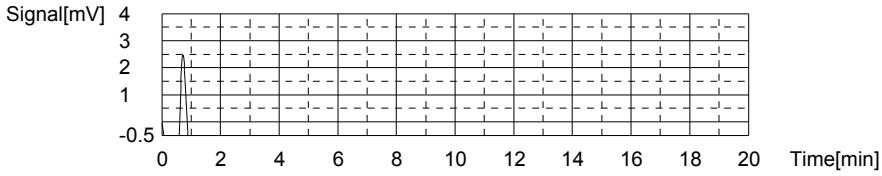
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4188mg/L TC:0.2415mg/L IC:-0.1773mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.166	0.2415mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 4:46:52 PM

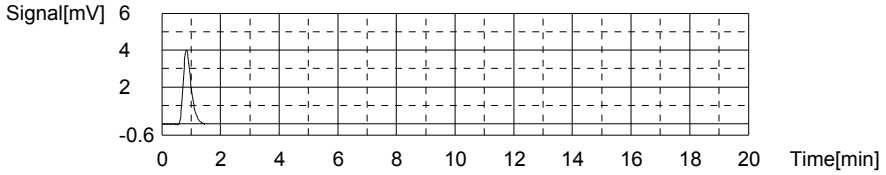
Mean Area 9.166
Mean Conc. 0.2415mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.616	-0.1773mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 4:50:45 PM

Mean Area 7.616
Mean Conc. -0.1773mg/L



Sample

Sample Name: L12070384-03 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

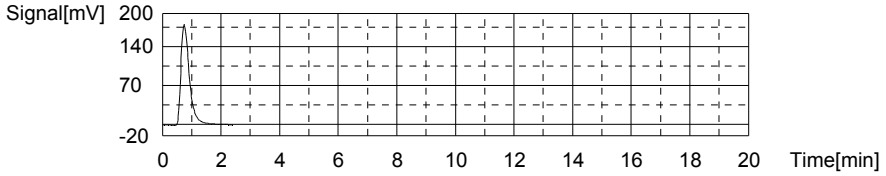
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.810mg/L TC:9.803mg/L IC:5.993mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	368.4	9.803mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 4:58:37 PM

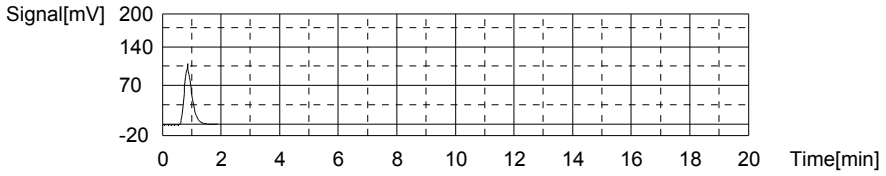
Mean Area 368.4
Mean Conc. 9.803mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	191.0	5.993mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 5:03:28 PM

Mean Area 191.0
Mean Conc. 5.993mg/L



Sample

Sample Name: L12070384-05 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

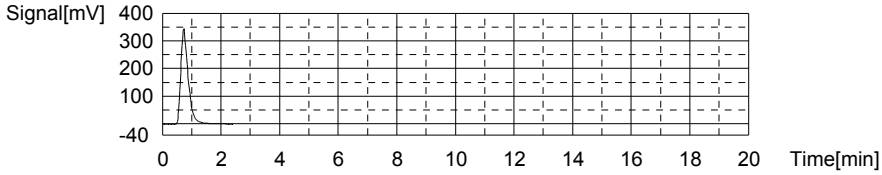
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.371mg/L TC:16.20mg/L IC:12.83mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	608.9	16.20mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 5:11:18 PM

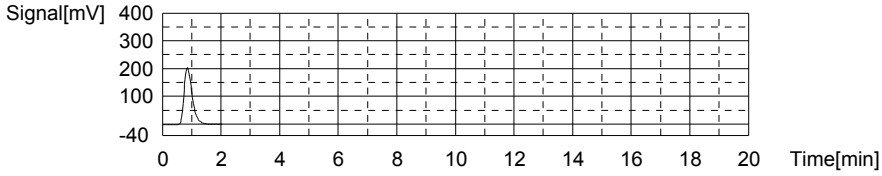
Mean Area 608.9
Mean Conc. 16.20mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	394.3	12.83mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 5:16:21 PM

Mean Area 394.3
Mean Conc. 12.83mg/L



Sample

Sample Name: L12070384-07 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

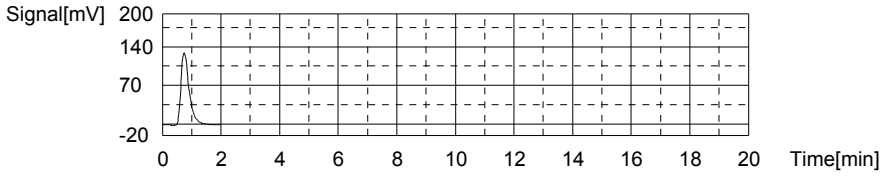
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.589mg/L TC:6.771mg/L IC:4.183mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	254.5	6.771mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 5:23:47 PM

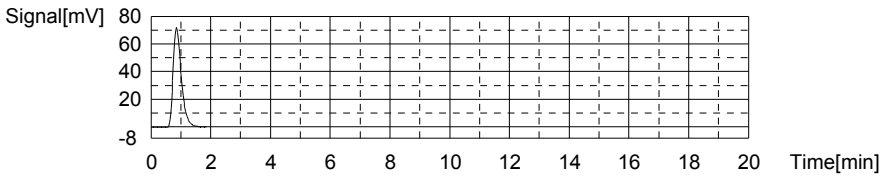
Mean Area 254.5
Mean Conc. 6.771mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	137.2	4.183mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 5:28:33 PM

Mean Area 137.2
Mean Conc. 4.183mg/L



Sample

Sample Name: L12070384-09 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

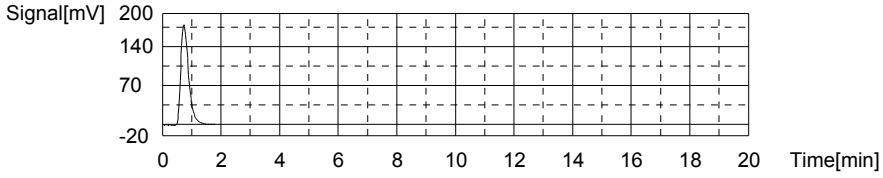
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.167mg/L TC:9.055mg/L IC:6.888mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	340.3	9.055mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 5:35:48 PM

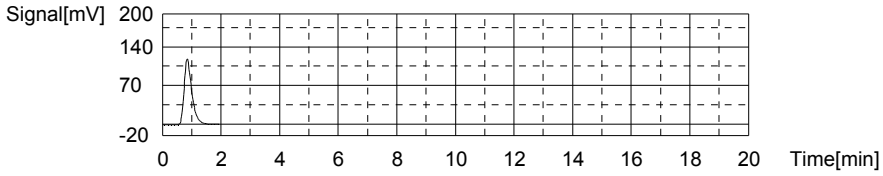
Mean Area 340.3
Mean Conc. 9.055mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	217.6	6.888mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 5:40:42 PM

Mean Area 217.6
Mean Conc. 6.888mg/L



Sample

Sample Name: L12070384-11 (3)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

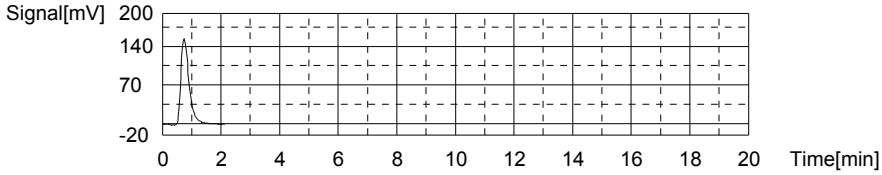
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.928mg/L TC:8.150mg/L IC:5.222mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	306.3	8.150mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 5:48:17 PM

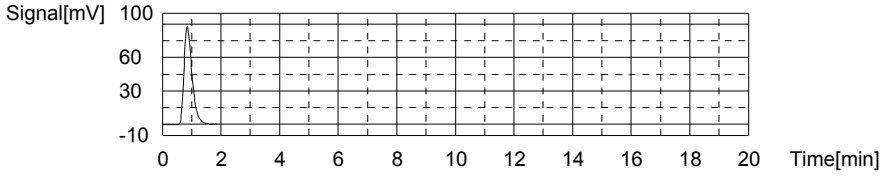
Mean Area 306.3
Mean Conc. 8.150mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	168.1	5.222mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 5:53:04 PM

Mean Area 168.1
Mean Conc. 5.222mg/L



Sample

Sample Name: L12070401-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

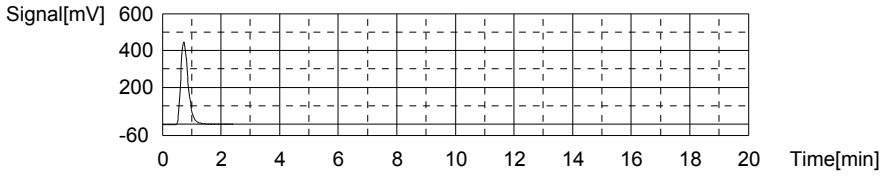
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.463mg/L TC:21.31mg/L IC:17.85mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	800.7	21.31mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 6:00:56 PM

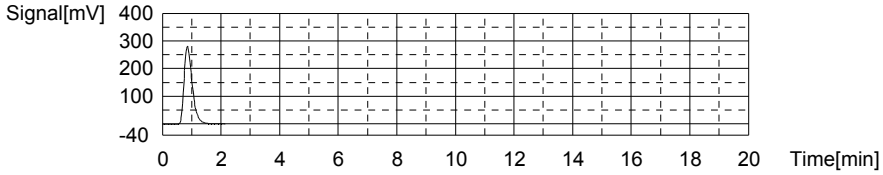
Mean Area 800.7
Mean Conc. 21.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	543.3	17.85mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 6:06:09 PM

Mean Area 543.3
Mean Conc. 17.85mg/L



Sample

Sample Name: L12070401-03
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

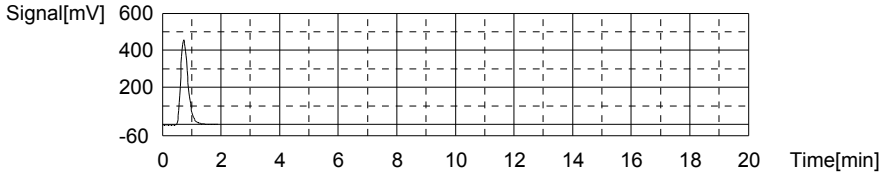
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.964mg/L TC:21.29mg/L IC:19.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	800.0	21.29mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 6:13:29 PM

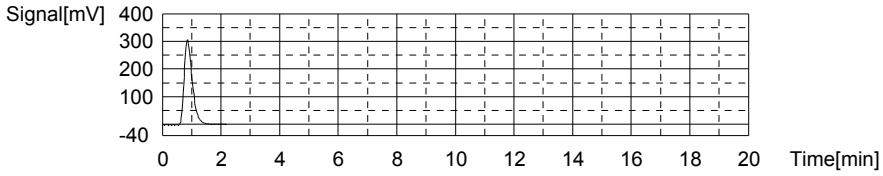
Mean Area 800.0
Mean Conc. 21.29mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	587.3	19.33mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 6:18:46 PM

Mean Area 587.3
Mean Conc. 19.33mg/L



Sample

Sample Name: L12070401-05
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

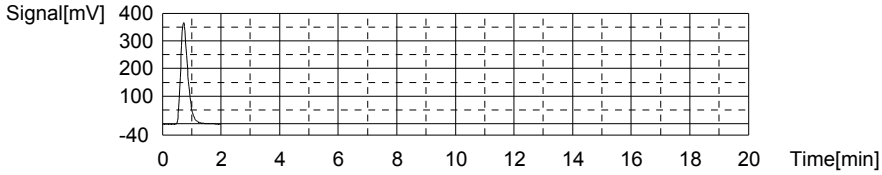
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.047mg/L TC:16.72mg/L IC:14.67mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	628.3	16.72mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 6:26:13 PM

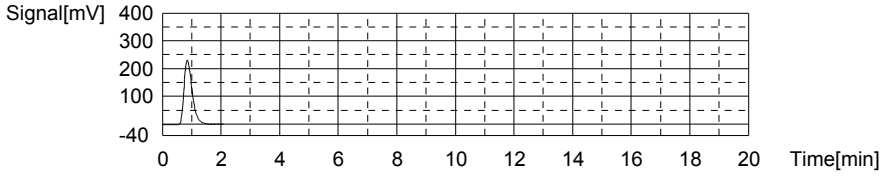
Mean Area 628.3
Mean Conc. 16.72mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	449.0	14.67mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 6:31:24 PM

Mean Area 449.0
Mean Conc. 14.67mg/L



Sample

Sample Name: L12070401-07
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

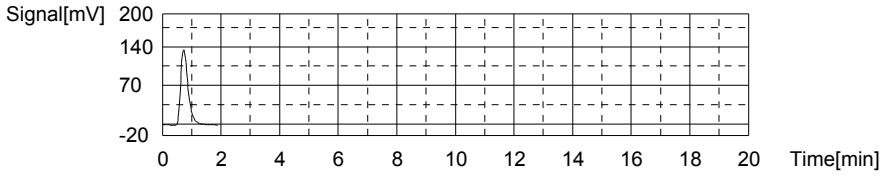
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.516mg/L TC:6.452mg/L IC:4.936mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	242.5	6.452mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 6:38:46 PM

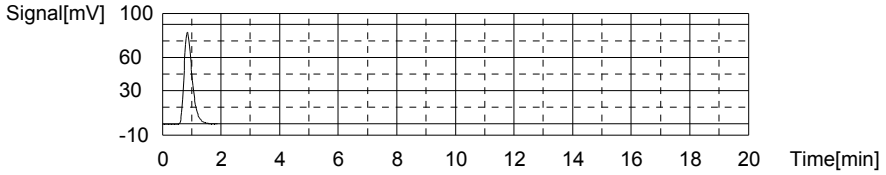
Mean Area 242.5
Mean Conc. 6.452mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	159.6	4.936mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 6:43:38 PM

Mean Area 159.6
Mean Conc. 4.936mg/L



Sample

Sample Name: L12070401-09
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

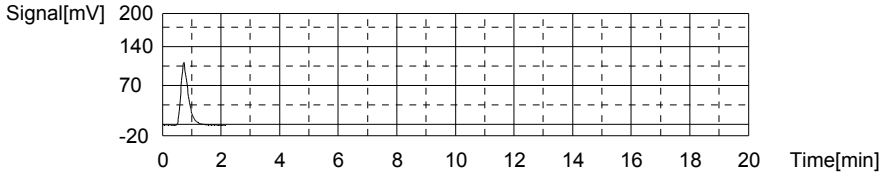
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.645mg/L TC:5.286mg/L IC:3.641mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	198.7	5.286mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 6:51:14 PM

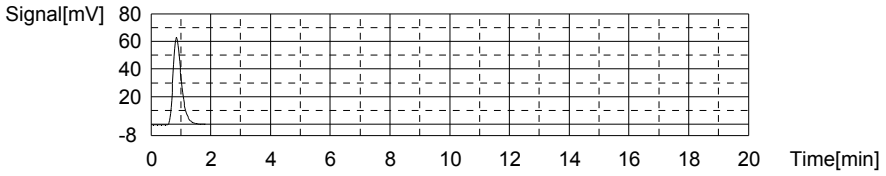
Mean Area 198.7
Mean Conc. 5.286mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	121.1	3.641mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 6:55:59 PM

Mean Area 121.1
Mean Conc. 3.641mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

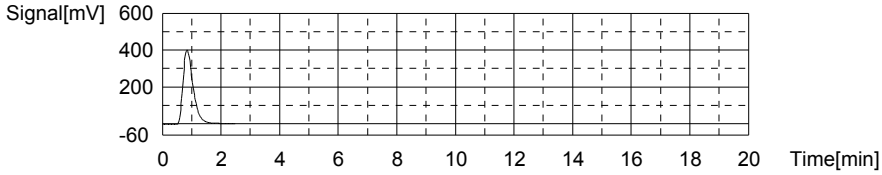
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.01mg/L TC:25.80mg/L IC:-0.2121mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	969.4	25.80mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 7:03:56 PM

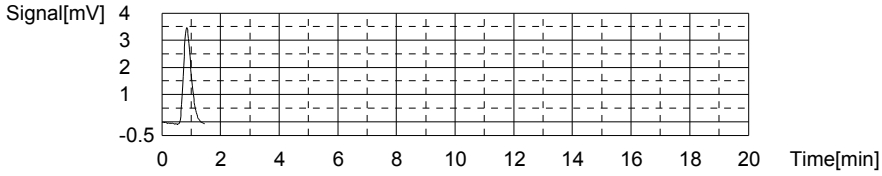
Mean Area 969.4
Mean Conc. 25.80mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.581	-0.2121mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 7:08:13 PM

Mean Area 6.581
Mean Conc. -0.2121mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

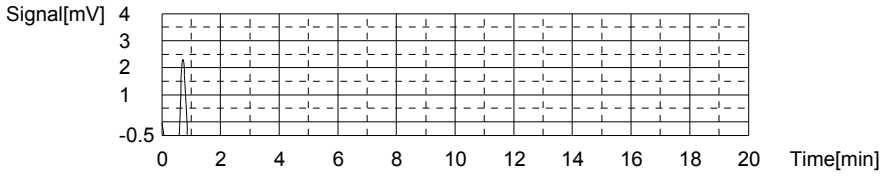
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4138mg/L TC:0.2361mg/L IC:-0.1777mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.963	0.2361mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 7:13:22 PM

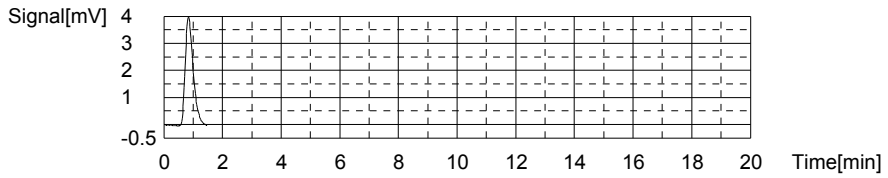
Mean Area 8.963
Mean Conc. 0.2361mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.605	-0.1777mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 7:17:18 PM

Mean Area 7.605
Mean Conc. -0.1777mg/L



Sample

Sample Name: L12070401-11
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

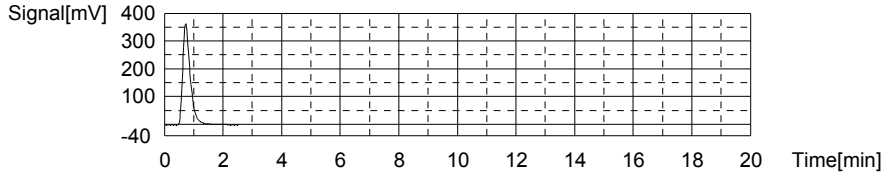
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.664mg/L TC:17.32mg/L IC:13.66mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	651.0	17.32mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 7:25:20 PM

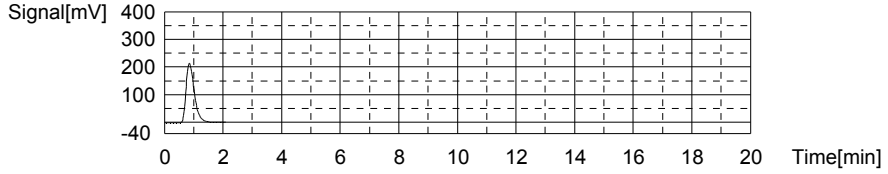
Mean Area 651.0
Mean Conc. 17.32mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	418.9	13.66mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 7:30:30 PM

Mean Area 418.9
Mean Conc. 13.66mg/L



Sample

Sample Name: L12070401-13
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

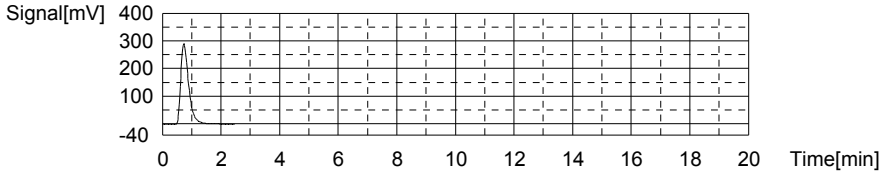
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.442mg/L TC:14.73mg/L IC:11.29mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	553.4	14.73mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 7:38:26 PM

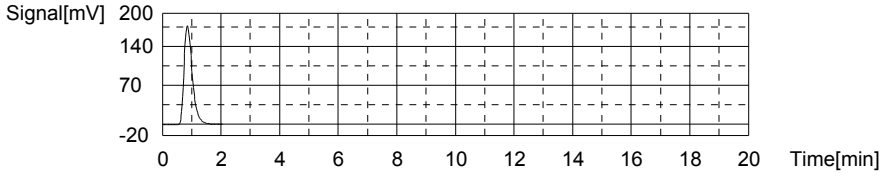
Mean Area 553.4
Mean Conc. 14.73mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	348.3	11.29mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 7:43:34 PM

Mean Area 348.3
Mean Conc. 11.29mg/L



Sample

Sample Name: L12070509-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

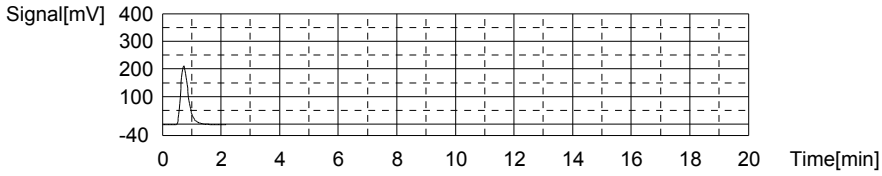
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.179mg/L TC:10.58mg/L IC:8.399mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	397.5	10.58mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 7:51:12 PM

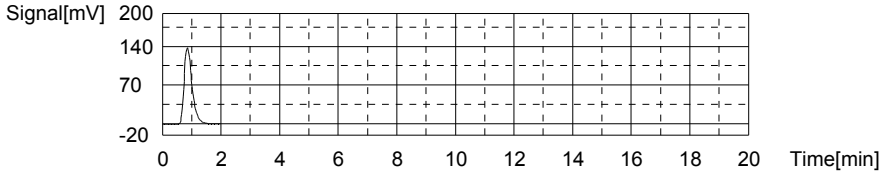
Mean Area 397.5
Mean Conc. 10.58mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	262.5	8.399mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 7:56:12 PM

Mean Area 262.5
Mean Conc. 8.399mg/L



Sample

Sample Name: L12070516-01 (4)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

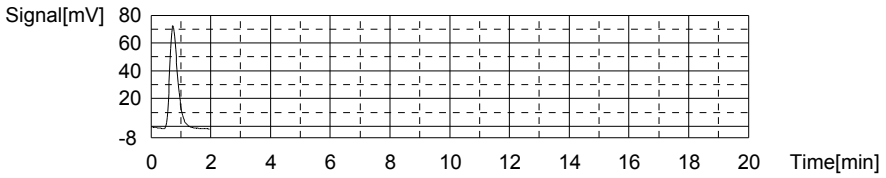
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9257mg/L TC:3.663mg/L IC:2.737mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	137.7	3.663mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:03:38 PM

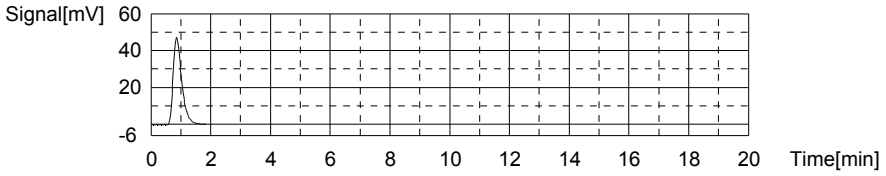
Mean Area 137.7
Mean Conc. 3.663mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	94.23	2.737mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 8:08:23 PM

Mean Area 94.23
Mean Conc. 2.737mg/L



Sample

Sample Name: L12070516-02
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

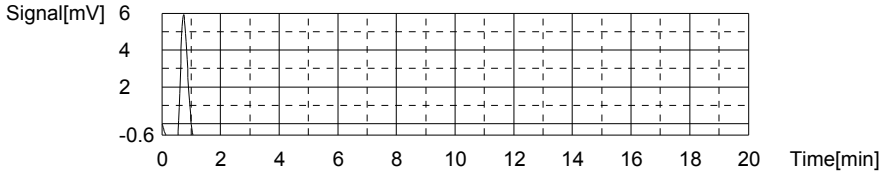
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.5694mg/L TC:0.3704mg/L IC:-0.1989mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14.01	0.3704mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:15:24 PM

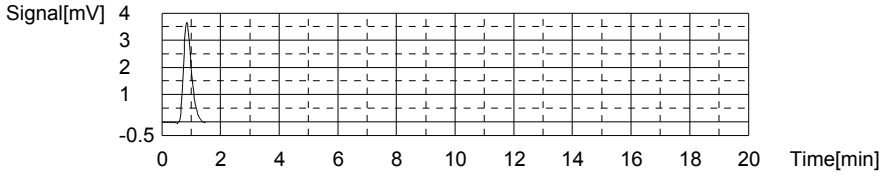
Mean Area 14.01
Mean Conc. 0.3704mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.973	-0.1989mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 8:19:45 PM

Mean Area 6.973
Mean Conc. -0.1989mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

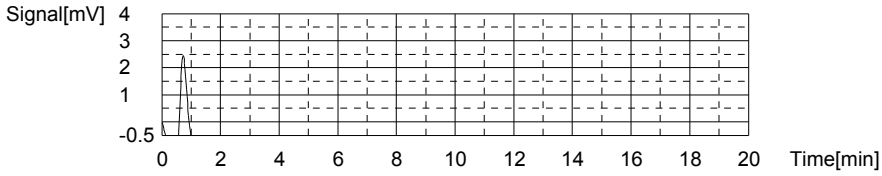
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4187mg/L TC:0.1940mg/L IC:-0.2247mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.381	0.1940mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:26:49 PM

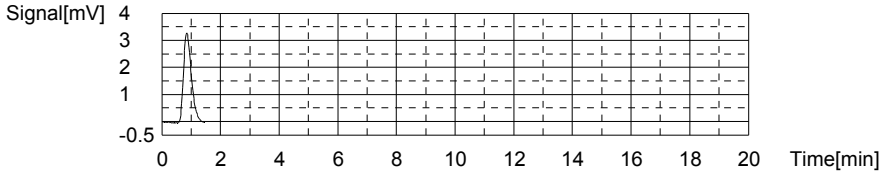
Mean Area 7.381
Mean Conc. 0.1940mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.207	-0.2247mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 8:31:05 PM

Mean Area 6.207
Mean Conc. -0.2247mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

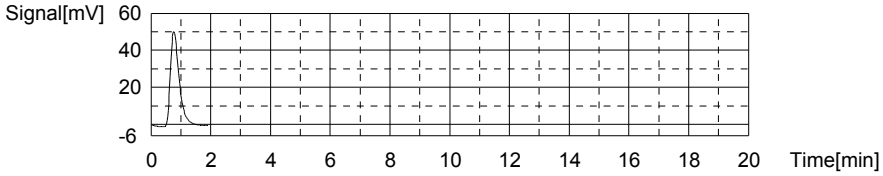
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.295mg/L TC:2.822mg/L IC:0.5260mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	106.1	2.822mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:38:27 PM

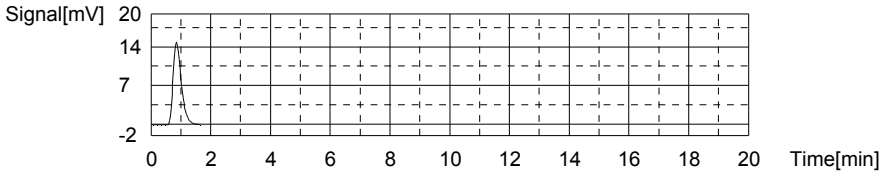
Mean Area 106.1
Mean Conc. 2.822mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28.52	0.5260mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 8:42:57 PM

Mean Area 28.52
Mean Conc. 0.5260mg/L



Sample

Sample Name: WG404038-05 DUP
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

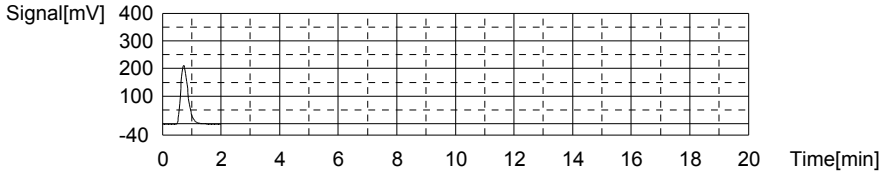
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.213mg/L TC:10.04mg/L IC:8.829mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	377.4	10.04mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 8:50:25 PM

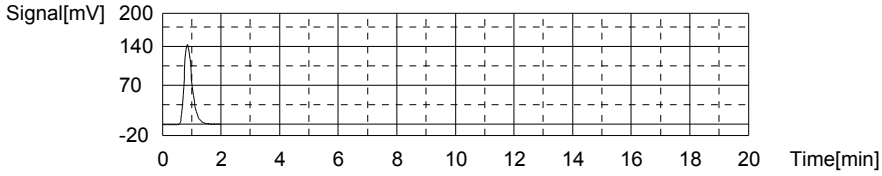
Mean Area 377.4
Mean Conc. 10.04mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	275.3	8.829mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 8:55:21 PM

Mean Area 275.3
Mean Conc. 8.829mg/L



Sample

Sample Name: WG404038-06 MS
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

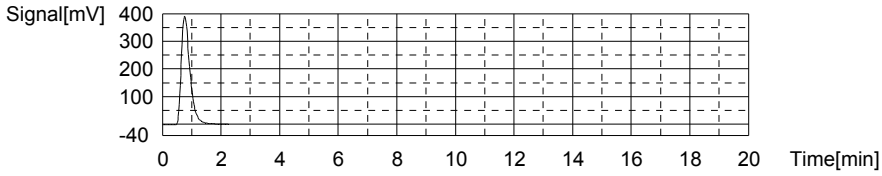
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.90mg/L TC:21.56mg/L IC:9.667mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	810.3	21.56mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:03:04 PM

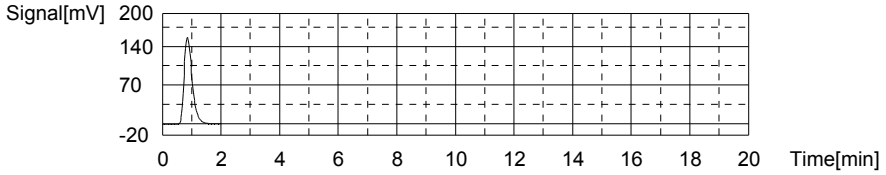
Mean Area 810.3
Mean Conc. 21.56mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	300.2	9.667mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/21/2012 9:08:07 PM

Mean Area 300.2
Mean Conc. 9.667mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

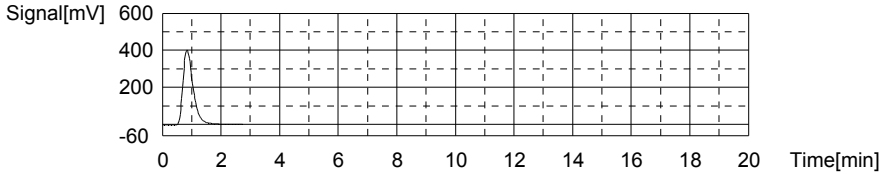
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:26.03mg/L TC:25.83mg/L IC:-0.2001mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	970.7	25.83mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:16:20 PM

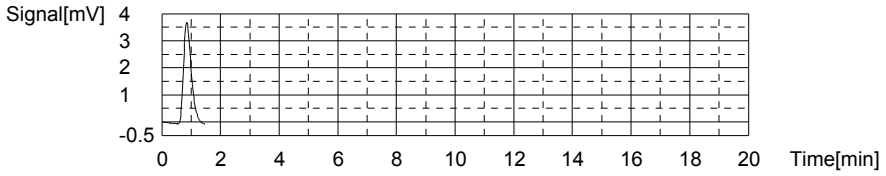
Mean Area 970.7
Mean Conc. 25.83mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.940	-0.2001mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:20:40 PM

Mean Area 6.940
Mean Conc. -0.2001mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

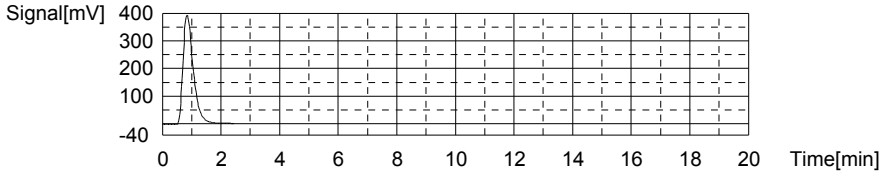
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.76mg/L TC:25.54mg/L IC:-0.2234mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	959.5	25.54mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:28:35 PM

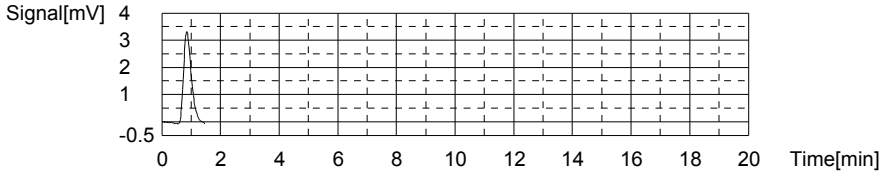
Mean Area 959.5
Mean Conc. 25.54mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.246	-0.2234mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:32:52 PM

Mean Area 6.246
Mean Conc. -0.2234mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

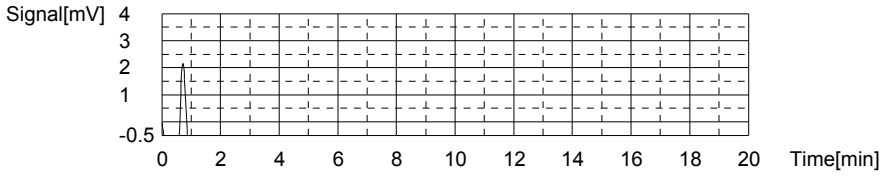
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3966mg/L TC:0.2172mg/L IC:-0.1795mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.252	0.2172mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/21/2012 9:38:00 PM

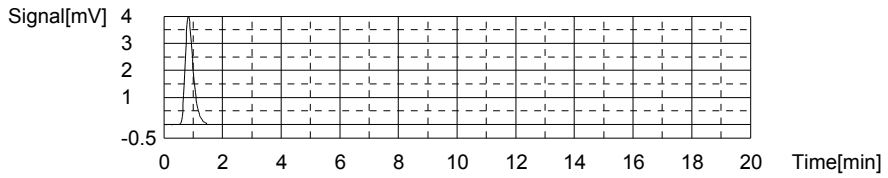
Mean Area 8.252
Mean Conc. 0.2172mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.552	-0.1795mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/21/2012 9:41:53 PM

Mean Area 7.552
Mean Conc. -0.1795mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

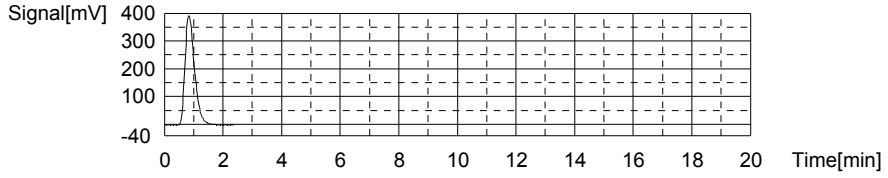
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:23.84mg/L TC:23.67mg/L IC:-0.1744mg/L

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	7/22/2012 10:10:26 AM

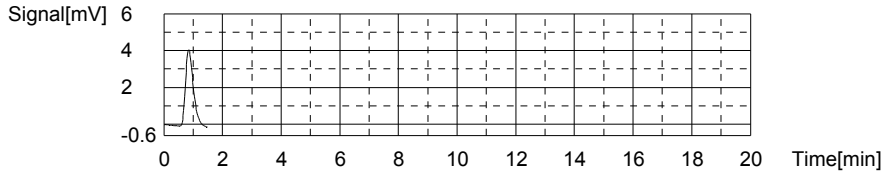
Mean Area 889.3
Mean Conc. 23.67mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.702	-0.1744mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/22/2012 10:14:59 AM

Mean Area 7.702
Mean Conc. -0.1744mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

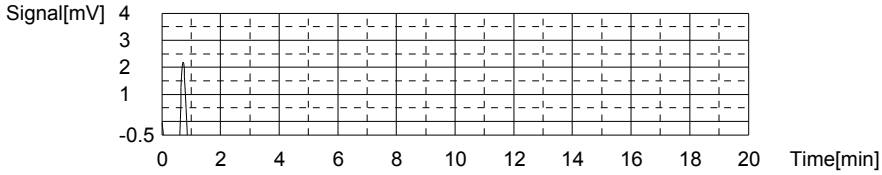
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.4038mg/L TC:0.2494mg/L IC:-0.1544mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.464	0.2494mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 10:20:11 AM

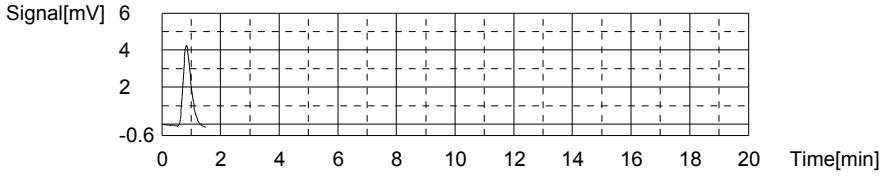
Mean Area 9.464
Mean Conc. 0.2494mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.296	-0.1544mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 10:24:07 AM

Mean Area 8.296
Mean Conc. -0.1544mg/L



Sample

Sample Name: L12070329-07 (5)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

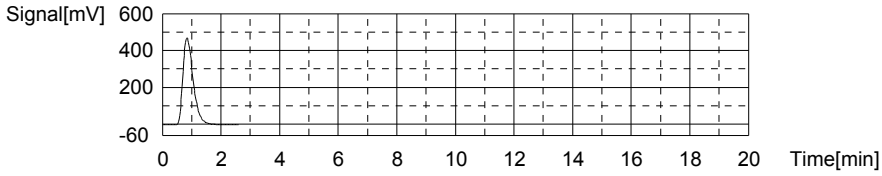
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:28.82mg/L TC:30.63mg/L IC:1.811mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1151	30.63mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 10:32:13 AM

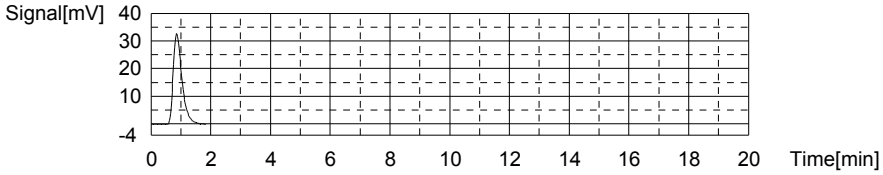
Mean Area 1151
Mean Conc. 30.63mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	66.72	1.811mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 10:37:01 AM

Mean Area 66.72
Mean Conc. 1.811mg/L



Sample

Sample Name: L12070329-10 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

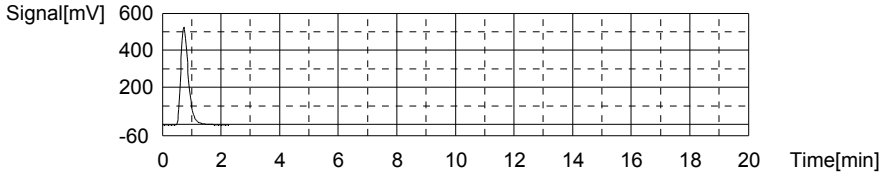
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.415mg/L TC:25.45mg/L IC:21.04mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	956.3	25.45mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 10:44:46 AM

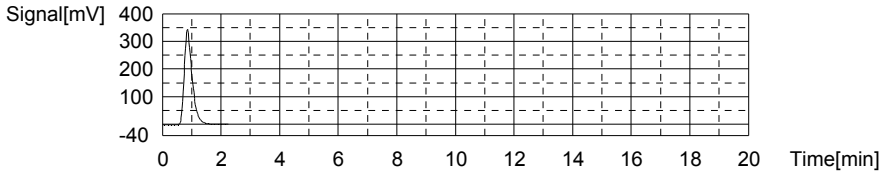
Mean Area 956.3
Mean Conc. 25.45mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	638.1	21.04mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/22/2012 10:50:13 AM

Mean Area 638.1
Mean Conc. 21.04mg/L



Sample

Sample Name: L12070329-15 (2)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

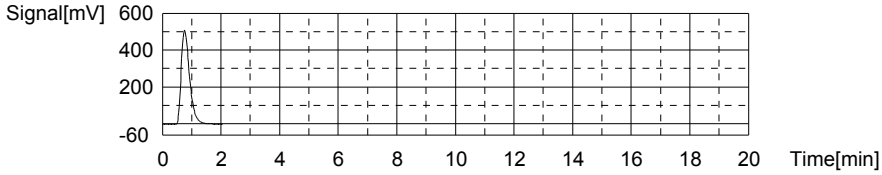
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.77mg/L TC:26.99mg/L IC:15.22mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1014	26.99mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 10:57:46 AM

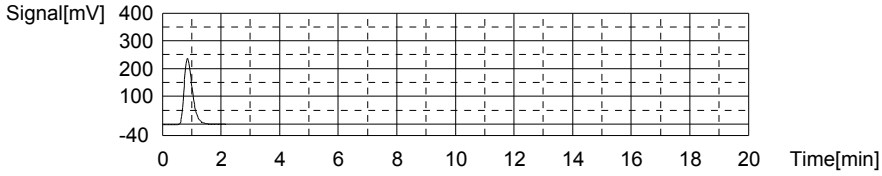
Mean Area 1014
Mean Conc. 26.99mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	465.1	15.22mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 11:03:09 AM

Mean Area 465.1
Mean Conc. 15.22mg/L



Sample

Sample Name:
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

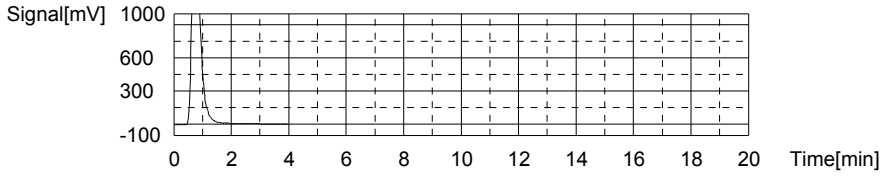
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-8.287mg/L TC:86.13mg/L IC:94.42mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3236	86.13mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 11:12:35 AM

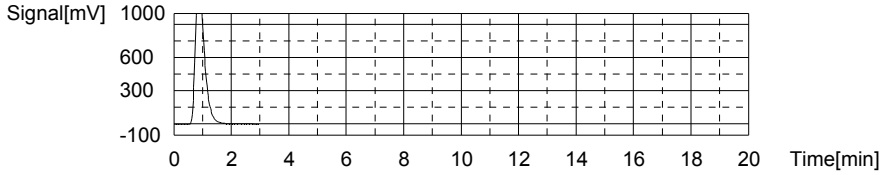
Mean Area 3236
Mean Conc. 86.13mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2819	94.42mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 11:19:08 AM

Mean Area 2819
Mean Conc. 94.42mg/L



Sample

Sample Name: L12070538-01 (20)
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

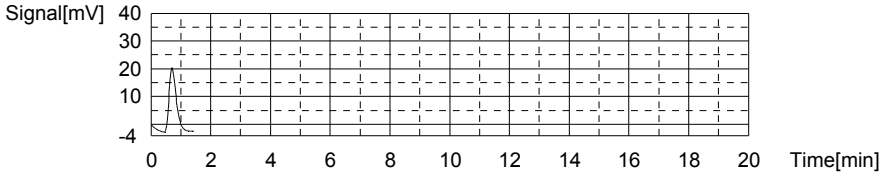
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.6112mg/L TC:1.028mg/L IC:0.4163mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	38.70	1.028mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 11:26:03 AM

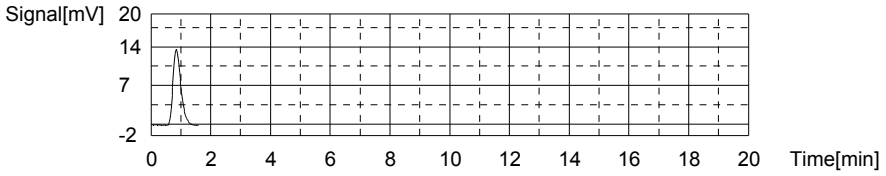
Mean Area 38.70
Mean Conc. 1.028mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	25.26	0.4163mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/22/2012 11:30:39 AM

Mean Area 25.26
Mean Conc. 0.4163mg/L



Sample

Sample Name: L12070526-01
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

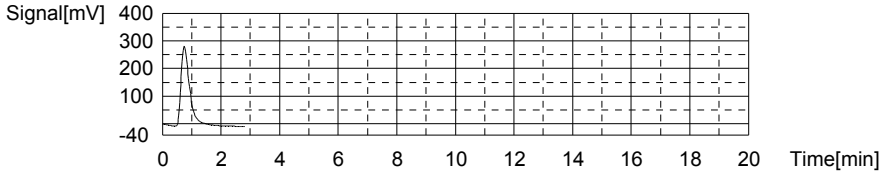
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.751mg/L TC:16.06mg/L IC:10.31mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	603.5	16.06mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 11:38:55 AM

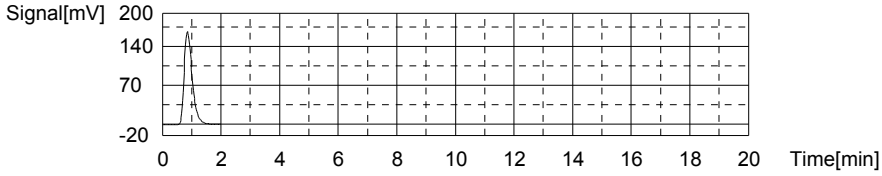
Mean Area 603.5
Mean Conc. 16.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	319.3	10.31mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 11:43:57 AM

Mean Area 319.3
Mean Conc. 10.31mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

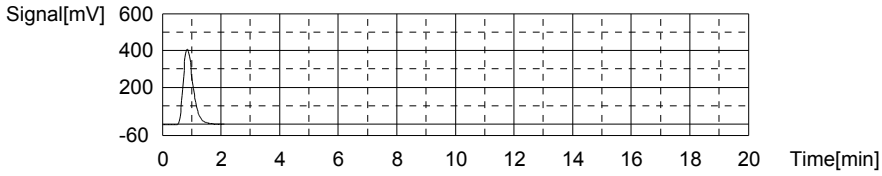
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.82mg/L TC:25.68mg/L IC:-0.1346mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	965.0	25.68mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 11:51:29 AM

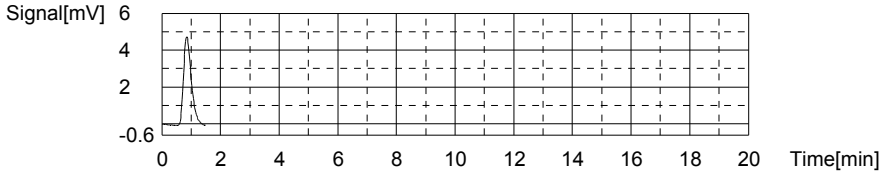
Mean Area 965.0
Mean Conc. 25.68mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.885	-0.1346mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47_	7/22/2012 11:55:49 AM

Mean Area 8.885
Mean Conc. -0.1346mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-12-06-2011.met
Status Completed
Chk. Result

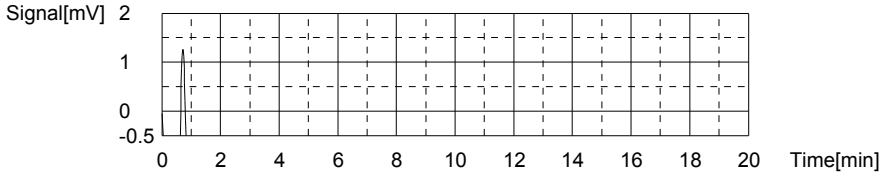
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.3687mg/L TC:0.2271mg/L IC:-0.1416mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.627	0.2271mg/L	500uL	1		TCCURVE-12-06-2011.2011_12_06_08_40_5	7/22/2012 12:00:59 PM

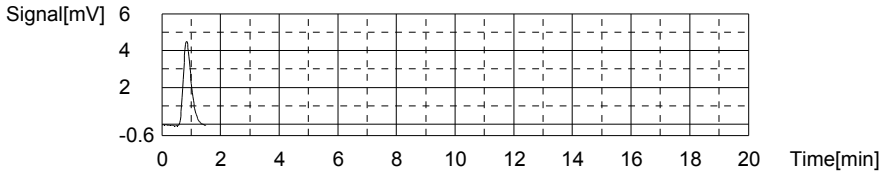
Mean Area 8.627
Mean Conc. 0.2271mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.677	-0.1416mg/L	500uL	1		TICCURVE-12-06-2011B.2011_12_06_15_47	7/22/2012 12:04:56 PM

Mean Area 8.677
Mean Conc. -0.1416mg/L



2.2.11 Total Suspended Solids Data

2.2.11.1 Summary Data

Login Number: L12070328
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: The LCS/LCS duplicate had recoveries above the acceptable limit. The sample results could be biased high.

Duplicates: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Total Suspended Solids. Please see the applicable QC report for a detailed presentation of the failures.

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: 50182
Approved By: Deanna Hesson

Microbac

Lab Report #: L12070328
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L12070328-01	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL05-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 09:27	**Dilution:**	1	**File ID:**	EN.1207161330-09
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-02	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL18-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 10:14	**Dilution:**	1	**File ID:**	EN.1207161330-10
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-03	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL16-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 12:12	**Dilution:**	1	**File ID:**	EN.1207161330-11
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-04	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-1	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-12
Sample Tag:		**Units:**	mg/L		

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

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

Certificate of Analysis

Sample #:	L12070328-05	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MS	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-13
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		27.0		5.00	2.50

Sample #:	L12070328-06	**PrePrep Method:**	N/A	**Instrument:**	OVEN
Client ID:	MPL17-0712-MSD	**Prep Method:**	160.2/SM2540D	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	160.2	**Cal Date:**	
Workgroup #:	WG403482	**Analyst:**	ERP	**Run Date:**	07/16/2012 13:30
Collect Date:	07/11/2012 14:00	**Dilution:**	1	**File ID:**	EN.1207161330-14
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		31.5		5.00	2.50

2.2.11.2 QC Summary Data

$$[(WT2 - WT1) * 1000000]/volume = mg/L$$

where:

WT1 = weight (grams) of empty container.
WT2 = weight (grams) of dried sample and container.
1000000 = factor to get to mg/L.
volume = mL of sample used.

Microbac Laboratories Inc.

Data Checklist

Date: 16-JUL-2012
Analyst: HJR
Analyst: ERP
Method: TSS
Instrument: TSS
Curve Workgroup: NA
Runlog ID:
Analytical Workgroups: WG403482

Calibration/Linearity	
Second Source Check	
ICV/CCV (std)	
ICB/CCB	
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	
Signed Raw Data	
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: 18-JUL-2012

Secondary Reviewer: 21-JUL-2012

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-21-2012 09:04:02

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 160.2 AAB#: WG403482

Login Number: L12070328

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
MPL05-0712-1	01	07/11/12					07/16/2012	5.2	7		07/16/12	5.2	7	
MPL18-0712-1	02	07/11/12					07/16/2012	5.1	7		07/16/12	5.1	7	
MPL16-0712-1	03	07/11/12					07/16/2012	5.1	7		07/16/12	5.1	7	
MPL17-0712-1	04	07/11/12					07/16/2012	5	7		07/16/12	5	7	
MPL17-0712-MS	05	07/11/12					07/16/2012	5	7		07/16/12	5	7	
MPL17-0712-MSD	06	07/11/12					07/16/2012	5	7		07/16/12	5	7	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 2504303
Report generated 07/19/2012 12:15

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L12070328
Blank File ID: EN.1207161330-01
Prep Date: 07/16/12 13:30
Analyzed Date: 07/16/12 13:30
Analyst: ERP

Work Group: WG403482
Blank Sample ID: WG403482-01
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	WG403482-02	EN.1207161330-02	07/16/12 13:30	
LCS2	WG403482-03	EN.1207161330-03	07/16/12 13:30	
MPL05-0712-1	L12070328-01	EN.1207161330-09	07/16/12 13:30	
MPL18-0712-1	L12070328-02	EN.1207161330-10	07/16/12 13:30	
MPL16-0712-1	L12070328-03	EN.1207161330-11	07/16/12 13:30	
MPL17-0712-1	L12070328-04	EN.1207161330-12	07/16/12 13:30	
MPL17-0712-MS	L12070328-05	EN.1207161330-13	07/16/12 13:30	
MPL17-0712-MSD	L12070328-06	EN.1207161330-14	07/16/12 13:30	
DUP	WG403482-08	EN.1207161330-24	07/16/12 13:30	
DUP	WG403482-10	EN.1207161330-25	07/16/12 13:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2504304
Report generated 07/19/2012 12:15

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L12070328 Prep Date: 07/16/12 13:30 Sample ID: WG403482-01
Instrument ID: OVEN Run Date: 07/16/12 13:30 Prep Method: 160.2/SM2540D
File ID: EN.1207161330-01 Analyst: ERP Method: 160.2
Workgroup (AAB#): WG403482 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: 2504305
19-JUL-2012 12:15

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L12070328 Analyst: ERP Prep Method: 160.2/SM2540D
Instrument ID: OVEN Matrix: Water Method: 160.2
Workgroup (AAB#): WG403482 Units: mg/L
QC Key: DOD4 Lot #: STD52717

Sample ID: WG403482-02 LCS File ID: EN.1207161330-02 Run Date: 07/16/2012 13:30
Sample ID: WG403482-03 LCS2 File ID: EN.1207161330-03 Run Date: 07/16/2012 13:30

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Suspended Solids	50.0	63.0	126	50.0	64.0	128	1.57	75 - 125	10	*

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2504306
Report generated: 07/19/2012 12:15

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum: L12070328 Cal ID: OVEN- Worknum: WG403482

Instrument ID: OVEN Contract #: Prep Method: 160.2/SM2540 D

Parent ID: L12070328-04 File ID: EN.1207161330-12 Dil: 1 Method: 160.2

Sample ID: L12070328-05 MS File ID: EN.1207161330-13 Dil: 1 Matrix: Water

Sample ID: L12070328-06 MSD File ID: EN.1207161330-14 Dil: 1 Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Total Suspended Solids	U	25.0	27.0	108	25.0	31.5	126	15.4	75 - 125	10	*#

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008
PDF File ID: 2504307
Report generated 07/19/2012 12:15

2.2.11.3 Raw Data

TRAY 7

WORKGROUP: WG403482

TOTAL SUSPENDED SOLIDS

Oven: TSS1 Other

LCS: STDS2717

MS: _____ mL LCS & _____ mL sample

Balance: AND GR-202 / Other

Method: EPA 160.2 / SM2540D SOP #: K1602 Revision #: _____ Filter Lot#: 060047

On Temp: 103 1520 103 1815

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	LCSDUP	100				
MDL 2.5 → 7-0001-1	1	200				
7-296-2	2	200				
7-309-2	3	200				
4	4	200				
7-310-2	5	200				
7-328-1	6	200				
2	7	200				
3	8	200				
4P	9	200				
5MS	10	200				
6MSD	11	200				
7-375-5	12	10				
7-390-1	13	100				
2	14	50				
7-318-1	15	200				
4	16	200				
6	17	200				
7-346-1	18	200				
7-349-1	19	~~200~~ 100				
7-351-4	20	50				
DUP: 7-328-1	DuP1	200				
DUP: 7-328-2	DuP2	200				

Off Temp: 103 1720 103 1915

ANALYST: [signature]

DATE/TIME: (on) 7-16-12 1530

DATE/TIME: (off) _____

DATE/TIME: (off) _____

DATE/TIME: (off) _____

* Duplicate required on 10% of samples

7-353-1	1	200
7-355-1	2	200

DCN#91566

Microbac Laboratories Inc.
GRAVIMETRIC REPORT

Workgroup (AAB#): WG403482
Analyst: ERP
Analyte: TOTAL SUSPENDED SOLIDS
Balance: BAL004
Instrument: OVEN

Method: 160.2/SM2540D
SOP: K1602 Revison 13
Spike Solution: STD52717
Daily Dilution:

SAMPLE NUMBER	#	INITIAL VOL	INITIAL WT	DRY WT A	DRY WT B	DRY WT C	Anal. Conc	Rep. Conc.	Units
WG403482-01	BLANK	200	0.0964	0.0959	0.0959		-2.500	-2.500	mg/L
WG403482-02	LCS	100	0.0963	0.1031	0.1026		63.00	63.00	mg/L
WG403482-03	LCSDUP	100	0.0973	0.1041	0.1037		64.00	64.00	mg/L
L12070001-01	1	200	0.0953	0.0956	0.0955		1.000	1.000	mg/L
L12070296-02	2	200	0.0919	0.093	0.0931		6.000	6.000	mg/L
L12070309-02	3	200	0.0902	0.0906	0.0905		1.500	ND	mg/L
L12070309-04	4	200	0.0903	0.0923	0.0921		9.000	9.000	mg/L
L12070310-02	5	200	0.0899	0.0915	0.0914		7.500	7.500	mg/L
L12070328-01	6	200	0.0884	0.0883	0.0881		-1.500	ND	mg/L
WG403482-07	6	200	0.0884	0.0883	0.0881		-1.500	-1.500	mg/L
L12070328-02	7	200	0.0907	0.0905	0.0904		-1.500	ND	mg/L
WG403482-09	7	200	0.0907	0.0905	0.0904		-1.500	-1.500	mg/L
L12070328-03	8	200	0.095	0.095	0.0947		-1.500	ND	mg/L
L12070328-04	9	200	0.096	0.0959	0.0957		-1.500	ND	mg/L
WG403482-04	9	200	0.096	0.0959	0.0957		-1.500	-1.500	mg/L
L12070328-05	10	200	0.0941	0.0995	0.0995		27.00	27.00	mg/L
WG403482-05	10	200	0.0941	0.0995	0.0995		27.00	27.00	mg/L
L12070328-06	11	200	0.0907	0.097	0.097		31.50	31.50	mg/L
WG403482-06	11	200	0.0907	0.097	0.097		31.50	31.50	mg/L
L12070375-05	12	10	0.089	0.1215	0.1215		3250	3250	mg/L
L12070390-01	13	100	0.0906	0.0935	0.093		24.00	24.00	mg/L
L12070390-02	14	50	0.0902	0.0985	0.098		156.0	156.0	mg/L
L12070318-01	15	200	0.0919	0.0928	0.0923		2.000	ND	mg/L
L12070318-04	16	200	0.0946	0.095	0.0945		-0.5000	ND	mg/L
L12070318-06	17	200	0.091	0.0912	0.0909		-0.5000	ND	mg/L
L12070346-01	18	200	0.0911	0.0951	0.0946		17.50	17.50	mg/L
L12070349-01	19	100	0.0912	0.095	0.0945		33.00	33.00	mg/L
L12070351-04	20	50	0.0925	0.0945	0.0942		34.00	34.00	mg/L
WG403482-08	DUP1	200	0.097	0.0973	0.0973		1.500	1.500	mg/L
WG403482-10	DUP2	200	0.0958	0.0961	0.0957		-0.5000	-0.5000	mg/L
L12070353-01	1	200	0.0974	0.098	0.0975		0.5000	ND	mg/L
L12070355-01	2	200	0.0955	0.096	0.0955		0	ND	mg/L

Analyst: Erin Potter

*Duplicate required on 10% of samples

Date/Time (on) : 07/16/2012 13:30
Date/Time (off): 07/17/2012 13:02
Date/Time (off): 07/17/2012 16:06
Date/Time (off):

CONT_GRAV_REPORT - Modified 02/18/2011
PDF ID: 2497757
Report generated: 07/17/2012 16:24

Microbac

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
July 25, 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 25, 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

COC No. A 30682

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 (Cl, Fl, 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
MPL05-0712-1		X	7-11-12	0927	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MPL18-0712-1		X	7-11-12	1014	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MPL16-0712-1		X	7-11-12	1212	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X			

Relinquished by: (Signature)	Date	Time	Received (Signature)
Brady Dow	7-11-12	1600	
Relinquished by: (Signature)	Date	Time	Received (Signature)

Microbac OVD
Received: 07/12/2012 10:33
By: ROSEMARY SCOTT
221000026688

Date	Time	Received by: (Signature)

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

L12070328 / Revision: 0 / 1210 total pages

COC No. A 30683

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 (Cl, Fl, 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
MPL 17-0712-1		X	7-11-12	1400	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL 17-0712-MS		X	7-11-12	1400	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MPL 17-0712-MSD		X	7-11-12	1400	W	8		X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Brady T. Dear	7-11-12	1600	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Microbac OVD
Received: 07/12/2012 10:33
By: ROSEMARY SCOTT
221000026688

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

Generated: 07/25/2012 08:48

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-01	989290	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	JBK	CLS	

Samplenum	Container ID	Products
L12070328-01	989291	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	DIH	

Samplenum	Container ID	Products
L12070328-01	989292	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-01	989293	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	ERP	

Samplenum	Container ID	Products
L12070328-01	989294	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2
2	ANALYZ	W1	WET	18-JUL-2012 07:06	DIH	AZH	
3	DISP	WET	A1	23-JUL-2012 11:26	CLS	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-01	989295	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:27	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070328-01	989296	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:50	CLS	HJR	

Samplenum	Container ID	Products
L12070328-02	989297	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	JBK	CLS	

Samplenum	Container ID	Products
L12070328-02	989298	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-02	989299	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:10	AZH	TMM	

Samplenum	Container ID	Products
L12070328-02	989300	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	ERP	

Samplenum	Container ID	Products
L12070328-02	989301	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2

Samplenum	Container ID	Products
L12070328-02	989302	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:27	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-02	989303	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:49	CLS	HJR	

Samplenum	Container ID	Products
L12070328-03	989304	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	JBK	CLS	

Samplenum	Container ID	Products
L12070328-03	989305	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	DIH	

Samplenum	Container ID	Products
L12070328-03	989306	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-03	989307	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-03	989308	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2
2	ANALYZ	W1	WET	18-JUL-2012 07:06	DIH	AZH	
3	DISP	WET	A1	23-JUL-2012 11:26	CLS	DIH	

Samplenum	Container ID	Products
L12070328-03	989309	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:27	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070328-03	989310	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:50	CLS	HJR	

Samplenum	Container ID	Products
L12070328-04	989311	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-04	989312	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	DIH	

Samplenum	Container ID	Products
L12070328-04	989313	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-04	989314	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	ERP	

Samplenum	Container ID	Products
L12070328-04	989315	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2
2	ANALYZ	W1	WET	18-JUL-2012 07:06	DIH	AZH	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-04	989316	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:28	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070328-04	989317	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:49	CLS	HJR	

Samplenum	Container ID	Products
L12070328-05	989318	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	JBK	CLS	

Samplenum	Container ID	Products
L12070328-05	989319	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-05	989320	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-05	989321	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	ERP	

Samplenum	Container ID	Products
L12070328-05	989322	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2
2	ANALYZ	W1	WET	18-JUL-2012 07:06	DIH	AZH	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-05	989323	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:27	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-05	989324	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:49	CLS	HJR	

Samplenum	Container ID	Products
L12070328-06	989325	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	SEM	13-JUL-2012 14:06	JBK	CLS	

Samplenum	Container ID	Products
L12070328-06	989326	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	20-JUL-2012 07:15	DIH	AZH	
3	STORE	WET	A1	20-JUL-2012 16:44	CLS	DIH	

Samplenum	Container ID	Products
L12070328-06	989327	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	12-JUL-2012 13:27	HJR	JKS	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-06	989328	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	13-JUL-2012 14:14	ERP	CLS	
3	STORE	WET	A1	16-JUL-2012 15:31	CLS	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: L12070328
Account: 3005
Project: 3005.011
Samples: 6
Due Date: 23-JUL-2012

Samplenum	Container ID	Products
L12070328-06	989329	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		<2
2	ANALYZ	W1	WET	18-JUL-2012 07:06	DIH	AZH	
3	STORE	WET	A1	23-JUL-2012 08:11	AZH	TMM	

Samplenum	Container ID	Products
L12070328-06	989330	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	12-JUL-2012 13:09	CLS		
2	PREP	W1	DIG	13-JUL-2012 05:05	REK	AZH	
3	ANALYZ*	DIG	METALS	13-JUL-2012 15:36	LMK	REK	
4	STORE	DIG	A1	16-JUL-2012 14:27	CLS	BRG	

Sample extract/digestate/leachate

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L12070328-06	989331	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	12-JUL-2012 13:09	CLS		
2	ANALYZ	W1	WET	18-JUL-2012 13:21	HJK	CLS	
3	STORE	WET	A1	23-JUL-2012 09:50	CLS	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login